KERALA VETERINARY AND ANIMAL SCIENCES UNIVERSITY

ANNUAL REPORT 2022-2023

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KERALA VETERINARY AND ANIMALSCIENCES UNIVERSITY, POOKODE

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ANNUAL REPORT 2022-2023

Patron

Vice Chancellor
Kerala Veterinary & Animal Sciences University
Pookode, Wayanad

Acknowledgements

Hon. Vice Chancellor

Registrar

Finance Officer

Director (Academics & Research)

Director (Entrepreneurship)

Chief Engineer (ID Wing)

Controller of Examinations

Deans, College of Veterinary & Animal Sciences, Mannuthy

Deans, College of Veterinary & Animal Sciences, Pookode

Deans, Verghese Kurien Institute of Dairy and Food Technology, Mannuthy

Director Clinics

Director Farms

Director (Student's Welfare)

Special Officers

College of Avian Sciences and Management, Thiruvazhamkunnu

College of Dairy Science and Technology, Pookode

College of Dairy Science and Technology, Thiruvananthapuram

College of Dairy Science and Technology, Kolahalamedu

Officers and Heads

Station heads

Faculty members

Librarian

Published By

Directorate of Entrepreneurship
Kerala Veterinary & Animal Sciences University
Pookode, Lakkidi P.O., Wayanad- 673576

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ABOUT THE UNIVERSITY

Kerala Veterinary and Animal Sciences University with headquarters in Pookode, Wayanad has landed assets of KVASU of about 957.95 acres spread across different campuses in Thrissur, Wayanad, Palakkad, Idukki and Thiruvananthapuam districts of Kerala . The powers of the University are vested in its authorities –the Management Council Chaired by the Chancellor, the Board of Management (Board) and Academic Council chaired by the Vice Chancellor. The ex-officio members include the Chancellor, Vice Chancellor, Registrar, Finance Officer, Directors and Deans. The functions and powers of these officers are defined in the University Act. The academic staff comprise of Professors, Associate Professors and Assistant Professors apart from research fellows and scholars at various phases of instruction or research. University now has a faculty occupancy of around 78% which would be one of the country's best and a teacher student ratio of 1:8. Further, the academic activity is supported by a non teaching cum farm staffing of nearly 948. The territorial jurisdiction of the University extends to the whole of the state of Kerala. The University encompasses three faculties- the Faculty of Veterinary and Animal Sciences, the Faculty of Dairy Science and Faculty of Poultry Science; with seven constituent colleges-

1. College of Veterinary and Animal Sciences, Mannuthy, Thrissur
2. College of Veterinary and Animal Sciences, Pookode Wayanad
3. Verghese Kurien Institute of Dairy and Food Technology Mannuthy, Thrissur
4. College of Dairy Science and Technology Pookode Wayanad,
5. College of Dairy Science and Technology, Kaimanam, Thiruvananthapuram
6. College of Dairy Science and Technology, Kolahalamedu, Idukki
7. College of Avian Sciences and Management, Thiruvazhamkunnu, Palakkad

The University has wide network of instructional and research farms spread throughout the state, which include the instructional livestock farms attached to College of Veterinary and Animal Sciences, Pookode and Livestock Farm and Fodder Research & Development Scheme at Mannuthy, Livestock Research Station, Thiruvazhamkunnu, Palakkad, University Poultry and Duck Farm, Mannuthy, Centre for Pig Production and Research, Mannuthy, Goat and Sheep Farm, Mannuthy, Cattle Breeding Farm, Thumburmuzhy and Base Farm, Kolahalamedu. KVASU hosts the All India Co-ordinated Research Project on Poultry, Centre for Advanced Studies in Poultry Science and Centre for Advanced Studies in Animal Breeding and Genetics at Mannuthy. The recent development in the inter-disciplinary initiatives of the University is the establishment of five schools and seven centres, an emerging academic feature of importance. They are School of Bio-Energy studies and farm waste management, School of Applied Production and Biotechnology, School of Zoonosis, Public Health and Pathobiology, School of New Media and Research, School of Animal Nutrition and Feed Technology, Centre for Animal Adaptation to Environment and Climate Change studies, Centre for Ethno pharmacology, Centre for Livestock Development and Policy Research, Centre for Small Laboratory Animal Production, Central Instrumentation Laboratory and central store. Centre for Wildlife Studies and Centre for One Health Education, Advocacy, Research and Training (COHEART) are located at Pookode, Wayanad. The Centre for Livestock Policy Research is located in Thiruvananthapuram, the State capital along with Regional

Research Training Centre. The University offers its services through Teaching Veterinary Clinical Complex at College of Veterinary and Animal Sciences, Pookode, Peripheral Veterinary Clinic and Entrepreunership Centre, Kakkavayal, Wayanad, Veterinary Hospital Complex at Mannuthy,Veterinary Hospital at Kokkalai, Thrissur. Products from University Meat Plant and Dairy Plant at Mannuthy offers quality assured livestock products to public. The products developed under various stations of the University are being marketed under the brand "kvasu".

Our mandate:

A reading of the Act and Statutes bestows the responsibility of leading the State with innovative research and education in Animal agriculture and Veterinary sciences including all supporting and allied subjects including management and policy sciences. An added aspect is the responsibility to train farmers to enhance productivity and profit in animal agriculture, promote factor productivity by entrepreneurship acting individually and as concerns, if necessary by forming companies. Focus on entrepreneurship; actable research and commercialization of research productivity are the innovative aspects of institutional design.

Funds and funding

KVASU is funded primarily by the legislature of the state of Kerala as grants in aid in its annual budgets. Apart from Govt. of Kerala, KVASU receive funds from Indian Council for Agricultural Research (ICAR), Externally Aided Projects from other agencies and internal revenue of the University.

FROM REGISTRAR'S OFFICE

The Kerala Veterinary and Animal Sciences University (KVASU) was established under the KVASU Act, 2010 (Act 3 of 2011) of the Government of Kerala for the development of Veterinary and Animal Sciences and for the purpose of ensuring proper and systematic instruction, teaching, training and research and extension exclusively in Veterinary and Animal Sciences in the State of Kerala. The headquarters of the University is situated at Pookode in Wayanad district. KVASU now undertakes academic, research, extension and entrepreneurship activities in the animal production and dairy sector. The University is empowered to award degrees as specified by the UGC under section 22 of the UGC Act 1956 through its main campus in regular mode with the approval of statutory bodies/ councils, wherever required. The University has seven constituent colleges, the names of the colleges have been listed below, and these colleges undertake academic, research and extension activities in the areas assigned to them.

1. College of Veterinary and Animal Sciences, Pookode, Wayanad.
2. College of Dairy Science and Technology, Pookode, Wayanad.
3. College of Veterinary and Animal Sciences, Mannuthy, Thrissur
4. Verghese Kurien Institute of Dairy and Food Technology, Mannuthy, Thrissur
5. College of Avian Sciences and Management, Thiruvazhamkunnu, Palakkad
6. College of Dairy Science and Technology, Kolahalamedu, Idukki
7. College of Dairy Science and Technology, Kaimanam, Thiruvananthapuram

The University is working as per the KVASU Act, 2010 (Act 3 of 2011), the KVASU Statutes, 2014, the Delegation of Powers and other rules/ amendments that came into existence by the order of the Government of Kerala or by the University. According to Chapter IV of the KVASU Act, 2010, the Chancellor, Pro-Chancellor and officers of the University are detailed and the list of persons who held the powers (except deans and other officers of the university prescribed in the statutes) during the period is listed below.

Position	Name	Tenure
The Chancellor	Sri. Arif Mohammed Khan	Continues from 06.09.2019
The Pro – Chancellor	Smt. J. Chinchurani	Continues from 20.05.2021
The Vice Chancellor	Prof. (Dr.) M.R. Saseendranath	Continues from 24-07-2019
The Registrar	Prof.(Dr.) P. Sudheer Babu	Continues from 29-12-2020
The Finance Officer	Smt.Sreelatha.M. Sri. Manoj T.R Sri.Dinesan A.K	From 19/06/19 to 13/06/22 From 14/06/22 to 19/02/23 Continues from 20/02/2023
The Director of Academics & Research	Dr. N. Ashok Dr. C. Latha	From 29-12-20 to 23-04-22 Continues from 23-04-2022
The Director of Entrepreneurship	Dr. M. K. Narayanan Dr. T.S. Rajeev	From 22-10-18 to 26-04-22 Continues from 26-04-2022

As per Chapter V of the KVASU Act, 2010, the Authorities of the University are enlisted as follows.

1. The Management Council;

2. The Board of Management;
3. Academic Council;
4. Research Council;
5. Extension Council;
6. Finance Council;
7. Board of Studies;
8. Faculty Research Committee;
9. Project Co-ordination Committee; and

such other bodies of the University as may be designated by Statutes to be the authorities of the University.

The university have provided appropriate level of officers and staff in the following categories of Joint Registrar, Deputy Registrar, Assistant Registrar, Section Officer, Assistant, Office Superintendent, and Computer Assistant to support the authorities in the management and administration of its Institutions/ Stations/ Offices.

The General Administration of the University is under the purview of the office of the Registrar. Important functions and responsibilities attached to this office are as stated below.

- Appointments, promotions, and other service-related matters of the teaching, non-teaching and labourer employees in the University.
- Legal-related activities for the University,
- Dealing with general directions, legislative questions, and other Government Communications. the conduct of the Management Council, Board of Management, and such other Authorities, Bodies, and Committees (other than those related to Academic and Financial matters) as provided under the Act and the Statute of the University.
- The elections to the Authorities, Bodies, and Committees as provided under the Act and the Statute of the University.
- Dealing with other administrative duties assigned to the University/ Registrar.

Details of the meeting of the various authorities of the University (other than those at the Faculty level) are as follows.

Meetings of the Board of Management held during the period 2022-23		
No. of the Meeting	**Date**	**Venue**
77th Meeting	22/04/2022	VC's Secretariate
78th Meeting	15/06/2022	Periyar Hall, CVAS, Pookode
79th Meeting	27/09/2022	Periyar Hall, CVAS, Pookode
80th Meeting	30/11/2022	VC's Secretariate
81th Meeting	28/01/2023	Periyar Hall, CVAS, Pookode
82st Meeting	25/03/2023	Periyar Hall, CVAS, Pookode

Meetings of the Management Council held during the period 2022-23		
No. of the Meeting	**Date**	**Venue**
41st Meeting	15/06/2022	Periyar Hall, CVAS, Pookode
42nd Meeting	27/09/2022	Periyar Hall, CVAS, Pookode
43rd Meeting	28/01/2023	Periyar Hall, CVAS, Pookode
44th Meeting	25/03/2023	Periyar Hall, CVAS, Pookode

Meetings of the Academic Council held during the period 2022-23	
No. of the Meeting	**Date**
7th Special Meeting	06-04-2022
33rd Meeting	08-06-2022
8th Special Meeting	26-07-2022
34th Meeting	09-12-2022

Meetings of the Finance Council held during the period 2022-23	
No. of the Meeting	**Date**
27th Meeting	27-09-2022
28th Meeting	28-01-2023
29th Meeting	21-03-2023

Meetings of the Research Council held during the period 2022-23	
No. of the Meeting	**Date**
4th Meeting	14/10/2022

Meetings of the Extension Council held during the period 2022-23	
No. of the Meeting	**Date**
5th Meeting	28-09-2022

Staffing of the University

Teaching Staffs of the University				
	Assistant Professor	**Associate Professor**	**Professor**	**Total**
Sanctioned Strength	217	64	54	335
In position	151	45	55	251

Non-Teaching Staff of the University		
Male	**Female**	**Total**
180	153	333

Labours of the University	
Permanent Labours	440
Casual Labours	105

Resume of works conducted in the General Administration wing during 2022-23

- During this period, the General Administration wing has successfully implemented the biometric punching system in the Pookode campus of the University.
- Digital Document Filing System (DDFS) software has been successfully initiated in three offices of the University Headquarters offices as a pilot project.

- Koyilandy Municipality handed over 4 acres of land to Veterinary University for the implementation of the Veterinary University Teaching, Research and Entrepreneurship Center (VUTREC) at Koyilandy in Kozhikode district.
- Necessary Government approval has been received for the restructuring of 486 non-teaching posts, that have been transferred from the Kerala Agricultural University and the regularisation orders are being issued for each post.
- In order to provide uninterrupted internet service to employees and to expand the internet service in the university, a centralized internet distribution system has been implemented.
- Optical fibre cable has been deployed in all the major parts of the campus as a first step to installing CCTV, WiFi Hotspots etc. in the Pookode campus of the University.
- GeM help desk has been established to provide instructions and other assistance for creating user IDs so as to purchase through the GeM (Govt e-Marketing place) system in all officers of the university.
- The University Students Grievance Redressal Cell, SC/ST Cell, and Complaint Committee on Harassment against Women/ Planning Cell have been formed at the university level.
- Conducted selection procedures to fill up the posts of Deans and directors as per the statutes and other rules and regulations.
- Appointments have been conducted to the N.C.A vacancy in the Assistant Professor posts.
- CAS interviews and promotion in respect of members of the faculty were conducted.
- General transfer of Teaching & Non-Teaching staff 2021.
- Establishment matters regarding declaration of probation, promotion, IUT, Transfer and posting, liaisoning with the Government were done during the reporting period.
- As per the Government's directions, the procedures to implement UNISPARK in the university are carried on.
- Proposals for sanctioning the posts of teaching and non-teaching staff at the newly started Dairy colleges have been submitted to Govt. and the same was brought to the notice of the Hon'ble Chief Minister.
- As per the regulations made by the University for the appointment from the lower category post, two qualified employees, from the lower category, have been given appointments to the Assistant categories.
- According to the Govt. directions, a Vocabulary committee has been constituted and a translation cell has been constituted for translating the University Act, statutes and ordinances.
- In compliance with government policy, the university has come to an agreement with M/s. Metal Scrap Trade Corporation (MSTC), a central govt. agency, for e-auction facilities to sell unserviceable articles. During the period University received an income of Rs. 4,14,027/- by selling unserviceable items through e-auction.
- Established the centralization in administration purchases, bills and accounts that are being conducted at the smooth General Administration, Finance wing and the office of the Vice

Chancellor in the Headquarters.

- Submitted timely replay to the 101 RTI applications and 35 LA interpellations during the period.
- Submitted the proposal to amend sections 44(3) and 58 in the KVASU Act to the Government.
- Submitted the proposal to amend the statutes regarding the conditions related to IUT as per the Govt. directions and the proposal to remove the audit objections raised due to the promotion given to the posts that are abolished lay the 9th pay revision order.
- Taken necessary actions to complete the actions in the files regarding the university in the file Adalat conducted by the government.
- Out of the 4 cases reported disciplinary actions have been taken against the incumbents in three cases.

FINANCE WING

1. Financial Landscape: a profile in numbers

Kerala Veterinary and Animal Sciences University is a grant in aid Educational & Research institution receiving grants from the Government of India, ICAR and the Government of Kerala.

KVASU, a government aided institution heavily relies on government grants, which make up 80% of its funding. The internal revenue generated by the University such as Fees, Farm proceeds, charges etc. in addition to endowments and donation also contribute substantially.

In the Fiscal year 2022-23, KVASU had a total budget of Rs.22,031.81 lakhs. The University allocated 67% of its budget to Non Plan, 22% percentage to State Plan, 3% to External Aided Projects, 7% to RIDF and the remaining 1% to New Courses.

A significant amount of expenditure of the University is incurred for the disbursement of salaries/ Pension of staff and Faculty. The University has a utilisation percentage of 85% for Non Plan components in which salaries/ pension of staff and other contingencies are incurred and 70% for plan components in which the expenditure for Research Projects and Infrastructure are incurred. The University has maintained a stable financial position all throughout the year. However, it has faced challenges related to increasing operational costs and potential fluctuation in Government support. The university also constituted a pension fund for disbursing the benefits of the retired staff.

2. Duties and Responsibilities of Financial Steward:

1. Subject to the general direction and control of the Vice-Chancellor, the Finance Officer shall,-

- ❖ be in charge of the Finance, Accounts and Audit branches of the University;
- ❖ be the principal adviser of the University on all matters connected with Finance and Audit of the University. The advice tendered by him shall generally be followed in the University office unless they are inconsistent with the provisions of the Act. Any exception to this shall be recorded by the authorities concerned and thereafter reported to the Finance Committee.

2. The Finance Officer shall, subject to the control of the Board of Management,-

- ❖ ensure that the limits fixed by the Board of Management for recurring and non-recurring expenditure, for a year are not exceeded and that the amount expended for the purpose for which they are granted or allotted;
- ❖ be responsible for the preparation of annual accounts and the Budget of the University and for their presentation to the Board of Management;
- ❖ keep a constant watch on the progress of expenditure against the budget and on the state of investments;
- ❖ watch the progress of the collection of revenue and advise on the methods of collection employed;
- ❖ ensure that the registers of buildings, land, furniture and equipment are maintained up-to-date and

that stock verifications of equipment and other consumable materials in all Departments of the University, University Centres, University Farms, specialized laboratories, colleges and institutions maintained by the University are conducted;

- ❖ put forward proposal to the Board of Management for calling for explanation in respect of unauthorized expenditure or other financial irregularities in any particular case and suggest disciplinary action against the persons at fault;
- ❖ call for from any Centre, Farm, Laboratory College or Institution maintained by the University any information or returns that he may consider necessary for the discharge of his duties; (viii) make all arrangements for the transaction of business of the meetings of the Finance Council;
- ❖ enter into correspondence with the University Grants Commission, Government of India, State Government and other institutions and bodies on matters connected with the Finance, Accounts and Audit of the University;
- ❖ scrutinize every item of new expenditure not provided for in the budget estimates of the University;
- ❖ make recommendations, whenever necessary, to the Board of Management on all matters relating to the Finance, Accounts and Audit of the University;
- ❖ suggest any new account or audit form or register considered necessary or to suggest alteration to any existing form or register suitable for the proper working of the University office and the subordinate offices for the approval of the Finance Committee and the Board of Management;
- ❖ realise and receive grants or other funds due to the University from Central and State Governments, University 'Grants Commission and other bodies, institutions or individuals;
- ❖ fix the duties and responsibilities of the officers working undbr him and to exercise control over these officers and to assess their 'work and performance'

3. The Finance Officer shall be the custodian and disbursing officer of the General Fund of the University. All payments received by him shall be credited to that Fund and he shall arrange to issue cheques on behalf of the University.
4. The Finance Officer shall make all authorized payment out of the University Fund.
5. The Finance Officer shall be responsible for the proper maintenance of the accounts of the University. It shall also be the duty of the Finance Officer to make arrangements for the audit and payment of bills presented at the University office.
6. The receipt of the Finance Officer or the person or persons duly authorized in this behalf by the Board of Management for any money payable to the University shall be sufficient discharge for payment of such money.

3. Insights of the Financial Committee Gatherings:

Finance Council is one of the authorities of the University and which consists the Vice Chancellor, the Registrar, The Finance Officer and two elected members from the Management Council. The Finance Council will be the authority to prepare the budget estimate of the University and, to review the accounts of expenditure and to make recommendations to the Management Council. The Finance Council will

advise and make recommendations to the Management Council on any other financial question affecting the affairs of the University. During the financial year 2022-23 three Finance Council meetings were conducted respectively on27.09.2022, 28.01.2023 and 21.03.2023.

4. Recorded Receipts; Grant in Aids:

Sl No	Receipt Head	Amount
1	Grant in Aid Non Plan	94,35,80,000
2	Grant in Aid Plan	34,30,23,676
3	External Aided Projects	1,63,62,834
4	ICAR	2,95,07,009
5	Internal Revenue	23,14,73,855
Total		**1,56,39,47,374**

5. Disbursement breakdown: Fund allocation for the financial year

2022-23

- **Non Plan**

Salary & Wages	Contingency fund transferred to station	Pension & Retirement benefits	Total fund disbursed
902485360	157400647	209302255	1269188262

State Plan

KVASU State Plan 2022-23				
Budget Outlay	**Opening Balance**	**Fund Released**	**TOTAL**	**Total Expenditure**
Rs. 49,00,00,000	Rs. 50,77,641	Rs. 34,30,23,676	Rs. 34,81,01,317	Rs. 34,55,67,882

- **External Aided Projects**

EAP Receipts 2022-23	Receipt	Disbursement
AICRP PIG	5518733	5518733
AICRP POULTRY	2172202	2172202
AICRP GOAT	1450000	1450000
AICRP MEGASEED	2500000	2500000

OUTREACH-EVM	250000	250000
FPT	3529973	3529973
SERB	1975500	1975500
UNDP	2732400	2732400
KSHEC-Brain Gain Scheme	630924	280924
ICAR JRF/SRF	696360	696360
ICAR DEVELOPMENT GRANT	1500000	1500000
ICAR MCM	382013	382013
ICAR VETERINARY INTERNSHIP	3918400	3918400
ICAR STUDENT READY	576000	576000
ICAR NASF	1937878	1937878
ICAR EMERITUS	700000	700000
ICAR NCVTC	150000	150000
ICAR NTS	4225450	4225450
KSCSTE	1318000	559361
NABARD	844400	355800
AHD	1067000	1167000
NMPB	650000	650000
INSPIRE FELLOWSHIP	451520	451520
ARJUNA NATURALS	66000	66000
DCCD	240000	240000
ICMR	1558026	1558026
TRAINING	1900775	614705
KSWDC	18920	18920
K-DISC	743150	743150
IIL	2166219	2166219
GIZ	0	1013472
AVT		446402
TOTAL	**45869843**	**43086534**

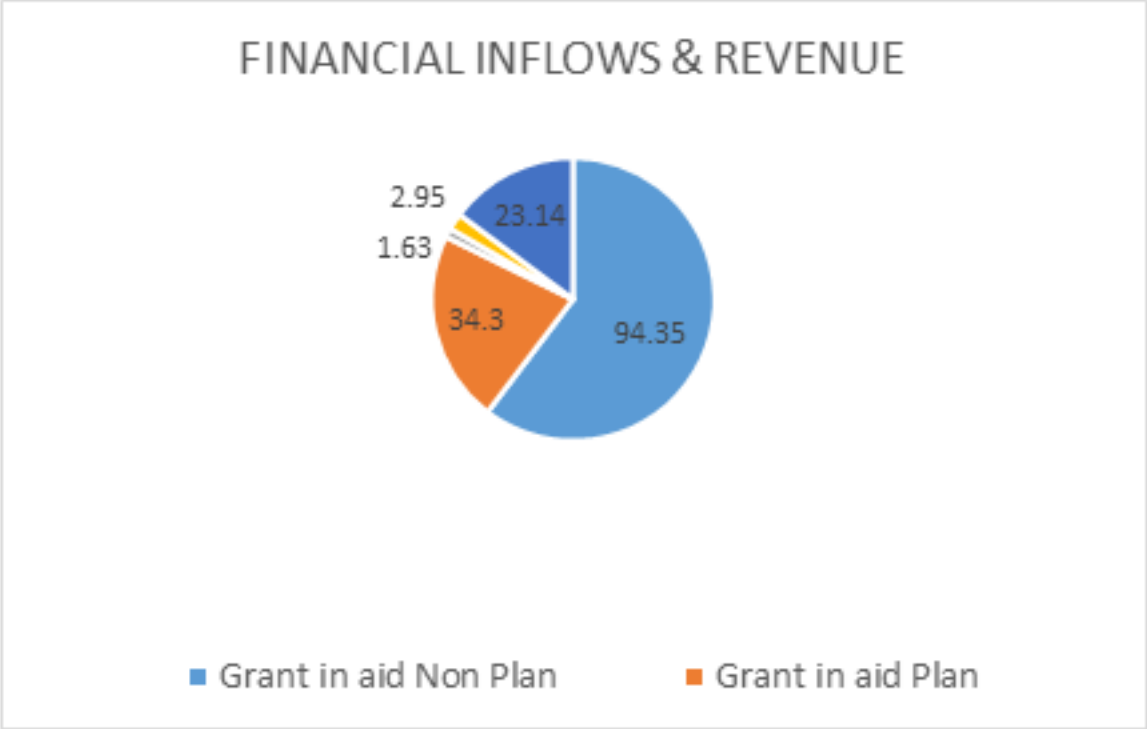
6. Breakdown of Pension Payments for the year 2022-23

Pension	Commutation	DCRG	TSEL	NPS University share
123968983	20790426	15979766	7327610	41235470
TOTAL – 20,93,02,255				

7. Concise Budget summary for the year 2022-23 (in crores)

Head	Non-Plan	PLAN	External Aided Projects	RIDF	New Courses	TOTAL
TOTAL	14922.00	4900.00	643.89	1442.00	123.92	22031.81

8.Financial Inflows and Revenue:



DIROCTORATE OF ACADEMIC AND RESEARCH

1. Scholarly and Investigative Programs

i. Existing programmes

The University offers the following courses for students coming various educational backgrounds.

Sl. No.	Name of Course
1	BVSc and AH
2	BTech Dairy Technology
3	BTech Food Technology
4	M.S. in Wildlife Studies
5	M.Sc. in Biostatistics
6	M.Sc. in Quality Control in Dairy Industry
7	M.Sc. in Biochemistry and Molecular Biology
8	M.Sc. in Applied Microbiology
9	M.Sc. in Animal Biotechnology
10	M.Sc. in Animal Sciences
11	M.Sc. in Applied Toxicology
12	P.G. Diploma in Climate Services in Animal Agriculture
13	P.G. Diploma in Climate Services
14	P.G. Diploma in Veterinary Cardiology
15	P.G. Diploma in Veterinary Anaesthesia
16	B.Sc. (Poultry Production and Business Management)
17	Diploma in Dairy Science
18	Diploma in Laboratory Techniques
19	Diploma In Feed Technology
20	PhD in Animal Breeding, Genetics and Biostatistics
21	PhD in Animal Nutrition
22	PhD in Animal Reproduction, Gynaecology and Obstetrics
23	PhD in Livestock Production and Management
24	PhD in Livestock Products Technology (Meat/Dairy)
25	PhD in Poultry Science
26	PhD in Veterinary Anatomy
27	PhD in Veterinary Extension Education

28	PhD in Veterinary Biochemistry
29	PhD in Veterinary Medicine (Clinical/Preventive)
30	PhD in Veterinary Microbiology
31	PhD in Veterinary Parasitology
32	PhD in Veterinary Pathology
33	PhD in Veterinary Pharmacology and Toxicology
34	PhD in Veterinary Physiology
35	PhD in Veterinary Public Health & Epidemiology
36	PhD in Veterinary Surgery and Radiology
37	Ph.D in Dairy Technology
38	Ph.D in Dairy Microbiology
39	Ph.D in Dairy Chemistry
40	Ph.D in Developmental Anatomy
41	Ph.D in Diagnostics and Vaccinology
42	Ph.D in Animal Sciences
43	Ph.D in Applied Microbiology
44	Ph.D in Experimental Toxicology
45	Ph.D in Climate Change in Animal Agriculture
46	MVSc in Veterinary Biotechnology
47	MVSc in Animal Genetics and Breeding
48	MVSc in Animal Nutrition
49	MVSc in Animal Reproduction, Gynaecology and Obstetrics
50	MVSc in Livestock Production and Management
51	MVSc in Livestock Products Technology (Meat/Dairy)
52	MVSc in Poultry Science
53	MVSc in Veterinary Anatomy
54	MVSc in Veterinary Extension Education
55	MVSc in Veterinary Biochemistry
56	MVSc in Veterinary Medicine (Clinical/Preventive)
57	MVSc in Veterinary Microbiology
58	MVSc in Veterinary Parasitology
59	MVSc in Veterinary Pathology
60	MVSc in Veterinary Pharmacology and Toxicology
61	MVSc in Veterinary Physiology
62	MVSc in Veterinary Public Health and Epidemiology
63	MVSc in Veterinary Surgery and Radiology
64	M Tech in Dairy Technology

65	M Tech in Dairy Microbiology
66	M Tech in Dairy Chemistry

ii) Existing programs: Research

A. State Plan Projects 2022-23

Administrative Sanction for State Plan projects of University with total outlay of Rs. 49 crore for the year 2022-23 was accorded by the Government vide GO (Rt) no. 283/2022/AHD, dt. 03/06/2022. Out of the total budgeted outlay of Rs. 49 Crores, Rs. 24.50 crores as 1st & IInd Installment and Rs. 4.68 crores being refund of amount resumed under state plan 2021-22 vide order No GO(Rt) No.384/2022 AHD dated 04/08/2022. Apart from this the University has also released the balance amount of Rs.50.77 Lakhs for the year 2021-22 to the ongoing plan projects for utilization during this year. The Government has also sanctioned an amount of Rs.5.12 crores as 3rd instalment vide GO (Rt) No. 75/2023/AHD, dated 27/02/2023, but the fund was credited to the University account on 10/03/2023 only. Out of the total amount of Rs. 29.69 crores, an amount of Rs. 26.09 crores has been utilized under various projects as on 09/03/2023.

- Eight plan review meetings have been conducted during this period for the evaluation of Plan projects (2022-23).
- Concurrent evaluation and monitoring of schemes 2022-23 were conducted by a team from Finance Department of Government of Kerala.
- The details of the University in connection with R&D Budget preparation has been submitted to the Government.

1. State Plan Projects

Sl. No	Name of Project	Outlay (Rs in lakh)	Fund released (Rs in lakh)	Department
	Scaling up of production of pigling	75.0	71.0	Centre for Pig Production and Research, Mannuthy
	Strengthening of Base Farm, Kolahalamedu as knowledge dissemination hub on latest technologies and innovations in dairy farming	64.0	63.9333	Base Farm, Kolahalamedu
	Sustainable Ex situ Conservation of Vechur and Kasargode cattle	55.0	52.81746	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy

	Integrated development of small-scale duck farming in northern Kerala ensuring sustainable livelihoods, food security, and economic empowerment of farmers	45.32	20.22	Instructional Livestock Farm Complex (ILFC), Pookode
	Enhancement of Productivity at Cattle Breeding Farm, Thumburmuzhy	45.0	37.76869	Cattle Breeding Farm, Thumburmuzhy
	Strengthening of Integrated Rural Poultry Production Centre	40.0	40.0	ARS, Thiruvazhamkunnu
	Strengthening of feed mill	33.0	6.0	Department of Animal Nutrition, CVAS, Mannuthy
	A comparative analysis of productive and reproductive performance of different purebred pigs under intensive management systems in Wayanad district of Kerala	32.0	25.0	Instructional Livestock Farm Complex (ILFC), Pookode
	"Silent Valley Farm Platform" for developing sustainable livestock production system	31.5	20.0	Livestock Research Station, Thiruvazhamkunnu
	A molecular approach in elucidating heat tolerence, disease resistance and reproductive robustness of indigenous cattle of Kerala	30.0	7.582	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy
	Augmenting productivity of livestock through genomic and nutritional interventions	28.5	9.0	Department of Animal Breeding, Genetics and Biostatistics, CVAS, Mannuthy
	Augmenting the quality and safety of foods of animals origin and waste valorization for entrepreneurship facilitation"	28.5	9.4126	Combined project of Department of Livestock Products Technology, Department of Veterinary Public Health, Department of Dairy Science, CVAS, Mannuthy
	Development of functional milk and meat products and safety assessment of foods of animal origin	28.5	11.168	Department of Livestock Products Technology, CVAS, Pookode

	Enhancement of productivity of livestock and poultry by optimising the management strategies in different agro-climatic regions of Wayanad district	28.5	9.49	Combined project of Department of Livestock Production Management, Department of Poultry Science, CVAS, Pookode
	Physiological, biochemical and morphological variations due to environmental stresses in crossbred and indigenous farm animals	28.5	11.1058	Department of Veterinary Anatomy, CVAS, Pookode
	Standardisation of in-ovo nutrition and vaccination in chicken and development of strategies for enhancement of poultry welfare in production systems by resource integration in selected five districts of Kerala	28.5	11.47	Combined project of Department of Livestock Production Management, Animal Husbandry Extension, Poultry Science, CVAS, Mannuthy
	Comprehensive health care of livestock and pet animals	27.5	9.433	Department of Animal reproduction gynaecology and obstetrics, CVAS, Mannuthy
	Development of a project model and strategies for the effective management of cattle infertility in selected areas of Wayanad	25.0	7.1	Department of Veterinary Surgery and Radiology, CVAS, Pookode
	Strengthening of Centre for Meat Type Duck Production at Avian Research Station, Thiruvazhamkunnu	25.0	24.59301	ARS, Thiruvazhamkunnu
	Evaluation of performance of crossbred pigs (25% share of AICRP)	24.0	24.0	Centre for Pig Production and Research, Mannuthy
	Novel diagnostic techniques for economically important bacterial, viral and parasitic diseases of large ruminants	24.0	11.5	Department of Veterinary Pathology, Department of Veterinary Microbiology, CVAS, Mannuthy
	Strategies for Improving the Fodder Production at Cattle Breeding Farm, Thumburmuzhy	24.0	21.28154	Cattle Breeding Farm, Thumburmuzhy
	Modification of Milk components to increase the bio availability and nutritive value of Milk based products	23.0	10.35	Department of Dairy Chemistry, VKIDFT, Mannuthy

	Upgradation of Dairy and Food Processing Operations in KVASU Dairy Plant.	23.0	16.46599	Dairy Plant, Mannuthy
	A multidisciplinary approach to combat concealed threats in dairy food chain- plan project	22.0	9.40104	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Scientific approaches for Rabbit productivity Improvement for enhancing farmer's income in Kerala	22.0	19.70213	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy
	Strengthening of goat and sheep farm	22.0	19.06259	Combined project of Department of Animal Genetics and Breeding, Goat and Sheep Farm, Mannuthy
	Nutritional and Genetic interventions for breed improvement of native Malabari goats of Kerala	20.47	8.83205	Combined project of Department of Animal Nutrition, Department of Animal Breeding & Genetics, CVAS, Pookode
	Field Progeny Testing (FPT) of Crossbred bulls (25% state share)	20.1	12.96	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy
	Development of a sustainable goat farming model for Wayanad District	20.0	16.45	Instructional Livestock Farm Complex (ILFC), Pookode
	Strengthening of Artificial Insemination Centre, Mannuthy	20.0	19.75594	Department of Animal reproduction gynaecology and obstetrics, CVAS, Mannuthy
	Sustainable Rabbit Breeding and Farming for Wayanad District	20.0	10.0	Instructional Livestock Farm Complex (ILFC), Pookode
	Comprehensive health care of livestock and pet animals	19.0	7.5	Department of Veterinary Surgery and Radiology, CVAS, Mannuthy
	Development of diagnostics and mining of lead molecules for the control of parasitic disease/ infection	19.0	7.0	Combined project of Department of Veterinary Parasitology and Department of Veterinary Pharmacology CVAS, Pookode

	Early and definitive identification of disease emergence in the scenario of extreme climatic change in farm animals, poultry and pets to support the sustainable and healthy animal rearing in northern Kerala through strengthening of post mortem and diagnostic facilities and providing training for farmers	19.0	9.9	Department of Veterinary Microbiology, CVAS, Pookode
	Molecular markers for thermo-tolerance and strategies for alleviation of thermal stress in ruminants	19.0	7.0	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Process standardization of cereal supplemented low calorie functional dairy products and evaluation of its nutritional profile and engineering properties	17.5	15.25	Combined project of Department of Dairy Technology & Department of Dairy Engineering, CDST, Pookode
	Application of fermentation technology: Process optimisation of daily staples	16.5	16.268	Combined project of Department of Dairy Chemistry & Department of Dairy microbiology
	Conservation and evaluation of Malabari and Attapadi black goat	16.0	15.615	Department of Animal Genetics and Breeding, Goat and Sheep Farm, Mannuthy
	Conservation, characterization and improvement of Tellicherry chicken breed of Kerala	15.0	15.0	AICRP on Poultry for Eggs, Mannuthy
	Interventions to Enhance the Quality and Safety of Dairy and Food Products'	15.0	7.7	Dairy Plant, Mannuthy
	Comprehensive in vitro and in vivo study of microvasculature and microenvironment associated with tumor hypoxia in the laboratory mouse model of triple negative breast cancer and canine mammary tumors.	14.0	12.90385	Combined project of Department of Veterinary Anatomy, Department of Veterinary Pathology CVAS, Mannuthy
	Genome-wide scan for the identification of genetic markers related to economic and functional traits in livestock and poultry	14.0	6.56	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy

	Inter Disciplinary research in Poultry Science for developing climate resilient birds for Kerala to establish a cost effective production system through breeding, nutritional and management interventions	14.0	10.84	College of Avian Sciences and Management, Thiruvazhamkunnu
	Revamping of small animal breeding station	14.0	9.0	Department of Animal Nutrition, CVAS, Mannuthy
	Comprehensive health care of farm animals and pets	10.0	10.0	Department of veterinary epidemiology and preventive medicine
	Enhancement of animal health and productivity through development of rapid accurate disease control measures for infectious disease of viral etiology	10.0	5.62875	Bioscience Research and Training Centre, Thiruvananthapuram
	Strengthening of Bioscience Research and training Centre, Thiruvananthapuram	10.0	5.546	Bioscience Research and Training Centre, Thiruvananthapuram
	Conservation of Vechur Cattle of Kerala	9.0	8.5	Cattle Breeding Farm, Thumburmuzhy
	AICRP on Malabari Goat Improvement (25% state share)	8.5	4.5	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy
	Artificial insemination for improving reproductive efficiency in pigs	8.0	8.0	Centre for Pig Production and Research, Mannuthy
	Conservation and maintenance of ankamali pigs of Kerala	8.0	8.0	Centre for Pig Production and Research, Mannuthy
	Bottling of purified compressed bio gas and production of bio-fertilizer from biogas plant slurry	7.0	5.23	Department of Livestock production Management, CVAS, Mannuthy
	Prevalence of zoonotic diseases among companion animals and pet birds in Kerala	7.0	5.0	Department of Veterinary Pathology, CVAS, Mannuthy
	Advanced mycotoxin testing facility for poultry feed	6.0	5.046	Centre for Advanced Studies in Poultry Science, Mannuthy
	Conservation, characterization and popularization of native varieties of Poultry in Kerala	6.0	5.048	Centre for Advanced Studies in Poultry Science, Mannuthy

	Strengthening of NABL accredited feed analysis laboratory	6.0	4.0	Department of Animal Nutrition, CVAS, Mannuthy
	Strengthening of NABL accredited Quality Control Laboratory	4.0	4.0	Department of Veterinary Public Health, CVAS, Mannuthy
	Surveillance of zoonotic diseases among companion animals and pet birds in Kerala	2.5	2.5	Department of Veterinary Epidemiology and Preventive Medicine, CVAS, Mannuthy
	Hatchery waste disposal and its effective utilization	2.0	1.5825	Centre for Advanced Studies in Poultry Science, Mannuthy
	Studies on awareness, molecular epidemiology and sero- conversion of rabies in domestic animals	1.6	1.6	Department of Veterinary Epidemiology and Preventive Medicine, CVAS, Mannuthy
	Revolving fund starter culture	0.5	0.5	Department of Dairy Microbiology, VKIDFT, Mannuthy

B. State Plan Projects 2019-20 (RIDF)

The mobilization activities at site for the works for the labours under RIDF project entitled "Establishment of referral and diagnostic laboratory for supporting livestock farming and diagnostic zoonotic diseases" was done and structural drawing of foundations duly proof checked by Thrissur Engineering college and approved GFC by ADG (RB) issued to contractor. BSL- 3 Lab consultancy draft tender document issued for comments of COVAS for comments/conforming its scope/requirement. The Central Public Works Department has informed that the agency M/S P.C Thomas has been filed a writ petition in the Hon'ble High Court of Kerala with regards to the work contract. Regarding the financial status of the project, it may be noted that out of Rs. 1.3707 crore released to the ID wing Director for the civil works an amount of Rs. 1.3089 crore was resumed by the Government from the project on 31/03/2022 and the amount has not been received back.

C. State Plan Projects 2022-23 (RIDF)

Three project proposals under RIDF for a total outlay of Rs. 1330 lakh has been submitted to the Government during the financial year (2022- 23) for approval and funding.

D. State Plan (2023-24)

The annual Plan proposal with total outlay of Rs. 58 crores for the year 2023-24 has been prepared and submitted to the Government. However, an maount of Rs. 49 crores has been earmarked for the University under State Plan (2023-24) as per the budget of Kerala for the year 2023-24. A project proposal of outlay Rs. 9.5 crore has also been submitted to Government under RIDF for 2023-24.

E. Externally aided projects/Revolving fund projects

Currently, the University has 56 ongoing research projects with execution period up to five years with a total financial support of Rs. 10.24 crores from different external agencies as detailed below.

Sl No	Name of Funding Agency	Number of ongoing projects	Outlay (in Lakhs)
1	ICAR	11	446.75
2	DST	08	176.62
3	DBT	01	39.33
4	KSCSTE	16	58.74
5	AHD	05	77.31
6	ATMA	03	31.77
7	NABARD	02	24.43
8	IDSP	01	3.00
9	NMPB	01	21.38
10	UNDP	01	45.54
11	ICMR	01	19.07
12	Others	06	82.55
	TOTAL	**56**	**1026.49**

The following new projects have been sanctioned by various funding agencies during this period.

Sl. No.	Project	Funding Agency	Outlay (Rs. in lakh)
1	Effect of supplementation of natural antioxidant (curcumin) and omega-3 in broiler feed on chicken meat quality" (Stage II)	M/s Arjuna Natural Pvt. Ltd., Aluva	0.66
2	Development of small molecular weight bioactives and polysaccharides from marine and coastal bivalves to develop prospective nutraceutical products	ICAR-NASF	33.01
3	Evaluation of maternal antibody transfer against infectious bronchitis and infectious bursal disease in chicken	AHD	18.65
4	An open label randomised multicentric study to assess safety and immunogenicity of Indian Immunologicals Limited manufactured Infectious Bovine Rhinotracheitis Recombinant Vaccine (Inactivated) in Cattle	M/s Indian Immunologicals Limited, Hyderabad	30.44

5	Corroborating host-vector-pathogen interplay in subclinical forms of arthropod-borne hemoparasitic diseases in goats	DST-SERB	29.40
6	Frontline demonstration unit of high density cashew plantation at Livestock Research Station, Thiruvazhamkunnu, Palakkad	Directorate of Cashew nut and Cocoa Development (DCCD)	2.40

The detailed project proposal of 'Translational Research Centre' of Kerala Veterinary and Animal Sciences University has been submitted to the Government and as per the direction of the Government the proposals have been uploaded in KIIFB portal. Besides this, 26 new proposals have been submitted to various funding agencies during this period. The projects have been approved with a total outlay of Rs. 20 crores.

Also, four project proposals with a total outlay of Rs. 13.59 crore under National Livestock Mission has been submitted to the Government for consideration and financial assistance.

Besides, 37 projects are running in the University under Revolving Fund mode.

2. Seminars b) training c) Seminars participated

3. Publications

i. *Journals/ Books / text books/ popular articles*

1. Aishwarya V., Venkatachalapthy R. T., Pramod S, T.V. Aravindakshan and V. Beena. 2022. Expression profiling of Ecto-NOX Disulfide-Thiol Exchanger 2 (ENOX2) gene during heat stress in Attappady black and Malabari goats. *Indian J. Small Rumin.* 53 (3):363-367.
2. Saranya, S. K., Marykutty Thomas, Thirupathy Venkatachalapathy. R., Aravindakshan, T. V. and Raji, K. 2022. Design of a tetra-primer amplification refractory mutation system technique for cost effective genotyping of single nucleotide polymorphism of gonadotropin releasing hormone receptor gene in goats. *Pharma Innov. J.* SP-11(5): 491-494.
3. Akhila, Bindu K. A. Elizabeth Kurien. 2022. "Identification of SNPs in exon 1, 2 and 14 of ITGβ6 and its association with FMD infection in crossbred cattle of Kerala". *Pharma Innov. J.,* 3(11).1552-1555.
4. Shibu Simon, A. Ramanathan1, K. N. Aravinda Ghosh. 2022. Doppler Ultrasonographic Assessment of Maternal and Foetal Blood Flow in Canine Pregnancy and Its Application in the Critical Management of Gestation. DOI: 10.18805/IJAR.B-4286. *Indian J. Anim. Res*., 56 .7: 811-821.
5. Shibu Simon, Jacob Alexander, P. Anzeena Hind, T. Rajiv, S. Sooryadas, P.T. Dinesh, P.R. Umashankar, E. K. Easwaran, R. Anoop, A.G. Gouri, V.D. Vijayakumar. 2022. A Novel Protocol for Medical Management of Cystic Endometrial Hyperplasia-Pyometra in White Tiger. DOI: 10.18805/ag. D-5510. *Agri. Sci. Dig.* 42 (4): 500-505.
6. Harshan, H. M., Jayakumar, C., Aravind, A., Nazer, A. T., Krishnan, A. and Abhilash, R. S. 2022. Successful management of pyometra in a golden retriever bitch with mifepristone and

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8. Aravind A., Simon S., Jayakumar, C., Abhilash R. S., Venkatachalapathy R. T., Raji K. and Ajith K.S. 2022. Effect of feeding *Moringa oleifera* leaves on growth, haemato biochemical profiles and puberty in Malabari doelings. *J. Vet. Anim. Sci*. 53(4): 522-528.

9. Aravind, A., Simon, S., Jayakumar, C., Abhilash, R. S., Venkatachalapathy, R. T., Raji, K. and Gleeja, V. l. 2022. Ovarian follicular dynamics in peripubertal Malabari goats. *J. Vet. Anim. Sci.* 53(4): 529-534.

10. Sahib, L., Pramod, S., Becha, B. B., Joseph, A. P. and Venkatachalapathy, R. T. 2022. Effect of pre- and post-partum challenge feeding on performance and serum mineral levels of crossbred dairy cattle. *Indian J. Dairy Sci*., 75(6): 569–573.

11. Becha, B.B., Sudha, G., Navya, M. and Chethana, D.H. 2022. Subinvolution of placental sites – its diagnosis and treatment in a Labrador dog. *Indian J. Canine Pract*. 14(2): 101–103.

12. Kutty, C. I., Abdul-Azeez, C. P., Becha, B.B., Pramod, K., Sunanda, C. and Anil, K. S. 2022. Thermal stress influence and seasonal pattern of ovarian follicular growth assessed through ultrasonography in Sunandhini cows under a humid tropical climate. *Eur. J. Vet. Med*. 2(5): 16–21.

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19. Javed Jameel, A., Justin Davis, K., George, A., Sangeetha, S. G., Vinod Kumar, K. and Udayasree, V. J. 2023. Pyothorax in a cat due to Acinetobacter spp. infection: a case report. *J. Vet. Anim. Sci.* 54(1):229-233.

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1. Books/ Book Chapters

1. Harikumar, S. 2023. Mrugasamrakshanam- Marunnakalavasthayil (Mal), Published by Directorate of Entrepreneurship (Chapter edited).
2. Chacko, B. P and Mani, B, K. 2022. Learning management system- Digital learning techniques in Digital culture, digital literacy and inclusive education in India. Kanishka publishers, distributors, New Delhi. ISBN: 978-93-91450-06-9.
3. Mini, M. and Ambily, R. 2023. Detection of Antimicrobial Resistance in Veterinary Bacterial Pathogens. In: Mothadaka, M. P., Vaiyapuri, M., Rao Badireddy, M., Nagarajrao Ravishankar, C., Bhatia, R., Jena, J. (eds) Handbook on Antimicrobial Resistance. Springer, Singapore. https://doi.org/10.1007/978-981-16-9723-4_30-1.
4. Ramnath,V. Chapter 44. 'Introduction of gastrointestinal physiology' in Dukes Physiology of Domestic Animals. 13th edition. Indian adaptation. Wiley India Pvt. Ltd.
5. Sreekumar T. R. Chapter 'General functions of gastrointestinal tract and their control' in Dukes Physiology of Domestic Animals. 13th edition. Indian adaptation. Wiley India Pvt. Ltd.
6. J. S. Bedi, Deepthi Vijay & Pankaj Dhaka. Textbook on Zoonoses Publishers: Wiley 2022 (under publication stage) [Book link: https://www.wiley.com/en-us/Textbook+of+Zoonoses-p-81119809517] ISBN: 1119809517, 9781119809517.
7. Gleeja V. L., 2022 Introduction to SPSS. Chapter in book Senthil K. R., Gleeja V. L., Sujith S, Geetha R, Devi SS, Silpa S, Harikumar S., Irshad A., Jiji R. S., Reeja G. and Rajeev T. S. 2022. Statistics in science: Modalities and applications Directorate of Entrepreneurship, Kerala Veterinary and Animal Sciences University.
8. Bindya Liz Abraham, Muhasin Asaf V.N., Lali F. Anand and E. M. Muhammed. 2023. *Laboratory Manual for Basic Bioinformatics.*, pp 38.
9. Biju Chacko. 2022. Book chapter entitled, "Achieving 'Aatmanirbhar Bharath' through Animal Husbandry in India and Kerala" in the book titled, "Advancing Innovations in Sustainable Agriculture", published by Vital Biotech Publication, Kota, Rajasthan., pp: 236-254.
10. Biju Chacko and Anugna, R. 2023.Book Chapter titled, "Ayurvedic Pharmaceutic Residues as Non-Conventional Feed Resources (NCFRS) For Enhancing Growth Performance of Malabari Goat Kids. In the book titled, "Impacts & Prospects of Food Science in Global Food Security" with ISBN: 978-81-943375-8-4. Published by Mahima Research Foundation and Social Welfare, Varanasi, UP. pp: 23-31.

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14. Kumaresan A., Muhammad Aslam M.K., Gupta, M.D., Sinha M.K. 2022. Semen proteomics and metabolomics. In Frontier Technologies in Bovine Reproduction. Eds. A. Kumaresan, A.K. Srivastava. Springer. 147-175.

15. Krithiga K. and Sreeja R. Nair. 2023. Book chapter on "Bovine mastitis- biofilms and biomarkers" by, accepted for publication by the editorial board, to be published in the edited book "Recent Advances in Agricultural Sciences and Technology" of ICAR-Indian Grassland and Fodder Research Institute, Southern Regional Research Station, Dharwad & National Agriculture Development Cooperative Ltd. (NADCL), Baramulla, J & K.

16. Aparna V. Sudhakaran and Himanshi Solanki. 2022. Phytochemicals and Medicinal plants in Food design –Chapter- Gut microbiota- specific food design written by - Apple academic press publishers- May 2022.

Popular Articles

1. John Abraham 2022. Viswasthanaya Kavalkaran. Haritha Muttam, Vol.5. Issue 1. September 2022.

2. John Abraham 2022. Naikkalile inthian janusukal. Haritha Muttam, Vol.5. Issue 1. September 2022.

3. John Abraham 2022. Samburnna misritha theettakramam. Kerala Karshakan, August 2022.

4. John Abraham 2022. Kuranjachelavil kuuduthal paal. Karshaka Sree, Malayala Manorama Vol.28. Issue 3. 2022.

5. Rajani. C. V. World of Vision in Lady Vets Day 2023. Egalite Souvenir 8th March, 2023. Published by IVA, Kerala Thrissur Unit. 22-27.

6. Pratheesh Mankuzhy, delivered an invited lecture on 'Role of Wnt signaling pathway in MSC regulated angiogenesis' in a 21 day Centre for Advanced Faculty Training program conducted on 'Stem cell therapeutics on livestock and pets' at Department of Veterinary Physiology and Climatology, ICAR-Indian Veterinary Research Institute on 20th January 2023.

7. Pratheesh Mankuzhy delivered an invited lecture on 'Role of signaling pathway in stem cell differentiation' in a 7 day Training program conducted on 'Stem cell therapeutics on livestock and pets' at Department of Veterinary Physiology, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, India on 18th December 2022.

4. Aggregate Students Body and Turnout

a) Student Status in the University/ Constituent College/Faculty (2022-23):

11. Student Status in the University/ Constituent College/ Faculty (during 2022-23):

Sl. No.	Name of College	Parameters	Numbers				
			Bachelor's	Master's	Ph.D.	Others Including Diploma	Total
1	CVAS, Pookode	Intake	100	64	18	40	222
		Enrolled	100	47	4	22	173
		Passed Out	116	48	2	30	196
2	CVAS, Mannuthy	Intake	125	77	16	69	287
		Enrolled	125	77	16	69	287
		Passed Out	141	94	11	75	321
3	VKIDFT, Mannuthy	Intake	46	22	7	3	78
		Enrolled	42	19	7	2	70
		Passed Out	31	18	4	3	56
4	CDST, Pookode	Intake	22	-	-	-	22
		Enrolled	15	-	-	-	15
		Passed Out	30	-	-	-	30
5	CDST, Thiruvananthapuram	Intake	22	-	-	-	22
		Enrolled	17	-	-	-	17
		Passed Out	19	-	-	-	19
6	CDST, Kolahalamedu.	Intake	22	-	-	-	22
		Enrolled	11	-	-	-	11
		Passed Out	19	-	-	-	19
7	CASM, Thiruvazham-kunnu.	Intake	44	-	-	-	44
		Enrolled	27	-	-	-	27
		Passed Out	48	-	-	-	48

Category wise total number of students in the University during the reported period

Programme	No. of students					
	SC	ST	OBC	EWS	General	Total
Bachelor's	150	56	993	73	496	1768
Master's	28	12	126	9	114	289
Ph. D.	9	1	33	0	53	96
Others	21	8	81	7	44	161

Gender Pattern amongst Student Enrolled in University/ Constituent College/Faculty:

SN	Name of College	Parameters	Numbers			
			Bachelor's	Master's	Ph.D	Total
1	CVAS, Pookode	Male	193	35	6	234
		Female	333	74	14	421
		Total	**526**	**109**	**20**	**655**
2	CVAS, Mannuthy	Male	252	44	27	323
		Female	411	124	42	577
		Total	**663**	**168**	**69**	**900**
3	VKIDFT, Mannuthy	Male	72	3	1	76
		Female	161	9	6	176
		Total	**233**	**12**	**7**	**252**
4	CDST, Pookode	Male	20	-	-	20
		Female	52	-	-	52
		Total	**72**	-	-	**72**
5	CDST Thiruvananthapuram	Male	13	-	-	13
		Female	76	-	-	76
		Total	**89**	**-**	**-**	**89**
6	CDST, Kolahalamedu.	Male	12	-	-	12
		Female	41	-	-	41
		Total	**53**	-	-	**53**
7	CASM, Thiruvazhamkunnu.	Male	76	-	-	76
		Female	56	-	-	56
		Total	**132**	-	-	**132**

Total number of students registered for various technology enabled distance (2022-2023)

Sl. No	Name of course	Total Number of students	Male	Female
1	Certificate Course in Animal Forensics (Certificate course)	3	3	0
2	Post Graduate Certificate Course in Veterinary Forensic Medicine (MOOC)	3	3	0
3	Post Graduate Certificate Course in Farm Journalism (MOOC)	5	1	4
4	Post Graduate Certificate in One Health Surveillance (Certificate course)	1	0	1
5	Post Graduate Certificate in Veterinary Homoeopathy (Certificate course)	62	49	13

6	Post Graduate Diploma in Applied Animal Welfare Ethics and Law	25	13	12
7	Post Graduate Diploma in Dairy Entrepreneurship (MOOC)	19	10	9
8	Post Graduate Diploma in Ethnopharmacology	2	1	1
9	Post Graduate Diploma in Food Safety and Quality Assurance	23	7	16
10	Post Graduate Diploma in One Health	15	4	11
11	Post Graduate Diploma in Poultry Entrepreneurship (MOOC)	36	19	17
12	Post Graduate Diploma in Recent Advancement in Therapeutic and Prophylactic Management of Infectious Diseases of Livestock	10	7	3
13	Post Graduate Diploma in Therapeutic Management of Infectious Diseases of Pet Animals and Pet Birds	91	52	39
14	Post Graduate Diploma in Toxicologic Pathology	26	17	9
15	PG Diploma in Small Animal Theriogenology	47	31	16

5. Chief of Disciplines, Scholarly Staff and Turnout

6. Student details - Gender based data/SC/ST based list – given above

7. Commenced course offerings

i. Details of new courses started

Regular Programmes

S. No	Course
1	MSc in Applied Toxicology

Distant programmes

S. No	Course
1	Certificate Course in Veterinary Nursing

8. Unveiled Academics extensions

i. Details of new Departments created (Deans)

9. Scholarships conferred

A. Merit Scholarship for the following number of students was granted during the period.

Sl. No.	Name of the Programme	Colleges	Year of Admission and Year of study	No. of students

1	B.Sc. (PP&BM)	CASM, Thiruvazhamkunnu	2019	5
			2021	5
			2022	3
2	BVSc&AH	CVAS, Mannuthy	2017	12
			2020	8
			2021	13
3	BVSc & AH	CVAS, Pookode	2021	6
3	B.Tech	CDST, Pookode	2019	4
			2022	2
4	B.Tech (DT&FT)	VKIDFT, Mannuthy	2018	6
			2019	8
			2020	6
			2021	6
			2022	6
5	B.Tech	CDST, Thiruvananthapuram	2018	2
			2019	2
			2020	2
			2022	2
6	B.Tech	CDST, Kolahalamedu	2018	2
			2022	2

B. Merit cum Means Scholarship for the following number of students was granted during the period

Sl No.	Name of the Programme	Colleges	Year of Admission and Year of study	No. of students
1	BVSc&AH	CVAS, Mannuthy	2021	6
2	BVSc&AH	CVAS, Pookode	2021	2
3	B Tech	VKIDFT	2022	3
4	B Tech	CDST, Pookode	2022	1
5	B Tech	CDST, Kolahalamedu	2022	1
6	B Tech	CDST, Trivandrum	2022	1
7	BSc.(PP & BM)	CASM, Thiruvazhamkunnu	2022	2

C. JRF was granted for the following number of students during this period

Sl. No	Course	College	Year	No. of students
1	MVSc	CVAS, Pookode	2020	1
2			2021	32
2	MVSc	CVAS, Mannuthy	2021	67

3	MTech	VKIDFT, Mannuthy	2021	6

D. SRF was granted for the following number of PhD students during this period

Sl. No	College	Year	No. of students
1	CVAS, Mannuthy	2021	9
2	CVAS, Pookode	2021	5
3	VKIDFT, Mannuthy	2021	3

10. Internship programme offered (Deans)

11. Externship (Deans)

12. Eminent guests enriching the campus

i. Brain gain

Various activities under Brain Gain Programme have been conducted during this period by engaging Dr. Maneesha S. Mohan, Alfred Chair Associate Professor in Dairy Manufacturing, Dairy and Food Science Department, South Dakota State University, Brookings, USA as an expert/ visiting scholar in VKIDFT Mannuthy. The report of the programme and Statement of Expenditure & Audited Utilization Certificate of the above said programme has been submitted to the KSHEC. The KSHEC has sanctioned and released Rs. 2,80,924/- towards the programme being reimbursement.

The KSHEC has sanctioned to conduct activities under Brain Gain Programme by inviting Dr. Jacob Chacko Thundathil, Faculty of Veterinary Medicine, University of Calgary, Canada during 2023 and released an amount of Rs. 3,50,000/- (70 % of the total outlay of Rs.5.00 lakh) to the account of the Finance Officer as advance for the above purpose intended to start the programme in the University by 20/03/2023.

13. Memoranda of Understanding Endorsed

Various MoUs have been signed between the University and reputed National International Institution to foster collaboration in the field of academics, research and extension. Collboartion with the industry is also given priority and MoUs have been signed with reputed firms. During 2022-2023, MoUs with the following instituions/firms were signed by the University:

Sl. No.	Name of Institution	Date of commencement	Period
1	National Ayurveda Research Institute for Panchakarma, Cheruthuruthy, Thrissur	10.01.2023	5 years
2	Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) Chennai	06.03.2023	5 years
3	Oklahoma State University College of Veterinary Medicine, Stillwater, Oklahoma, USA	14.02.2023	5 years

4	Toxicology Excellence for Risk Assessment, Ohio, USA	22.10.2022	5 years
5	Amrita Institute of Medical Sciences and Research Centre (AIMS), Amrita Vishwa Vidyapeetham, Healthcare Campus, Elamakkara, Kochi	20-02-2023	5 years
6	ALEPA Dairy Foods Pvt Ltd Bangalore, India	24.03.2023	3 years
7	Xilatron Technologies Thrissur	23.07.2022	10 years

14. Reflection of Alumni Nexus (Deans/Special Officers)

15. Emergence of Excellence: Convocation Gala

The 3rd convocation ceremony of the University was held on 7th October, 2021. Hon'ble Governor and Chancellor of KVASU, Shri. Arif Mohammed Khan confered the degrees and awards in the august presence of Hon'ble Pro-Chancellor, Smt. J. Chinchurani. The 4th convocation is scheduled to be held on 20th May, 2023.

1. Research Highlights

2. 1. **External Aided Projects**

Sl. No	Name of the Project	Funding Agency	Name of PI	Department	Total outlay (Lakhs)
	Investigation of calf rearing practices to evolve better replacement heifers for Kerala	AHD	Dr. Manju Sasidharan	Department of Livestock production Management, CVAS, Mannuthy	3.6
	Effect of the natural ingredients on physico-chemical, microbiological and organoleptic quality of beef under chilled (4°C) storage	AVT Naturals Pvt. Ltd.	Dr. V. N. Vasudevan	Department of Livestock Products Technology, CVAS, Mannuthy	4.9
	Effect of supplementation of natural antioxidants and omega 3 in broiler feed on chicken meat quality	Arjuna Naturals Pvt Ltd	Dr. Sathu T	Department of Livestock Products Technology, CVAS, Mannuthy	2.0

	Role of Parkin mediated mitophagy in metastatic melanoma in the in vivo mouse and in vitro anoikia models	Science and Engineering Research Board (SERB) – TARE Project	Dr. Leena Chandrasekhar	Department of Veterinary Anatomy, CVAS, Mannuthy	18.30
	Evaluation of inactivated and subunit vaccines against Riemerellosis among ducks in Kerala	NABARD	Dr. Priya P.M	Department of Veterinary Microbiology, CVAS, Mannuthy	18.50
	Molecular characterisation, antibiogram and geospatial analysis of leptospiral isolates from Kerala	ICMR	Dr. Ambily R	Department of Veterinary Microbiology, CVAS, Mannuthy	29.75
	Development of recombinant protein based diagnostic kit for visceral Schistosomosis and sero-epidemiological study of the infection in ruminants.	KSCSTE	Dr. Bindu Lakshmanan	Department of Veterinary Parasitology, CVAS, Mannuthy	12.57
	Sustainable parasite management using anaemia eye card in goats	NABARD	Dr. K. Syamala	Department of Veterinary Parasitology, CVAS, Mannuthy	5.93
	Bioactivity guided fractionation and isolation of bioactive molecules from Thespesia populnea medicinal plant with anticancer potential against triple negative breast cancer	National Medicinal Plants Board	Dr. Bibu John Kariyil	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy	21.39
	Development of small molecular weight bioactives and polysaccharides from marine and coastal bivalves to develop prospective nutraceutical products	ICAR-NASF	Dr. Bibu John Kariyil	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy	33.00

	Development of an eco-friendly smart organ-ogel based drug delivery system for administration of antibiotics in aquaculture and evaluation of its efficacy as targeted drug delivery system in fishes	KSCSTE	Dr. Suresh N Nair	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy	17.22
	Evaluation of dietary supplementation of exogenous fibrolytic enzymes on *in vitro* nutrient digestibility for ruminants	KEMIN, Chennai	Dr. S. Senthil Murugan	Department of Animal nutrition, CVAS, Pookode	6.96
	Lion-tailed macaque (*Macaca silenus*): feeding ecology and management of an endangered species in captivity	DST-WOSA	Dr. S. Senthil Murugan (Mentor)	Department of Animal nutrition, CVAS, Pookode	20.85
	Gene network and pathway analysis of the impact of heat stress on exotic Large White Yorkshire pigs	KSCSTE	Dr. Roshin Anie Jose	Department of Livestock Production Management, CVAS, Pookode	21.24
	Multi-omic approach in elucidating the higher disease resistance, heat tolerance and robust reproductive health of indigenous cattle of Kerala	Chancellor' award project	Dr. Radhika G.	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy	35.00
	Genomic approach for genetic improvement and conservation of important aquaculture species, *Eutroplus suratensis* and *Trachinotus blochii* under changing climate scenario	SERB-TARE	Dr. Lali F Anand	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy	7.50
	Comprehensive study on spermatozoa of Vechur and Crossbred bulls for identifying breed specific and fertility related biomarkers	DST-SERB	Dr. Muhammad Aslam M.K.	Base Farm, Kolahalamedu	27.38
	Establishment of demonstration plot with high density in cashew	Directorate of Cashew & Cocoa Development	Dr. Prasad A	Livestock Research Station, Thiruvazhamkunnu	2.40

	Pilot study on the seroprevalence of SARS-COV-2 in cats in Thiruvanathapuram district	AHD, Government of Kerala	Dr. Sreeja R. Nair	Bioscience Research and Training Centre, Thiruvananthapuram	20.06
	Evaluation of maternal antibody transfer against infectious bronchitis and infectious bursal disease in chicken	AHD, Government of Kerala	Dr. Krithiga K.	Bioscience Research and Training Centre, Thiruvananthapuram	18.64
	Milk as a reservoir of Multiple Drug Resistant bacteria – An assessment	KSCSTE – Student Project	Dr. A. K Beena	Department of Dairy Microbiology, VKIDFT, Mannuthy	0.10
	Post pasteurization contaminating bacteria as shelf life determinants of pasteurized milk	KSCSTE – Student Project	Dr. Ligimol James	Department of Dairy Microbiology, VKIDFT, Mannuthy	0.10
	Microbiological quality profiling of pasteurized milk during refrigerated storage	KSCSTE – Student Project	Dr. Aparna Sudhakaran V	Department of Dairy Microbiology, VKIDFT, Mannuthy	0.10
	Genetic up breeding of duck production to strengthen livelihood security in NER of India by converging conventional and molecular techniques	Department of Biotechnology	Dr. Stella Cyriac,	College of Avian Sciences and Management, Thiruvazhamkunnu	33.41

ICAR Network Projects

SL No	Name of faculty (Principal Investigator)	Title of Project	Department	Outlay/ year Lakhs
	Dr. N. Madhavan Unny	ICAR outreach programme on ethnoveterinary medicine	Department of Clinical Medicine, Ethics and Jurisprudence, CVAS Mannuthy	4.25
	Dr. S. Sankaralingam	AICRP on Poultry Breeding, Mannuthy Centre	AICRP on Poultry for Eggs, Mannuthy	83.19
	Dr. K. Anilkumar	Field Progeny Testing Scheme	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy	34.75

	Dr. R. Thirupathy Venkitachalapathy	AICRP on Malabari Goat Improvement	Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy	14.5
	Rejeesh R.	Network centre of Dairy Microbes (ICAR-NCVTC, Hisar, Haryana)	College of Dairy Science and Technology, Thiruvananthapuram	1.50
	Dr. A. P. Usha	Megaseed project on pigs	Centre for Pig Production and Research, Mannuthy	45.50
	Dr. A.P. Usha	AICRP on pigs	Centre for Pig Production and Research, Mannuthy	45.50

2. Research Report

Attached

3. **Ph.D. and P.G. Thesis**

Sl. No.	Title of the Thesis/Dissertation	Degree conferred	Department
	Prediction of protein coding genes in rumen metagenomic reads of cattle using machine learning based approach	PhD	Department of Animal breeding, Genetics and biostatistics, CVAS, Mannuthy
	Follicular dynamics and expression profile of *B-cell lymphoma-2* gene in Malabari doelings supplemented with *Moringa oleifera* leaves	PhD	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy
	Comparative histomorphology and ultrastructure of the skeletal muscles of broiler and Kuttanad ducks	PhD	Department of Veterinary Anatomy, CVAS, Mannuthy
	"Evaluation of anticancer property of recombinant goat lactoferrin"	PhD	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Analysis of differential expression of microRNA in lipopolysaccharide challenged lymphocytes of Vechur and crossbred cattle	PhD	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Comparative efficacy of different tests for ante-mortem diagnosis of bovine tuberculosis	PhD	Department of Veterinary Microbiology, CVAS, Mannuthy
	Detection and characterisation of bacterial and viral agents associated with neonatal diarrhoea in calves	PhD	Department of Veterinary Microbiology, CVAS, Pookode
	Histomorphological, immunohistochemical and molecular studies on desmoplastic reactions in canine mammary tumours	PhD	Department of Veterinary Pathology, CVAS, Mannuthy

	Efficacy of campylophages and selected phyto-chemicals in the control of campylobacter biofilms	PhD	Department of Veterinary Public Health, CVAS, Mannuthy
	Development and quality evaluation of shelf stable extruded snack incorporated with chicken meat	PhD	Department of Livestock Products Technology, CVAS, Pookode
	Multidrug resistance profiling of bacterial pathogens in bovine mastitis and in vitro therapeutic interventions using silver nanoparticles	PhD	Department of Veterinary Epidemiology and preventive medicine, CVAS, Pookode
	Rearing of Large White Yorkshire pigs in different feeding systems for meat and biodiesel Production	PhD	Department of Veterinary Public Health, CVAS, Pookode
	Impact analysis of management practices on reproductive performance of sows in different agro-climatic zones of Kerala	PhD	Department of Veterinary Public Health, CVAS, Pookode
	Development of region specific phage resistant dairy starter combinations for the state of Kerala	PhD	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Autologous platelet rich plasma for treatment of sole lesions and expression profile of associated biomarkers in dairy cattle	PhD	Department of Veterinary Surgery and Radiology, CVAS, Mannuthy
	Transcriptome analysis of pectoral muscle among Pekin and Kuttanad ducks	PhD	Department of Poultry Science, CVAS, Mannuthy
	Biological, anthropogenic and ecological factors contributing to the emergence of human-tiger conflict in Wayanad district of Kerala	PhD	Department of Veterinary Public Health, CVAS, Pookode
	Social and feeding behaviour in free-ranging and captive populations of Lion-Tailed Macaque	PhD	Department of Veterinary Public Health, CVAS, Pookode
	Characterisation of acid soluble collagen from Daggertooth Pike Conger (*Muraenesox Cinereus*) and its application in wound healing	MVSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Antibiotic resistance profiling of bacteria isolated from corneal ulcers in dogs	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Therapeutic response of goats with muscle weakness to Vitamin E- Selenium supplementation	MVSc.	Department of Clinical medicine, ethics, jurisprudence, CVAS, Pookode
	Holter electrocardiographic monitoring in suspected cardiac disorders of dogs	MVSc.	Department of Clinical medicine, ethics, jurisprudence, CVAS, Pookode
	Clinico-therapeutic studies on Idiopathic cystitis in domestic cats	MVSc.	Department of Clinical medicine, ethics, jurisprudence, CVAS, Pookode
	Efficacy of dry cow therapy on the persistence of common contagious pathogens in bovine udder in Wayanad district	MVSc.	Department of Veterinary Epidemiology and preventive medicine, CVAS, Pookode

	A genome-wide scan for selection signatures in Ankamali pigs and its genomic comparison with exotic pig breeds	MVSc.	Department of Animal breeding, Genetics and biostatistics, CVAS, Mannuthy
	Genetic variability of growth hormone gene and its association with growth and carcass traits in native ducks of Kerala	MVSc.	Department of Animal breeding, Genetics and biostatistics, CVAS, Mannuthy
	Association of mucin6 genotypic variants with gastro-intestinal parasitic resistance traits in Malabari goats of Kerala.	MVSc.	Department of Animal breeding, Genetics and biostatistics, CVAS, Mannuthy
	Expression profiling if Ecto-NOX Disulfide-Thiol Exchanger 2 (*ENOX2*) gene in response to heat stress in goats	MVSc.	Department of Animal breeding, Genetics and biostatistics, CVAS, Mannuthy
	Evaluation of candidate gene associated with canine mammary tumour	MVSc.	Department of Animal breeding, Genetics and biostatistics, CVAS, Mannuthy
	Analysis of *gonadotropin releasing hormone receptor gene* polymorphisms and their association with litter size in native goat breeds of Kerala	MVSc.	Department of Animal breeding, Genetics and biostatistics, CVAS, Mannuthy
	Assessment of sire evaluation methods in crossbred cattle of Kerala	MVSc.	Department of Animal breeding, Genetics and biostatistics, CVAS, Mannuthy
	Feeding value of grass silage incorporated with propionic acid and bacterial inoculum in crossbred heifers	MVSc.	Department of Animal Nutrition, CVAS, Mannuthy
	Evaluation of milk replacers containing alternative protein sources in crossbred calves	MVSc.	Department of Animal Nutrition, CVAS, Mannuthy
	Nutritional evaluation of feeding practices of wild ungulates at zoological park in Thrissur district	MVSc.	Department of Animal Nutrition, CVAS, Mannuthy
	Medical management of canine pyometra with prostaglandin E_1 analogue and progesterone receptor antagonist	MVSc.	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy
	Preservability of boar cauda epididymal sperm incubated with specific seminal plasma fractions	MVSc.	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy
	Clinical and laboratory evaluation of response to chemotherapy in canine transmissible venereal tumour	MVSc.	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy
	Accuracy of whelping prediction in late gestation based on maternal and foetal parameters	MVSc.	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy
	Comparative study on the cryotolerance of *in vitro* matured and vitrified bovine oocytes supplemented with L- carnitine and niacin	MVSc.	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy

	Oestrus induction using long and short term progesterone based protocols in anoestrous goats	MVSc.	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy
	Follicular fluid exosome supplementation on in-vitro maturation competence of bovine oocytes exposed to heat stress	MVSc.	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy
	Immunohistochemical localisation of progesterone, oestrogen and Ki-67 receptors in genital tract tumours of female dogs	MVSc.	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy
	Uterine fluid clearance and uterine artery haemodynamics as early indicators of cystic endometrial hyperplasia-pyometra in subfertile female dogs	MVSc.	Department of Animal Reproduction Gynaecology and Obstetrics, CVAS, Mannuthy
	Clinico-pathological investigations on mucocutaneous lesions in dogs.	MVSc.	Department of Clinical Medicine, Ethics and Jurisprudence, CVAS, Mannuthy
	Evaluation of oxidative stress in stagem III chronic kidney disease in dogs and its management	MVSc.	Department of Clinical Medicine, Ethics and Jurisprudence, CVAS, Mannuthy
	Evaluation of coagulation status in mitral valvular diseases of dogs	MVSc.	Department of Clinical Medicine, Ethics and Jurisprudence, CVAS, Mannuthy
	Evaluation of electrocardiographic and biochemical changes in arrhythmias associated with respiratory, renal and gastrointestinal diseases in dogs	MVSc.	Department of Clinical Medicine, Ethics and Jurisprudence, CVAS, Mannuthy
	Evaluation of oxidative stress and efficacy of antioxidant therapy along with plasma transfusion in haemorrhagic gastroenteritis in dogs	MVSc.	Department of Clinical Medicine, Ethics and Jurisprudence, CVAS, Mannuthy
	Effect of repeated freezing and thawing on the quality of spent cattle and buffalo meat	MVSc.	Department of Livestock Products Technology, CVAS, Mannuthy
	Effect of moringa (*Moringa oleifera*) leaf extract and nisin on quality and shelf life of Japanese quail meat	MVSc.	Department of Livestock Products Technology, CVAS, Mannuthy
	Development and evaluation of enrobed chicken nuggets incorporating millets and hydrocolloids	MVSc.	Department of Livestock Products Technology, CVAS, Mannuthy
	Development and quality evaluation of organic briquettes incorporating slaughterhouse waste and sewage sludge	MVSc.	Department of Livestock Products Technology, CVAS, Mannuthy
	Enrichment of chicken egg by dietary inclusion of flaxseed oil, fish oil and their combination	MVSc.	Department of Poultry Science, CVAS, Mannuthy

	Effect of fermented cottonseed meal on growth performance, gut microflora and carcass traits in broilers.	MVSc.	Department of Poultry Science, CVAS, Mannuthy
	Effect of Probiotics in corn replaced rice based diet in broiler chicken	MVSc.	Department of Poultry Science, CVAS, Mannuthy
	Semen quality and preservability in aseel, kadaknath and native chicken of Kerala	MVSc.	Department of Poultry Science, CVAS, Mannuthy
	Role Performance and Capacity Need Assessment of field extension functionaries of Dairy Development Kerala	MVSc.	Department of Veterinary and Animal Husbandry Extension, CVAS, Mannuthy
	Molecular differentiation of *Anaplasma spp*. and therapeutic studies of anaplasmosis in goats	MVSc.	Department of Veterinary Epidemiology and Preventive Medicine, CVAS, Mannuthy
	Molecular characterisation of Canine adenovirus infections and it's pathology in dogs	MVSc.	Department of Veterinary Epidemiology and Preventive Medicine, CVAS, Mannuthy
	Evaluation of biofilm formation and antimicrobial resistance profiling of coagulase negative S*taphylococci* isolated from bovine subclinical mastitis	MVSc.	Department of Veterinary Epidemiology and Preventive Medicine, CVAS, Mannuthy
	Genotypic characterisation of infectious bronchitis virus isolates from Kerala	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Molecular detection and characterisation of chicken anaemia virus from Kerala	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Isolation and molecular characterisation of Fowl adenovirus from broiler chicken	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Isolation and characterisation of Infectious bursal disease virus from field outbreaks in Kerala	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Assessment of seroprevalence and molecular diagnosis of leptospirosis in cats	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Isolation and characterisation of *Avibacterium paragallinarum* from poultry in Kerala	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Molecular characterisation of bacterial and viral pathogens associated with respiratory tract infections in dogs	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Characterisation of amitraz resistance in *Rhipicephalus sanguineus*	MVSc.	Department of Veterinary Parasitology, CVAS, Mannuthy
	Evaluation of benzimidazole resistance in gastrointestinal nematodes of cattle	MVSc.	Department of Veterinary Parasitology, CVAS, Mannuthy
	Genetic analysis of host resistance to gastro intestinal nematode infection among native goat breeds of Kerala	MVSc.	Department of Veterinary Parasitology, CVAS, Mannuthy

	Immunohistochemical localisation of M2 macrophages in canine mammary tumours using CD163 marker	MVSc.	Department of Veterinary Pathology, CVAS, Mannuthy
	Immunohistochemical evaluation of Eukaryotic Translation Initiation Factor 4e-Binding Protein 1, Phosphorylated, Eukaryotic Translation Initiation Factor 4e- Binding Protein 1 and Eukaryotic Translation Initiation Factor 4g in canine mammary tumours	MVSc.	Department of Veterinary Pathology, CVAS, Mannuthy
	Immunohistochemical evaluation of the expression of glutamate ammonia ligase in the brain of rabies affected dogs	MVSc.	Department of Veterinary Pathology, CVAS, Mannuthy
	Histomorphological evaluation of stromal collagen and immunohistochemical analysis of heat shock protein 47 in canine mammary tumours	MVSc.	Department of Veterinary Pathology, CVAS, Mannuthy
	Histopathological and immunohisochemical evaluation of male and female reproductive systems of porcine circovirus-2 infected pigs	MVSc.	Department of Veterinary Pathology, CVAS, Mannuthy
	Evaluation of host cellular behaviours to extracellular matrix based porcine tunica vaginalis scaffolds in a rat	MVSc.	Department of Veterinary Pathology, CVAS, Mannuthy
	Immunohistochemical evaluation of the expression of calcium calmodulin dependent kinase 2 alpha in the brain of rabies affected dogs	MVSc.	Department of Veterinary Pathology, CVAS, Mannuthy
	Comparative study of berberine and capsaicin as efflux pump inhibitors in quinolone resistant *Staphylococcus aureus* isolates from bovine mastitis	MVSc.	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy
	Antineoplastic activity of silver nanoparticles biosynthesised from seeds of *Sesamum indicum* (Sesame) in Dalton's lymphoma ascites	MVSc.	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy
	Evaluation of protective effect of lemongrass oil and citral on fatty liver disease in rats	MVSc.	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy
	Sub-acute toxicity of indoxacarb and its reversal with hesperidin and ascorbic acid in rats	MVSc.	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy
	Antineoplastic potential of *Magnolia champaca* (Chembakam) and *Epipremnum aureum* (Money plant) leaves in MCF-7 cell line	MVSc.	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy
	Evaluation of Vitamin and Mineral Status in Chronic Skeletal Disorders in Dogs	MVSc.	Department of Veterinary Physiology, CVAS, Mannuthy

	Evaluation of Vitamin and Mineral Status in dermatological Disorders in Dogs	MVSc.	Department of Veterinary Physiology, CVAS, Mannuthy
	Detection of colistin and quinolone from poultry processing line	MVSc.	Department of Veterinary Public Health, CVAS, Mannuthy
	Epidemiological investigation of risk factors associated with occurrence of Leptospirosis in dairy cattle	MVSc.	Department of Veterinary Public Health, CVAS, Mannuthy
	Isolation and detection of antimicrobial resistance of thermophilic *Campylobacter* from layer farms and chicken processing lines	MVSc.	Department of Veterinary Public Health, CVAS, Mannuthy
	An exploratory study on the determinants of occupational hazards among veterinarians of Kerala	MVSc.	Department of Veterinary Public Health, CVAS, Mannuthy
	In vivo efficacy of garlic and chitosan for control of *Campylobacter spp*. in meat type chicken	MVSc.	Department of Veterinary Public Health, CVAS, Mannuthy
	Detection of *Coxiella brunetii* in milk and vaginal swabs of goat with history of reproductive disorders	MVSc.	Department of Veterinary Public Health, CVAS, Mannuthy
	Phytocontrol strategies using silver nanoparticles and activated charcoal against coliforms in water	MVSc.	Department of Veterinary Public Health, CVAS, Mannuthy
	Antibiotic resistance in enteropathogenic *Escherichia coli* and *Campylobacter spp.* from beef and raw cow milk	MVSc.	Department of Veterinary Public Health, CVAS, Mannuthy
	Occurrence of enrofloxacin and tetracycline Resistant *klebsiella pneumoniae* and *Salmonella spp.* In beef and cow milk	MVSc.	Department of Veterinary Public Health, CVAS, Mannuthy
	Association of single nucleotide polymorphisms in the immune related genes with mastitis in crossbred cattle	MVSc.	Department of Animal Breeding & Genetics, CVAS, Pookode
	Insertion/deletion (InDel) polymorphisms in candidate genes and its association with body measurement traits in native goat breeds of Kerala	MVSc.	Department of Animal Breeding & Genetics, CVAS, Pookode
	Social and feeding behaviour in free-ranging and captive populations of lion-tailed macaque.(*macaca silenus*)	MVSc.	Department of Animal nutrition, CVAS, Pookode
	Effect of supplementation of Chlorella vulgaris extract on growth performance and nutrient utilisation in broilers.	MVSc.	Department of Animal nutrition, CVAS, Pookode
	Effect of dietary incorporation of Tiktaka gritham residue on growth performance of Malabari kids.	MVSc.	Department of Animal nutrition, CVAS, Pookode
	Effect of dietary incorporation of Saraswatha gritham residue on growth performance of Malabari kids.	MVSc.	Department of Animal nutrition, CVAS, Pookode

	Quality of retort pouch processed traditional chicken biriyani	MVSc.	Department of Livestock Products Technology, CVAS, Pookode
	Quality of retort pouch processed traditional Kerala chicken curry	MVSc.	Department of Livestock Products Technology, CVAS, Pookode
	Quality of buffalo meat dried by hot air and microwave	MVSc.	Department of Livestock Products Technology, CVAS, Pookode
	Efficacy of dietary supplementation of *kaempferia galanga* on the growth performance of broiler chicken and assessment of its antimicrobial activity against non-typhoidal *Salmonella* spp	MVSc.	Department of poultry Science, CVAS, Pookode
	Histomorphology and ultrastructure of thyroid and adrenal gland in large white Yorkshire pigs reared at high and low altitude	MVSc.	Department of Veterinary anatomy, CVAS, Pookode
	Detection and molecular characterisation of pathogens causing respiratory infections in goats	MVSc.	Department of Veterinary Microbiology, CVAS, Pookode
	Molecular characterisation of *Porcine circovirus 2* and development of a real-time polymerase chain reaction for detection of the virus	MVSc.	Department of Veterinary Microbiology, CVAS, Pookode
	Detection and molecular characterisation of viruses associated with reproductive dysfunction in pigs with special reference to porcine teschovirus	MVSc.	Department of Veterinary Microbiology, CVAS, Pookode
	Detection and characterisation of bacterial and viral agents associated with neonatal diarrhoea in calves	MVSc.	Department of Veterinary Microbiology, CVAS, Pookode
	Gross and histopathological evaluation of thyroid gland in dogs	MVSc.	Department of Veterinary Pathology, CVAS, Pookode
	Postmortem evaluation of avian pancreas and thyroid with special reference to infectious diseases	MVSc.	Department of Veterinary Pathology, CVAS, Pookode
	Pathology of avian reproductive organs and molecular detection of associated viruses	MVSc.	Department of Veterinary Pathology, CVAS, Pookode
	Pathological studies of cardio-pulmonary and renal affections in ducks and screening for specific viral etiology	MVSc.	Department of Veterinary Pathology, CVAS, Pookode
	The effect of heat stress on the physiological parameters and blood biomarkers in Malabari Goat	MVSc.	Department of Veterinary Public Health, CVAS, Pookode
	The effect of heat stress on the physiological parameters and stress biomarkers in Large White Yorkshire and crossbred pigs	MVSc.	Department of Veterinary Public Health, CVAS, Pookode

	Comparison of the biogas production potential of four types of full-scale biogas plant utilizing cow dung as feed stock	MVSc.	Department of Veterinary Public Health, CVAS, Pookode
	Effect of stress mitigation measures on the welfare during transportation of pigs	MVSc.	Department of Veterinary Public Health, CVAS, Pookode
	Early diagnosis of Hip dysplasia and its surgical management by Juvenile Pubic Symphysiodesis in puppies	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Pookode
	Multimodal balanced general anaesthesia using Tiletamine-Zolazepam-Butorphanol-Dexmeditomedine-propofol and Lignocaine in dogs	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Pookode
	Assessment of healing of corneal wounds grafted with fresh preserved canine amniotic membrane in dogs	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Pookode
	Autologous platelet rich plasma treatment for management of keratoconjunctivitis sicca in dogs	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Pookode
	Para-osseous clamp assisted cerclage wiring for management of long bone fracture in dogs	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Pookode
	Xylazine -Midazolam-Lignocaine-Ketamine constant rate infusion for anaesthetic maintenance in Xylaxine-Butorphanol- Midazolam- Ketaime anaesthetised dogs	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Pookode
	Evaluation of contrast enhanced ultrasonography for diagnosis of Gastrointestinal affections in dogs	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Pookode
	Sonological features of mammary gland neoplasms and its correlation with surgical margins and malignancy in dogs	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Mannuthy
	Clinical evaluation of a multimodal anaesthetic protocol using butorphanol- dexmedetomidine-midazolam-ketamine- isoflurane and lignocaine continuous rate infusion in cattle	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Mannuthy
	Minimal invasive percutaneous cystostomy using paediatric suprapubic catheters for management of urethral obstructions in tom cats.	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Mannuthy
	Supracutaneous locking compression plating for the management of long bone fractures in dogs	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Mannuthy
	Management of long bone fractures in cats by external skeletal fixature with intramedullary pin tie in configuration using epoxy putty.	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Mannuthy

	Comparison of multimodal anaesthesia protocols with isoflurane and sevoflurane maintenance in geriatric canine patients	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Mannuthy
	autologous platelet rich plasma for the treatment of canine superficial corneal ulcers: a comparison between subconjunctival and topical applications	MVSc.	Department of Veterinary Surgery and Radiology, CVAS, Mannuthy
	Development of diagnostic protocol for riemerellosis in ducks	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Assessment of immunogenic potency of inactivated vaccine against riemerellosis in breeder ducks	MVSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Detection and molecular characterisation of bacterial and viral pathogens from respiratory infections in dogs	MVSc.	Department of Veterinary Microbiology, CVAS, Pookode
	Comparison of amino acid profile of Malabari, Attappady Black goat milk in different geographical locations	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Cytotoxic potential of methanolic extract of Curcubitis pepo. L seed and its fraction in MCF-7 cell lines	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Analysis of amino acid profile of milk and milk products of cattle and buffalo using UHPLC	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Evaluation of cytotoxic potential of methanolic extract and fractions of Cyclea peltate leaves in MCF -7 cell lines	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Antibacterial activity of silver nanoparticles of Chromolaena odorata extract loaded carrageenan- gelatin hydrogel against multidrug resistant bacteria	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	In vitro evaluation of anti in flammatory activity of Tamarindus indica seed coat extract and its fractions	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Determination certain water-soluble vitamins in milk and milk products of cattle and goat using UHPLC	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	In vitro evaluation of anti inflammatory activity of methanol extract of Erythrina variegata stem bark and its fractions	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Characterisation of pepsin soluble collagen from Daggertooth pike conger (*uraenesox cinereus*)	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Assessment of lipid mobilization and liver enzyme levels during early lactation in crossbred cows	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy

	Sequencing of promoter and coding regions of *serum albumin* gene of Vechur cattle and its comparison with crossbred cattles of Kerala	MSc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Isolation antibiogram and phylotyping of *Escherichia coli* associated with canine pyometra	MSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Molecular typing of *Staphylococcus aureus* isolated from canine pyometra	MSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Isolation, identification and antibiogram of bacteria from gastrointestinal tract infections in chicken	MSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Assessment of virulence factors of *Riemerella anatipestifer* isolates	MSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Evaluation of multiplex polymerase chain reaction for diagnosis of pasteurellosis, contagious caprine pleuropneumonia and peste des petits ruminants in goats	MSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Molecular detection of antibiotic resistance in leptospiral isolates from Kerala	MSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Modelling time from last calving to culling of dairy cattle using survival models	MSc.	Department of Statistics, CVAS, Mannuthy
	Modelling productive lifespan of dairy cattle	MSc.	Department of Statistics, CVAS, Mannuthy
	Modelling the production and price of milk in Kerala	MSc.	Department of Statistics, CVAS, Mannuthy
	Modelling lactation curve in buffaloes	MSc.	Department of Statistics, CVAS, Mannuthy
	Molecular characterization of the coding region of *ATP1A1* gene in Malabari goats	MSc.	Department of Veterinary Biochemistry, CVAS, Pookode
	Characterization and isolation of Gram positive cocci from market samples of pasteurized milk	MSc.	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Process standardization of whey based probiotic fruit spread	MSc.	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Coconut shell as a natural colorant in yoghurt and fermented whey milk – A Quality assessment	MSc.	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Process standardization of Kulfi yoghurt	MSc.	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Development of bio-colorant incorporated fermented milk product using lactic acid bacteria isolated from Vechur cow	MSc.	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Characterization of *Lactobacillus* species isolated from indigenous Milk product/products	MSc.	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Microbial quality of ice cream samples sold in Thrissur area	MSc.	Department of Dairy Microbiology, VKIDFT, Mannuthy

	Activity profiling of Lactic acid bacterial cultures during refrigerated storage of fermented milk prepared using them	MSc.	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Process standardization and quality evaluation of Avacodo (Perse a Americana) flavoured yoghurt	MSc.	Department of Dairy Microbiology, VKIDFT, Mannuthy
	In vitro evaluation of anti-inflammatory activity of Tamarindus indica seed coat extract and its fraction	MSc.	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy
	In vitro evaluation of anti-inflammatory activity ofmethanol extract of Erythrina variegata stem bark and its fractions	MSc.	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy
	Evaluation of *in vitro* acaricidal activity and safety of Cyclea peltata (Padal)	MSc.	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy
	Antibacterial and antibiofilm activities of cinnamon bark oil and thyme oil against clinical isolates of multidrug resistant Staphylococcus aureus	MSc.	Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy
	Identification of bacteria isolated from surgical sites employing aseptic protocols during surgical procedure in companion animals	MSc.	Department of Veterinary Microbiology, CVAS, Mannuthy
	Expression profiling of microRNA in lipopolysaccharide challenged peripheral blood mononuclear cells of cattle	M.Sc.	Department of Veterinary Biochemistry, CVAS, Mannuthy
	Isolation, identification and antibiogram of bacterial organisms in the reproductive tract of subfertile dogs during oestrum	MSc	Department of Veterinary Microbiology, CVAS, Mannuthy
	Isolation of *Escherichia coli* from canine clinical samples and characterisation of antibiotic resistance genes in the isolates	MSc	Department of Veterinary Microbiology, CVAS, Mannuthy
	Pathology of riemerellosis in ducklings and identification of virulence associated *biotin* gene among the Riemerella anatipestifer isolates	MSc	Department of Veterinary Microbiology, CVAS, Mannuthy
	Development of fiber incorporated reduced calorie herbal rasamalai	M.Tech	Department of Dairy Technology, VKIDFT, Mannuthy
	Biofunctional properties of flavoured fermented milk product developed using indigenous lactic acid bacteria	M.Tech	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Study on post fermentation acidification by dahi starter cultures	M.Tech	Department of Dairy Microbiology, VKIDFT, Mannuthy
	Effect of differential heat treatments on the bio functional properties of biopeptides in fermented goat milk	M.Tech	Department of Dairy Chemistry, VKIDFT, Mannuthy

	Extraction and Characterization of essential oil from nutmeg fruit flesh for its utilization as an antimicrobial coating in Paneer	M.Tech	Department of Dairy Chemistry, VKIDFT, Mannuthy

4. Journal of Veterinary and Animal Sciences

The Journal of Veterinary and Animal Sciences is a quarterly publication of the Kerala Veterinary and Animal Sciences University (KVASU) devoted to the publication of original research papers on various aspects of Veterinary, Dairy and Animal Sciences and clinical articles which are of interest to research workers and practitioners engaged in livestock and poultry production. The Journal was first published in 1970. The journal launched its website in 2018 and is currently available as an online open access journal with E- ISSN- 2582-0605 through the link: http://www.jvas.in. The articles published in the journal are copyrighted and licensed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. The journal is currently indexed with several indexing agencies.

The journal is also listed in the NAAS score list published by National Academy of Agricultural Sciences.

The journal follows stringent measures to ensure quality of published articles and so manuscripts are qualified to be forwarded to the reviewers only after screening for plagiarism using software subscribed by the University. Currently plagiarism checker provided by UGC- 'Urkund' software is being used. Every manuscript submitted undergoes a strict review process managed through the online journal management system and follows a double blind review process.

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Dr G Ajithkumar, Chief Veterinarian, DSSNW Clinic, Calgery Alberta, Canada, Email: ajitvet@yahoo.co.in

Dr Cyril Stephen, Diplomate, American College of Theriogenologists, Associate Professor in Veterinary Reproduction, School of Agricultural, Environmental and Veterinary Sciences, Locked Bag 588, Wagga Wagga, NSW- 2678, Australia, Email:cstephen@csu.edu.au

Language editors

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DIRECTORATE OF ENTREPRENEURSHIP

The Directorate of Entrepreneurship headed by Director (Entrepreneurship) has Publications, Training, Entrepreneurship, Media and Informatics, Technology Enabled Distance Learning as major divisions. Directorate of Entrepreneurship with headquarters at Pookode, Wayanad focus on capacity building of farmers, entrepreneurs and extend services through outreach programmes, developing model farms, supporting self-help groups in improving production and productivity of livestock. This division also conducts need based researches in different fields, workshops, exhibitions and seminars on behalf of the University. The Publication Division coordinates the publication works of University publications. Technology enabled Distance Learning Centre coordinates the conduct of various distance learning courses of the University. The evening clinic under the leadership of the Director provides veterinary services and advisories to owners of large and small ruminants, pet animals in the State coordination with Directorate of Clinics.

The Academic Staff College of the University functioning under the directorate, focus on career advancement programmes of the faculty and other advanced training programmes. The directorate launched the Technology Business Incubation Division (TBIC) in Mannuthy campus during this year, with main focus on student entrepreneurship and startups. The Directorate of Students Welfare (DSW) monitors the student welfare activities, coordination of NSS activities etc. The Technology Information and Sales Center functions at Pookode, which has a sales outlet where the University publications and KVASU products are sold to the public.

The Directorate plays a vital role in commercializing new ideas and raising productivity and employment in all sectors, specially benefitting the farming community. The University student- focused activities include the Student Entrepreneurship, personality development programmes, educating students in cultivating a startup business idea, etc. Entrepreneurship division gives major emphasis to entrepreneurship development, extension, knowledge dissemination, distance learning and awareness programmes. Directorate manages the website of the University and updates timely news and events. And also manages an official instagram account, face book page and You Tube Channel as social media platform for knowledge and information exchange.

Major programs of DE

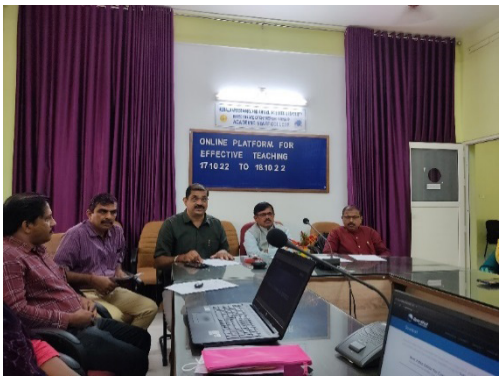
- Directorate of Entrepreneurship, KVASU-'SPARSAM' Social initivae for primary rural sector engaged in small animal Entrepreunership-Scientific Goat Farming-Vythiri, Pozhuthana, Vengapally on June 2022
- Sparsham-Karshakadhinam dt. 17.08.2022 at Pozhuthana
- Oppam,Mrigasamrakshana camp-dt. 24.08.2022 at Chundel
- Cultural exchange and develpment programmes for tribal youth. Exposure visit to various farms and institutions undertaken by KVASU for tribal career development programme, on 17/09/2022-Chembatty and Narangakandy villages of Wayanad

- Rural incubationand livelihood centre streamlining and Hands on training. (established with the help of ICAR – CCARI, Goa) at Vaniyambara- dtd 19/09/2023
- Hand on training to tribals on value added Milk Products – on 19th and 20th September, 2022, conducted as part of the tribal development programmes with the assistance of ICAR- CCARI, Goa
- Inauguration of renovated personality development centre for tribal youth and students at Chembatty colony- dtd 28/09/2022
- Training for Gender justice at Vellapamkandy
- 5 Day Training on-Stray Animal Rescue & Humane Handling
- Five Day Refresher Training Programme on"Statistics in Science"Modalities & Applications"
- 2 Day Training on "Online Platform for effective Teaching" Development Of MOOC Courses for the Faculty
- 2 day Hands on Training Programme on the participants of Milk based snack food
- Capacity building of training programme for st. farmers of Thrissur district on Value added milk Products
- Study Aid Distribution to Tribal Students at Narangakandy colony
- Goat Skill Training for Tribal beneficiaries- December 2022
- National Work shop on comprehensice Management of Working Dogs
- Hands on training Butchery Techniues and Hygenic Meat Production- (Dec 5th to 9th)
- 5 days Entrepreneurship and skill development training on processing and marketing of fresh and value-added meat products" from 16/12/2022 to 21/12/2022
- Entrepreneurship training on hygienic saughter and dressing of pigs

Gender Justice Workshop– Vellappankandy

Stray Animal Humane Handling & Rescue Platoon (SHHARP) – 5 days training

Day Training on “Online Platform for effective Teaching” Development of MOOC Courses for the Faculty



Capacity building of training programme for farmers of Thrissur district

Study Aid Distribution to Tribal Students – Narangakandy

Goat Skill Training for Tribal beneficiaries

National Work shop on Comprehensive Management of Working Dogs

Butchery Techniques & Hygiene Meat Production

New Programmes Launched By Directorate Of Entrepreneurship Kvasu :

1. **"OPPAM" - Livelihood Enhancement of Wayanad Tribal Colonies Through Need Based Package of Inputs**

This is a novel project aimed at enhancing the social and economic well being of the tribal community of Wayanad by providing sustainable livelihood support. Facilitate strategies for continued education among tribal students, improving communication and other skill sets required for better community life. Facilitate employment generation of tribal youth through skill enhancement and self-employment. Ensure better health and general well being through capacity building and campaigns. To augment Entrepreneurial culture among tribal groups.

2. **"KVASU – PRATHIKSHA" - "Planning, Reintroduction And Timely Intervention of KVASU to Streamline Alternatives in Animal Production"**

This is an innovative programme aimed at developing alternative methods for farmers to improve the growth rate of Desi chicken and also aiming to actively involve in household

waste management. One of the main objective is to improve the growth rate of back yard chicken by supplementing them with Black Soldier Fly Larvae produced at the farmers premises using the modified KVASU bins. The programme was inaugurated by Honourable Minster for Animal Husbandry, Dairy Development and Zoo Smt. J. Chinju Rani and presided over by Honourable Minster for Revenue Land Records Adv. K Rajan.

3. **"KVASU MIRROR" – University Multimedia Studio**

A model studio was established at KVASU Mannuthy campus utilising the Plan Project 2021-22 funds for production and recording audio and video files for dissemination of ideas, knowledge for teaching and extension activities of the University. The Studio was inaugurated by Honourable Minster for Animal Husbandry, Dairy Development and Zoo Smt. J. Chinju Rani.

4. **"JEEVANADHAM" – Weekly programme in All India Radio**

KVASU is broadcasting a weekly programme for farmers and entrepreneurs through the All India Radio. The programme is aired on all Wednesdays from 6.50 to 7.20 PM through the "Vayalum Veedum".

5. **"JEEVANAM JEEVADHANM" - (LIVESTOCK REARING FOR SUSTAINABLE LIVELIHOOD)**

This was a flagship programme organised by KVASU in association with State NSS Cell of VHSE involving regular on-line classes and trainings to students and public to inculcate the sense of animal farming and involve them in livelihood security activities during the COVID Lockdown and adjoining months when the students and public were held up at home and were highly in need of support. The follow up of the training was done by supply of chicks and feed to the selected students who attended the online trainings.

TRAININGS

- Goat Skill Training for Tribal beneficiaries, Directorate of Entrepreneurship, Kerala Veterinary and Animal Sciences, University, LPM Hall, Pookode

- National Work shop on comprehensive Management of Working Dogs, Directorate of Entrepreneurship, Kerala Veterinary and Animal Sciences, University, Kerala Police Academy, Thrissur.
- "Butchery Techniques & Hygiene Meat Production", College of Veterinary and Animal Sciences, Mannuthy.
- Milk and Milk Products, Varghese Kurien Institute of Dairy and Food Technology, Thrissur.
- Processing and marketing of fresh and value added meat products, Meat Technology Unit, Mannuthy.
- ENTRI2 Entrepreneur's Training Initiative, Kerala Veterinary and Animal Sciences University, Malappuram
- Preparation of Milk Products for Small scale enterprises, VargeseKurien Institute of Food and Technology, Mannuthy
- CCARI- Central coastal Agricultural Research Institute of India Goa, regional meeting with beneficiary group siting up of self-help group, Kerala Veterinary and Animal Sciences University, Vaniyampara.
- Farmers Seminar as part of polima, Kerala Veterinary and Animal Sciences University, Thiruvazhamkunnu.
- Women Entrepreneurship Training- Chembatty colony, Kerala Veterinary and Animal Sciences University, Pookode.
- Three day Yoga and Meditation Workshop, College of Avian Sciences and Management, Thiruvazhamkunnu.
- 6th Orientation program"Boosting scientific productivity for academic par excellences", Academic Staff College, Mannuthy.
- Skill training for veterinarians and soft tissue surgery for veterinarians, Teaching veterinary Clinical Complex, Mannuthy.

Sl No	Date	Training Name
1	16/05/2022	Five day training programme on "Analytical techniques in Animal Nutrition
2	07/06/2022	Conduct of sponsored training on "Clinical and Diagnostic Parasitology
3	24/06/2022	Management and handling of laboratory animals for research

4	Jul-22	Development of Value Added Milk Products for farmers
5	05/07/2022	Preparation of Dairy and Food Products for Small Scale Entrepreneurs
6	08/07/2022	Quality Monitoring of Milk at Production and Procurement
7	15/07/2022	Familiarizing the operations of Dairy Plant and preparation of milk products
8	16/07/2022	Capacity building programme in Goat Production and Entrepreneurship for goat farmers
9	02/08/2022	Cheese making for Dairy/ Food Entrepreneurs/Professionals
10	26/08/2022	Quality Monitoring of Milk at Production and Procurement"
11	15/09/2022	Statistics in Science – Modalities and Applications
12	18/10/2022	Advances in Analytical Techniques
13	09/11/2022	Basic Bioinformatics Tools for Molecular Genetics Research
14	18/11/2022	Sustainable livestock Production: Prospects for innovation
15	30/11/2022	Preparation of Milk Products
16	05/12/2022	Hands on Training on "Butchery Techniques and Hygienic Meat Production
17	19/12/2022	Therapeutic Hoof Trimming in dairy cattle
18	Jan-23	Trainers Training to Veterinary Surgeons on Abattoir Management and Meat Inspection
19	Jan-23	Meat Production and value addition
20	Jan-23	"Preparation of Fermented Milk Products-Yoghurt and Starter culture Technology"
21	11/01/2023	Small Animal Soft Tissue Surgery
22	Feb-23	Quality of Foods of Animal Origin
23	22/02/2023	Analytical Instrumentation for high –quality research in life sciences
24	23/02/2023	Boosting scientific productivity for academic par excellence
25	24/02/2023	Preparation of milk based snack foods" at Department of Dairy Science, CoVAS, Mannuthy

26	25/02/2023	Training on Humane Handling and Restraining of stray Dogs for volunteers from Local Self Government Bodies of Kerala
27	Mar-23	"Entreprenuership training for students/entrepreneurs on meat processing and preservation
28	Mar-23	Meat processing and preservation for students
29	10 .02.2023	Development of soft skills for entrepreneurship among Agri-graduates
30	14.09.2022	Stipendiary Training programmesat University Dairy Plant, Mannuthy
31	16.06.2022	Preparation of value added milk products

EXHIBITIONS

- Exhibition stall of KVASU with advisory unit of dairy processing, College of Dairy Science & Technology, Pookode.
- Pooppoli 2023, Kerala Veterinary and Animal Sciences University, Pookode
- Pavilion at the sambrambhakasangamam, Kerala Veterinary and Animal Sciences University.
- Disha Higher Studies Expo, Kozhikode.
- KVASU pavilion at Thrissur Pooram during- 2022 and 2023.

DIRECTORATE OF ST UDENTS' WELFARE

UNIVERSITY UNION 2022-23

The election notification for University Union announced on 23.11.2022 and the result declared on 5.12.2022.The various activities of the University Union detailed as follows

DAYITVA-2023-kvasu union inauguration

KVASU Union inauguration -Dayitva was inaugurated by Adv. KM Sachin Dev. (MLA Balussery on January 17, 2023. Prof. (Dr.) M R Saseendranath (Hon'ble Vice-Chancellor), Prof. (Dr.) P Sudheer Babu (Hon'ble Registrar), and felicitations from Dr. C Latha (Director of Academics and Research), Dr. TS Rajeev (Director of Entrepreneurship), and Dr. M K Narayanan (Dean, CVAS Pookode) enriched this auspicious occasion. Ajay Suresh, convenor of the programme committee, conveyed vote of thanks at the end of the ceremony.

INTEGRO

INTEGRO was inaugurated on February 24, 2023, led by Dayitva University Union 2022-23, with a welcome and presidential speech from Akshay A (Dayitva General Secretary) and Prof. (Dr.) P Sudheer Babu (Hon'ble Registrar). Prof. (Dr.) M R Saseendranath (Hon'ble Vice-Chancellor), , Dr. C Latha (Director of Academics and Research), Dr. T S Rajeev (Director of Entrepreneurship), Dr. M K Narayanan (Dean, CVAS Pookode), and Dr. Madhavan Unni N (Director of Clinics) addressed the audience.Sri Taposh Basumatary IPS (Asst. Superintendent of Police) was the chief guest of the programme. At the end of the ceremony, Sreelalshmi K, convenor of the program committee, gave vote of thanks.

IMPETUS' 23

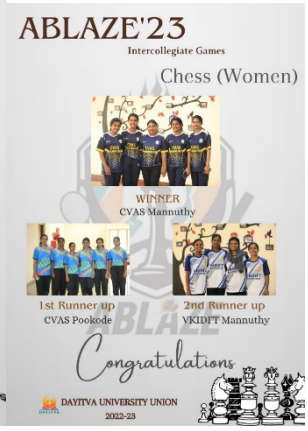
IMPETUS' 23 was inaugurated on March 20, 2023Prof. (Dr.) M R Saseendranath (Hon'ble Vice-Chancellor), Dr. C Latha (Director of Academics and Research), Dr. T S Rajeev (Director of Entrepreneurship, KVASU), Dr. Sreeranjini AR (Director of Students Welfare, KVASU), Dr K Vijayakumar (Dean, CVAS Mannuthy), Dr S N Raja Kumar (Dean, VKIDFT Mannuthy), Vishnu T (Management councils member) also addressed the students. At the end of the ceremony, Alfiya Midulaj (Vice-president, Dayitva University Union) gave vote of thanks.

Article 19(1)(a)-Intercollegiate arts

Article 19(1)(a) –Intercollegiate Arts was inaugurated on April 17, 2023, Smt. J Chinchurani (Pro Chancellor, KVASU & Hon'ble Minister of Animal Husbandry & Dairy Development, Govt. of Kerala), Prof. (Dr.) M R Saseendranath (Hon'ble Vice-Chancellor), Prof. (Dr.) Sudheer Babu (Registrar, KVASU), Dr. C Latha (Director of Academics and Research, KVASU), Dr. T S Rajeev (Director of Entrepreneurship, KVASU), Dr K Vijayakumar (Dean, CVAS Mannuthy), Dr. M K Narayanan(Dean, CVAS Pookode), Dr. Abhilash A M (Academic Council member) addressed the students. At the end of the ceremony, Muhammad Dinshad, Joint Secretary University Union, gave t vote of thanks.

Intercollegiate Games-ABLAZE-2023

1st set & 2nd set of intercollegiate games conducted form 19th & 20th August 2023 and 14th to 15th September 2023 at College of Veterinary and Animal Sciences, Mannuthy.



Activities of University Union 2022-23

SN	Event	Date	Held at
1	South Zone Interuniversity Football Tournament (M)	23.12.22-31.12.22	Calicut University
2	South Zone Inter University Volley-ball Tournament (W)	27.12.22-31.12.22	M.G University Kottayam
3	All India InterUniversity Aquatics (Women) Championship	26.12.22-29.12.22	KISS Bhuvaneswar
4	Inauguration of University Union-DAYITVA 2023	17.1.23	CVAS Pookode
5	XXI All India Inter Agricultural Universities Sports & Games Meet 2022-23 – Selection trial	21.1.23	CVAS Mannuthy
6	XXI All India Inter Agricultural Universities Sports & Games Meet 2022-23	20.2.23-24.2.23	CCS Haryana Agricultural University, Hisar

7	Kerala Veterinary University Students Science Congress-***INTEGRO***	24.2.23-25.2.23	CVAS Mannuthy
8	Intercollegiate Athletic Meet 2022-23	20.3.23-21.3.23	CVAS Mannuthy
9	Intercollegiate Arts	16.4.23-20.4.23	CVAS Mannuthy
10	Intercoleegiate Games -1st Set	19.8.23-20.8.23	CVAS Mannuthy
11	Students Elocution contest –All India Science Congress-Zonal Level-1	28.8.23	GKVK Campus Bangaluru
	Inter collegiate Games -2nd Set	14.9.23-15.9.23	CVAS Mannuthy

TRAININGS /Placement Cell/OTHER ACTIVITIES

1. SPEAK LIKE SUPER STAR, COMMUNICATION SKILL ENHANCEMENT SESSION FOR CAREER EXCELLENCE

" SPEAK ***LIKE SUPER STAR, COMMUNICATION SKILL ENHANCEMENT SESSION FOR CAREER EXCELLENCE"*** programme was conducted by the Directorate of Students Welfare along with the Directorate of Entrepreneurship at College of Avian Science and Management, Thiruvazhamkunnu on 23rd August 2022 10.00 am for the students. Mr. Jayaprakash C.B. handled the session. Total 75 students participated in the programme.

2.Campus Recruitment for Veterinary Officers

The Directorate of Students Welfare scheduled campus recruitment on 15.10.22 at Academic Staff College Mannuthy, .along with Thiruvananthapuram Regional Co-operative Milk Producers Union (TRCMPU) Ltd for Veterinary graduates for 21 posts, i.e. Veterinary Officer (Mobile Clinic) Veterinary Officer (Input Services), Veterinary Officer decentralised Veterinary Units) and Veterinary consultant (scheme) in Trivandrum, Kollam, Pathanamthitta and Alappuzha on contract basis.

3. DESIGN YOUR DESTINY – MOTIVATIONAL SESSION FOR IMPROVING PERSONAL EFFECTIVENESS

National Service Scheme Units and Student Counselling Centre of VKIDFTDirectorate of Students Welfare has organised a motivational Session named 'Design your Destiny for improving personal effectiveness 'on 20th October 2022,10.00am in the VKIDFT conference hall. The programme started with NSS song. NSS programme officer Dr. Jose Mathew welcomed the gathering. Dr. S.N Rajakumar Dean VKIDFT and Dr. Sreeranjini A . R , Director of Students Welfare addressed the gathering. Dr. Siju Thomas Thottapilly, with over 20 years of experience as a soft skill development trainer was the resource person. He is a trainer at Junior Chamber International and is currently practicing as a homeopathicconsultant. He motivated the students by giving real-life examples of success stories. He gave valuable tips to improve personality and to build career effectively. He taught them the ways to make each day productive. All volunteers were very active in group activities and enthusiastic throughout the session. After the session Sreelakshmi.S, NSS secretary thanked the gathering and the programme ended by 1.00 pm.

AND ANIMAL SCIENCES UNIVERSITY
AND FOOD TECHNOLOGY

DESIGN YOUR DESTINY

KERALA VETERINARY AND
ANIMAL SCIENCES UNIVERSITY
NOT ME BUT YOU

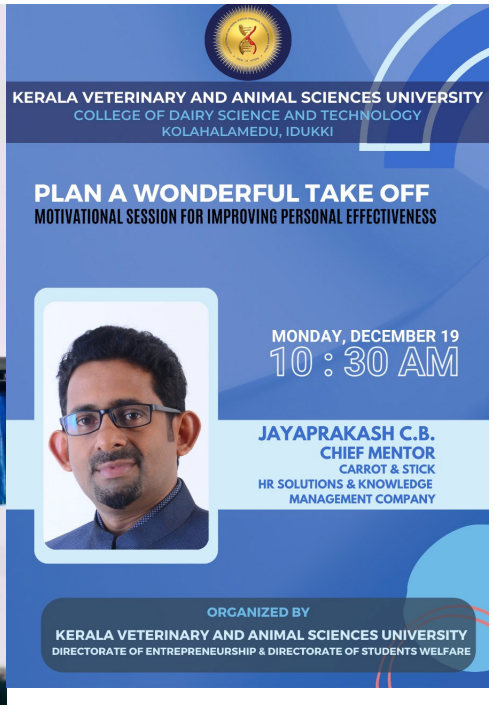
VERGHESE KURIEN IN

4. ONE -DAY WORKSHOP FOR FACULTY UNDER DOE

The Directorate of Students Welfare conducted one day workshop on 29.10.2022 for faculty under the Directorate of Entrepreneurship dealing with student related extension activities, at the Seminar Hall of Verghese Kurien Institute of Dairy and Food Technology Mannuthy.

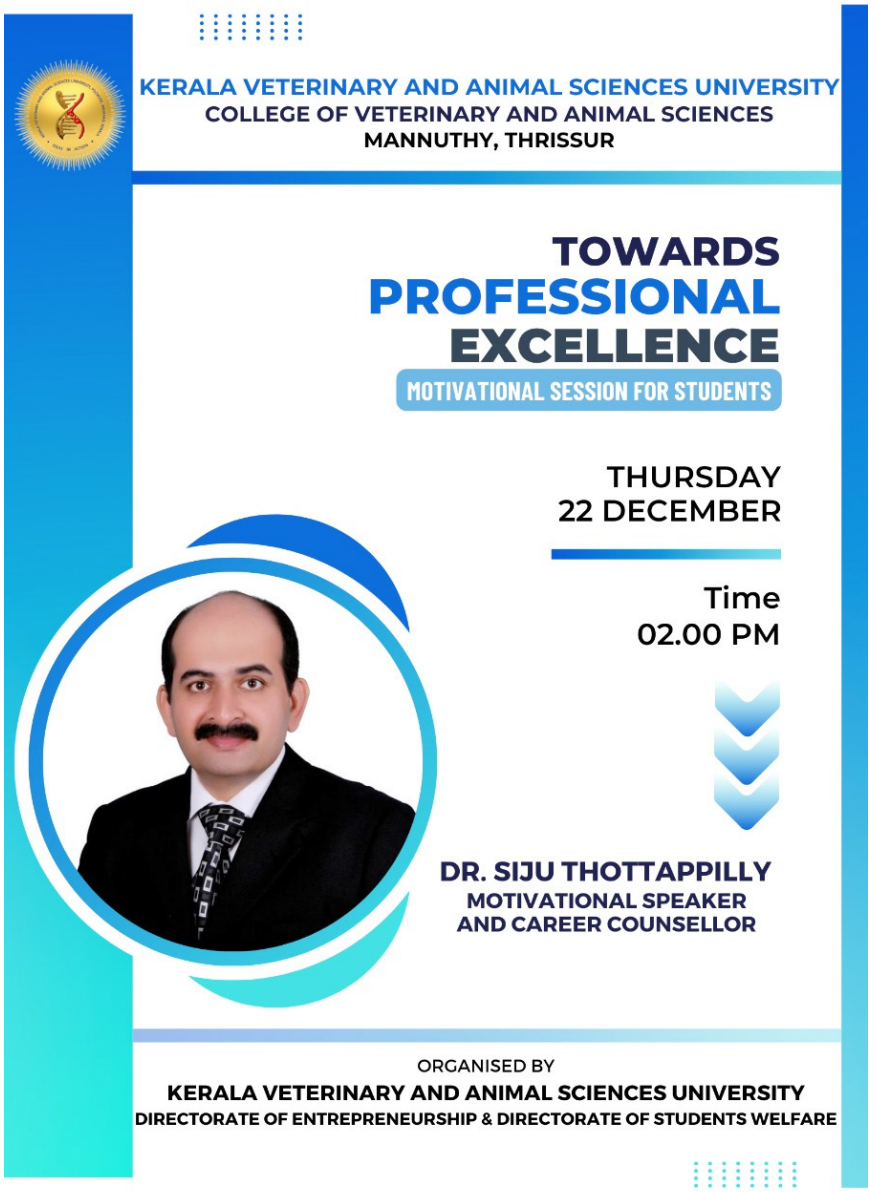
5. PLAN A WORDERFUL TAKE OFF-

The Directorate of Students Welfare organised a motivational session "PLAN A WORDERFUL TAKE OFF," to improve the personal effectiveness of the students at College of Dairy Science and Technology Kolahalamedu, Idukki on 19th December 2022. Sri. Jayaprakash C.B . was the Chief mentor of the programme. A total number of 70 students participated in the programme.



6. **Towards Professional Excellence-Motivational session for students**

The Directorate of Students Welfare of Kerala Veterinary and Animal Sciences University, has organized a motivational session for students ***"Towards Professional Excellence*** 'on 21st December 2022,at College of Veterinary and Animal Sciences Mannuthy. Dr. K. Vijayakumar, Dean, CVAS Mannuthy and Dr. Sreeranjini A.R, Director of Students Welfare addressed the gathering. Dr. Siju Thomas Thottapilly was the resource person. A total of 85 final year BVSc&AH students attended the programme.



7. ENTRI-22-Experiential Training Initiative ,

Entri-22 an experiential training initiative and career development workshop was scheduled by the Directorate of Entrepreneurship, Directorate of students' welfare and Technology Business Incubation Centre, KVASU on 21st December 2022 at Hotel Woodbine Foliage Malappuram. The programme was organised in association with Indian Veterinary Association and Kerala State Veterinary Council. A total

number of 146 students attended the programme (54 students of 2018 batch BVSc & AH from CVAS Pookode, 45 students of 2018 batch BVSc & AH from CVAS Mannuthy, 44 students of 2020 & 2021 batch BSc& PPBM from CASM Thiruvazhamkunnu and three students of B.Tech Dairy Technology 2019 batch students from Verghese Kurien Institute of Dairy and Food Technology Mannuthy).

8.CAMPUS RECRUITMENT OF VETERINARY GRADUATES

The Directorate of Students Welfare, along with EMRI GREEN HEALTH SERVICES, providers of 1962 veterinary ambulance services in Tamil Nadu, Telangana and Gujarat has organised a walk inter-view on 23rd December 2022 at Academic Staff College Mannuthy. The interview was for Veterinary Graduates towards the post of 32 Veterinary Consultants in Tamil Nadu on contract for one year .

9. Leadership Training Programme 2023

The Directorate of students' welfare conducted a leadership training programme for newly elected university union 2022-23 councillors of KVASU on 28.12.2022 at Academic Staff College, Mannuthy. Participants were enlightened about the duties and responsibilities of a student leader and the etiquette to be followed during various union activities/functions.

10. Training Programme for NSS Programme officers of KVASU

A training programme was organised for all the NSS programme officers of KVASU on 10.02.2023 at Academic Staff College Mannuthy. Dr. Binu T V, NSS District coordinator, Thrissur of the university of Calicut was the resource person.

11. Professional Students Summit-2023

Additional Skill Acquisition Programme Kerala (ASAP Kerala) under the higher Education Department conducted a Professional Student Summit at Adlux International Convention Centre, Karukutty, Angamaly, Ernakulam on 11.02.2023 to share ideas to build a better Kerala. Total 50 students of the University attended the Summit (12 students from CVAS Mannuthy,12 students from CVAS Pookode, 9 students from Verghese Kurien Institute of Dairy and Food Technology Mannuthy, 4 Students from College of Dairy Science and Technology Pookode, 4 Students from College of Dairy Science and Technology Kolahalamedu, 4 students from College of Dairy science and Technology Trivandrum and 5 students from College of Avian Science and Management Thiruvazhamkunnu).

12. ASAP-Kerala Wayanad- Soft Skill Training to first and final year BVSc students of KVASU, Pookode

Additional Skill Acquisition Programme Wayand district, along with DoE &DSW conducted a 3-day preplacement training for 2018 and 2019 batch BVSc & AH students of CVAS, pookode. The training for 2018 batch was scheduled from 16 to l8 March 2023 at Periyar Hall and that of 2019 batch was from 25th march 2023 to 28th march 2023 at Kabani Auditorium. The training was conducted 6 hours /day in two groups (40students in a group). Areas like goal setting, verbal and written communication skills, listening skills, making a great resume etc. were covered in the training.

COLLEGE OF VETERINARY AND ANIMAL SCIENCES, MANNUTHY, THRISSUR

About the college

The College of Veterinary and Animal Sciences, Mannuthy, holds the prestigious distinction of being the first veterinary college in Kerala. It is a constituent college of the Kerala Veterinary and Animal Sciences University. Renowned for its progressive academic programs, dedicated specialized veterinary clinical care services and ground breaking research, the college has established itself as a prominent institution in both national and international veterinary education

History

The first veterinary college in Kerala has its origins in a conference of Food Ministers in Delhi in the mid-1950s which was attended by the Secretary to Government (Food) of the state of Travancore-Cochin, Sri. George Thomas. The Government of India proposed to begin a veterinary college in South India with the condition that this institution should start functioning by August 1, 1955. The state of Travancore-Cochin confirmed its intention to proceed with the proposed time frame of the Central Government and financial sanction to begin a Veterinary College at Ollukara, near Thrissur, with central aid of Rs. 48 lakhs was approved. This was formally declared at the third session of the Travancore Legislative Assembly on Thursday, 6th October, 1955 by the Health Minister Sri. A.A. Rahim. The government of Travancore-Cochin set aside Rs. 40 lakhs for the new veterinary college as part of its second five-year plan proposal. An urgent cabinet meeting was convened by the Honourable Chief Minister Sri. Panampilly Govinda Menon to approve the central proposition to begin work on the new college and on August 1, 1955, the Government Veterinary College, Ollukara began functioning on nearly 400 acres of land. This included the District Livestock Farm, the goat unit and the State Poultry Farm of the Department of Animal Husbandry. The Veterinary Hospital at Kokkalai was also made available for the use of the new college. Dr. S.R. Chandran, Disease Investigation Officer (Indian Council of Agricultural Research Scheme), Department of Animal Husbandry, was appointed as Special Officer.

Prof. S.R. CHANDRAN
1955 - 1966

The new college began functioning in a temporary double storied building of the District Livestock Farm, Mannuthy with a makeshift lecture hall and three small laboratory spaces.

The college began with a staff of six teachers, including the Principal. The buildings were designed by the State Architect Sri. J.C. Alexander and on 30th November, 1958, the new college with an area of 55,000 sq. ft. was dedicated to the nation by the Hon. Chief Minister of Kerala, Sri. E.M.S. Namboodiripad in the presence of Sri. C. Achutha Menon.

Foundation Stone, College of Veterinary and Animal Sciences, Mannuthy

The government appointed the renowned educationist, Dr. K.S. Nair, former Principal of the Madras as well as the Osmania Veterinary Colleges and Retired Director of Animal Husbandry,

Madras State, as the first Principal of the Government Veterinary College.

Prof. K.S NAIR
1955 - 1958

In 1955, the college began on a modest note with faculty strength of just six teachers who were spread over the five composite departments of Anatomy and Surgery, Physiology and Pharmacology, Animal Husbandry, Medicine and Therapeutics and Pathology, Parasitology and Bacteriology. The faculty strength was expanded to 27 in 1958 and 35 in 1961.

Research

The College has a long tradition of cutting-edge research to its credit. Starting from 8-2-1964 when it was raised to the status of a Research Institute, the emphasis has been on high quality research that could positively impact human and animal health and welfare. The approach to research has been one that extends from the molecular level and encompasses the entire realm of various species of animals in tune with the research policy of the Kerala Veterinary and Animal Sciences University. Along with externally funded research, the College actively engages in the development and delivery of post graduate research programmes both at the masters and the doctoral level so as to equip and train future professionals for national and international positions in industry, animal health sector and the higher research institutes.

Extension and Veterinary services

The college prides itself in providing an assortment of extension educational programmes for various categories of clientele in this sector. The college also works closely with various government and nongovernmental agencies and other groups across the community besides being associated with various state, national and international organisations for capacity building of various stakeholders in this sector. Engagement with the community has been a mandate of the college right from its formation. All departments actively engage in programmes to disseminate useful research findings to the farming community and other stakeholders. The Veterinary Hospitals at Mannuthy and in the heart of Thrissur town at Kokkalai, are equipped with modern diagnostic facilities to provide world class treatment and care for animals. Besides this, our dedicated teams of doctors also provide ambulatory care to animal owners in adjoining areas. In addition to the numerous exhibitions, seminars and workshops for various categories of farmers, the college also conducts the Annual Karshaka Dinam ***or Farmers' Day every year on*** Chingam 1***, the beginning of the Malayalam year with a plethora of programmes and events. The college also participates in the Annual Flower Show at Thrissur and our exhibition stall for the public at the famed annual Thrissur*** Pooram ***festival is also a highlight.***

Affiliations over the years

At the time of formation in 1955, the college was named as the Government Veterinary College, Ollukara and it was affiliated to Travancore University. With the formation of the State of Kerala the name of the college was changed to Kerala Veterinary College in 1956 and it was placed under the newly formed Kerala University. In 1961, the college was renamed as the Kerala Veterinary College and Research Institute. In the year 1968-69, Calicut University was formed. Taking into consideration the geographical location of the college, it was re-affiliated to Calicut University. In 1972, the Government of Kerala established the Kerala Agricultural University and the college, with all its assets were transferred to the newly formed university. The college was simultaneously renamed as the College of Veterinary and Animal Sciences, Mannuthy. With the formation of the Kerala Veterinary and Animal Sciences University in 2010, the college became a constituent college under the new university.

Mandate

a. To impart quality education in Veterinary and Animal Sciences with advanced learning and to develop quality human resource for the different sectors of Animal Husbandry

b. To conduct quality research leading to excellence in the domain of Veterinary and Animal Sciences and allied subjects, producing effective deliverables for enhancing the growth and augmentation of these sectors

c. To disseminate efficient and innovative technologies for the socio-economic transformation of farming community through extension and clinical services

The College Office, CVAS, Mannuthy

The College Office, CVAS, Mannuthy is responsible for ensuring the timely conduct of all official procedures relating to the College. There are five sections in the office which is administered by the Administrative Officer. The various sections are Academics, General section, Accounts and Bills, Establishment, Cash and the Fair Copy and despatch section. These sections are responsible for various activities with regard to admissions, scholarships, issuance of certificates, documentation and accounting of funds pertaining to the college and issuance and despatch of official documents in this regard.

a. Staff of the Office of the Dean, CVAS, Mannuthy

Sl.No.	Name	Designation	Email	Mobile
1	Dr. C. Latha (01.04.2022-22.04.2022)	Dean in charge	deanvetmty@kvasu.ac.in	9495047649
2	Dr. K. Vijayakumar (23.04.2022 - continuing)	Faculty Dean	deanvetmty@kvasu.ac.in	9495900300

3	Dr. Shynu M. (01.07.2022-continuing)	Associate Dean	adeanmty@kvasu.ac.in	9447674075
4	Sri. Joseph E.L. (01.04.2022-10.06.2022)	Steno to Dean	eluvathingaljoseph@gmail.com	9496348845
5	Sri. Ajayakumar R. (10.06.2022-Continuing)	Steno to Dean	ajaydevimandiram@gmail.com	9287920923

b. Teaching staff – gender disaggregated data

Number of Professors	Number of Associate professors	Number of Assistant Professors	Number of lady teachers	Number of male teachers
32	26	50	60	48

c. Staff of the College Office – gender and social disaggregated data

Number of females	Number of males	Number of persons from SC/ST
20	16	4
20	16	4

Staff of the College Office

Sl.No.	Name of Employee	Designation	Mobile No.
1	Jayan N. B.	Administrative Officer Gr. I	8156811330
2	Sathy M. C.	Assistant Librarian	9496536853
3	C. C. Babu	Office Superintendent Hr. Gr.	9846613593
4	Ajayakumar R.	Office Superintendent Hr. Gr.	9287920923
5	Anil K. B.	Sr. Tech. Supervisor	9496419227
6	Syam Kumar J.	Section Officer Hr. Gr.	9539705559
7	Yatheena L.	Section Officer	8921505339
8	Savitha Mohan	Section Officer	8129187677
9	Panchami V. S.	Office Superintendent	9074344811
10	Kunjumon T.K.	Senior Farm Supervisor	
11	Vidhya V. Baskar	Assistant Section Officer	8301004250
12	Rajeesha R. V.	Assistant Section Officer	8943935365
13	Nisha S.	Assistant Section Officer	9744558327
14	Merlin M.	Assistant Senior Grade	9633804095

15	Sandhakumari S.	Assistant Senior Grade	9746043246
16	Adheela Sherief	Assistant	8281594075
17	Karthika Karunakaran	Assistant	8943190338
18	Byjuraj C S	Assistant	9961482491
19	Sanilkumar T C	Assistant	9744642364
20	Nisha M. C.	Assistant	9074439609
21	Dhanya C.T.	Assistant	9995680736
22	Akhil Mohan	Assistant	9496347024
23	Athira K.A.	Computer Assistant	9539476225
24	Jayesh P.C.	Clerical Assistant	9544349357
25	Nidhal P. K.	Clerical Assistant	8281509067
26	Kunjachan G.	Farm Supervisor Gr. II	9847262655
27	Sugathakumari K.	Farm Supervisor Gr. II	8086730628
28	Nishad E.S.	Office Attendant (Sel. Gr.)	6235934148
29	Laila M.R.	Office Attendant Hr. Gr.	9745172728
30	Omana M.V.	Office Attendant (Sel. Gr.)	9744973352
31	Prakash K.V.	Office Attendant (Hr. Gr.)	9526302232
32	Rajalakshmi P.	Office Attendant (Hr. Gr.)	9446921588
33	Laila T.	Office Attendant	9745057523
34	Shebin K.B.	Office Attendant (Hr. Gr.)	8089510367
35	Sujatha S.V.	Duplicating Machine Operator Sel. Gr.	8113980061
36	Anil Kumar P.B.	Bus Attendant Sel. Gr.	9447401641

I. Academic cell 1

The academic cell-1 functioning in the college co-ordinates all academic activities related to B.V.Sc. & A.H., M.V.Sc. and Ph.D. programmes. Academic cell is responsible for ensuring the implementation of academic programmes as per the academic regulations formulated by the University from time to time. It also serves as an advisory centre to the Office of the Dean in academic matters related to students.

Activities

- Administrative support to the students for curricular and co-curricular activities from admission to completion of the programme
- Programming the semester schedules and class time tables for U.G., P.G. and Ph.D. programmes
- Co-ordinating the conduct of various examinations associated with U.G., P.G. and Ph.D. programmes
- Monitoring the overall student activities and ensuring availability of student amenities and other facilities.
- Co-ordinating internship training programme of B.V.Sc. & A.H. students
- Conducting credit seminars and defense seminars of P.G. and Ph.D. students

Officers in charge

Sl.No.	Name	Designation	Email	Mobile
1	Dr. K. M. Lucy	Professor (Academic)*	lucy@kvasu.ac.in	9446408861
2.	Dr. R. Thirupathy, Venkatachalapathy	Professor, Officer (i/c) PG Academic	thirupathy@kvasu.ac.in	9747728625
3.	Dr. Deepa Jolly	Assistant Professor & Officer (i/c) UG Academic	deepajolly@kvasu.ac.in	9388020563
4.	Dr. Anu George	Assistant Professor & Officer (i/c) UG Academic	anu@kvasu.ac.in	9447112165
5.	Dr. Surya Sanker	Assistant Professor & Officer (i/c) UG Academic	surya@kvasu.ac.in	9495242106
6.	Dr. Ajith Y.	Assistant Professor & Officer (i/c) UG Academic	ajithy@kvasu.ac.in	8891981301
7.	Dr. Biya Ann Joseph	Assistant Professor & Officer (i/c) UG Academic, IUMS & AMS	biya@kvasu.ac.in	9846024361

Dr.K. Shyama, Professor, officiated as Professor Academic from 21.02.2022 to 31.03.2023

Academic programmes

1. Bachelor of Veterinary Science and Animal Husbandry (B.V.Sc. & A.H.)

B.V.Sc. & A.H. is a five-and-half year professional degree programme with a curriculum including core courses to be taken in four professional years extending over four and half years and an internship programme including entrepreneurial training for twelve calendar months. Successful completion of the degree programme enables the candidate to register as a veterinary practitioner in the state/central veterinary council as per Indian Veterinary Council Act, 1984. Students seeking admission for B.V.Sc. & A.H. have to qualify in the National Eligibility cum Entrance Test – Undergraduate (NEET-UG) and 15 per cent of seats will be allotted by VCI and 85 per cent seats will be filled by the office of the Commissioner for Entrance Examinations, Government of Kerala through the Kerala Engineering Architecture Medical (KEAM) entrance examination series for admissions to various professional degree courses in the state of Kerala, India. The intake capacity for the academic year 2022-2023 at the College of Veterinary and Animal Sciences, Mannuthy is currently 125.

Social inclusion and gender disaggregated data of B.V.Sc. & A.H. students (2022-23)

Year of study	Admission	Total	No. of Dropouts	No. of females	No. of males	No. of SC	No. of ST	No. of EWS	No. OBC
1st Professional year BVSc & AH (2022 & earlier admn.)	2022 & earlier admn.	129	0	84	45	11	3	11	71
2nd Professional year BVSc & AH (2021 & earlier admn.)	2021 & earlier admn.	125	4	84	41	8	2	-	65
3rd Professional year BVSc & AH (2020 & earlier admn.)	2020 & earlier admn.	98	3	61	37	6	2	0	55
4th Professional year BVSc & AH (2019 & earlier admn.)	2019 & earlier admn.	101	0	65	36	8	2	0	54
4th Professional year BVSc & AH (2018 & earlier admn.)	2018 & earlier admn.	82	0	37	45	9	3	0	35
Internship batch BVSc & AH (2017 & earlier admn.)	2017 & earlier admn.	121	1	78	43	8	3	0	66
Internship MSVE 2008 batch BVSc & AH (2015 & earlier (Re-repeat)	2015 & earlier admn.	3		1	2	0	0	0	0

Final year MSVE 2008 batch	2015 & earlier admn.	4		1	3	2	0	0	0
BVSc & AH (2015 & earlier (Re-re-repeat)									
Total		663	8	411	252	52	15	11	346

2. Post graduate Programmes

i. Master of Veterinary Science (M.V.Sc.)

The Master of Veterinary Science course is offered by the college in various disciplines. The duration of the programme is two years. The admission to M.V.Sc. course is through an entrance examination conducted by the University and an interview. Twenty-five per cent of seats in each department are earmarked for ICAR candidates who qualify entrance examination conducted by ICAR and are advised to the KVASU.

Gender disaggregated data of M.V.Sc. (2022-2023)

Year of study	Admission	Semester No.	Total	No. of Males	No. of Females
1st Year	2022 & earlier	1	77	15	62
2nd Year	2021& earlier	3	87	27	60
3rd Year (if any)	2020 & earlier	5	2	0	2
4th year (if any)	2019 & earlier	7	2	2	0
	Total		**168**	**44**	**124**

ii. Doctor of Philosophy Programme (Ph.D.)

The Ph.D. programme is offered in various disciplines. The duration of the programme is three years. The admission to the Ph.D. programme is through an entrance examination conducted by the University and an interview. Twenty-five per cent of seats in each department are earmarked for ICAR candidates who qualify entrance examination conducted by ICAR and advised to the KVASU.

Gender disaggregated data of PhD students (2022 -2023)

Year of study	Admission	Semester	Total	Male	Female
1st Year	2022 & earlier	1	16	8	8
2nd Year	2021 & earlier	3	22	10	12
3rd Year	2020 & earlier	5	18	6	12
4th Year	2019 & earlier	7	11	1	10
5th Year	2018 & earlier	10	2	2	0
6th Year	2017 & earlier	Nil	0	0	0
	Total		**69**	**27**	**42**

Institutional scholarships

Various scholarships are provided by the University for the benefit of students. Merit scholarships for 30 students in the year were disbursed in 2022-2023. Four merit cum means scholarships were disbursed to deserving students during this period. The college offers a residency programme leading to a postgraduate Master of Veterinary Science for students in the Clinical, Para clinical, and Livestock and Poultry Production departments. Residents are paid Rs. 20,000, Rs.25,000, Rs.30,000, Rs.35,000 and Rs.40,000 per month during the first, second, third, fourth and fifth (optional) years of residency respectively. Residency fellowships were paid to eight students and assistantships to seven students during this year. Internship allowances of Rs. 17,000/- per month for students of the B.V.Sc. and A.H. programme were disbursed to 121 internees who are currently undergoing the programme and 141 students who completed this programme in 2022-2023. Junior Research Fellowships were disbursed to 62 students currently undergoing the M.V.Sc. programme and 65 students who completed this programme. For the doctoral programmes, 18 current students and nine students who completed the programme were benefited by the Senior Research Fellowship. Research grants for post graduate scholars to the tune of Rs. 26,00,000/- were also disbursed.

Details of scholarships provided for students 2022-2023

Sl. No.	Name of scholarship	Amount disbursed	No of students benefited
1.	Merit Scholarship	Rs. 1,56,000; @3000/month	30
2	Merit Cum Means	Rs. 1,52,000; @ 20000/year	4

3	Residency Fellowship	1st year Rs. 20,000, 2nd year Rs.25,000, 3rd year Rs.30,000 4th year Rs.35,000 5th year Rs.40,000 (optional)	8
4	Assistantship	Rs. 4,79,900/- @5000/month	7
5	Internship allowance	Rs. 2,45,84,536 @17000/ month	Current internees: - 121 ,2017 Admn. BVSc& AH Internship completed 141students,2016 Admn. B.V.Sc.& A.H.
6.	Junior Research Fellowship	Rs.97,78,724/- @ 9,000/-pm	Current students: - 62 students, 2021 Admission M.V.Sc. Students who completed 65 Students, 2019 & 2020 Admission M.V. Sc.
7.	Senior Research Fellowship	Rs. 21,89,739/- @ 10,000/- pm	Current students: - 18 students, 2020 & 2022 Admission Ph.D. Students who completed 9 Students,2018 & 2019 Admission
8.	Research Grant	Rs.26,00,000/-	78 P.G. and 13 Ph. D. Students

II. Academic cell 2

The academic cell 2 deals with all the academic matters of Diploma and M.Sc. courses of the Kerala Veterinary and Animal Sciences University at CVAS, Mannuthy.

Activities

- Deals with all the academic matters of Diploma and M.Sc. courses such as registration of students, conduct of exams, transmission of grade reports, other activities related to submission of dissertation, issue of identity cards and various certificates.

- IUMS related activities- Student registration, student course allocation and teacher allocation, monitoring attendance and internal mark entry particulars.
- Classes on spoken English, coaching for competitive examination and general awareness are arranged for the benefit of M.Sc. and Diploma students.
- Recruitment of staff on contract for these courses.

Officers in charge

Sl.No.	Name	Designation	Email	Mobile
1	Dr. C. T. Sathian	Professor, Acad Cell 2 (Upto 04-05-2023)	sathian@kvasu.ac.in	9495039707
2	Dr. Varuna Panicker	Assistant Professor, Acad Cell 2 (Upto 04-05-2023)	varuna@kvasu.ac.in	8089355649
3	Dr. Radhika G.	Professor, Acad cell 2 (04-05-2023- continuing)	radhikag@kvasu.ac.in	9446162608
4	Dr. Geetha R.	Assistant Professor, Acad cell 2 (04-05-2023- continuing)	geetha@kvasu.ac.in	9495289976
5	Mrs. Sujatha S. V.	Duplicating Machine Operator	-	8113980061

Academic programmes

1. M.Sc. Biostatistics
2. M.Sc. Quality control in Dairy Industry
3. M.Sc. Biochemistry and molecular Biology
4. M.Sc. Applied Microbiology
5. M.Sc. Animal Biotechnology
6. M.Sc. Animal sciences
7. M.Sc. Applied Toxicology
8. Diploma in Dairy science
9. Diploma in Feed Technology
10. Diploma in Laboratory Techniques

Gender disaggregated data of M.Sc. and Diploma students (2022-2023)

Sl. No.	Course	Admission	No. of females	No. of males	No. of SC/ST	No. of EWS	No. of OBC	Total
1.	M.Sc. Quality control in Dairy Industry	2020	2	0	0	0	0	2
		2021	2	0	0	0	2	2
		2022	2	0	0	0	0	2
2.	M.Sc. Animal sciences	2020	1	0	0	0	1	1
		2021	2	0	0	0	1	2
		2022	0	2	0	0	1	2
3.	M.Sc. Animal Biotechnology	2021	4	0	0	0	2	2
		2022	1	1	1	0	1	2
4.	M.Sc. Applied Microbiology	2020	4	0	0	0	2	4
		2021	4	0	2	0	0	4
5.	M.Sc. Biostatistics	2021	2	0	0	0	0	2
6.	M.Sc. Biochemistry and Molecular Biology	2021	8	1	0	0	7	9
		2022	6	2	1	1	4	8
7.	M.Sc. Applied Toxicology	2022	3	1	0	0	0	4
8.	Diploma in Dairy science	2020	22	5	2	3	16	27
		2021	18	8	3	0	12	26
		2022	7	7	3	3	7	14
9.	Diploma in Laboratory Techniques	2022	11	18	6	2	19	29
10.	Diploma in Feed Technology	2021	2	2	3	0	1	4
		2022	2	4	1	0	3	6

Institutional measures to counter ragging

The College has a zero-tolerance policy to ragging and has taken the following measures to curb ragging in the campus.

- Undertaking against ragging signed by parents sought from all senior students
- Anti-ragging Committee and Anti-ragging Squad have been formed
- Formation of Mentoring cell under senior faculty members with students from every batch

- Formation of round the clock Anti-ragging Vigilance and Anti-ragging duty committee in Men's and Ladies hostel with all faculty members
- Class on Anti-ragging laws by District Legal Services Authority, for faculty and students
- Suspension of regular classes for senior students when freshers arrive on the campus
- Displayed Flex posters exhibiting Anti-ragging Laws and Contact Telephone Numbers of all higher authorities in all Hostels and in all notice boards of the College for immediate reporting and installed CCTV cameras at vital points
- Senior students shifted to the new blocks in hostels
- Anti -ragging weekly report submitted every week to the Dean, CVAS, Mannuthy

Committee on Women's Compliant Redressal

Committee on Women's Complaint Redressal has been constituted in the college with the following members:

Chairperson:

Dr. M. Shynu, Associate Dean

Members:

Dr. Anil K.S., Professor, Department of Livestock Production Management

Dr. K. Karthyayini, Professor, Department of Veterinary Physiology

Dr. Devi S.S., Assistant Professor, Department of Veterinary Pathology

Sri. Jayan N. B., Administrative Officer

Dr. P. Bhanumathi, Association for mentally handicapped adults, Elthuruth

Departments

Department of Animal Genetics and Breeding

About the Department

Department of Animal Breeding and Genetics of College of Veterinary and Animal Sciences was upgraded and given the status of Centre for Advanced Studies in Animal Genetics and Breeding (CASAGB) in 1986 as recognition for its contribution in various fields of activities. The objectives of the centre include undertaking undergraduate, master's and doctorate studies and research on Animal Breeding and Genetics, improving the genetic potential of livestock for efficient growth and increased production, research in molecular genetics, genomics and animal breeding, conservation of native animal genetic resources and to act as germplasm repository for domestic animals. At present, Molecular Genetics lab is equipped to conduct studies on PCR-RFLP, microsatellites, SSCP, qPCR and aims to start work on genomics. Specific areas of research include immunity of host to diseases like mastitis, FMD, Johne's disease etc, heat tolerance of Vechur cattle, prolificacy of Malabari goats, genetic diversity on domestic animals, production and constituents of milk in crossbred cattle and other production traits in animals.

From left standing: Dr. Marykutty Thomas, Assistant Professor; Dr. Elizabeth Kurian, Assistant Professor; Dr. Rojan P. M.; Dr. Jamuna Valsalan, Assistant Professor; Dr. Seena T.X., Assistant Professor

From left seated: Dr R.Thirupathy Venkatachalapathy, Professor; Dr. K.Anilkumar, Professor;

Dr. T.V. Aravindakshan, Senior Professor; Dr. Bindu K.A, Professor; Dr. Radhika G., Professor

Staff details

Name and Qualification	Designation	Mobile number & e-mail id	Area of interest
Dr. T.V. Aravindakshan, Ph.D.	Senior Professor	9895268573 aravindakshantv@kvasu.ac.in	Area of interest: Molecular Genetics, Animal Biotechnology
Dr. K. Anilkumar, Ph.D.	Professor	9447352616 anilkumar@kvasu.ac.in	Domestic Animal Diversity, Animal Breeding
Dr. Bindu K.A., Ph.D.	Professor	9495131152 binduka@kvasu.ac.in	Animal Genetics and Breeding
Dr R. Thirupathy Venkatachalapathy, Ph.D.	Professor	9747728625 thirupathy@kvasu.ac.in	Animal Breeding, Molecular Genetics
Dr. Radhika G., Ph.D.	Professor	9446162608 radhikag@kvasu.ac.in	Molecular Genetics, Animal Biotechnology
Dr. Dinesh C.N., Ph.D.	Professor	9447227119 dinesh@kvasu.ac.in	Molecular Genetics, Animal Biotechnology
Dr. Elizabeth Kurian, Ph.D.	Assistant Professor	9446234162 elizabeth@kvasu.ac.in	Genomics and Transcriptomics
Dr. Marykutty Thomas Ph.D.	Assistant Professor	9446042919 marykutty@kvasu.ac.in	Molecular Genetics, Genomics
Dr. Jamuna Valsalan, Ph.D.	Assistant Professor	9495794342 jamuna@kvasu.ac.in	Cattle Breeding, Molecular Genetics
Dr. Seena T.X., M.V.Sc.	Assistant Professor	9495539063 drseenatx@kvasu.ac.in	Animal Genetics and Breeding

Courses offered by the Department

- B.V.Sc.& A.H.
- M.V.Sc.
- Ph.D. (Animal Genetics and Breeding)
- Ph.D. (Biosciences)

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl.No.	Name	Admission Number
1.	Seena T.X.	21-DVM-01
2.	Tina Sadan	21-DVM-02
3.	Haritha B. Pillai	20-DVM-01
4.	Rojan P. M.	20-DVM-02
5.	Charlotte Coretta Rodricks	19-DVM-04
6.	Vandana C. M.	19-DVM-17
7.	Shyju O.	18-DBM-03

ii. M.V.Sc

Sl.No.	Name	Admission Number
1.	Valarmathi R.	21-MVM-01
2.	Anupama Pranab Bhattacharya	21-MVM-02

b. Completed during the year – Ph.D., M.V.Sc., M.Sc.

i. Ph.D.

Sl. No.	Name of the student and admission number	Title of thesis	Major Advisor
1.	Dr. Safeer M. Saifudeen 19-DVM-12	Prediction of protein coding genes in rumen metagenomic reads of cattle using machine learning based approach	Dr. K. Anilkumar

ii.M.V.Sc.

Sl. No.	Name of the student and admission number	Title of thesis	Major Advisor
1.	Dr. Michelle Elizabeth Roy 20-MVM-02	A genome-wide scan for selection signatures in Ankamali pigs and its genomic comparison with exotic pig breeds	Dr. Manoj. M.

2.	Dr. V. N. Sahana 20-MVM-03	Genetic variability of growth hormone gene and its association with growth and carcass traits in native ducks of Kerala	Dr. Bindya Liz Abraham
3.	Dr. Teenu Thomas 20-MVM-04	Association of mucin6 genotypic variants with gastro-intestinal parasitic resistance traits in Malabari goats of Kerala.	Dr. Marykutty Thomas
4.	Dr. Aishwary Vibhuti 19-MVM-02	Expression profiling if Ecto-NOX Disulfide-Thiol Exchanger 2 (*ENOX2*) gene in response to heat stress in goats	Dr. R. Thirupathy Venkatachalapathy
5.	Dr. Arya Gopal 19-MVM-12	Evaluation of candidate gene associated with canine mammary tumour	Dr. Radhika G.
6.	Dr. Saranya S. K. 19-MVM-55	Analysis of *gonadotropin releasing hormone receptor gene* polymorphisms and their association with litter size in native goat breeds of Kerala	Dr. Marykutty Thomas
7.	Dr. M. Priyadharshini 17-MVM-07	Assessment of sire evaluation methods in crossbred cattle of Kerala	Dr. K. Anilkumar

Thrust areas of research

- Research in molecular genetics, genomics and animal breeding
- Improving the genetic potential of livestock for efficient growth and increased production
- Genomics and Transcriptomics

Details of Units/High end labs/Specialized labs in the Department

Molecular Genetics lab is equipped to conduct studies on PCR-RFLP, microsatellites, SSCP, qPCR and has started work on genomics. Next Generation Sequencing based researches started with rumen metagenomic and dd-RAD sequencing works. Bioinformatics lab, Computer lab with internet facilities and facilities for data analysis related to Animal Breeding.

Extension and outreach activities for various stakeholders

ICAR- Field Progeny Testing Scheme

Socio- economic status of 573 farmers in Thrissur district who are rearing Frieswal progenies

have been collected and analysed. Cattle feed and mineral mixture supplied to 94 tribal farmers and 44 SC farmers.

ICAR- AICRP on Malabari Goat Improvement

Two trainings on commercial goat farming in the offline mode were conducted for 60 farmers with 1-day duration. The net return per goat per month is Rs. 1192.50. Total of 20100 kg goat feed, 600 kg mineral mixture, 5.5 litre liver tonic and 108 gm dewormers were distributed among the farmers.

Department of Animal Nutrition

About the Department

The Department offers courses for B.V.Sc. & AH., M.V.Sc. and PhD. students. Classes for Diploma in feed technology (under SANFT) is managed by the faculty of the department. Faculty members are also involved in the operation of RF Feed Mill, NABL accredited feed analysis laboratory and functioning of Small Animal Breeding Station.

From left: Dr. George Sherin, Associate Professor; Dr. Sajith Purushothaman, Assistant Professor; Dr. Dipu, M.T., Associate Professor; Dr. Ally K., Professor and Head, Dr Ajith K.S., Assistant Professor; Dr Jith John Mathew, Assistant Professor; Dr. Lasna Sahib

Staff

Name & Qualification	Designation	Mobile Number & e-mail id	Area of interest
Dr Ally K., Ph.D.	Professor & Head	9447476508 ally@kvasu.ac.in	Calf nutrition

Dr Shyama K., Ph.D.	Professor	shyama@kvasu.ac.in 9447436104	Swine nutrition
Dr Dipu M. T., Ph.D.	Associate Professor	dipu@kvasu.ac.in 9495086538	Dairy cattle nutrition
Dr George Sherin K., Ph.D.	Associate Professor	sherin@kvasu.ac.in 9961452523	Small ruminant nutrition
Dr Deepa Ananth, Ph.D.	Assistant Professor	adeepa@kvasu.ac.in 9562775354	Probiotics
Dr Ajith K.S., Ph.D.	Assistant Professor	ajithks@kvasu.ac.in 9447203151	Pet feed development
Dr Sajith Purushothaman, Ph.D.	Assistant Professor	sajith@kvasu.ac.in 9447019183	Bypass nutrients
Dr Jith John Mathew, M.V.Sc.	Assistant Professor	jith@kvasu.ac.in 9446936939	Swine nutrition

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl.No.	Name	Admission Number
1	Prabhakar	22-DVM-08

ii. M.V.Sc.

Sl.No.	Name	Admission Number
1.	Athira Rajan	21 MVM-03
2.	Nayana K.	21 MVM-04
3.	Vyshnav B.	21 MVM-05
4.	Gopika Thampi	21 MVM-06

5.	B. Omprakash Reddy	21 MVM-08
6.	Abhijeet S. Ambhore	21 MVM-09
7.	Ameer Suhail	22 MVM-04
8.	Ayana P.	22 MVM-05
9.	Irishikesh K.	22 MVM-06
10.	Gopukrishnan C. S.	22 MVM-07
11.	Sreelakshmi M.	22 MVM-08
12.	Rohini K.	22 MVM-
13.	Shalinee G.V.	22 MVM-67

b. Completed during the year

i. MVSc

Name of Student & Admission number	Title of thesis	Name of Major advisor
Putuluru Satish Reddy 19-MVM-42	Assessment of nano zin supplementation in Malabari kids fed on complete ration with different energy levels	Dr. Deepa Ananth
Reshma R. Chandran 20-MVM-09	Dietary inclusion of Indukantham Kashayam residues on growth performance and carcass traits of broiler rabbits	Dr. Shyama K.
Akhil Prasad K. A. 20-MVM-06	Feeding value of grass silage incorporated with propionic acid and bacterial inoculum in crossbred heifers	Dr. Dipu M.T.
Nikhila Mohan 19-MVM-35	Dietary supplementation of selected essential amino acids in Large White Yorkshire piglets	Dr. Dipu M.T.

Febina K.P. 20 – MVM – 08	Nutritional evaluation of feeding practices of wild ungulates at Zoological park in Thrissur District	Dr Ajith K.S.

Thrust areas of research

- Continued focus on making better use of local and alternate feed resources strategically to make livestock production economic and rewarding while maintaining the sustainability for various classes of livestock farmers
- The potential use of nutrition (involving specific nutrients and emerging nutraceuticals) for promotion of health: both for preventive and prophylactic use of clinical nutrition for farm, companion and captive and zoo animals
- To focus on the industrial application of nutritional concepts in order to make the students more industry-ready. It also aimed to inculcate a sense of entrepreneurship among animal nutrition students.
- Teaching latest developments in the science of nutrition and food bioscience and integrating the newer concepts from human and laboratory animal nutrition into the curriculum of animal nutrition
- A particular focus on the use of molecular biology (nutrigenomics), which has become a key to understanding the outcome of various nutritional interventions in health and more so in diseases including the rumen metabolism.
- Because of the changing perspectives of livestock and environment, greater thrust on the role of feeding and nutrition on minimizing and/ or mitigating the (adverse) environmental impacts of rearing various classes of farm animals
- Sound feeding practices and evolving nutritional concepts for ensuring safe food production for consumers

Details of Units/High end labs/Specialized labs in the Department

NABL accredited feed analysis laboratory

During the period under report, a total of 692 samples of feed and fodder received from both private and government sector were analyzed. Revenue generated from feed analysis was Rs. 4,32,600/- during this period.

RF Feed Mill

Through revolving fund scheme operated by the department 3645.77 Kg of feed was sold.

Small Animal Breeding Station

A total number of 4496 experimental animals were sold from the Small Animal Breeding Station. Total revenue generated :Rs. 4,37,361/-.

Brief description of Extension and outreach activities for various stakeholders

1. Sale of livestock feed, pet feed, mineral mixture and feed supplements

2. Feed analysis and classes conducted for farmers, entrepreneurs and other stake holders

Department of Animal Reproduction, Gynaecology and Obstetrics

About the Department

The Department of Animal Reproduction, Gynaecology and Obstetrics was formed in the year 1961. The department in the erstwhile Kerala Veterinary College and Research Institute started offering post graduate course from 1967. Doctorate programme in the subject of Animal Reproduction was started in 1984. The department offers Under Graduate Courses, Post Graduate Courses and Doctorate Courses in Animal Reproduction, Gynaecology and Obstetrics. A post graduate diploma course in Small animal theriogenology is also offered by the department. The department endeavours to impart undergraduate, post graduate and doctoral programmes in the concerned subject, carry out research and extension activities beneficial to livestock holders and to encourage companion pet animal reproductive management.

From left: Dr. Amritha Aravind, Assistant Professor; Dr. Hiron M. Harshan, Associate Professor; Dr. Shibu Simon, Associate Professor; Dr. C. Jayakumar, Associate Professor; Dr. Benjamin E.D., Assistant Professor; Dr. B. Bibin Becha, Assistant Professor; Dr. R.S. Abhilash, Assistant Professor

Staff

Name and Qualifications	Designation	Mobile number & e-mail id	Area of interest
Dr. C. Jayakumar M.V.Sc., Ph.D.	Associate Professor	9447476054 jayakumarc@kvasu.ac.in	Canine and feline reproduction

Dr. Hiron M. Harshan M.V.Sc., Ph.D.	Associate Professor	9495661032 hiron@kvasu.ac.in	Canine pyometra Cryopreservation of semen
Dr. Shibu Simon M.V.Sc., Ph.D.	Associate Professor	9447006499 shibu@kvasu.ac.in	Canine reproduction
Dr. B. Bibin Becha M.V.Sc., Ph.D.	Assistant Professor	9447971872 becha@kvasu.ac.in	Goat semen preservation
Dr. R. S. Abhilash M.V.Sc., Ph.D.	Assistant Professor	9447265844 abhilash@kvasu.ac.in	Assisted Reproductive technologies
Dr. Amritha Aravind M.V.Sc., Ph.D.	Assistant Professor	9446308776 amritha@kvasu.ac.in	Small ruminant reproduction
Dr. Benjamin E.D. M.V.Sc.	Assistant Professor	9447735281 benjamin@kvasu.ca.in	Boar semen preservation Large ruminant reproduction

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl. No.	Name	Admission Number
1.	Dr Niyas E.	19-DVM-10
2.	Lekshmi Bhai K.	19- DVM- 08
3.	Sophia Xavier	20-DVM-05
4.	Y.V. Prithvidhar Reddy	21-DVM-07
5.	Nayana Devarajan	21-DVM-06

ii. M.V.Sc.

Sl. No.	Name	Admission Number
1.	Gautam Malakar	20- MVM-16
2.	Ananthapadmanabhan T. P.	21-MVM-10
3.	Ayana C. I.	21-MVM-11

4.	Alaka Suresh	21-MVM-12
5.	Rahul Ram S.	21-MVM-13
6.	Drisya K. M.	21- MVM-14
7.	Rosemary M. J.	20- MVM-15
8.	Sundar V.	21-MVM-16
9.	K.K.Nivethitha	21-MVM-17
10.	Parvathi Premkumar	22-MVM-03
11.	Kiran Mariya George	22-MVM-09
12.	Aiswarya D.	22-MVM-10
13.	Aravind Suresh M.	22-MVM 11
14.	Hitha K. Thilak	22-MVM-12
15.	Keerthana Komalan	22-MVM-13
16.	Nimitha V. S.	22-MVM-14
17.	Rini Maria Manuel	22-MVM-15
18.	P. Prathima	22- MVM-71

b. Completed during the year

i. PhD

Sl. No.	Title of thesis	Name of student	Major advisor
1	Follicular dynamics and expression profile of B- cell lymphoma- 2 gene in Malabari doelings supplemented with Moringa oleifera leaves	Dr Amritha Aravind	Dr Shibu Simon
2	Assessment of myometrial contractility, gene expression of hormone receptors in uterus and foeto-maternal velocity indices in canine uterine inertia	Dr Magnus Paul K.	Dr C. Jayakumar

ii. M.V.Sc.

Sl. no.	Title of thesis	Name and admission number of the student	Major advisor
1	Intrauterine ozone treatment for subclinical endometritis in crossbred dairy cows	H. Neelakanta Nikshepa Nithish (19-MVM-19)	Dr. C. Jayakumar

2	Immunohistochemical localisation of progesterone, oestrogen and KI-67 receptors in genital tract tumours of female dogs	Kodange Omkar Tukaram (19-MVM-24)	Dr Shibu Simon
3	Comparative study on the cryotolerance of in vitro matured and vitrified bovine oocytes supplemented with L-carnitine and niacin	Anjitha K. (19-MVM-07)	Dr. Amritha Aravind
4	Assessment of Fertility and Fecundity in female dogs by sonographic, hormonal and genomic studies	Nikhila E.S. (19-MVM-34)	Dr. Magnus Paul. K.
5	Clinical and Laboratory Evaluation of Response to Chemotherapy in Canine Transmissible Venereal Tumour	Aja Taj Nazer (20-MVM-12)	Dr. Bibin Becha
6	Freezability and in vitro fertility of Malabari buck semen cryopreserved in liposome-based extender	Urmila S. (20-MVM-18)	Dr. Lekshmibhai K.
7	Follicular fluid exosome supplementation on in vitro maturation competence of bovine oocytes exposed to heat stress	Arya Theres (20-MVM-14)	Dr R.S.Abhilash
8	Foeto-Maternal Haemodynamics and Combined Thickness of Uterus and Placenta for Prediction of Time of Whelping in Canines	Princy Johnson (20-MVM-17)	Dr. Magnus Paul K.
9	Induction of oestrus using long term and short-term progesterone-based protocols in anoestrus goats	Bareera Vallikkadan (20 MVM 15)	Dr. Amritha Aravind
10	Medical Management of Canine Pyometra with Prostaglandin E1 Analogue and Progesterone Receptor Antagonist	Arya Krishnan S. (20 MVM 13)	Dr. Hiron M. Harshan

Diploma/certificate courses

- PG diploma in Small Animal Theriogenology; Number of students: 49

Thrust areas of research

Impact of heat stress on reproductive health (use of exosomes in countering heat stress mediated oocyte damage); assessment of role of PDC-109 on Vechur semen cryopreservability; impact of GPG protocol

and progesterone sponges in Vechur cow fertility; impact of genital tract microbiome on canine foetal health, assessment of canine foetal maturity with reference to induction of whelping, assessment of effect of medical management of pyometra on fertility.

Details of Units/High end labs/Specialized labs in the Department

Endocrinology lab, Reproductive biology lab, Semen cryopreservation lab, Sonography lab

Brief description of Extension and outreach activities for various stakeholders

The department operates Gynaecology and Obstetrics units at the Mannuthy and Kokkalai Veterinary Hospitals run by the University as well as Artificial Insemination Centres at Mannuthy and Kokkalai premises, for catering to the needs of cattle, buffalo and goat rearers. An ambulatory clinical service tending to the needs of Cherumkuzhy and Malamukku farmers is also part of the routine activities of the department. The staff routinely give radio talks and take classes for veterinarians and farmers. The department conducts training programmes for in-service veterinarians and para veterinarians.

Department of Clinical Medicine, Ethics and Jurisprudence

About the Department

A combined Department of Pharmacology and Therapeutics existed as early as 1959. An independent Department of Therapeutics was formed in May 1972. Subsequently the name was changed as Department of Clinical Medicine. It came into being in 1982 and in 2001, the name was changed as Department of Clinical Veterinary Medicine. M.V.Sc. programme was introduced in 1976 and PhD in the academic year 1992 -93. So far 69 students have competed M. V. Sc and four students Ph.D. The department caters to the management of medical cases affecting livestock and pets of the state and nearby districts of neighboring states. Tertiary level medical care is provided to animals presented to the Teaching Veterinary Clinical complexes at Mannuthy and Kokkalai. Critically ill animals are given special attention and medical care is provided in the Emergency and Critical Care Unit. A transfusion medicine unit is functioning in the department where blood transfusion is done for anaemic animals.

From left standing: Dr. Udayasree V.J., Assistant Professor; Dr. Sangeetha S. Gireesh, Assistant Professor; Dr. Javed Jamal A., Assistant Professor; Dr. Ambily V.R. Assistant Professor; Dr. Usha Narayana Pillai, Professor and Head; Dr. Sindhu K. Rajan, Assistant Professor; Dr. Arun George, Assistant Professor

Staff

Name and Qualification	Designation	Mobile No. and Email ID	Area of interest
Dr. Usha Narayana Pillai Ph.D.	Professor and Head	ushanp@kvasu.ac.in 9847803271	Small animal medicine
Dr. Sangeetha S. Gireesh M.V.Sc.	Assistant Professor	sangeethasgireesh@kvasu.ac.in 9544562090	Small animal medicine
Dr. Udayasree V.J. M.V.Sc.	Assistant Professor	udayasree@kvasu.ac.in 8281887196	Dermatology
Dr.Arun George Ph.D.	Assistant Professor	arun@kvasu.ac.in 9447747992	Disease investigation, Anaemia, Small animal cardiology

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl. No.	Name	Admission Number
1.	Dr Sundararajan C. K.	22-DVM-09
2.	Dr. Manju K. Mathew	20-DVM-12
3.	Dr. Umesh C.G.	21-DVM-16

ii. M.V.Sc.

Sl. No.	Name	Admission Number
1.	Dr. Majida Farsana P.	21-MVM-41
2.	Dr. Sonaa M.	21-MVM-39
3.	Dr. Athira Sajeendran	21-MVM-40
4.	Dr. Arun Kumar R.	21-MVM-42
5.	Dr. Reshma R.	22-MVM-37
6.	Dr. Hana V.P.	22-MVM-36
7.	Dr. Aiswarya A.	22-MVM-38

b. Completed during the year

i. Ph.D.

Name of the student and Admission Number	Title of the Thesis	Name of major advisor
Dr Ambily V. R. (2018-DVM-01)	Clinico-therapeutic and ultrastructural studies on canine atopic dermatitis with special reference to filaggrin gene polymorphism	Dr Usha Narayana Pillai

ii. M.V.Sc.

Name of the student and Admission Number	Title of the Thesis	Name of major advisor
Dr Kamalu S. Kumar (2019-MVM-21)	Comparative evaluation of fluralaner and Doramectin in the management of canine demodicosis	Dr Ambily V. R.
Dr Anjaly Francis (2019-MVM-06)	Evaluation of point of care tests for the detection of subclinical ketosis in early postpartum cows	Dr Ambily V. R.
Athulya Gopal (20-MVM-35)	Clinical investigations on mucocutaneous lesions in dogs	Dr Ambily V. R.
Remyakrishna U.S. (20-MVM-38)	Evaluation of electrocardiographic and biochemical changes in arrhythmias associated with respiratory, renal and gastrointestinal diseases in dogs	Dr. Arun George
Neethu Balakrishnan (20-MVM-37)	Evaluation of oxidative stress in stage III chronic kidney disease in dogs and its management	Dr. Madhavan Unny
Greeshma J. (20-MVM-36)	Evaluation of coagulation status in mitral valvular disease of dogs	Dr. Sindhu K. Rajan

Thrust areas of research

Ethnoveterinary medicine, diagnosis of diseases associated with anaemia in goats

Details of Units/High end labs/Specialized labs in the Department

The blood transfusion unit carries out blood transfusion in pet animals, small ruminants and

large ruminants.

Department of Dairy Science

About the Department

The Department of Dairy Science started functioning in 1972. Master's programme (M.V.Sc. Dairy Science) was started in 1973 and Ph.D. (Dairy Science) in 1984. Diploma in Dairy Science is a two-year academic programme offered by this Department from 1990 onwards for Dairy farm Instructors of Dairy Development Department. At present fresh students with plus two/ VHSE qualifications are also admitted for this programme. The Dairy Science Department also offers a PG programme, M.Sc (Quality control in Dairy Industry) for science graduates. Department is handling courses for B.V. Sc &A.H programme, M.V. Sc, Ph.D., M.Sc. and Diploma courses in Dairy Science.

From left: Dr R. Geetha, Associate Professor; Dr K. Radha, Associate Professor; Dr. C.T. Sathian, Professor

Staff

Name & Qualification	Designation	Mobile Number & e-mail id	Area of interest
Dr. C.T. Sathian, B.V.Sc, M.V.Sc, Ph.D.	Professor	9495039707 sathian@kvasu.ac.in	Quality assurance, Milk analysis
Dr K. Radha, B.V.Sc, M.V.Sc, Ph.D.	Associate Professor	9744481598 radha@kvasu.ac.in	Bio active peptides, Goat milk functional products
Dr R. Geetha B.V.Sc, M.V.Sc, Ph.D.	Associate Professor	9495289976 geetha@kvasu.ac.in	Lactic acid bacteria, Functional Dairy products

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl.No.	Name	Admission Number
1.	Naveen Kumar, T.J.	22-DVM-02

ii. M.V.Sc.

Sl.No.	Name	Admission Number
1.	Lejin A.S.	21-MVM-25
2.	Amritha Vikraman	21-MVM-24
3.	Pressy M.B.	22-MVM-21

iii. M.Sc.

Sl.No.	Name	Admission Number
1.	Aparna M.	21-MSVM-01
2.	Shebina	21-MSVM-02
3.	Anna Rose Johnson	22-MSVM-01
4.	Anna Mathew	22-MSVM-02

b. Completed during the year

i. M.Sc. Quality control in Dairy Industry

Sl.No.	Name of the student and Admission Number	Title of the Thesis	Name of major advisor
1.	Ms Anly Alex (20-MSVM-01)	Isolation and characterization of *Staphylococcus spp* in different brands of milk powders marketed in Thrissur District.	Dr. R. Geetha
2.	Ms.Manju, C.B. (20-MSVM-02)	Antioxidant activity of herbal yoghurt incorporated with tulsi (*Ocimum sanctum*) and cinnamon (*Cinnamomum zeylanicum*) extracts	Dr. K.Radha

Diploma/certificate courses

The department handles a Diploma in Dairy Science course and at present there are 26 students of the 2021 admission and 14 students of 2022 admission undergoing the programme.

Thrust areas of research

- Functional dairy Products
- Antimicrobial peptides and antioxidative peptides from fermented dairy products
- Antioxidant activity of yoghurt incorporated with herbs

Extension and outreach activities for various stakeholders

A Collaborative Online Training Programme of KVASU, Wayanad, Kerala & MANAGE, Hyderabad conducted on "Quality Monitoring of Milk at Production and Procurement" for Officials of Dairy Co-operative Societies, Kerala 23-25th August 2022.

Two days training programme entitled "Hands on training on the preparation of milk-based snack foods" was conducted from 15th and 16th of July 2022 and 19-10-22 to 20-10-22 in the department under Revolving fund project. Ten participants attended the training programme. Milk based snacks like paneer samosa, paneer pakora, carrot halwa, milk halwa, shrikhand, rasogolla, rasomalai, mint whey and yoghurt were prepared.

.

Fresher's Day of 2022 M.Sc./ Diploma Batch of students was arranged on 28th October 2022 at 2.00 pm. Function was arranged at PG Examination hall, CV & AS, Mannuthy. Dr. Shynu M., Associate Dean, CV& AS Mannuthy was the chief guest.

Department of Livestock Production Management

About the Department

Kerala Veterinary College was started under Kerala University in 1955 and this department was started as the Department of Animal Husbandry. When the Kerala Agricultural University was formed in 1972 the name was changed to Department of Animal Management. Subsequently in 1986 when semester system was introduced in undergraduate teaching programme it was again renamed as Department of Livestock Production Management. As part of the academic expansion, P.G. programme was started in 1977 and Ph.D. programme in 1986. In 2011 M.Sc. (Animal Science) was started in the department. So far, 80 M.V.Sc. and 20 Ph.D. theses and six M.Sc. dissertation have been completed in the department. More than 400 research papers and 200 popular articles have been published from the department.

From left standing: Dr. Biya Ann Joseph, Assistant Professor; Dr. N. Geetha, Associate Professor; Dr. Sabin George, Professor; Dr. S. Harikumar, Associate Professor; Dr. Manju Sasidharan, Assistant Professor

From left seated: Dr. Balusami C., Professor; Dr. Anil K.S., Professor; Dr. Joseph Mathew, Senior

Professor and Head; Dr. A. Kannan, Associate Professor; Dr. Suraj P.T., Professor

Staff

Name and Qualification	Designation	Mobile No.	Email	Area of Interest
Dr. Joseph Mathew, Ph.D.	Senior Professor & Head	9847083609	josephm@kvasu.ac.in	Integrated farming
Dr. Anil K.S., Ph.D.	Professor	9447437407	anilks@kvasu.ac.in	Large Ruminants
Dr. Balusami C., Ph.D.	Professor	9446510821	balusami@kvasu.ac.in	Swine Production
Dr. Sabin George, Ph.D.	Professor	9446203839	sabin@kvasu.ac.in	Pet animal management
Dr. Suraj P.T., Ph.D.	Professor	9846360887	surajpt@kvasu.ac.in	Sustainable dairy production
Dr. A. Kannan, Ph.D.	Associate Professor	9447527519	kannan@kvasu.ac.in	Swine production
Dr. Biju S., Ph.D.	Associate Professor	9447475710	bijus@kvasu.ac.in	Wild Life
Dr. N. Geetha, Ph.D.	Associate Professor	9496371751	ngeetha@kvasu.ac.in	Waste management
Dr. S. Harikumar, Ph.D.	Associate Professor	9447386770	harikumar@kvasu.ac.in	Climate stress and animal management
Dr. Manju Sasidharan, M.V.Sc	Assistant Professor	9446422328	manju@kvasu.ac.in	Calf management
Dr. Biya Ann Joseph, Ph.D.	Assistant Professor	9846024361	biya@kvasu.ac.in	Rabbit production and management

Courses offered by the Department

- B.V.Sc.. & A.H.
- M.V.Sc. (Livestock Production Management)
- Ph.D. (Livestock Production Management)
- Ph.D. (Biosciences)
- M.Sc. (Animal Science)
- Certificate Course in "Multi Skill Development Programme in Integrated Resource Management Centered on Livestock and Poultry"

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl. No.	Name	Admission Number
1.	Dr. E.D. Benjamin	18-DB- 01
2.	Dr. Giridas P.B.	18-DB- 02
3.	Dr. Manju Sasidharan	19-DVM-09
4.	Dr. Sahana M	19-DVM-13
5.	Dr. Sunitha Thomas	19-DVM-16
6.	Dr. Sachin B. Patil	21-DVM-08
7.	Dr. A. Sringaravadivelan	21-DVM-09
8.	Dr. Febin Stephan	22- DVM-12

ii. M.V.Sc.

Sl. No.	Name	Admission Number
1.	Dr. Treesa Rose George	21-MVM-18
2.	Dr. Nabeel K.P.	21-MVM-19
3.	Dr. Rameesa K.K.	21-MVM-20
4.	Dr. Beegum Farhana F.M.	21-MVM-21
5.	Dr. Vindhya M.V.	21-MVM-22
6.	Dr. Josline Naviya G.	22-MVM-16
7.	Dr. Praveen Kumar I.	22-MVM-17
8.	Dr. Athira V.S.	22-MVM-18
9.	Dr. Binil Babu	22-MVM-19
10.	Dr. Haleema H.	22-MVM-20
11.	Dr. Lakshmi M.	22-MVM-69

iii. M.Sc.

Sl. No.	Name	Admission Number
1.	Sushma G.	20-MSVM-03
2.	Akhitha Raj D.J.	21-MSVM-07
3.	Revathy A.V.	21-MSVM-08
4	Akshy Sunil	22-MSVM-13
5.	A. Sriram	22-MSVM-14

b. Completed during the year

i. M.V.Sc.

Name of Student & Admission number	Title of thesis	Name of Major advisor
Dr. Vishnu Dev R.S. (19-MVM-67)	Impact of enrichment of grazing meadow with automated water trough on the welfare of crossbred cattle	Dr. Harikumar S.
Dr. Livin Raj V.L. (19-MVM-28)	Behavioural and physiological response of captive macaques to stressors	Dr. Biju. S.
Dr. Ramesh S. (20-MVM-19)	Assessment of udder skin surface temperature changes in relation to mastitis and microclimatic variables in cross-bred dairy cows in three climatic zones in Kerala	Dr. Biju S.

Diploma/certificate courses

A six-month certificate course in "Multi Skill Development Programme in Integrated Resource Management Centered on Livestock and Poultry" is conducted at the Ecofarm, Department of LPM, CVAS, Mannuthy. Six students have completed the course and six are undergoing the same.

Thrust areas of research

- Integrated farming management
- Stress management in relation to climatic factors and animal welfare
- Human Resource management in animal husbandry sector
- Integrated waste management and biofuel production
- Animal behaviour and behavioural control studies (Ethology)
- Wildlife management

- Interventions in productivity enhancement of livestock
- Livestock production system studies
- Earn While You Learn students' projects

Brief description of Extension and outreach activities for various stakeholders

The staff from the department of Livestock Production Management are involved in imparting knowledge to the farmers through both online and offline classes and farmer interactions.

Department of Livestock Products Technology

About the Department

A Meat Plant capable of undertaking the responsibilities of teaching, research and extension was started in 1992, with infrastructure facilities for a multi species abattoir, meat processing unit and necessary laboratories. The unit soon developed modern facilities, which were fully utilized for providing practical hands on training to veterinary students, unemployed youth, entrepreneurs and veterinary officers under Continuing Education Programme. Several externally aided projects were undertaken by the unit including the establishment of a Carcass Utilization Plant with financial support from Ministry of Agriculture, Government of India.

The Meat Technology Unit, Mannuthy was later recognized as Department of Livestock Products Technology in 1994. The facilities and manpower developed were the first of its kind under universities in India leading to the ICAR recognizing this unit as Centre of Excellence in Meat Science and Technology in 2001. Department of Livestock Products Technology and Meat Technology Unit started offering the M.V.Sc. programme in 2004 and Ph.D. programme in 2011. MTU also achieved ISO 22000:2018 certification in beef processing, a first for a government university department in India. The vision is to become a global hub for training and knowledge in meat science and technology.

From left: Dr. Irshad A., Assistant Professor; Dr. V.N. Vasudevan, Associate Professor and Head; Dr. Sathu T., Associate Professor; Dr. Silpa Sasi, Assistant Professor

Staff

Name and Qualification	Designation	Mobile No.	Email	Area of Interest
Dr. V.N. Vasudevan Ph.D.	Associate Professor and Head	94473 82558	vasudevan@kvasu.ac.in	Livestock Products Technology – Meat science Safety and Quality of Livestock Products Hygienic Meat Production and Processing
Dr. Sathu. T. Ph.D.	Associate Professor	9447293042 9447293042	sathu@ kvasu.ac.in	Livestock Products Technology – Meat science Fresh Meat Technology Product development/meat processing
Dr. Irshad. A.	Assistant Professor	9895213500	irshad@kvasu.ac.in	Animal Welfare Product development • Fresh Meat Technology • Pac
Dr. Silpa Sasi	Assistant Professor	8075394869	silpa.s@kvasu.ac.in	Product development • Fresh Meat Technology

Courses offered by the Department

- B.V.Sc. & A.H.
- M.V.Sc.
- Ph.D.

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl.No.	Name	Admission Number
1.	Aaliya Tahseen	21-DVM-10

2.	Priya Muktan	22-DVM-11

ii. M.V.Sc.

Sl.No.	Name	Admission
1.	Sahla Kannatti	21-MVM-26
2.	Anandhu A Kumar	21-MVM-27
3.	Linda S Kumar	21-MVM-28
4.	Aisha T. S.	21-MVM-29
5.	M.H.S. Abrar Basha	21-MVM-30
6.	Ameena Asharaf	22-MVM-22
7.	Harikrishnan R.G.	22-MVM-23
8.	Midhun Mohan	22-MVM-24
9.	Jophil Thomas	22-MVM-70
10.	Bhattu Naveen Kumar	22-MVM-76

b. Completed during the year

i. M.V.Sc.

Sl. No.	Name of the student	Title of thesis	Major advisor
1	Hridhya Vijay C. (20-MVM-23)	Effect of repeated freezing and thawing on the quality of spent cattle and buffalo meat	Dr. Irshad A.
2	Anjitha Jose K. (20-MVM-22)	Effect of moringa (Moringa oleifera) leaf extract and nisin on quality and shelf life of Japanese quail meat	Dr. Irshad A.
3	Akhila V.V. (20-MVM_21)	Development and evaluation of enrobed chicken nuggets incorporating millets and hydrocolloids	Dr. Sathu T.
4	Manasa M. (20-MVM-24)	Development and quality evaluation of organic briquettes incorporating slaughterhouse waste and sewage sludge	Dr. V.N.Vasudevan

Thrust areas of research

Slaughterhouse by-product utilization for value-added applications; fresh meat technology for quality preservation and food safety; biomaterial development from animal tissues for medical applications; pet food and fertilizer development using meat and by-products; meat product development for improved quality and consumer acceptance; meat packaging and preservation technologies for extended shelf life;

and waste management for environmental sustainability in slaughterhouses and meat processing plants.

Units/High end labs/Specialized labs

Meat Processing Laboratory: This specialized lab is designed to facilitate the processing and analysis of various meat and meat products. Equipped with modern meat processing equipment, it enables researchers and students to explore different processing techniques and assess the quality attributes of meat and meat products.

Microbiology and Food Safety Laboratory: In this laboratory, researchers focus on the microbiological aspects of meat and meat products, emphasizing food safety and quality control. The lab is equipped with advanced microbial analysis systems and microbiological culturing equipment. It enables the identification and characterization of microorganisms, detection of foodborne pathogens, and evaluation of microbial spoilage, ultimately ensuring the safety and hygienic standards of meat products.

Quality Analysis Laboratory: This lab houses a wide range of analytical instruments used for the comprehensive analysis of meat and meat products. Researchers employ techniques such as gas chromatography, liquid chromatography, spectrophotometry, and texture analysis.

Sensory Evaluation Rooms - The sensory evaluation rooms within the department are purposefully designed to ensure accurate and objective assessment of meat products.

International externship/internship/industrial collaboration

- **Arjuna Naturals Private Limited**: The collaboration with Arjuna Naturals Private Limited, enables the department to explore the potential of herbal extracts in enhancing meat quality, improving product shelf life, and developing healthier meat alternatives.
- **AVT Pvt Ltd**: The partnership with AVT Pvt Ltd, allows collaborative research that focuses on optimizing meat formulations, evaluating the impact of additives on product characteristics, and developing innovative meat-based functional foods.
- **AOV Exports**: The collaboration with AOV Exports, a leading exporter of meat products, provides valuable insights into export-oriented meat processing, packaging, and compliance with international quality and safety standards.
- **Amrita Institute of Medical Sciences:** The collaboration with Amrita Institute of Medical Sciences, a premier healthcare institution, opens avenues for interdisciplinary research between medical and meat technology fields.
- **Allanasons Pvt Ltd**: Collaborations with Allanasons Pvt Ltd, leading meat processing company, offer insights into large-scale meat production, processing, and value-added product development.

Collaborative MoUs with Arjuna Natural Private Limited, Aluva, Kerala

Extension and outreach activities for various stakeholders

These initiatives include training programs for farmers and entrepreneurs, aimed at enhancing their knowledge and skills in meat production, processing, and hbmarketing.

Department of Physical Education

About the Department

The Department of Physical Education provides a safe atmosphere for kids to play and refresh their minds and bodies. It provides infrastructure and training for many different kinds of sports events. To promote a healthy lifestyle among students, the department operates a fantastic sports facility, the services of which are offered to the college faculty as well. The physical education department's activities provide students to further develop their athletic, football, cricket, volleyball, shuttle badminton, table tennis, basketball, chess, and bodybuilding talents. Intercollegiate and interclass local tournaments are organized on campus. This type of activity not only inspires students' interest, but additionally works as preparation for intercollegiate, inter-university, and ICAR-level competitions and local tournaments. Department of Physical Education also organises the intercollegiate tournament for the colleges of the Kerala Veterinary and Animal Sciences University. Physical education sessions are provided for B.V.Sc., M.V.Sc., and Diploma students.

Dr Baby Shalini E., Assistant Professor and Head, Department of Physical Education, CVAS, Mannuthy

Staff

Name and Qualification	Designation	Mobile No. Email	Area of Interest
Dr.Baby Salini E.	Assistant Professor & Head	babyshalini@kvasu.ac.in 8943084389	

Standing second from left: Dr Baby Shalini, Assistant Professor and Head, Department of Physical Education, CVAS, Mannuthy who secured four medals at the 4th National Masters Athletic Championship 2023 held at Dronacharya Stadium, Kurukshetra, Haryana.

Facilities in the Department of Physical Education

Outdoor sports equipment and infrastructure

- Track and Field
- Football Field
- Cricket field
- Two cricket Practice Nets
- Two volleyball courts
- One Basketball courts
- Multi-Purpose Play Field (football, Cricket, Hockey etc.)

Indoor sports equipment and infrastructure

- Tow Badminton Courts
- Table Tennis Hall (Two board)
- Chess Room
- Yoga Hall
- Health Club (Multi-Gym)

Achievements during the academic year 2022-23

Sl.No	Inter collegiate Championship	Position
1.	Table tennis (Men)	Winner

2.	Table tennis (Women)	Winner
3.	Shuttle badminton (Men)	Runner Up
4.	Shuttle badminton (Women)	Winner
5.	Chess (Men)	Winner
6.	Chess (Women)	Runner Up
7.	Athletics	Winner

Report of the 3rd Adhilsha Memorial Intercollegiate Football Tournament (Tackle 3.0)

Adhil Sha Memorial Intercollegiate Football Tournament being conducted every year in memory of Adhil Sha, a student of B.V.Sc. 2017 batch of CVAS, Mannuthy. The third Adhil Sha Memorial Intercollegiate Football Tournament (Tackle 3.0) was held from 23rd September to 25th September 2022 at CVAS, Mannuthy. A total of 17 teams participated in the tournament. At the end of the full time, College of Agriculture, Vellanikkara was declared as the champions by scoring two goals against Government Medical College Calicut. Individual awards were given, which are as follows:

- Winners Ever rolling trophy with cash prize- Rs. 20000.00
- Runner up Ever rolling trophy with cash prize - Rs. 15000.00
- Best individual player of the tournament
- Best goal keeper
- Golden boot

Ragam'23 Fest Volleyball Tournament at The National Institute of Technology Calicut

CVAS Mannuthy Men and Women Volleyball Teams were selected for the Volleyball tournament as part of Ragam'23 at the National Institute of Technology Calicut (NITC). The tournament is scheduled from 9th March to 12th March 2023. The following students are selected for the CVAS College Team.

Men team

1. Ajeeb Khan (19-Dip VMD- 03)
2. Asif Muhammad (19-BVM-77)
3. Tentlavelley Tradnesh (21-MVM-31)
4. Karthik.A (21-MVM-83)
5. Anandhu.A. Kumar (21-MVM-27)
6. Rinu (19-MVM-52)
7. Gibin (19-BVM-69)
8. Amruth Krishnan. B (18-BVM-59)
9. Boby Varghese (22-BVM-27)
10. Amarnath (22-BVM-99)

11. Arjun (20-BVM-45)

Women team

1. Krishna Sabu (20-BVM24)
2. Treesa Martin K (20-BVM-86)
3. Aruna J (18-BVM-52)
4. Safna At (19-BVM-57)
5. Ardra As (20-BVM-18)
6. Savia Ev (21-MSVM-11)
7. Krishna Umesh (20-BVM-47)
8. Kamarunneesa A (19-BVM-18)
9. Devika (20-BVM-17)
10. Aiswarya Mohanan (18-BVM-60)

The National University of Advanced Legal Studies, Kochi (Nuals) Interuniversity 7s Football Tournament

CVAS Mannuthy Football Team to participate in The National University of Advanced Legal Studies, Kochi (NUALS) 4th edition of its All Kerala Invitational Interuniversity 7s Football Tournament from March 1st to March 3rd, 2023.

Team List

1. Vishnu S H (18-BVM-)51
2. Mohammed Fasil K. (18-BVM-76)
3. Gautham P. S. (18-BVM -77)
4. Amal Raj V. (18-BVM-48)
5. Nadeem (21-BVM-48)
6. Asif E. E. (21-BVM-44)
7. Sidharthan S. R. (22-BVM-64)
8. Shyam Bharath P. (22-DIP-VML-2)

FIFA World Cup Prediction Contest

The Department of Physical Education, along with the Students Union, hosted a Fifa World Cup prediction contest prediction competition on 6/11/22 the first prize was a pedalling cycle.

T20 Cricket World Cup Prediction Contest

The Department of Physical Education, along with the Students Union, hosted a T20 Cricket world cup prediction contest competition on 14/11/22, with the first prize being a jersey.

7s Football Tournament

On 16/11/22, the Department of Physical Education, along with the Students Union, organised a 7s football event, in which a -4 fans team competed. The final was held on November 23rd, 2012.

Interclass Athletics

The Department of Physical Education, along with the Students Union 22-23, held Interclass Athletics on 01/03/23 and 02/03/23. A total of 15 events were conducted for both men and women. This championship's in Women's category newly included triple jump and 3000 m events. Interclass athletics 2023 was inaugurated by Dr. K. Vijayakumar, Dean, CVAS, Mannuthy and 2020 batch was declared as Champions, while 2021 and 2022 batches were declared as the first and second runner ups respectively.

Annual Athletic Training Camp-2023

The athletic selection trials and 15 days training camp were conducted by the Department of Physical Education. The practice session started from 6:30 a.m. to 7:30 p.m. The training camp provided students with vigorous trainings and nutritious food and drinks. Dr. K. Vijayakumar, Dean, CVAS, Mannuthy, visited the training camp every day to inspire and support the athletes.

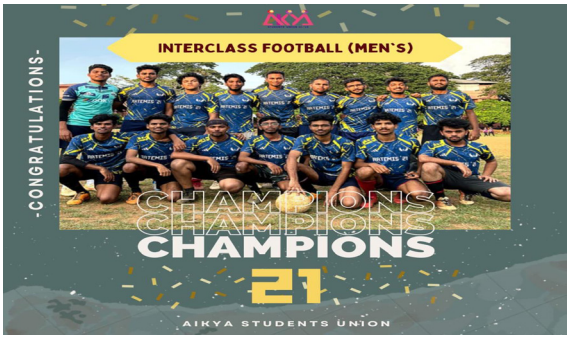
KVASU Intercollegiate Athletics-2023

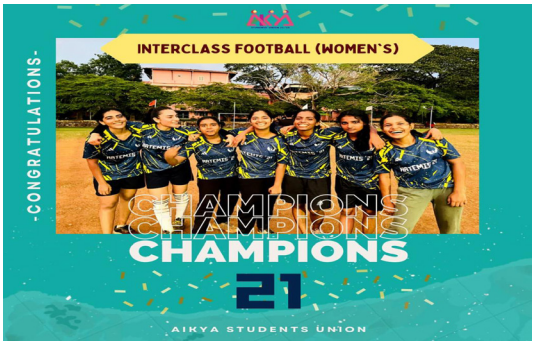
Intercollegiate athletics was conducted on 20/03/23 and 21/03/23 by the Department of Physical Education along with the University Union 22-23. The assembly was honoured by the presence of Dr. M.R. Saseendranath, Hon. Vice Chancellor, Kerala Veterinary and Animal Sciences University and graced

by Dr. K. Vijayakumar, Dean CVAS Mannuthy, Dr. Sreeranjini A.R., Director of Student Welfare (DSW), Dr. S. N..Rajkumar, Dean VKIDFT and Dr. T.S. Rajeev, DE ,KVASU. In the sixth Intercollegiate Athletic Meet, CVAS, Mannuthy secured the overall championship with a 45-point lead. The CVAS athletic team won the overall championship in 2015 and again in 2023, following an eight-year break.

Interclass Football Tournament Men & Women-2023

The Department of Physical Education, along with the Students Union 22-23, organised an INTERCLASS FOOTBALL TOURNAMENT, in which all batches of UG, PG, and Diploma students participated. Men's Champion - 2k21 Batch, Runner-up - 2k 22 Women's champions-2k21 batch, runner-up 2k20 batch





South Zone Inter University Volleyball Tournament

The Department of Physical Education hosted the volley ball open selection trials and coaching camp on December 16th to 24th at the CVAS, Mannuthy. There were 46 players attending the trials and 33 players chosen for the camp, with 15 players chosen from various KVASU constituent colleges. The open selection trials for the KVASU volleyball Women's team were held on December 16, 2022, at 2 p.m., at the CVAS, Mannuthy. The following players were selected from CVAS Mannuthy for the Kerala Veterinary and Animal Sciences University Volleyball (W) Team, to participate in the South Zone Interuniversity Volleyball Tournament Organized by Mahatma Gandhi University, Kottayam at Pavanatma College, Murickassery, Idukki from 27th to 31st December 2022.

1. Aruna Joy (18-BVM-52)
2. Ananya Rajan (22-DIP-VML-11)
3. Aishwarya V. Mohanan (18-BVM-60)

South Zone Inter University Football Tournament-2023

The Department of Physical Education hosted the football (Men) open selection trials and coaching camp from December 16th to 24th 2022 at the CVAS, Mannuthy football court. The following players have been selected from CVAS, Mannuthy for the Kerala Veterinary and Animal Sciences University Football Team, to participate in the South Zone Interuniversity Football Tournament held at University of Calicut from 23rd to 31st December 2022.

1. Gautham P.S. (18-BVM-77)
2. Mohammed Fasil K. (18-BVM-76)

3. Riyas Sulfi T. (21-BVM-77)
4. Amal Shaji (21-BVM 29)
5. Amalt.S. (21-BVM-42)
6. Aswin K. Suresh (21-BVM-97)
7. Amal Raj V. (18-BVM-48)
8. Shifan Mohamed (21-CPS -04)

Department of Poultry Science

About the Department

The Department of Poultry Science at College of Veterinary and Animal Sciences, Mannuthy came into existence in 1972. Department is offering U.G. courses for B.V. Sc & A.H. programme including guidance for final year internship students and ETR programmes. The P.G. programme in Poultry Science (M.V.Sc.) was started in 1973, Ph.D. programme in 1981 and the one-year self-financing course, Diploma in Poultry Production in 2011. The Department is also assisting Kerala Agricultural University to conduct the courses like B.Sc. (Co-operation, Banking &Management) and B.Sc.-M.Sc. (Integrated) Climate Change and Animal Adaptation. The Department is well equipped with a conference hall, lecture hall and U.G. & P.G. laboratories. The department is involving in the routine farmers counselling, technical advices and assisting in various training programmes for the farmers, students, para vets and field veterinarians.

From left standing: Dr. Vimal Antony Muttathettu , Assistant Professor; Dr. Suja C.S., Assistant Professor; Dr.Vineetha P.G., Assistant Professor

From left seated: Dr. Binoj Chacko, Associate Professor; Dr. P. Anitha, Professor; Dr. S. Sankaralingam Assistant Professor

Staff

Sl. No.	Name and qualification	Designation	Mobile Number and E-mail ID	Area of Interest
1.	Dr. P. Anitha Ph.D.	Professor	9447918364 anitha@kvasu.ac.in	Poultry nutrition
2.	Dr. Binoj Chacko Ph.D.	Associate Professor	9446173016 binoj@kvasu.ac.in	Poultry nutrition
3.	Dr. S. Sankaralingam Ph.D.	Assistant Professor	9447688783 sankaralingam@kvasu.ac.in	Poultry genetics

4.	Dr. Vimal Antony Muttathettu M.V.Sc.	Assistant Professor	9447770207 vimal@kvasu.ac.in	Poultry nutrition
5.	Dr Shamna T.P. M.V.Sc.	Assistant Professor	9446784921 shamna@kvasu.ac.in	Poultry management
6.	Dr. Suja C.S. M.V.Sc.	Assistant Professor	8281446079 suja.cs@kvasu.ac.in	Poultry genetics

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl.No.	Name	Admission Number
1.	Dr. Sabitha Antony	20- DVM-07
2.	Dr. Vimal Antony Muttathettu	20-DVM-08
3.	Dr. Shamna T. P.	21-DVM-11
4.	Dr. Suja C. S.	21-DVM-12
5.	Dr. R. Prabhakar	21-DVM-13
6.	Dr.Vineetha P. G.	22-DVM- 03

ii.M.V.Sc.

Sl.No.	Name	Admission Number
1.	Dr. P.Tradhnesh	21-MVM-31
2.	Dr. Juvin Saju	21-MVM-32
3.	Dr. Sai Sivakumar K.	21-MVM-33
4.	Dr. Harsha Venugopal	22-MVM-25
5.	Dr. Malini K. Kumar	22-MVM-26
6.	Dr. Navya M. S.	22-MVM- 27
7.	Dr. Indur Dilishma	22- MVM- 74

b. Completed during the year

i.Ph.D.

Sl. No.	Name of the student & Admission Number	Title of the Thesis	Name of major advisor
1.	Dr.S.Sankaralingam (17-DVM-10)	Transcriptome analysis of pectoral muscle among pekin and Kuttanad ducks.	Dr.P.Anitha

ii. M.V.Sc.

Sl. No.	Name of the student & Admission Number	Title of the Thesis	Name of major advisor

1.	Dr.Akshay D. (20-MVM-26)	Semen quality and preservability in Aseel, Kadaknath and native chicken of Kerala.	Dr. Harikrishnan S.
2.	Dr.Archana S. (20-MVM-27)	Enrichment of chicken egg by dietary inclusion of flaxseed oil, fish oil and their combination.	Dr. S. Sankaralingam
3.	Dr. Arundhathi U. (20-MVM- 28)	Effect of fermented cottonseed meal on growth performance, gut microflora and carcass traits in broilers.	Dr. P. Anitha
4.	Dr. Reshma Raveendran (20-MVM-30)	Effect of Probiotics in corn replaced rice-based diet in broiler chicken.	Dr. Binoj Chacko

Thrust areas of research

- Poultry Nutrition
- Poultry Breeding
- Poultry Production & Management
- Poultry products Technology
- Avian biotechnology

Details of Units/High end labs/Specialized labs in the Department

- Post Graduate Nutrition Lab (Area- 15.9 m^2)
- Avian Biotechnology/ Mycotoxin Lab (Area- 25.40 m^2)
- Post Graduate Lab (Area – 36.51 m^2)

Brief description of Extension and outreach activities for various stakeholders

Production and supply of quality chicks through University Poultry and Duck Farm and AICRP on Poultry projects. Production and supply of good quality Poultry/ animal feeds for various farms under A.H. Departments and farmers. Estimation of aflatoxin in the feed/ feed ingredients is being carried out under CAS in Poultry Science.

Department of Statistics

About the Department

The Department was established as a statutory Department of Kerala Agricultural University in 1972. The Department offers various courses for B.V.Sc., M.V.Sc., and Ph.D. programmes and is

actively engaged in Statistical Analysis of various projects inside and outside the University.

Dr. Gleeja. V. L., Associate Professor & Head, Department of Statistics

Staff

Name and Qualification	Designation	Mobile number & e-mail id	Area of interest
Dr. Gleeja. V. L. M.Sc., Ph. D.	Associate Professor & Head	9846261694 & gleeja@kvasu.ac.in	Survival Analysis, Repeated Measures ANOVA

Courses offered

M.Sc. Biostatistics

Number of Post graduate students

Ongoing - MSc

Sl. No.	Name	Admission Number
1	Mariya Saji	21-MSVM-10
2	Savia. E. V.	21-MSVM-11

Completed during the year - M.Sc.

Name of the student & Admission Number	Title of the Thesis	Name of major advisor
Reshma. B. S. 20-MSVM-08	Modelling time from last calving to culling of dairy cattle using survival models	Dr. Gleeja. V. L.
Dhiya Paul 20-MSVM-09	Modelling productive lifespan of dairy cattle	Dr. Gleeja. V. L.

Athira. V. 20-MSVM-10	Modelling the production and price of milk in Kerala	Dr. Gleeja. V. L.
Nandana. P 20-MSVM-11	Modelling lactation curve in buffaloes	Dr. Manoj M.

Teaching Veterinary Clinical Complex

About the complex

The Veterinary College Hospital, Mannuthy was established in 1961 as a part of the Kerala Veterinary College, Mannuthy and was renamed as University Veterinary Hospital, Mannuthy from 01-07-2011, with the inception of Kerala Veterinary and Animal Sciences University. Teaching Veterinary Clinical Complex (TVCC) started functioning in the same hospital from 2012 onwards along with the commencement of clinical training of 2009 batch of BVSc & AH students. As per the Veterinary Council of India (VCI) undergraduate curriculum (MSVE, 2008), a separate well-furnished Teaching Veterinary Clinical Complex consisting of the different clinical departments like Veterinary Clinical Medicine, Ethics and Jurisprudence, Veterinary Epidemiology and Preventive Medicine, Veterinary Surgery and Radiology and Animal Reproduction, Gynaecology and Obstetrics brought under one umbrella, to impart a cohesive veterinary health care service to the public.

This integrated approach can impart an overall clinical academic teaching service to the undergraduate and postgraduate students; and advanced post-graduate research. Various specialized services like veterinary cardiology, dermatology, diagnosis of infectious diseases, advanced gynaecological and infertility treatments, ophthalmology, orthopaedics and soft tissue surgeries catering both small, large, laboratory and rescued wild animals are provided from this unit. It also acts as a referral centre for veterinary patients from all districts of Kerala and the neighbouring states like Tamil Nadu and Karnataka for specialized diagnosis and treatment. Presently the TVCC is known as Dr. K.R. Narayanan, Teaching Veterinary Clinical Complex.

Staff

Sl. No.	Name & Qualification	Designation	Mobile Number	e-mail id	Area of interest
1.	Dr. Ajithkumar S. M.V.Sc., Ph.D.	Professor and Head	9400322511	ajithkumar@kvasu.ac.in	Bovine Gastroenterology, Canine cardiology
2.	Dr. Nisha A. R.	Associate Professor (Additional charge- Clinical lab)	8606391936	nisha@kvasu.ac.in	Toxicology
3.	Dr Reji Varghese M.V.Sc.	Assistant Professor (On PhD study leave)	9745055033	reji@kvasu.ac.in	Soft tissue surgery, Physiotherapy
4.	Dr. Ajith Y., M.V.Sc., Ph.D.	Assistant Professor	8891981301	ajithy@kvasu.ac.in	Vector and Vector Borne Diseases; Goat Medicine
5.	Dr. Preena P.	Assistant Professor	9400460153	preenap@kvasu.ac.in	Veterinary Clinical Laboratory Diagnosis

Thrust areas

- Providing clinical training to veterinary students
- Clinical and extension services to the public
- Facilitation of clinical research

Annual case profile at TVCC (2022-2023)

Month	Bovine	Caprine	Canine	Feline	Porcine	Avian	Equine	Others	Total
Apr-22	193	354	1852	319	0	56	0	38	**2812**
May-22	81	278	1636	233	2	25	0	9	**2264**
Jun-22	118	370	1619	337	0	44	0	22	**2510**
Jul-22	125	428	1807	388	0	45	0	31	**2824**
Aug-22	119	333	1610	362	0	38	10	20	**2492**
Sep-22	143	295	1572	333	0	41	3	25	**2412**
Oct-22	160	325	1684	278	0	36	0	17	**2500**
Nov-22	164	259	1661	355	0	38	7	29	**2513**
Dec-22	124	255	1807	378	0	50	33	15	**2662**

Jan-23	158	319	1713	250	0	47	0	37	**2524**
Feb-23	86	224	1867	251	0	48	0	18	**2494**
Mar-23	90	192	2033	280	0	36	3	17	**2651**
Total	**1561**	**3632**	**20861**	**3764**	**2**	**504**	**56**	**278**	**30658**

Facilities available in Dr. K.R. Narayanan, Teaching Veterinary Clinical Complex

a) Clinical Veterinary Medicine, Ethics and Jurisprudence

- Large and small animal medicine out-patient units
- Large and small animal in-patient unit
- Haemodialysis unit
- Dermatology unit
- Blood transfusion unit
- Emergency and critical care unit*
- Advanced cardiology unit
- Advanced ultrasonography including doppler echocardiography
- Large animal downer lift
- Centralized oxygen supply

b) Veterinary Epidemiology & Preventive Medicine

- Large and small animal medicine out-patient units
- Disease investigation unit
- Vaccination unit
- Infectious disease ward
- Isolation ward

c) Veterinary Surgery & Radiology

- Surgical out-patient units
- Small animal surgical operation theatres with gas anaesthesia work station
- Large animal surgical operation theatre with gas anaesthesia machine
- Ophthalmology unit with separate theatre
- Orthopaedic surgery unit with separate theatre
- Endoscopy
- Radiology

d) Animal Reproduction, Gynaecology and Obstetrics

- Gynaecological out-patient units
- Small animal gynecological operation theatre with gas anaesthesia work station
- Large animal gynecological operation theatres with gas anaesthesia machine
- Small and large animal infertility clinic, Laparoscopy, Neonatal care unit

e) Veterinary Diagnostic Laboratory

- Clinical Laboratory with advanced molecular diagnostics**

f) Karshakamitra medical store

g) Registration counter and pharmacy

h) Ambulatory Services

* The critical care unit is equipped with advanced lifesaving equipment such as defibrillator, ventilator, oxygen concentrator, CRI machine (Syringe pump and drip counter), blood pressure monitor and multi parameter monitor.

**The clinical laboratory is equipped with haematological auto analyzer and semi auto biochemical analyzer. The PCR machine, gel-doc and chemiluminescent immunoassay add to the advanced molecular diagnostics.

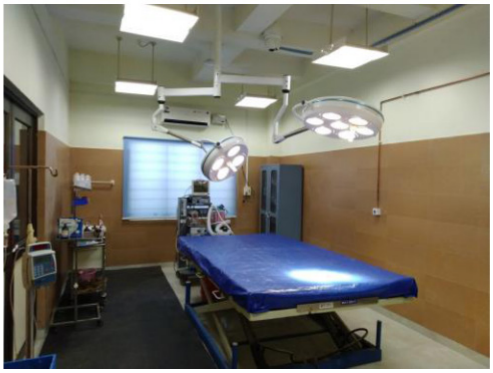
Critical care unit

Ophthalmology theatre

Gynaecology theatre

Large animal O.P.

Large animal lift



Karshakamitra medical store

5 kV Solar plant

A state-of-the-art ambulance with all necessary clinical facilities visits predetermined sites every day to provide veterinary service to the animals free of cost. Farmers of Malamukku and Cherumkuzhi villages are being provided with extension and veterinary care on all working days in Mobile Ambulatory vehicle from UVH & TVCC Mannuthy. Faculty members accompanied by final year students provide yeomen services during these visits to the remote areas. The undergraduate students are getting acquainted the farmers and their livestock at these rural milk societies. An average of 150 cases like artificial insemination with chilled semen, breeding advice for farmers, vaccination, treatment of animals and advisory facilities are being given to needy farmers every month. Medicines like antibiotics, health boosters, tonics, dewormers etc. are provided to farmers at free of cost. On request basis, farm visits are also conducted for screening of various infectious diseases and providing expert diagnostic facility. The ambulatory jeep purchased under the RKVY scheme is utilized for the purpose

International externship/internship/industrial collaboration in the Department

1. Internship training of two weeks duration to BVSc & AH students from KVASU [CVAS Pookot – 120 (2016 batch) +100 (2017 batch) & CVAS Mannuthy – 140 (2016 batch) + 121 (2017 batch)]
2. Externship training of fifteen days duration to eighty-eight students from Tamil Nadu University of Veterinary and Animal Sciences- TANUVAS (MVC, Chennai, VCRI Orathanadu, VCRI, Thirunelveli, VCRI, Namakkal)
3. Externship training of one-month duration to thirty students from (Rajiv Gandhi Institute of Veterinary Education and Research) RIVER, Puducherry
4. Internship training to Diploma in Laboratory techniques students of CVAS Mannuthy.
5. Field internship training of Mr Sreekanth KS, a 3rd semester MSW student of the Sree Sankaracharya University of Sanskrit.
6. Six-month intensive hospital training to fourteen VHSE passed students registered for Stipendiary

Training Programme on Veterinary Nursing, Pharmacy and Laboratory Techniques in University Veterinary Hospital, Mannuthy.

Brief description of Extension and outreach activities for the farming community

The hospital also caters to the needs of Police department, Army, Navy, NCC and Forest and wildlife departments and handles more than fifty thousand cases annually.

Department of Veterinary Anatomy

About the Department

The Department of Veterinary Anatomy started functioning since the inception of the College in the year 1955. Dr. V. Padmanabhan, Dr. K. Radhakrishnan (former Dean and a famous elephant practitioner), Dr. P. A. Ommer (Ph.D. from Denmark), Dr. Lucy Paily, Dr. K. R. Harshan, Dr. Jose John Chungath, Dr. N. Ashok (Former DAR, KVASU), Dr. K.M. Lucy (former CoE, KVASU) and Dr. S. Maya (Associate Dean, CVAS, Pookode) served as the Heads of Departments. The department handles three major aspects *viz.* ***Gross Anatomy, Microscopic Anatomy and Developmental Anatomy. Without a sound basic knowledge of anatomy, it is not possible for the student/ research worker/ clinician to grasp other subjects in the Veterinary field. Under graduate, post graduate and Ph.D. courses are offered in this Department apart from various research and extension activities. Facilities include a well-equipped museum cum osteology lab, gross anatomy lab (dissection lab), embalming room and bone room, histology practical lab with advanced microscopes, LCD projector and computer with multimedia facilities, PG lab, cell culture lab and a department library. Anatomy museum attached to this department provides an exposure to various mounted skeletons (including that of elephant) and specimens to researchers, UG and PG students of this college, school and college students from different parts of the state and the country and farmers and public from different parts of Kerala.***

From left standing: Dr. K. B. Sumena, Assistant Professor; Dr. N.S. Sunilkumar, Assistant Professor; Dr. N. Ashok, Senior Professor and University Head; Dr. K. M. Lucy, Professor; Dr. Leena Chandrasekhar, Assistant Professor

Staff

Name and Qualification	Designation	Mobile number & e-mail id	Area of interest
Dr. N. Ashok, Ph.D.	Senior Professor and University Head	ashokn@kvasu.ac.in	Developmental anatomyand histology
Dr. K. M. Lucy, Ph.D.	Professor	lucy@kvasu.ac.in	Histology
Dr. A.R. Sreeranjini, Ph.D.	Professor	sreeranjini@kvasu.ac.in	Developmental anatomy
Dr. Leena Chandrasekhar, Ph.D.	Assistant Professor	leena@kvasu.ac.in	Cell biology
Dr. N.S. Sunilkumar	Assistant Professor	sunilkumar@kvasu.ac.in	Neuroanatomy, Hoof health
Dr. K. B. Sumena	Assistant Professor	sumena@kvasu.ac.in	Histology and embryology

Number of Post graduate students (Course wise) (2022-2023)

a. Ongoing

i. PhD

Sl.No.	PhD (Name& Admn.No.)	MVSc (Name& Admn.No.)
01	Dr. N. S. Sunilkumar, (20-DVM-09)	Dr. J. Jayalekshmi , (21-MVM-37)
02	Dr. K.B. Sumena (21-DVM-15)	Dr. Pavizham G. Krishna (22-MVM-33)
03	Dr. Vaka Harideep, (22-DVM-14)	Dr. Kalyani Radhakrishnan,(22-MVM-32)

b. Completed during the year-

i. Ph.D.

Name of the student and Admission number	Title of the thesis	Name of major advisor
Dr. Alphine Joseph (20-DVM-02)	Comparative histomorphology and ultrastructure of the skeletal muscles of broiler and Kuttanad ducks	Dr. S. Maya

Thrust areas of research

Development of bio-scaffold materials from slaughter waste; investigation into the anatomy and applications of normal skin in broiler chicken, broiler ducks, and turkeys; cell biology;study of anatomical and genetic factors predisposing to bovine infertility; assessment of the structural integrity of the digital cushion and its relevance as a predictor of claw horn disruption lesions in bovines; detailed investigation

into the skeletal musculature of broiler and Kuttanad ducks

Details of Units/High-end labs/Specialized labs in the Department Initiation of Cell Culture lab establishment. A carbon dioxide incubator was purchased and a semi furnished room was created.

Department of Veterinary and Animal Husbandry Extension

About the Department

The Department of Veterinary Extension came into existence in 1963, though the subject of Extension was part of the curriculum in 1955. Dr. G.R. Nair was the first Head of Department. Post graduate programme was introduced in 1976 and thirty-four students have qualified for the M.V.Sc. degree. Ph.D. programme commenced from 2011 onwards and five scholars were awarded Ph.D. At Under Graduate level, the department offers courses to students of Dairy Diploma and B.Tech (Dairy Science & Technology), in addition to BVSc and AH.

From left:Dr. Anu George, Assistant Professor; Dr. Subin K. Mohan, Assistant Professor; Dr. R. Senthilkumar , Professor; Dr. R. S. Jiji, Professor and Head; Dr. Reeja George P., Professor; Dr. P. Vidya, Assistant Professor

Staff

Sl. No.	Name and Qualifications	Designation	E-mail and Mobile	Area of interest
1.	Dr. R. S. Jiji, M.V.Sc. Ph.D., PGD-IPR	Professor and Head	jiji@kvasu.ac.in 9446573117	IPR, Biodiversity management
2.	Dr. R. Senthilkumar M.V.Sc.,Ph.D. MBA	Professor	senthilkumar@kvasu.ac.in 9645675500	Organisational Studies
3.	Dr. Reeja George M.V.Sc., Ph.D.	Professor	reeja@kvasu.ac.in 9495996499	Rural sociology

4.	Dr. Anu George M.V.Sc., Ph.D. MBA, PGDAEM, PGDCE	Assistant Professor	anu@kvasu.ac.in 9447112165	Livelihood improvement
5.	Dr. Subin K Mohan M.V.Sc., Ph.D. P.G. D. Adult Cont. Edn.	Assistant Professor	subin.mohan@kvasu.ac.in 9895900936	ITK, organizational studies

Number of post graduate students

a. Ongoing

i. Ph.D.

Sl.No.	Name	Admission Number
1.	Dr. Vidya P.	21 DVM 14
2.	Dr. T. Vijaya Nirmala	22 DVM 13

ii. M.V.Sc.

Sl.No.	Name	Admission Number
1.	Dr.Greeshma S.M.	21 MVM 35
2.	Dr.Aswathy Chandran	21MVM 36
3.	Dr.Amiya Rahim	22MVM 38
4.	Dr.Vinaya V.	22 MVM 39
5.	Dr.Ryan L Dsouza	22 MVM 75

b. Completed during the year –

i. **Ph.D.**

Sl. No.	Name and Admn. No. of the student	Title of the Thesis	Name of major advisor
1.	G. Vijayakumar 19-DVM-05	Antimicrobial use and prescribing behaviour of veterinarians in large animal practice in Kerala	Dr. Reeja George P.

ii. **M.V.Sc.**

Sl.No.	Name and Admn. No. of the student	Title of the Thesis	Name of major advisor
	Dr. B. Akhila (20-MVM-31)	Role Performance and Capacity Need Assessment of field extension functionaries of Dairy Development Kerala	Dr. Subin K. Mohan

Thrust areas of research

Technology validation through farmer participatory research; development of client-based knowledge-sharing methods in the practice of Veterinary Science; documentation and evaluation of indigenous technical knowledge; economic feasibility of different systems of animal production and transfer of technology; evolving mechanisms to monitor the cost of production, market intelligence and suggesting periodic revision in the pricing of dairy, meat and egg products; utilisation of Information and Communication Technology (ICT) for linkages with stakeholder institutions and clients;capacity building for livelihood security of economically weaker sections of people

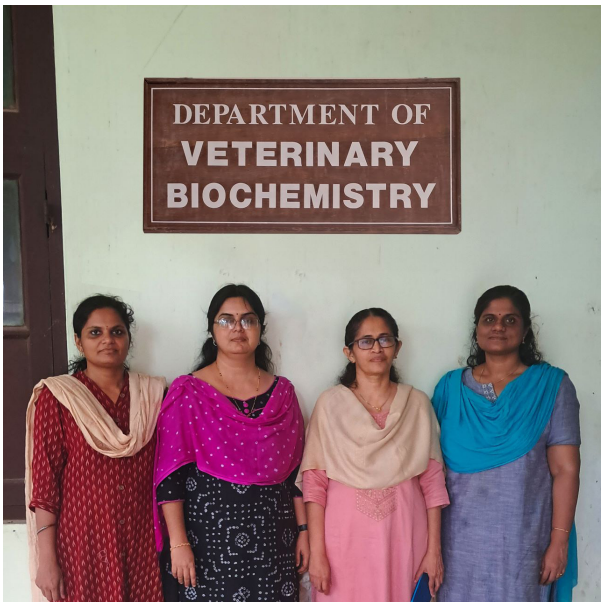
Extension and outreach activities for the farming community

Organised capacity building programme for the poultry farmers of Thrissur district on 14.09.2022 at Wadakkancherry Municipality.

Department of Veterinary Biochemistry

About the Department

Department of Veterinary Biochemistry was established as a fully-fledged Department in 2000 by bifurcating the existing Department of Physiology and Biochemistry. The department conducts lectures and practical exercises for undergraduates (B.V.Sc. & A.H.), post graduates (M.V.Sc.) and doctoral (Ph.D.) programme in the area of Veterinary Biochemistry. The department also conduct two year post graduate course in Biochemistry and Molecular Biology leading to M.Sc. degree.



From left: Dr. M. V. Chinnu, Assistant Professor; Dr. Uma R., Associate Professor; Dr. Shynu, M., Professor; Dr. Varuna P. Panicker, Assistant Professor

Staff

Name and Qualification	Designation	Mobile number & e-mail id	Area of interest
Dr. Shynu, M., M.V.Sc., Ph.D.	Professor	shynu@kvasu.ac.in 9447674075	Molecular Biology, Cancer research, Metabolomics
: Dr. Uma R., M.V.Sc., Ph.D. Associate Professor	Associate Professor	uma@kvasu.ac.in 9446270707	Genomics and Proteomics
Dr. Varuna P. Panicker, M.V.Sc., Ph.D	Assistant Professor	varuna@kvasu.ac.in 8089355649	Veterinary Biochemistry and Peptide chemistry
Dr. M. V. Chinnu, M.V.Sc.	Assistant Professor	chinnu@kvasu.ac.in 9562968495	Molecular Biology, Residue analysis in livestock products

Courses offered by the Department

- B.V.Sc.& A.H.
- M.V.Sc.
- Ph.D.
- M.Sc. (Biochemistry and Molecular Biology)

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl. No.	Name	Admission Number
1	Dr. Chinnu M. V.	20-DVM-11

ii. M.V.Sc.

Sl. No.	Name	Admission Number
1	Roshna K.	21-MVM-38
2	Prajisha C.	22-MVM-34

iii. **M.Sc.**

Sl.No.	Name	Admission Number
1.	Anjali Anil	21-MSVM-12
2.	S. Shabana	21- MSVM-13

3.	Sreelakshmi N. S.	21- MSVM-14
4.	Hasna K.	21- MSVM-15
5.	Sayisha V. P.	21- MSVM-16
6.	Aswathy Asokan	21- MSVM -17
7.	Shimna Prakash C. K.	21- MSVM -18
8.	Adarsh T. Premachandran	21- MSVM -19
9.	Aparna Anilkumar	21- MSVM -20
10.	Afra M.T.	22- MSVM -03
11.	Aiswarya Thomas	22- MSVM -04
12.	Ajeesh Anilan N.	22- MSVM -05
13.	Anantha Narayanan V.	22- MSVM -06
14.	Hasiba M.	22- MSVM -07
15.	Jini Roy	22- MSVM -08
16.	Vrindha M.	22- MSVM -09
17.	Fathimath Jumana N.A.	22- MSVM -10

b. Completed during the year

i. Ph.D.

Name of the student and Admn. Number	Title of the Thesis	Name of major advisor
Vasudhar Bhat S. V. (19-DVM-18)	Evaluation of anticancer property of recombinant goat lactoferrin	Dr. Uma R.
Divya P. D. (18-DVM-04)	Analysis of differential expression of microRNA in lipopolysaccharide challenged lymphocytes of Vechur and crossbred cattle	Dr. Shynu M.

ii.M.V.Sc.

Name of the student and Admission Number	Title of the Thesis	Name of major advisor
Nimna Ajay (20-MVM-033)	Characterisation of acid soluble collagen from Daggertooth Pike Conger (Muraenesox Cinereus) and its application in wound healing	Dr. Varuna P. Panicker
Akshara B.Venu (20-MVM-32)	Expression profiling of microRNA in lipopolysaccharide challenged peripheral blood mononuclear cells of cattle	Dr. Divya P. D.

iii.M.Sc.

Name of the student and Admission Number	Title of the Thesis	Name of major advisor
Sreepriya M. 20-MSVM-12	Comparison of amino acid profile of Malabari, Attappady Black goat milk in different geographical locations	Dr. Chinnu M. V. Asst. Professor Dept. of Veterinary Biochemistry
Sneha Geevarghese 20-MSVM-13	Cytotoxic potential of methanolic extract of *Curcubitis pepo. L* seed and its fraction in MCF-7 cell lines	Dr. Preethy John Asst. Professor Dept. of Pharmacology & Toxicology
Arya K. 20-MSVM-14	Analysis of amino acid profile of milk and milk products of cattle and buffalo using UHPLC	Dr. Sreekumar T. R. Assistant Professor Dept. of Veterinary Physiology
Roshni S. S. 20-MSVM-16	Evaluation of cytotoxic potential of methanolic extract and fractions of *Cyclea peltate* leaves in MCF -7 cell lines	Dr. Sujith S. Assistant Professor Dept. of Veterinary Pharmacology & Toxicology
Anu Chandran 20-MSVM-17	Antibacterial activity of silver nanoparticles of *Chromolaena odorata* extract loaded carrageenan- gelatin hydrogel against multidrug resistant bacteria	Dr. Suresh N. Nair Associate Professor Dept. of Veterinary Pharmacology & Toxicology
Aysha Saleem K. K. 20-MSVM-18	*In vitro* evaluation of anti-inflammatory activity of *Tamarindus indica* seed coat extract and its fractions	Dr. Suja Rani S. Associate Professor, Dept. of Pharmacology & Toxicology
Athira E. H. 20-MSVM-20	Determination certain water-soluble vitamins in milk and milk products of cattle and goat using UHPLC	Dr. V. Ramnath Professor & Head, Dept. of Veterinary Physiology

Linda Johnson 20-MSVM-21	*In vitro* evaluation of anti-inflammatory activity of methanol extract of *Erythrina variegata* stem bark and its fractions	Dr. Bibu John Kariyil Assistant Professor, Dept. of Pharmacology & Toxicology
Sreelakshmi Aravind K. 20-MSVM-22	Characterisation of pepsin soluble collagen from Daggertooth pike conger (*Muraenesox cinereus*)	Dr. Varuna P. Panicker
Aleesha 20-MSVM-23	Assessment of lipid mobilization and liver enzyme levels during early lactation in crossbred cows	Dr. V. Beena Associate Professor Dept. of Veterinary Physiology
Yadukrishnan M. B. 20-MSVM-24	Molecular characterisation of ATP1A1 gene in Malabari goats	Dr. Renjith Sebastian Assistant Professor Dept. of Veterinary Biochemistry, CVAS, Pookode
Gopika Das 20-MSVM-25	Sequencing of promoter and coding regions of serum albumin gene of Vechur cattle and its comparison with crossbred cattles of Kerala	Dr. Shynu M.

Thrust areas of research

- Protein chemistry
- Diagnostic biochemistry
- Clinical enzymology
- Molecular characterisation of eukaryotic and prokaryotic genes
- Gene expression studies
- Genes related to immunity
- Functional genomics
- Cell biology
- Cancer gene therapy
- Functional proteomics

- Antimicrobial peptides
- Drug discovery
- Biochemical and genetic markers of metabolic disorders in animals
- Biochemical effects of food additives
- Oxidative stress

Details of Units/High end labs/Specialized labs in the Department

1. Molecular biology laboratory
2. Cell culture lab
3. M.Sc. lab
4. U.G. lab

Department of Veterinary Epidemiology and Preventive Medicine

About the Department

The Department of Preventive Medicine started functioning under the department of Veterinary Medicine and Parasitology when the Kerala Veterinary College and Research Institute came into existence during 1955. Subsequently when Kerala Agricultural University was formed in 1972, the same set up was continued till 1976.The department became independent during 1976. The name of the department was changed to the Department of Veterinary Epidemiology and Preventive Medicine in 1994 when the Veterinary Council of India (VCI) syllabus was introduced for undergraduate programme. The department started functioning under Kerala Veterinary and Animal Sciences University from 2010. Master's degree programme (M.V.Sc.) was started in the same year. Ph.D. programme has started since 2008.

From left standing: Dr. Ancy Thankachan, Assistant Professor, Dr. Justin Davis K., Assistant Professor, Dr. Preena P., Assistant Professor

From left sitting: Dr. K. Vinodkumar, Assistant Professor, Dr. Tresamol P. V., Professor and Head, Dr. K. Vijayakumar, Professor and Faculty Dean

Staff

Name and Qualification	Designation	Mobile number & e-mail id	Areas of interest
Dr. Tresamol P. V.	Professor and Head	tresamol@kvasu.ac.in 9947659891	Preventive veterinary medicine
Dr. K. Vinodkumar	Assistant Professor	vinodkumar@kvasu.ac.in 9447668796	Preventive veterinary medicine
Dr. Justin Davis K.	Assistant Professor	justinpm@kvasu.ac.in 9446797772	Preventive veterinary medicine
Dr. Ancy Thankachan	Assistant Professor	ancy@kvasu.ac.in 9947770438	Preventive veterinary medicine

Number of Post graduate students

a. **Ongoing**

i. **Ph.D**

Name of the Scholar	Title of thesis
Athira K. (21-DVM-17)	Molecular Epidemiology and clinic therapeutic studies on babesiosis of dogs
Krupa Rose Jose (20-DVM-13)	Clinico-therapeutic studies of pyoderma in dogs and in vitro efficacy of green synthesized silver nanoparticles against the Staphylococcus epidermidis isolates

Completed during the year

i. M.V.Sc.

Name and admission number of of the student	Title of thesis
Anaina S. (20-MVM-40)	Evaluation of biofilm formation and antimicrobial resistance profiling of coagulase negative staphylococci isolated from bovine subclinical mastitis
Alphiya Joseph (20-MVM-39)	Molecular characterization of canine adenovirus infections and its pathology in dogs

Himadri Biswas (20-MVM-41)	Molecular identification of *Anaplasma* spp. and therapeutic studies of anaplasmosis in goats

Thrust areas of research

Diagnosis, molecular level characterization of aetiologias, haematobiochemical changes, prevention and surveillance of infectious diseases of domestic, pet, wild and exotic animals.

Other Courses offered

PG Diploma in therapeutic management of infectious diseases of pet animals and pet birds ((1year course), and Certificate course on Animal Handling.

Department of Veterinary Microbiology

About the Department

The erstwhile Department of Pathology and Bacteriology of the Kerala Veterinary College was bifurcated in the year 1959 giving rise to the Department of Bacteriology. Since the Department was dealing with different aspects of microbiology *viz*., bacteriology, virology and immunology, it was renamed as 'Microbiology' in the year 1977. The name was again changed as "Veterinary Microbiology" when B.V.Sc. & A.H. curriculum was brought under VCI regulations. Currently, the Department of Veterinary Microbiology is offering courses for B.V.Sc. & A.H., M.V.Sc. and Ph.D. under veterinary sciences and M.Sc. in Applied Microbiology. The M.V.Sc. and Ph.D. programmes were started in the year 1972 and 1982, respectively. So far, 98 M.V.Sc. and 14 doctorate degrees were awarded in Veterinary Microbiology and at present 11 students are in the different stages of completion. Twenty individuals have successfully undertaken a post graduate diploma from this department. Of late in 2012, M.Sc. in Applied Microbiology was started in a self-sustaining mode and till date 49 students have completed the course and 4 are pursuing. Till date, 21 projects funded from different external agencies were completed successfully. In addition [illegible] fruitfully.

From left: Dr. Binu K. Mani, Associate Professor; Dr. Priya P.M., Professor; Dr. M. Mini, Senior Professor and Head; Dr. Surya Sankar, Assistant Professor; Dr. Ambily R., Assistant Professor

Staff

Sl. No.	Name & Qualification	Designation	Mobile No. & E-mail ID	Area of Interest
1	Dr. M. Mini, Ph.D.	Senior Professor & Head	9446030361 mini@kvasu.ac.in	Veterinary Microbiology
2	Dr. Priya P.M., Ph.D.	Professor	9539065924 priya@kvasu.ac.in	Vaccine development
3	Dr. Binu K. Mani, Ph.D.	Associate Professor	9447225513 binu@kvasu.ac.in	Veterinary Immunology
4	Dr. Sreeja R. Nair, Ph.D.(BRTC, Tvm)	Assistant Professor	9447246201 sreejar@kvasu.ac.in	Virology Immunology, AMR
5	Dr. Surya Sankar, Ph.D.	Assistant Professor	9495242106 surya@kvasu.ac.in	Veterinary Virology, AMR
6	Dr. Ambily R., Ph.D.	Assistant Professor	9446373104 ambily.r@kvasu.ac.in	Veterinary Microbiology

Courses offered by the Department

- B.V.Sc.& A.H., M.V.Sc., Ph.D., M.Sc. (Applied Microbiology)

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl.No.	Name	Admission Number
1.	P.S. Reshma	19-DVM-12

ii. M.V.Sc.

Sl.No.	Name	Admission Number
1.	Roshni Moses	20-MVM-45
2.	Amritha S. Kumar	21-MVM-46
3.	Aarathi S. Nair	21-MVM-47
4.	Ayana B. Sanal	22-MVM-48
5.	Velugoti Venkata Guru Nikhil Teja	21-MVM-49

6.	Paidimuddala Charitha	21-MVM-50
7.	G. Oviya	21-MVM-51
8.	Niranjana V.	22-MVM-40
9.	Reshma Titus	22-MVM-41
10.	Vani Viswambharan	22-MVM-42

iii. M.Sc.

Sl.No.	Name	Admission Number
1.	Christy Darly	21-MSVM-03
2.	Induja P. Venu	21-MSVM-04
3.	Akhila Raghavan	21-MSVM-05
4.	Dilna Sebastian	21-MSVM-06

b. Completed during the year

i. Ph.D.

Name of the student and Admission Number	Title of thesis	Major Advisor
Sarika N. (17-DVM-12)	Comparative efficacy of different tests for ante-mortem diagnosis of bovine tuberculosis	Dr. Binu K. Mani

ii. M.V.Sc.

Name of the student and Admission Number	Title of thesis	Major Advisor
Greeshma Raju (19-MVM-18)	Development of diagnostic protocol for riemerellosis in ducks	Dr. Priya P.M.
Lina Kunjamma Mathews (20-MVM-043)	Assessment of immunogenic potency of inactivated vaccine against riemerellosis in breeder ducks	Dr. Priya P.M.
Ashtamy M. G. (20-MVM-42)	Antibiotic resistance profiling of bacteria isolated from corneal ulcers in dogs	Dr. Binu K. Mani

Sruthy Chandran B.	Genotypic characterisation of Infectious bronchitis virus isolates from Kerala	Dr. Surya Sankar
Vidya P.	Molecular detection and characterisation of chicken anaemia virus from Kerala	Dr. Surya Sankar
Akhila Joy (19-MVM-04)	Isolation and characterisation of Infectious *bursal disease virus* from field outbreaks in Kerala	Dr. Sreeja R. Nair

iii. M.Sc.

Name of the student and Admission Number	**Title of thesis**	**Major Advisor**
Sradha Dinesh Kumar (20-MSVM-06)	Assessment of virulence factors of *Riemerella anatipestifer* isolates	Dr. Priya P.M.
Aruna C. (20-MSVM-05)	Identification of bacteria isolated from surgical sites employing aseptic protocols during surgical procedure in companion animals	Dr. Binu K. Mani
Ajomol Joy (19-MSVM-10)	Isolation, identification and antibiogram of bacterial organisms in the reproductive tract of subfertile dogs during oestrum	Dr. Binu K. Mani
Albin Mathew (19-MSVM-11)	Isolation, identification and antibiogram of bacteria from gastrointestinal tract infections in chicken	Dr. Binu K. Mani
Archana T. S.	Isolation, antibiogram and phylotyping of *Escherichia coli* associated with canine pyometra	Dr. Surya Sankar
Bincy K. Abraham (20-MSVM-07)	Evaluation of multiplex polymerase chain reaction for diagnosis of pasteurellosis, contagious caprine pleuropneumonia and peste des petits ruminants in goats	Dr. Ambily R.

Thrust areas of research

The department takes up research projects in accordance with the public demand. The undertaken projects include those pertaining to the applied as well as the fundamental aspects of Veterinary Microbiology. The thrust areas include diagnosis of infectious diseases of animals and birds. Conventional as well as advanced molecular techniques are employed for the diagnosis of bacterial, viral and fungal diseases of animals and birds. The department is involved in development of diagnostics and vaccines.

Brief description of Extension and outreach activities for various stakeholders

Apart from the teaching and research activities, the staff members are also associated with various extension activities like imparting required technical knowledge to the officers of AHD and farmers through trainings, seminars, discussions and radio talks. Microbiological investigation of the clinical samples from livestock, pets and poultry, received from different districts of Kerala is carried out regularly. The major services include the investigation during disease outbreaks to know the causative agent, antibiogram studies to adopt appropriate field antibiotic regimen and diagnosis of leptospirosis in animals and humans. It acts as a referral centre for diagnosis of leptospirosis in animals.

Department of Veterinary Pathology

About the Department

The Department of Pathology, College of Veterinary and Animal Sciences, Mannuthy was initially established as a composite department in 1959 and started functioning as an independent department since 1972. The department was upgraded as Centre of Excellence in 1987 and elevated as Centre of Advanced Studies by ICAR in 1993. Outstanding contributions made by the department in the fields of ethmoid carcinoma, mycotoxicosis, thyroid disorders, immunopathology, pet animal and avian diseases, animal rabies, oncology, biomaterial research and environmental pollution have been well accomplished and acclaimed at the national and international levels. The department fetched the Science and Technology award in 1981 for outstanding research contributions.

Staff

Sl. No.	Name & Qualification	Designation	Mobile No. & E-mail ID	Area of Interest
1.	Dr. Prasanna K. S., Ph.D., PGDIPR	Assistant Professor	9495014780	Neuropathology, Toxicopathology, Oncology
2.	Dr. Sajitha I.S., Ph.D.	Associate Professor	9446193407, sajitha@kvasu.ac.in	Disease Biology, Oncology, Regenerative medicine, Comparative Pathology
3.	Dr. Devi S. S., Ph.D.	Assistant Professor	9495154440, deviss@kvasu.ac.in	Oncology. Pathology of infectious diseases, Avian Pathology
4.	Dr. Anoopraj R., Ph.D.	Assistant Professor	9495361872 anoopraj@kvasu.ac.in	Oncology. Ocular Pathology, Cytology

5.	Dr. Divya C., M.V.Sc.	Assistant Professor	9288172169	Area of interest: Regenerative medicine, Neuropathology

Courses offered

- B.V.Sc.& A.H., M.V.Sc.,Ph.D.,PG Diploma in Toxicologic Pathology

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl.No.	Name	Admission Number
1	Dr. Divya C.	22-DVM-05
2	Dr. Bharathi R.	21-DVM-19
3	Dr. Udhayakumar C.	21-DVM-23
4	Dr. Sruthi S.	20-DVM-14

ii. M.V.Sc.

Sl.No.	Name	Admission Number
1	Dr. Abin Kalliyan Ashok	22-MVM-46
2	Dr. Anoop E. P.	22-MVM-47
3	Dr. Sreelekshmi T. R.	22-MVM-48
4	Dr. Sreepriya T. R.	22-MVM-49
5	Dr. Karnati Bhargava Jyothi	22-MVM-66
6	Dr.Nisna Niyas	21-MVM-56
7	Dr.Anseena A. K.	21-MVM-57
8	Dr.Reshma K. A.	21-MVM-58
9	Dr.Princy Thomas	21-MVM-59
10	Dr.Aravind. K. Unni	21-MVM-60
11	Dr.Kishore Gopal A. G.	21-MVM-61
12	Dr.Bhupendra Chauriya	21-MVM-89

Completed during the year

i. Ph.D.

Name of the student and Admission Number	Title of thesis	Major Advisor
Dr. Devi S. S. (2018-DVM-03)	Histomorphological, immunohistochemical and molecular studies on desmoplastic reactions in canine mammary tumours	Dr. Ajith Jacob George

ii. M.V.Sc.

Name of the student and Admission Number	Title of thesis	Major Advisor
Dr. Arathy P. S. (20-MVM-49)	Evaluation of host cellular behaviours to decellularised extracellular matrix based porcine tunica vaginalis scaffolds in rat model	Dr. Dhanush Krishna B.
Dr. Jessil Joseph (20-MVM-52)	Pathological Evaluation of Central Nervous and Reproductive Systems of Porcine Circovirus-2 Infected Pigs	Dr. Dhanush Krishna B.
Dr. Navya Elizabeth Sajeev (19-MVM-32)	Immunohistochemical localisation of M2macrophages in canine mammary tumours using CD163 marker	Dr. Sajitha I. S.
Dr. Arya Nair M. L. (20-MVM-50)	Immunohistochemical evaluation of the expression of calcium calmodulin dependent kinase 2 alpha in the brain of rabies affected dogs	Dr. Divya C.
Dr Pullagura Nikhithasree (20-MVM-54)	Immunohistochemical evaluation of the expression of glutamate ammonia ligase in the brain of rabies affected dogs	Dr. Divya C.
Dr Blessy John (20-MVM-51)	Immunohistochemical evaluation of Eukaryotic Translation Initiation Factor 4e-Binding Protein 1, Phosphorylated, Eukaryotic Translation Initiation Factor 4e- Binding Protein 1 and Eukaryotic Translation Initiation Factor 4g in canine mammary tumours	Dr. Devi S. S.
Dr Keerthana Santhosh (20-MVM-54)	Histomorphological evaluation of stromal collagen and immunohistochemical analysis of heat shock protein 47 in canine mammary tumours	Dr. Devi S. S.

Thrust Areas of Research-Pathology

- **Regenerative medicine: P**reparation of potential bio scaffolds and their *In vitro* and *In vivo* characterization. Application of these potential scaffold candidates in various clinical practices and their clinical evaluation
- **Neuropathology**: Diagnosis of infectious and neurodegenerative conditions and evaluation of potential biomarkers in animal rabies
- **Molecular oncology:** Histological and molecular classification of common tumours in animals. Identification of specific candidate biomarkers for commonly occurring tumours in animals. Validation of the identified biomarkers in clinical cases throughout the state. Preparation of a reference database of potential candidate biomarkers for commonly occurring tumours in animals
- **Toxicopathology (including nanoparticles)**: *In vitro* and *In vivo* studies to evaluate the effect of

various toxicants and their amelioration using various herbal and synthetic preparations

Details of Units/ High end Laboratories/ specialised labs in the Department

- Molecular Pathology & Oncology Lab
- Rabies diagnosis Lab
- Histopathology and Immunohistochemistry Lab
- Post-mortem and Clinical Pathology Lab
- Pathology Museum

Brief description of Extension and outreach activities for the farming community

Post-mortem examination and consultancy services to farmers and pet animal owners are routinely provided from the department

Carrying out disease investigation during outbreaks and offering referral support to field veterinarians and disease diagnostic labs in disease diagnosis and post mortem.

Imparting training programmes to field vets and paravets on latest trends in disease diagnosis are systematically organized in this department every year for the benefit of farming community on latest trends in disease diagnosis are systematically organized in this department every year. A well-maintained Pathology museum is available for academic and extension purpose

Department of Veterinary Parasitology

About the Department

During the formative years of the Kerala Veterinary College and Research Institute in 1955-1958, there existed a composite department comprising of Parasitology, Pathology and Bacteriology. Later the department of Medicine and Parasitology came into existence in 1959 with Dr. C.T. Peter as the Professor and Head. The Department of Parasitology started functioning as an independent department from 1974 onwards with Dr. R. Kalyanasundaram as the Professor and Head. Post graduate programme leading to the award of M.Sc. (changed to M.V.Sc. in 1974) and Ph.D. were initiated in 1964 and P.G. diploma programmes in 1965. Till date, four dissertations, 54 M.Sc./M.V.Sc. theses and 13 Ph.D. theses have been submitted. The department also co-ordinates the Diploma in Laboratory Techniques, a two-semester programme that aims to produce competent lab technicians for AH sector. The department makes it clear to impart sufficient knowledge and experience to students and equip them as better veterinary surgeons. It upholds to investigate disease outbreaks and identify parasites that may pose harmful to livestock production and national economy. It implies on conveying and educating the public on the perils of drug abuse and on efficient management of parasites.

From left: Dr. M.N. Priya, Assistant Professor, Dr. Bindu Lakshmanan, Professor and Head, Dr. K Devada, Professor Emeritus (ICAR), Dr. R. Radhika, Associate Professor, Dr. Asha Rajagopal, Associate Professor, Dr. K. Syamala, Assistant Professor

Staff

Sl. No.	Name & Qualification	Designation	Mobile No. & E-mail ID	Area of Interest
1	Dr. K. Devada, Ph.D.	Professor Emeritus (ICAR)	9447418800 devada@kvasu.ac.in	Tissue cyst forming coccidians
2	Dr.Bindu Lakshmanan, Ph.D.	Professor and head	9447486722 bindul@kvasu.ac.in	Diagnostic Parasitology
3	Dr.R.Radhika Ph.D. (On working arrangements at UVH, Kokkalai	Associate Professor	9447995133 radhikar@kvasu.ac.in	Tick and tick borne infections
4	Dr. Asha Rajagopal, Ph.D.	Associate Professor	9446502343 asha@kvasu.ac.in	Anthelmintic resistance

5	Dr. H.Shameem, Ph.D. (On LWA)	Assistant Professor	09847008341 shameem@kvasu.ac.in	Trematodes of ruminants
6	Dr. K.Syamala, Ph.D.	Assistant Professor	9447668582 syamala@kvasu.ac.in	Anthelmintic resistance in small ruminants
7	Dr. M.N. Priya, Ph.D.	Assistant Professor	9847801988 mnpriya@kvasu.ac.in	Diagnostic Parasitology

Courses offered by the Department

- B.V.Sc.& A.H., M.V.Sc., Ph.D., Diploma in Laboratory Techniques

Number of Post graduate students

a. Ongoing

i.Ph.D.

Sl.No.	Name	Admission Number
1.	Dr. Rajeshwari	22-DVM-10
2.	Dr. Sunkara Prathyusha	21-DVM-18

ii. M.V.Sc.

Sl.No.	Name	Admission Number
1.	Dr. Deepa Soman	22-MVM-45
2.	Dr. Anandhabhairavi P.	22-MVM-43
3.	Dr. Archana P. S.	22-MVM-44
4.	Dr. Hiba Basheer E.	21-MVM-52
5.	Dr. Athira C. P.	21-MVM-53
6.	Dr.Nikitha Shajan	21-MVM-54
7.	Dr.Sethulakshmi M. J.	21-MVM-55

Completed during the year

i. M.V.Sc.

Name of the student and Admission Number	Title of thesis	Major Advisor
Reshmi Raveendran	Genetic analysis of host resistance to gastro-intestinal nematode infection among native goat breeds of Kerala	Dr.K.Syamala
Shaik Nikhat Reena	Characterisation of amitraz resistance in *Rhipicephalus sanguineus*	Dr. Bindu Lakshmanan
Merin Das V. J.	Evaluation of benzimidazole resistance in gastrointestinal nematodes of cattle	Dr. Priya M.N

Diploma/certificate courses

Department offers a self-sustaining one year course in Diploma (Laboratory Techniques) in association with the Departments of Veterinary Public Health and Pathology. At present there are 33 students undergoing the programme.

Thrust areas of research

Prevalence of emerging parasitic diseases in the state; diagnostics based on morphological, serological and molecular techniques; anthelminthic and acaricide resistance; trematodes of ruminants; vector potentiality ; sustainable parasite

Brief description of Extension and outreach activities for various stakeholders

Nine farmer awareness camps in Thrissur and five in Palakkad with 350 participating farmers on sustainable parasite management in goats with limited chemotherapy were organized under the project funded by NABARD in association with the AH department. Hands on training for the usage of Haemchek anaemia card and distribution of anthelmintics, acaricides, feed supplements and mineral mixtures was carried out.

Department of Veterinary Pharmacology and Toxicology

About the Department

The Department commenced as the composite Department of Pharmacology and Therapeutics in 1956 in the Veterinary College. In 1971, it was bifurcated into the Department of Pharmacology and Toxicology, and the Department of Therapeutics. Post-graduation (M.V.Sc.) was started in 1967, and the Ph.D. program in 1993. The M.Sc. in Toxicology course was commenced in 2022. The department is equipped with facilities such as a Cell Culture Lab, Molecular and Microbiology Lab, Pharmacodynamics Lab, Phytopharmacology Unit, In vitro Drug Activity Assessment Facility, Alternate Animal Testing Unit,

and *in silico* Drug Design Facility. Additionally, the department conducts technology-enabled distance education programs like the PG Certificate in Veterinary Homeopathy and the Postgraduate Diploma in Ethnopharmacology. The department also offers regular hands-on training in lab animal biomethodology and phytopharmacological techniques. The department has three externally aided research programs from the National Medicinal Plant Board, ICAR-NASF, and KSCSTE, with a total financial outlay of 71.6089 lakhs.

From left: Dr Bibu John Kariyil, Assistant Professor, Dr Sujith S., Assistant Professor, Dr. Suresh N. Nair, Associate Professor, Dr. Nisha A. R., Associate Professor, Dr. Suja Rani S., Associate Professor

Staff

Name	**Qualification**	**Designation**	**Mobile Number** **e-mail id**	**Area of interest**
Dr. Nisha A. R.	Ph.D.	Associate Professor	8606391936 nisha@kvasu.ac.in	Antimicrobial resistance, Molecular Pharmacology and Toxicology
Dr. Suresh N. Nair	Ph.D.	Associate Professor	9446919146 suresh@kvasu.ac.in	Pharmacokinetics, Pharmacodynamics, Regulatory toxicology, in silico techniques
Dr Suja Rani S.	Ph.D.	Associate Professor	9400964104 sujarani@kvasu.ac.in	Metabolic diseases, Antimicrobial resistance, Regulatory Toxicology, Laboratory animal science
Dr Sujith S.	Ph.D.	Assistant Professor	9539511273 sujith@kvasu.ac.in	Toxicology, Ethnopharmacology, Endocrinology
Dr Bibu John Kariyil	Ph.D.	Assistant Professor	9895297842 bibujohn@kvasu.ac.in	Cancer Biology, Metabolic diseases, Pesticide Toxicology, Laboratory Animal Medicine

Courses offered by the Department

- B.V.Sc.& A.H.,M.V.Sc., Ph.D., MSc. Applied Toxicology

Number of Post graduate students

a. Ongoing

i. Ph.D.

Name	Admission Number
Nisaath Begum	21-DVM-20
Aathira K.K.	20-DVM-15
Aswathy P.U.	19-DVM-03

ii. M.V.Sc.

Name	Admission Number
Devu B. Nair	21-MVM-68
Hari Sankar V.J.	21-MVM-63
Arundhathy S. Nair	21-MVM-64
Priyanka Menon K.	21-MVM-65
Jida M.D.	21-MVM-67
Divya Rajaselvi N.	21-MVM-69

iii. M.Sc.

Name	Admission Number
Sherin Thomas	22-MSVM-15
Aparna P	22-MSVM-16
Alfin Mariya	22-MSVM-17
Rohith Mohanan	22-MSVM-18

b. Completed during the year

i. M.V.Sc.

Name of the student	Admission Number	Title of the Thesis	Name of major advisor
Archana Raj	20-MVM-55	Sub-acute toxicity of indoxacarb and its reversal with hesperidin and ascorbic acid in rats	Dr. Suresh N. Nair

Arya Mohan	19-MVM-13	Comparative study of berberine and capsaicin as efflux pump inhibitors in quinolone resistant Staphylococcus aureus isolates from bovine mastitis	Dr.Nisha A. R.
V.Keerthika	19-MVM-23	Antineoplastic activity of silver nanoparticles biosynthesised from seeds of *Sesamum indicum* (Sesame) in Dalton's lymphoma ascites	Dr.Nisha A .R.

Thrust areas of research

- Antimicrobial resistance mitigation using phytopharmaceutical agents
- Phytopharmacological studies for the anti-inflammatory, wound healing and anticancer activities
- Pharmacokinetic studies of drug molecules
- *In vitro* and *in vivo* toxicity studies
- Evaluation of drug formulations and specialized drug delivery system *in vivo*
- Alternate animal models for drug toxicity evaluations
- Regulatory guideline toxicity studies of pesticides
- *In silico* pharmacological and toxicological studies

Details of Units/High end labs/Specialized labs in the Department

1. Phytopharmacology lab
2. Molecular biology lab
3. Cell culture facility
4. Antimicrobial activity assessment lab
5. Drug formulation unit
6. Alternate animal facility

Department of Veterinary Physiology

About the Department

The composite Department of Physiology, Biochemistry and Pharmacology started functioning as a constituent unit of College of Veterinary and Animal Sciences, Mannuthy ever since its inception in 1955. Later, in 1958 separate departments of Physiology & Biochemistry and department of Pharmacology were formed. In 2000, the composite department was again bifurcated as Department of Veterinary Physiology and Department of Veterinary Biochemistry. Post graduate (M.Sc. & M.V.Sc.) and doctoral (Ph.D.) programmes were started in 1964. The department has completed 7 external aided projects (ICAR, NATP and Govt. of Kerala), 4038 research projects (Masters) and 9 doctorate (Ph.D.) projects. Currently

there are one Ph.D. and three M.V.Sc. projects in the ongoing status. The department has done pioneering research work on the Physiology of Asian elephants and different aspects of Avian physiology. Besides, elaborate studies on stress, antistress agents, immune responses, reproductive physiology, climatic effects and growth were conducted in both domestic animals and birds.

Staff

Name and Qualification	Designation	Mobile Number & e-mail id	Area of interest
Dr. V. Ramnath., Ph.D.	Professor and Head	9446579057 ramnath@kvasu.ac.in	Cancer biology, Stress physiology,
Dr. K. Karthiayini, Ph.D.	Professor	9961448088 karthiayini@kvasu.ac.in	Reproductive physiology, Stress physiology
Dr. V. Beena., Ph.D.	Professor	9447532177 beenav@kvasu.ac.in	Environment & Stress physiology
Dr. Aziz Zarina., Ph.D	Associate Professor	9895016583 zarina@kvasu.ac.in	Environment & Stress physiology
Dr. Sreekumar T.R., Ph.D.	Assistant Professor	9496441351 sreekumartr@kvasu.ac.in	Cell biology

Courses offered by the Department

B.V.Sc.& A.H., M.V.Sc.,Ph.D.

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl.No.	Name	Admission Number
1	Dr. Megha P S	

ii. M.V.Sc.

Sl.No.	Name	Admission Number
1	Dr. Mathew J Kulamkuttiyil	21-MVM-70
2	Dr. Athulya Swaminathan	21-MVM-71
3	Dr. B. Ragupathi	21-MVM-72
4	Dr.Naveen	22-MVM-17

b. Completed during the year

i. M.V.Sc.

Name of the student and Admission Number	Title of thesis	Major Advisor
Radhika R (20-MVM-57)	Evaluation of Vitamin and Mineral Status in Chronic Skeletal Disorders in Dogs	Dr. Aziz Zarina
G. Srujana Sai (20-MVM-58)	Evaluation of Vitamin and Mineral Status in dermatological Disorders in Dogs	Dr. V. Babitha

Thrust areas of research

Physiology of Asian elephants, Avian physiology, antistress agents, immune responses, reproductive physiology

Department of Veterinary Public Health

About the Department

The Department of Veterinary Public Health was sanctioned by the Government of Kerala in the College of Veterinary and Animal Sciences, Mannuthy in July 1969. The subject of meat hygiene was delinked from the Department of Pathology and Meat Hygiene in 1972. Dr. R. Padmanabha Iyer was the first Professor and Head of the Department. Masters degree programme (M.V.Sc) in Veterinary Public Health was started in the year 1976 and Ph.D programme in 2007. The Meat Plant was established by the Department and the slaughter and sale of meat was managed by the department of Veterinary Public Health till the formation of Department of Livestock Products Technology. The department has an NABL accredited quality control laboratory for testing of water viz.,drinking water, ground water and water for food processing plant. The laboratory facilities are useful for assessing the portability of drinking water and for FSSA certification of the various food industries.

From left: Dr. Deepa Jolly, Assistant Professor, Dr. K. Vrinda Menon, Associate Professor, Dr. B. Sunil, Professor, Dr. Binsy Mathew, Assistant Professor, Dr. C. Sethulekshmi, Associate Professor, Dr. Deepthi Vijay, Assistant Professor

Staff

Sl.No.	Name	Designation	Email and Mobile	Area of Interest
1.	Dr. B. Sunil, Ph.D.	Professor	sunil@kvasu.ac.in 9497626575	Veterinary Public Health Food Safety and Quality
2.	Dr. K. Vrinda Menon,Ph.D.	Associate Professor	vrinda@kvasu.ac.in 9497655590	Food Safety and Zoonoses
3.	Dr. C. Sethulekshmi, Ph.D.	Associate Professor	sethulekshmi@kvasu.ac.in 9446246966	Zoonoses and Epidemiology of infectious diseases
4.	Dr. Deepa Jolly, Ph.D.	Assistant Professor	deepajolly@kvasu.ac.in 9388020563	Food safety and Quality Assurance
5.	Dr. Binsy Mathew, Ph.D.	Assistant Professor	binsymathew@kvasu.ac.in 9447381699	Food safety ,Environmental Hygiene
6.	Dr. Deepthi Vijay, Ph.D.	Assistant Professor	deepthivijay@kvasu.ac.in 9847774527	Epidemiology of zoonotic diseases, Food safety

Courses offered by the Department

- B.V.Sc.& A.H., M.V.Sc., Ph.D.

Number of Post graduate students

a. Ongoing

i. Ph.D.

Sl. No.	Name	Admission Number
1	Chendu Bharat Prasad	20-DVM-17
2	Asif M. Hebbal	21-DVM-21
3	Narayanan SB	22-DVM-06

ii. M.V.Sc.

Sl. No.	Name	Admission Number
1	Sahna R S.	21-MVM-74
2	Shilpa S.	21-MVM-75
3	Anjali S .	21-MVM-76
4	Sruthy S.	21-MVM-55
5	Akhila S.	21-MVM-73
6	Sonali N.	21-MVM-77
7	Fathima M	22-MVM-60
8	MSVB Ananaya	22-MVM-72
9	Amruthasree	22-MVM-59
10	Reema Nasrin E	22-MVM-61

b. Completed during the year

i. Ph.D.

Name of the student and Admission Number	Title of the Thesis	Name of the student advisor
Vivekanandan R. 18-DVM-13	Efficacy of campylophages and selected phytochemicals in the control of campylobacter biofilms	Dr. B. Sunil

ii. M.V.Sc.

Name of the student and admission number	Title of the Thesis	Name of the student advisor
Sriji A. P.	Epidemiological investigation of risk factors associated with occurrence of Leptospirosis in dairy cattle	Dr. K. Vrinda Menon

Pravitha C. P.	Isolation and detection of antimicrobial resistance of thermophilic *Campylobacter* from layer farms and chicken processing lines	Dr. Deepa Jolly
Radikha A. N.	Detection of colistin and quinolone from poultry processing line	Dr. Binsy Mathew
Devika D. Sunil	Antibiotic resistance in enteropathogenic *Escherichia coli* and *Campylobacter* spp. from beef and raw cow milk	Dr. Binsy Mathew
D. PremKumar	An exploratory study on the determinants of occupational hazards among veterinarians of Kerala	Dr. Binsy Mathew
Kavya A.	In vivo efficacy of garlic and chitosan for control of *Campylobacter* spp. in meat type chicken	D. Deepa Jolly
Jisna Jamal P.P.	Occurrence of enrofloxacina and tetracycline resistant *Klebsiella pneumoniae* and *Salmonella* spp. in beef and cow milk	Dr. C. Latha
Miyada Yoosuf	Phytocontrol strategies using silver nanoparticles and activated charcoal against coliforms in water	Dr. Deepa Jolly
M Bindhupushpa	Detection of *Coxiella brunetii* in milk and vaginal swabs of goat with history of reproductive disorders	Dr. Sethulekshmi C.

Thrust areas of research

The research undertaken by this department focuses on aspects of human, animal and environment health connectedness. The main domains of activity include, the development of advanced diagnostic techniques for pathogens of public health importance, surveillance and monitoring of zoonotic diseases with special reference to prevention and control, development of HACCP plan for various food processing plants, assessment of physio-chemical and bacteriological quality of environmental samples to ensure environmental hygiene. So far the department has completed three Externally Aided Projects funded by ICAR, one by Kerala State Council for Science, Technology & Environment, 32 KAU projects and 15 KVASU projects.

Details of Units/High end labs/Specialized labs in the Department

1. Zoonoses lab
2. Molecular biology lab.
3. Quality control and water testing lab (NABL accredited)
4. Post graduate lab
5. Undergraduate lab

Brief description of Extension and outreach activities for various stakeholders

Routine testing for water, meat, meat products, milk products and other foods of animal origin. Conduct of camps for water testing and conduct awareness programmes for the public on aspects of zoonosis and one health. Organised exhibitions in Sacred Heart School, Thrissur as a part of zoonosis day celebrations.

Department of Veterinary Surgery and Radiology

About the Department

The Department of Veterinary Surgery and Radiology came into existence along with the Kerala Veterinary College in 1955. The Department continues to impart knowledge and skills in large and small animal surgery to the undergraduate students since then. Post graduate programme was started in the department in the year 1973 and Doctoral Programme in Veterinary Surgery and Radiology in the year 1993. So far, the Department of Surgery has come out with 91 M.V.Sc. thesis and 9 Ph.D. thesis and published 312 research articles in reputed national and international journals. At present the Department is having an intake capacity of six post graduate students and two doctoral scholars every year. Apart from the contributions in academics, the department is committed to extend clinical services to the farmers and act as a referral centre for the Veterinarians in Kerala and nearing states. The Department has successfully hosted three national seminars of Indian Society of Veterinary Surgery and is an integral part of organising Continuing Veterinary Education to the veterinary officers of the state.

Staff

Name& Qualification	Designation	Mobile Number & e-mail id	Area of interest

Dr. John Martin.K.D. MVSc, Ph.D.	Professor and Head	9847413665 martin@kvasu.ac.in	Radiology Soft tissue surgery
Dr. Sudheesh S Nair M.V.Sc, Ph.D.	Assistant Professor	8111842340 7012782977 sudheeshnair@kvasu.ac.in	Surgical oncology Soft tissue surgery
Dr. Laiju M. Philip M.V.Sc, Ph.D.	Assistant Professor	9447996512 laijuphilip@kvasu.ac.in	Ophthalmology Bovine lameness
Dr. Soumya Ramankutty M.V.Sc.	Assistant Professor	9446451739 soumya@kvasu.ac.in	Anaesthesia Soft tissue surgery
Dr. Nijin Jos B.M. M.V.Sc.	Assistant Professor	9496328772 nijinjo@kvasu.ac.in	Large animal surgery orthopaedics

Number of Post graduate students

a. Ongoing

i.Ph.D.

Sl.No.	Name	Admission Number
1.	Ashok R. Unni	18 DVM 02
2	Giggin T.	19 DVM 07
3	Gayathri K.	19 DVM 06
4	Soumya Ramankutty	20 DVM 18
5	Udharwar Sanjaykumar Vithalrao	20 DVM 19
6	Reji Varghese	21 DVM 22
7	Deny Jennes	22 DVM 07

ii. M.V.Sc.

Sl.No.	Name	Admission Number
1.	Ashlin Michael	20 MVM 66
2.	Shubham W Raut	20 MVM 70
3 .	Jishi Das P.	21 MVM 79
4.	Shehasina K. A.	21 MVM 80
5.	Ajin S. Kumar	21 MVM 81
6.	Alan V. Stephen	21 MVM 82
7.	Karthik A.	21 MVM 83
8.	Shahabas Shareef M.	21 MVM 84
9.	Amal Prakash	21 MVM 86
10.	Ishwaria R.	21 MVM 87
11.	Hareeshma Babu	21 MVM 85
12.	Sreelakshni M. Nair	22 MVM 65
13.	Lakshmi Padmanabhan	22 MVM 63
14.	Anuja D. A.	22 MVM 62
15.	Preethi S.	20 MVM 66

b. Completed during the year

i. Ph. D.

Name of the student and Admission Number	Title of the Thesis	Name of major advisor
Laiju M. Philip (18 DVM 08)	Autologous platelet rich plasma for treatment of sole lesions and expression profile of associated biomarkers in dairy cattle	Dr. John Martin.K.D.

ii. M.V.Sc.

Name of the student and Admission Number	Title of the Thesis	Name of major advisor
Aleena Thomas (19MVM 05)	Sonologic features of mammary gland neoplasms and its correlation with surgical margins and malignancy in dogs	Dr. Sudheesh S. Nair
Aiswarya C. Babu (19MVM 03)	Comparison of multimodal anaesthesia protocol with Isoflurane and sevoflurane maintenance in geriatric canine patient	Dr. Soumya Ramankutty
Reny Raj (19MVM 49)	Management of long bone fractures in cats by external skeletal fixator with intramedullary pin tie-in configuration using epoxy putty	Dr. S. Anoop
Shakir S. N. (19MVM 58)	Supracutaneous locking compression plating for the management of long bone fractures in dog	Dr. Laiju M. Philip
Deny Jennes (19 MVM 14)	Autologous platelet rich plasma for treatment of canine superficial corneal ulcers –a comparison between subconjuctival and topical application	Dr. Soumya Ramankutty
Abhiram M. J. (20MVM 65)	Homologous platelet rich plasma gel for treatment of sole lesions in dairy cattle	Dr. Laiju M. Philip
Aswathy Mohan A. (20MVM 67)	Decellularised porcine cornea as an acellular scaffold graft for the management of corneal ulcers in dogs	Dr. S. Anoop
Jayakrishnan V. (20MVM 68)	Clinical evaluation of a multimodal anaesthetic protocol using butorphanol- dexmedetomidine-idazolam-ketamine-isoflurane and lignocaine continuous rate infusion in bovines	Dr. Sudheesh S. Nair
Rahul B. (20MVM 69)	Evaluation of dexmedetomidine - butorphanol - zolazepam – tiletamine anaesthesia for elective surgery in cats	Dr. Syam K. Venugopal
Tamaraiselvi P. (20MVM 71)	Minimal invasive percutaneous cystostomy using paediatric suprapubic catheters for management of urethral obstructions in tom cats	Dr. Sudheesh S. Nair

Thrust areas of research

- Surgical urinary diversion techniques for obstructive urolithiasis in male goats
- Therapeutic decompression methods for spinal cord injury in dogs
- Ocular ultrasonographic methods for opththalmic diseases in canine patients
- Multimodal anaesthetic studies for large animal and pet animals
- Biomaterial application in wounds and corneal defects
- Streamlining surgical approaches to Canine Mammary and Superficial neoplasms with reference to adjuvant and neoadjuvant chemotherapy protocols
- Regenerative therapy in hoof disorders in dairy cattle

Details of Units/High end labs/Specialized labs in the Department

- Fully equipped air-conditioned large animal operation theatre with inhalant anesthetic machine with ventilator and hydraulic operation table.
- A 200 mA High Frequency X-ray machine and 100 mA High Frequency Mobile X ray unit for animal radiography and a Computerized Radiography system with networking facility to various out-patient units of Veterinary Hospital, Mannuthy also established for real-time viewing of radiographic images for clinical diagnosis.
- Physiotherapy unit with therapeutic diathermy, therapeutic ultrasound and diagnostic and therapeutic electric muscle stimulator.
- Ophthalmology unit with Slit lamp biomicroscope, Tonopen, Operating microscope, Direct and Indirect Ophthalmoscope.

Brief description of Extension and outreach activities for various stakeholders

i. Co organised Annual Conference of Indian Society for Veterinary Surgery - Kerala Chapter, Prof. (Dr.) P.O. George commemoration speech series II and Continuing Veterinary Education programme on topic 'New perspectives in Large Animal anaesthesia' on 18.12.2022 at Hotel Pearl Regency, Thrissur.

ii. Kerala State Veterinary Council sponsored CVE Training 'Therapeutic Hoof Trimming in dairy cattle' for Veterinary Graduates was conducted 6th and 7th & 21st and 22nd January 2023 with twenty participants.

iii. Kerala State Veterinary Council sponsored CVE Training 'Small Animal Soft Tissue Surgery' for Veterinary Graduates was conducted on 18-21 Jan 2023, 8-11 Feb 2023 and 22-25 Feb 2023 with a total of 24 participants.

Lecture Halls, Examination Halls and Ladies' waiting rooms

Lecture Halls

The College of Veterinary and Animal Sciences, Mannuthy houses six well-furnished classrooms with seating capacities of 90 to 130 and equipped with projection facilities. Each classroom is under the control of a Head of Department as given below.

1. Lecture hall I (seating capacity- 96) - HoD of Veterinary Pathology
2. Lecture hall II (seating capacity- 81) - HoD of Veterinary Microbiology
3. Lecture hall III (seating capacity- 130) - HoD of Veterinary Biochemistry
4. Lecture hall IV (seating capacity- 130) - HoD of Veterinary Parasitology
5. Lecture hall V (seating capacity- 96) - HoD of Veterinary & Animal Husbandry Extension
6. Lecture halls VI (seating capacity- 81) - HoD of Veterinary Pharmacology and Toxicology

Lecture Hall equipped with projection facilities

In addition, the college also houses a specially designed smart class rooms to seat 100 persons and equipped with projection facilities and under the control of the Head of the Central Instrument Laboratory.

Smart Classroom

Centralized Examination Halls

Main Examination Hall

University examinations are conducted in two centralized examination halls under the control of the Professor (Academic); a Main Examination Hall with seating arrangements for 366 students and a Post Graduate Examination Hall with seats for 120 students at a time.

Ladies' Waiting rooms

A ladies' waiting room to seat twenty students at a time and with washroom and study facilities is available for the exclusive use of lady students who wish to avail the facility during college hours.

Auditoriums, Seminar Halls and Board Rooms

Pushyaragham Hall (College Auditorium)

The original auditorium of the College of Veterinary and Animal Sciences, constructed in 1958, with seating capacity of 75 and stage facility for conducting stage performances.

The Open-air auditorium

The open-air auditorium was commissioned in 2023 and is a vibrant green space for hosting colourful cultural events by the staff and students of the college.

Pavizham Board Room

College of Veterinary and Animal Sciences houses the fully air-conditioned Wi-Fi enabled Pavizham Board Room with facilities for video conferencing and projection facility with a seating capacity of 15.

Indraneelam Hall (Seminar Hall)

Fully airconditioned Wi-Fi enabled seminar hall with seating capacity for 140 persons, projection facility and generator back up constructed in 1995.

Indraneelam Hall (Seminar Hall)

Golden Jubilee Alumni Hall (Suvarnam Hall)

The Golden Jubilee Alumni Hall is the first major contribution to the Alma Mater by Veterinary College Alumni Association, Kerala (VAAK) and it was constructed and dedicated on 23.04.2010. The hall along with a pucca firefighting system and a suitable overhead tank was constructed at a cost of Rs. 42 Lakhs and the fund for this was by liberal donations of the Alumnae of the College and the MPLADS (of two Hon'ble Members of Parliament) and Special development fund of Hon'ble Member of the Legislative Assembly of the constituency. The land for the building was allotted by the University for this purpose. Dean, CVAS, Mannuthy is the custodian of the building and officer allotting the hall.

Golden Jubilee Alumni Hall (Suvarnam Hall)

Secretary, VAAK is the officer in charge on behalf of Dean. The hall has a seating capacity of 300, a permanent stage and separate washroom facilities as well.

Rajatham Hall (Smart class room)

Smart class room (Rajatham hall) was widely used for 202 classes handled by staff of KVASU. Classes include interactive sessions, online meetings and offline classes. The smart class room was made under the surveillance of CCTV camera. As a part of National Agricultural Higher Education Project which envisages to raise the standard of current agricultural education system, a facility to record and upload video classes in Agri-Diksha web portal was implemented.

The infrastructure received from ICAR include digital podium for lecturer, visualiser, interactive panel, tracking camera, and audio systems. Till date 47 classes were recorded for uploading

Grounds, Indoor Court and Gymnasium

The college has impeccable outdoor sport equipment and infrastructure that include the following

- Track and field (4x100 m); Football field (45m width and 90m length)

  Cricket field (60m width and 100 m length); Two cricket Practice Nets (Size. 20.12 x3.5 m; Material, Nylon Net, Metal Frame); Two volleyball courts (18 meters long and 9 meters wide); One Basketball court (28 meters long and 15. m wide)

  Multi-Purpose Play Field for various games such as football, cricket, hockey etc.

The College Grounds

Additional facilities and equipment for indoor sports are as follows:

- Tow Badminton Courts (5.2 meters wide and 13.41 meters long); Table Tennis Hall (six standard table); Chess Room (25 board); Yoga Hall with mats

Indoor Badminton Court

The college also provides the service of a newly renovated two synthetic shuttle badminton court free at the following rates:

Type of institution	**Rent (for a maximum of 6 hours)**	**Rent for additional extra hours**	**Security Deposit**
Educational Institutions	6000/-	1000/-	12000/-
Non- Educational Institutions	9000/-	1000/-	18000/-
Time for Students	6 to 10 am and 3 to 11 pm		
Time for Faculty (One Court)	6 to 8 am and 7 to 8 pm		

Indoor Badminton Court

Gymnasium

A state-of-the-art gymnasium is available at the college for the use of staff and students as per the schedule below. The facility is equipped with three treadmills, two ellipticals one cycle, bench press, incline bench press, deltoid CRAC machine, fly rear deltoid, lat putt down, triceps CRAC, dumbbells - fixed and adjustable, barbells and Olympic barbells, weights, caff rising, chest press machine, adjustable bench, preacher curl bench (Bicep Curl Bench), leg press machine, leg extension machine, kettlebells, stability ball, cable crossover machine, skipping rope, plyometric box, pull up bar and push-up bars.

The Gymnasium

User fee for students and faculty and staff members

User category	Monthly Fee	Six Month Fee
Students	Registration fee: Rs.50/ (at the time of Registration); User fee Rs.50/ (to be remitted before 5th of every month)	Registration fee: Rs.50/ (at the time of Registration); User's fee Rs.250/ (to be remitted before 5th of every month)
Faculty / staff/ Temporary staff	Registration fee: Rs. 100/ (at the time of Registration); User fee Rs.300/ (to be remitted before 5th of every month)	Registration fee: Rs. 100/ (at the time of Registration); User fee Rs. 1500/ (to be remitted before 5th of every month)

Health Club Timings

Days	Girls / Women Faculty		Boys / Men Faculty	
	Morning	Evening	Morning	Evening
Monday to Saturday	6.00 to 7.30	3.30 to 6.00	7.00 to 8.30	6.00 to 8.00

The Gymnasium

The Guest House -Neelambari

The Guest House, Neelambari is situated within the college campus near the indoor stadium. The guest house offers a comfortable and peaceful stay to the guests visiting the College of Veterinary and Animal Sciences, Mannuthy.

Officer in –charge: Dr. Anoopraj R., Asst. Professor, Department of Veterinary Pathology, CVAS, Mannuthy

Facilities

The guest house has four double bed air-conditioned rooms which include three VIP rooms. The guest house also has a well-maintained kitchen and a dining hall which provides a comfortable dining space for 20 persons at a time.

Hostels

Undergraduate Ladies' Hostels – Priyadarshini, Pournami, Navami and Panchami Hostels

The college provides separate Wi-Fi enabled furnished accommodation with dining facility, common reading and recreation rooms and provision for water purifiers and outdoor games to undergraduate lady student in four hostels. The hostels for undergraduate lady students are Priyadarshini Hostel, Pournami Hostel (New Annexe), Navami Hostel, (Old Annexe) and Panchami Hostel, above the Teaching Veterinary Clinical Complex. In all, a total of 102 rooms, spread over the four hostels are available for undergraduate lady students. At present, a total of 402 lady students occupy the hostels.

Officer in charge

Dr. Nisha A.R., Associate Professor, Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy

Postgraduate Ladies' Hostel - Ashtami

The college offers separate furnished accommodation for post graduate lady students. The Ashtami Hostel for postgraduate lady scholars is Wi-Fi enabled and has common television, water cooling, computer and printing facilities for the inmates. The hostel houses 63 rooms and at present is occupied by 93 lady post graduate scholars.

Officer in charge

Dr. Aziz Zarina, Associate Professor, Department of Veterinary Physiology, CVAS, Mannuthy

Undergraduate Men's Hostel -Taurus

A three storied building for the Men's Hostel, facing the then Trichur – Palghat Road was completed in the year 1957 and was occupied from the academic year 1957-1958. The college provides furnished residential accommodation facilities for undergraduate men students at the Taurus Hostel with 78 rooms that are Wi-Fi enabled and provided with a mess serving Kerala meals, common recreational and reading facilities and purified water. At present there are 210 men students occupying the men's hostel.

Officers in charge

Dr. George Sherin K., Associate Professor, Department of Animal Nutrition, CVAS, Mannuthy

Dr. Bibu John Kariyil, Assistant Professor, Department of Veterinary Pharmacology and Toxicology, CVAS, Mannuthy

Postgraduate Men's Hostels Leo and Capricorn

The college provides 38 furnished rooms with dining facility, a recreational room and common washing machine facilities in two postgraduate hostels for men situated on the campus. At present there are 69 scholars occupying the hostel.

Officer in charge

Dr. B. Bibin Becha, Assistant Professor, Department of Animal Reproduction, Gynaecology and Obstetrics, CVAS, Mannuthy

Staff residential facilities

The college provides residential facility for resident doctors of Teaching Veterinary Clinical Complex above the TVCC. In addition to these residential facilities on the campus are available as flats and individual staff quarters as follows.

Flats

Type H and T – 29 flats

Individual quarters

Type A - 4

Type B - 7

Type C - 9

Type D - 8

Type E - 46

Type F - 2

Type G - 8

Type P - 3

Total residential facility for staff: Flats 29 and individual quarters 87

The Library

Library space with list of holdings

Library and Information Centre, College of Veterinary and Animal Sciences, that supports learning, teaching, and research activities of the College of Veterinary and Animal Sciences, Mannuthy. The Library is functioning in two buildings and the total plinth area allotted to the library comes to 5765 square feet with adequate furniture and seating facility, with vast knowledge and information resources, facilities, and latest communication technologies. The Library is well equipped with modern facilities and resources in the form of online/offline databases, e-books, e-journals, thesis collections. Library uses 'Koha' open source software for the effective management of the information documents. In addition to the finest collections of print and non-print documents of latest veterinary publications, literature and competitive exam documents, the library has a treasure of nearly one thousand books for general reading including world classics, novels, , autobiography, critics etc. It has been striving relentlessly to enhance the quality of services to maximize user satisfaction.

Books (Text Books, Reference Books, Books for general reading)	***25890***
Thesis (MVSc /PhD)	***1966***
Bounded Back volumes of Journals.	***5914***
E- journals (sciencedirect.com)	***216***
E-books (Wiley-177, NIPA-138, ASAP- 24)	***219***
On-line Journals/e-contents through CeRA (https://jgateplus-com/)	***4021***
Knimbus digital library platform	
Scopus Database	
CABI Vet CD	***1971-2013***

The Library

Other facilities and services

- Library timings 9 am to 7 pm on all working days
- Wireless internet facility
- Twenty desktop computers with internet access
- Book bank scheme for SC/ST students
- Automated Library circulation system by using Koha open source software Library
- Catalogue (OPAC)- 'Koha' is accessible to all computers connected with LAN

- Photocopying Facilities provided through reprographic centre of PTA
- ***Book bank lending scheme for UG, PG and Ph.D Students***
- ***Orientation Programme to freshers***
- ***Over-night reference loan***
- ***CCTV based Security Surveillance System***

Library Timings and Usage

The library is functioning from 9 am to 7 pm on all working days. Apart from the UG, PG and Ph. D students, the beneficiaries include teaching and non-teaching staff of the faculty.

Photocopying Facilities

Reprographic facilities are being provided to the beneficiaries at nominal rate through the reprographic centre of PTA in the campus.

Availability of Computers and Access to Internet

Wireless internet facilities are available in the library free of cost. Twenty computers with internet access are provided for browsing. Library Catalogue (OPAC) is available at all computers connected with LAN.

E-journals

CeRA (Consortium for e-resources in Agriculture) provided by NAIP (National Agricultural Innovation Project) under the aegis of IARI as lead institute is available with an access to nearly 4021 Indian and foreign journals. The major scientific journal publishers including Elsevier, Springer, Taylor and Francis, Annual Review and Indian journals.com are also available through CeRA. Presently, the users can access 4021 e-journals through ICAR e-journal consortium (https://jgateplus.com/). A total of 216 e-journals are subscribed and accessible through Elsevier science direct.com

E-books

Altogether 219 veterinary medicine and animal husbandry e-books are subscribed from the publishers like Wiley online library, NIPA and ASAP. These e-books are accessible through Knimbus digital library platform.

CABI Abstracts

An elaborate database, CABI Abstracts in Veterinary Science is available from 1973+ onwards in the library. Through it the researchers get instant access to more than 6.3 million records of veterinary science and animal husbandry.

Library circulation

An automated Library circulation system is being followed in the library using Koha open source software. Barcoded lending system is being followed for speedy transaction.

Augmented Reality – Virtual Reality lab (AR-VR lab)

KVASU has established an Augmented Reality-Virtual Reality lab at CVAS, Mannuthy. It was done as part of National Higher Education Project which envisages strengthening of national agricultural higher education system in the country by digital transformation and enhancement of current capabilities. ICAR-IASRI is the lead centre entrusted with the implementation of the project and they are concerned with the setting up of AR-VR labs in state agricultural universities. As part of the programme, six AR-VR headsets with pre-loaded learning modules were delivered to KVASU. Augmented Reality-Virtual Reality is the name of computer technology that places the user in a virtual world and it makes the person feel that they are somewhere else. This learning modules will be useful for students and faculty as it facilitates an immersive visual and interactive learning experience which could foster a better learning outcome.

The Crèche, Cooperative Society, Coffee and photostat shops

The college offers the facilities of creche managed by Parent Teacher Association, CVAS, Mannuthy which caters to the day care needs of the children of working faculty and staff in the university. Kids are taken care by the creche teacher, who in addition to routine day care, engages them in teaching rhymes and other games. Kids enrolled in the creche are on either on daily basis, afternoons after class hours and weekend depending on the needs of the parents. About five to six kids make use of this facility regularly. An assortment of educational toys of various kinds and a television have been made available for the children at the creche.

Officer in charge- Dr. Lucy K.M., Professor, Department of Veterinary Anatomy

Two coffee shops are maintained in the campus, one at the main building and other at the TVCC campus. The coffee shop provides beverages and snacks at subsidized rates to students and staff.

The Parent Teacher Association, CVAS, Mannuthy also runs a photostat cum binding facility for students and staff at subsidized rates.

The Cooperative Society

Kerala Agricultural and Kerala Veterinary University Co-Operative Society Limited No.R.162, Mannuthy, Thrissur, 680651 is a cooperative society registered under the Act X of 1952. The employees of Kerala agricultural university, Kerala Veterinary & Animal Sciences University under the area of operation of the society and the colleges and other organisations under these universities are eligible to be the member of the society. At present there are a total of 1452 Members, out of which 548 members are from Kerala Veterinary & Animal Sciences University. The objects of the society are encouragement of thrift and self-help among the members, purchasing and selling , especially for the benefit of student members' educational accessories, running a provisional store to cater to the needs of members , college hostels and canteens, maintaining a canteen for the benefit of members, promoting the ideas of co-operation, carrying out activities conclusive to the attainment of the above objectives, providing simple loans to members and to run monthly deposit schemes for the benefit of members. The society provides

members loan schemes such as the loans to purchase home appliances, simple loan, pay security loan, loan on investment and over draft facility. Deposit schemes include Savings Account Schemes, Fixed Deposits and Monthly Deposit Schemes. The society has been running in profit since 1998 and provides dividends to its members at a percentage of 25 per cent. Profit for the year ending 31st March 2022 was Rs. 34,42,804.82/-

Centres, Stations, Schools and Farms

Centre for Animal Adaptation to Environment and Climate Change Studies (CAADECCS)

About the centre

Foreseeing the risks that the livestock sector would be facing in the changing climatic scenario, the Kerala Veterinary & Animal Sciences University (KVASU) has established 'Centre for Animal Adaptation to Environment and Climate Change Studies (CAADECCS)' to excel in climate change education, research and extension in the field of Animal Agriculture under the Directorate of Academics and Research with ICAR special grant during XI Plan.The CAADECCS is the first of its kind among the State Veterinary Universities of the country which serves as the nodal agency dealing with research and capacity building on all the aspects of climate risk management in relation to animal agriculture including weather insurance and providing information to the planners/policy makers for implementing strategies to mitigate the ill effects of climate change/variability so as to sustain and enhance the rural livelihoods through livestock production and management. The centre aims to have Livestock Advisory Field Units (LAFUs) at all livestock farms to cater to the location-specific issues on climate change adaptation and mitigation and prepare Livestock Advisory based on medium Range Weather Forecasting for the benefit of livestock farmers. The outcomes of the Centre will have local and regional as well as national and global relevance to climate change adaptation and mitigation strategies in the field of Animal Agriculture in the Humid Tropics.

Thrust areas of research

The centre has done pioneering research work on thermal stress in dairy cattle.

Details of Units/High-end labs/Specialized labs in the Department

In the year 2019, an RKVY-RAFTAR project entitled "Strengthening of Centre for Animal Adaptation to Environment and Climate Change Studies (CAADECCS) for Thermal Stress Assessment in Dairy cattle" was sanctioned to CAADECCS with a total financial outlay of 170 lakhs. A climate-controlled research facility has been installed on the Mannuthy campus.

Climate Controlled Research Complex (CCRC) is a high-tech research facility for assessing thermal stress in animals attached to the Centre for Animal Adaptation to Environment and Climate Change Studies (CAADECCS) of Kerala Veterinary and Animal Sciences University (KVASU). It is a part of the RKVY-RAFTAR 2019-20 project - "Strengthening of Centre for Animal Adaptation to Environment and Climate Change Studies (CAADECCS) for Thermal Stress Assessment in Dairy cattle"

with a total financial outlay of 170 lakhs. This is a sophisticated state-of-the-art facility that is commonly used to study the impact of climate change on animals in a fully controlled environment.

The facility comprises two major chambers as given below.

1. A climate chamber in which the temperature can be adjusted from 5°C to 50°C ±1°C and relative humidity from 20% to 95% ±3%

2. A comfort chamber in which the temperature is always kept in the comfort zone (i.e., from 20- 27°C) of the animal.

Each chamber can accommodate six large animals like cattle and buffaloes. Besides, there is animal holding facility to keep 12 animals in ambient conditions outside the chamber. In all three conditions, the physiological and behavioural alterations can be observed and monitored continuously. In the climate chamber, an artificial climate can be created with different combinations of temperature and relative humidity with the help of air conditioners and dehumidifiers supported by appropriate software. There is also a provision for controlling the diurnal lighting, optional elevated humidity, air exchange control, and tight performance tolerances. There are facilities to monitor methane, carbon dioxide and ammonia gases discharged from animals in the chamber. It is an ultimate research facility of international standards for assessing the impact of thermal stress in animals and also for finding out the alleviation strategies to be adopted for sustainable livestock production. The uniqueness of this facility is that it can be used for large and small animal research.

This facility is the first of its kind in State veterinary universities and is ideal for studying climate-related impacts on cows, buffalos and other small animals. The climate-controlled research complex has been recognized as an achievement of the Kerala State Government and has been uploaded to the Kerala State's Government official website. A team of experts from the University of Melbourne visited the climate-controlled research complex on 15th September 2022. The facility has been inaugurated on 17th April 2023 by honourable minister for animal husbandry and dairy development Smt. J. Chinchurani in the presence of honourable minister for revenue and housing Shri. (Adv.) K. Rajan, M. L. A Shri. O. R. Kelu, Shri. (Adv.) T. Siddique, Shri. Vazhoor Soman and other University members.

Central Instruments Laboratory

About the laboratory

Central Instruments Laboratory conducted three short term trainings on "Modern Analytical Research Techniques used in Veterinary and Allied Sciences" during 2022-23. A total of 30 Post Graduate students and 10 PhD scholars got trained and acquainted with operating procedures of all the sophisticated equipment installed at Central Instruments Laboratory. Central Instruments Laboratory received one new equipment- Fully automated biochemical analyser worth 8.4 lakhs. It was installed and made functional. A total of 3640 visitors and on an average of thirteen users/day, used the laboratory's infrastructure facilities, which include students and staff of KVASU while, 728 were from outside KVASU.

Research equipment at the Central Instruments Laboratory

A revolving fund operating through Central Instruments Laboratory generated a revenue of Rs 28,76,942/- against an expenditure of Rs 27,95,697/-, with a net profit of Rs 81,245/-. The expenditure includes Rs 1.25 lakhs which has been transferred to finance officer of KVASU as a part of profit. The expenditure also includes Rs 9.37 lakhs spent exclusively for Annual Maintenance Contract fee of some sophisticated equipment and associated repairs. At present five temporary employees are engaged on daily wage basis under revolving fund, as Lab Technicians, Office Assistant, Lab Assistant and Sample Collector. An Instrumentation Engineer on contract basis has been working through plan scheme of the laboratory. A total of 58 samples were analysed for pesticide residues and 210 samples were analysed for heavy metals residue levels. Images of 37 samples were captured using scanning electron microscope. Hundred blood samples were analysed for thyroid profile.

Officer in charge: Dr. V. Ramnath, Professor, Department of Veterinary Physiology, College of Veterinary and Animal Sciences, Mannuthy

List of equipment at the Central Instruments Laboratory

Sl No	Equipment Name	Make	Date of purchase / Installation	Scheme under which equipment was purchased	Cost of the equipment (Rs.)
	Atomic Absorption Spectrophotometer	Perkin Elmer	27/11/2013	EFC	42,21,522/-
	Tripple Quadruple-GCMSMS	Thermo Fisher Scientific	16/09/14	EFC	1,00,93,010/-
	Ultra High Performance Liquid Chromatography	DionexSoftronGmbh Thermo Fisher Scientific	14/10/14	EFC	31,71,568/-

	PROTEAN® i12™ IEF System for 2-D Electrophoresis& Densitometer	Bio-Rad	22/05/13	EFC	13,82,739/-
	Western Blotting Assembly	Bio-Rad Laboratories	31/08/14	EFC	5,57,068/-
	Chemidoc MP Imaging System	Bio-Rad Pacific Ltd	22/05/13	EFC	17,12,453/-
	Gradient Thermal Cycler	Bio-Rad Laboratories	22/05/13	EFC	3,10,661/-
	Tissue Homogenizer	Kinematica	23/12/13	EFC	4.91.168/-
	Freeze Drier/ Lyophilizer; Cold Trap; Vacuum Concentrator	Operon	16/08/13	EFC	24,65,381/-
	Orbital Shaker/Shaker Incubator	Thermo Fisher Scientific	18/07/13	EFC	3,80,313/-
	Rotary Flash Evaporator	Hahnshin Scientific Co	28/12/2013	EFC	7,53,850/-
	Gamma Counter	PerkinElmer	12/07/13	EFC	18,89,109/-
	Nanodrop Spectrophotometer	Thermo Fisher Scientific	5/06/13	EFC	6,45,884/-
	Fluorospectrometer-Nanodrop	Thermo Fisher Scientific	29/09/13	EFC	5,00,000/-
	Semi-Micron Analytical Balance	Mettler	25/09/13	EFC	2,76,077/-
	Electronic Weighing Balance	Shimadzu	March 2012	EFC	75,000/-
	Ultrapure Water Purification System	Merck Millipore	7/12/13	EFC	5,35,058/-
	Bio-Chemical Analyser	Hospitex Diagnostics	21/10/13	EFC	2,19,964/-
	HaematologyAnalyser	Orphee	24/11/13	EFC	7,74,289/-

	Ultra-Centrifuge	Thermo Fisher Scientific	10/08/13	EFC	43,24,809/-
	Refrigerated Centrifuge (High-Speed)	Thermo Fisher Scientific	26/07/13	EFC	6,57,326/-
	Stereo Zoom Microscope	Vision Engineering	3/08/13	EFC	2,36,082/-
	Trinocular Research Microscope	Leica	1/12/13	EFC	16,50,802/-
	Inverted Research Microscope	Zeiss	16/10/14	EFC	16,00,000/-
	Co_2 Incubator	Thermo Fisher Scientific	18/07/13	EFC	3,39,408/-
	Autoclave	Tuttnauer	19/09/13	EFC	8,64,120/-
	Ice Flaker	Castel Mac Spa	17/02/14	EFC	2,28,550/-
	Automated Mammalian Cell Counter	Invitrogen	9/06/14	EFC	2,50,000/-
	Incubator	Thermo Fisher Scientific	14/10/13	EFC	1,07,442/-
	Hot Air Oven	Thermo Fisher Scientific	29/10/13	EFC	96,506/-
	Deep Freezer -86^0c	Thermo Fisher Scientific	27/09/13	EFC	11,86,604/-
	Real Time PCR	Applied Bio Systems	21/02/14	EFC	13,26,708/-
	Automatic Fraction Collector	Bio-Rad Laboratories	31/08/14	EFC	2,25,811/-
	Electrofusion Apparatus/ Electroporator	Bio-Rad Laboratories	31/08/14	EFC	3,96,695/-

	Microwave Digestion System	Perkin Elmer	29/05/14	EFC	17,09,379/-
	Fourier Transform Infrared Spectrometer (FTIR)	Perkin Elmer	13/08/13	EFC	18,87,900/-
	Biosafety Cabinet Class II	Thermo Fisher Scientific	30/09/14	EFC	5,05,772/-
	Shaker Water Bath	Thermo Fisher Scientific	18/07/13	EFC	3,31,792/-
	Fume Hood	Technico Laboratories	23/05/14	EFC	1,52,917/-
	Ultrasonic Cleaner	Medical Ultrasonic Cleaner	1/04/14	EFC	45,000/-
	Radiation Monitor	ATOMTEX	29/05/14	EFC	76,046/-
	REMI Vortex mixer	REMI	16/06/14	EFC	6,298/-
	REMI magnetic stirrer	REMI	16/06/14	EFC	8,588/-
	Digital Thermometer	Thermo fisher scientific	31/01/15	EFC	4,600/-
	Liquid Chromatograph – Mass Spectrometry (LC-MS)	Thermo fisher scientific	31/05/2017	EFC	67,36,304/-
	Inductively Coupled Plasma – Optical Emission Spectrometer (ICP-OES)	Thermo fisher scientific	09/10/2017	EFC	37,95,874/-
	Scanning Electron Microscope	TESCAN	30/06/2017	EFC	60,23,329/-
	Accelerated solvent extractor	Thermo fisher scientific	25/04/2016	ICAR dev grant	20,42,818/-
	Vertical Gel electrophoretic system	Bio-rad	22/05/2013	EFC	3,29,927/-
	Submarine Gel electrophoretic system	Bio-rad	22/05/2013	EFC	2,91,667/-

	Electrolyte analyzer	Easy stocking solutions	31/03/2016	EFC	1,79,000/-
	Laminar air flow	Scientific enterprises	20/07/2013	EFC	78,275/-
	pH-ORP meter	Hanna instruments	13/01/2017	ICAR dev grant	29,500/-
	Fully automated biochemical analyser	Selectra Pro s Lite, Netherland	01/04/2021		8,40,000/-

Small Animal Breeding Station

The Small Animal Breeding Station was started in 1966 as a part of Animal Nutrition Department. The Station is registered according to the CPCSEA regulations. The Station is meant for supplying good quality laboratory animals such as rats, mice, guinea pigs, rabbits and hamsters to various Research Institutions in the Government and Private Sector, Schools and Colleges all over the State and even to the Institutions in the adjacent States. An amount of Rs. 4 lakhs is generated annually as a result of sale of laboratory animals and feed.

Officer in Charge : Dr. Ajith K.S. Assistant Professor, Department of Animal Nutrition

Facilities available in the station

a. Area of Present SABS Building :6460 sq. ft

b. Number of Rooms Available in Present SABS: 17

c. Current Animal Stock Position in SABS

Sl. No	Animal Species	Number
1	Sprague Dawley	140
2	Albino wistar rats	105
3	BALB/c Mice	103
4	Swiss albino	120
5	Rabbit	7
6	Guinea pig	30
7	Hamster	30

School of Animal Nutrition and Feed Technology (SANFT)

School of Animal Nutrition and Feed Technology **(**SANFT) is established for conducting animal nutrition research in basic and applied areas and it also helps to coordinate the animal nutrition and physiology researches with other institutes. The School has established a feed processing and technology

unit to produce nutritionally balanced feed with a quality testing laboratory with all modern techniques and facilities. The school also provides specialized training programs in allied sectors for up gradation of man power in animal nutrition and feed technology for different part of the country. A fully automatic feed mill with a capacity of 2 Tonnes per hour was purchased and installed under SANFT**.** A Diploma course on feed Technology is also offered with the aim of addressing the shortage of man power in feed mill technicians and operators.

Mandate of SANFT

- To conduct Animal Nutrition Research in basic and applied areas, develop balanced / complete feeds using available agro-industrial by-products
- To adopt /develop densification/baling of fodder technology, Total Mixed Ration (TMR), ensure the production and supply of mineral – vitamin mixture and animal feed supplements and pet and laboratory animal feed
- To conduct Diploma / Certificate courses to progressive farmers, livestock entrepreneurs, feed mill managers, develop specialized training programmes for up-gradation of manpower in animal nutrition and feed technology for different parts of the country and develop technologies to improve the quality and economical utilization of poor-quality roughages

Staff

Sl No	Name of Staff
1	Dr. Shyama K- Implementing officer and DDO, SANFT
2	Dr. Dipu M T- Officer in charge of Feed Mill, SANFT
3	Dr. Sajith Purushothaman- Officer in charge of Mineral Mixture, DCFB and pet food plant
4	Mr. Shibu Thomthy- Farm Supervisor Grade I, RF Feed Mill, SANFT

Production and Sale from RF Feed Mill, SANFT 2022-23

Total Production from RF Feed Mill, SANFT 2022-23: 3651 Tonnes

Total Sale from RF Feed Mill, SANFT 2022-23: 3645 Tonnes

Control Panel Unit of Feed Mill

School of Applied Animal Production and Biotechnology (SAAPBT)

The School of Applied Animal Production and Biotechnology (SAAPBT) was established in 2013 with the objectives of establishing cutting edge facilities to take up research in many fields of Biotechnology. The School has got well-equipped laboratories with all modern facilities for carrying out biological research.

The School has got expertise in many aspects of wet lab molecular biology techniques including nucleic acid isolation, PCR, restriction enzyme analysis, electrophoresis, SSCP, quantitative real time PCR, ELISA as well as analysis of research results with various bioinformatics tools.

The research facilities of the School are being utilized by post-graduate Ph.D. scholars of many disciplines of CVAS, Mannuthy for their research projects. The School offers two Post graduate programmes, M.Sc (Animal Biotechnology with 15 seats) and M.V.Sc (Animal Biotechnology with four seats).

Staff

Dr Radhika G. (Additional duty), Professor, Department of Animal Genetics and Breeding with additional charge of Implementing Officer, SAAPBT

Number of Post graduate students (Course wise) (2022-2023)

Ongoing -M.Sc.

Sl. No.	Name	Admission Number
1.	Arjith P.	22-MSVM-12
2.	Aksa Thomas	22-MSVM-11
3.	Prathyusha	21-MSVM-21
4.	Adithya D.	21-MSVM-22
5.	Tijina Rachel Thomas	21-MSVM-23
6.	Sreelakshmi T. S.	21-MSVM-24

Completed during the year – M.Sc.

Sl. No.	Title of thesis	Name of student	Major advisor
1	Polymorphism studies of *Lysozyme* gene (*lyz*) and their association with mastitis resistance in crossbred cattle and Murrah buffaloes of Kerala	Ms. Remya John 19-MSVM-07	Dr Jamuna Valsalan

Training Course for 10 days

Three trainings were conducted in 2022-2023 on Skill Development Training on Molecular Biology and Bioinformatics tools for Advanced Life Science Research with 15 students per batch.

Thrust areas of research

The thrust area includes molecular biology and Bioinformatics studies for Animal Production and Improvement.

Details of Units/High end labs/Specialized labs in the Department

The School has Molecular Biology, Cell Culture labs equipped with sophisticated instruments such as PCR, Real-time PCR, high speed refrigerated centrifuges, UV spectrophotometers, CO2 incubator, Osmometer, Gel electrophoresis systems, Pulsed Field Gel Electrophoresis, Gel documentation system, Fluorescence and inverted microscopes and Bioinformatics Lab with Server Computer with latest bioinformatics facilities. There are two class rooms and a Conference Hall with LCD Projector and e-conferencing facility.

Research scholars in scientific engagement at the school

School of Bio energy studies and Farm Waste Management

The School started functioning in 2013 as a collaborative project of Dept. of Livestock Production Management, Livestock Products Technology, Animal Nutrition and Veterinary Public Health, The School has established a Bio-diesel plant and environmental lab with facility for multigas analysis, IR thermometer and thermal camera and BOD analyser, an integrated waste management model and has developed technologies for enhanced aerobic composting through mechanical shredding and forced oxygenation, two stage digestor bio-gas plant, bio-diesel production from animal fat, waste utilisation by black soldier flies *(Hermetia illucens*), holistic low cost scrubbing mechanism for harvesting purified biogas, integrated farming model for waste management, model bio waste management by combined mechanical and biological process, values addition of slurry and organic manure and compressed storage of biogas.

School has associated with Nirmal Nagaram Project at Alappuzha in integrated waste management using Thumburmuzhy composting technique, conducted a series of trainings to farmers and stake holders in waste management, and has initiated Gobardhan projects in University Farms, and associated with World Bank funded Kerala Solid Waste Management Project (KSWMP).

Officer in charge: Prof. (Dr.) Joseph Mathew, Senior Professor & Head, Dept. of Livestock Production Management (LPM)

School of Zoonoses Public Health and Pathobiology

About the school

The School of Zoonoses Public Health and Pathobiology was started under the special EFC grant, ICAR, Government of India in 2012. It was being formed in collaboration with departments of Veterinary Public Health, Veterinary Pathology, Veterinary Microbiology, Veterinary Parasitology and Veterinary Epidemiology and Preventive Medicine. The main objective of the School is to generate, transfer and apply knowledge in the concerned disciplines for the protection and promotion of animal and human health and their wellbeing in consonance with the theme of 'Health for all in 21 st century'. The activities of School focus on creating awareness on zoonotic diseases in the community, training programmes for veterinarians, medical professionals, teachers and students on various aspects of zoonotic diseases and biosafety. School is also involved in need-based research on zoonotic diseases and also to produce a database on the various diseases. The School is also conducting technologically enabled course on 'Food safety and quality assurance' since 2015.

Staff

Dr K. Vrinda Menon, Associate Professor, Dept. of VPH, CVAS, Mannuthy,

Collaborating Departments:

- Department of Veterinary Public Health
- Department of Veterinary Microbiology
- Department of Veterinary Epidemiology and Preventive Medicine
- Department of Veterinary Parasitology
- Department of Veterinary Pathology

2**. Plan project 22-23: Prevalence of zoonotic diseases among companion animals and pet birds in Kerala**

Research Findings

Kitten and cats reared strictly inside the houses had less chances of getting gastrointestinal parasitism. Roaming household cats are potent source of infections like *Toxoplasma gondii, Sarcocystis.* Major parasitic infections detected among cats are Ancylostoma sp., Diphyllobothrium sp., Spirometra sp. Joexiella sp.*Campylobacter species* was not isolated from faecal samples of pet birds and cats *Riemerella anatipestifer* (17 isolates) *from* detected the presence of virulence - associated genes *viz*., pncA, vapD and sprA. The organisms cause acute septicaemia, peri-carditis, peri-hepatitis, meningitis and air-sacculitis like conditions and leads to death and huge economic loss. 25 per cent of the cats suspected with rabies were confirmed by post- mortem and FAT. Multisystemic involvement of *E.coli* infection in African grey parrot (*Psittacus erithacus)* was observed. Serological testing of *Chlamydia* spp in pet birds was studied.

Activities over the year

1. Zoonoses Day 2022- 6th July, 2022

2. Training on Biosafety (Culture of Responsibility) for Post graduate students – 23rd March, 2023
3. ReAct Asia Pacific
4. Rabies Awareness Workshop at Ollukkara Block Panchayat – 20th December, 2022
5. Rabies Awareness and Water Testing Camp at Nadathara, Madakkathara and Panancharry Panchayats – 10.03.23, 14.03.23, 24.03.23
6. Rabies awareness classes at schools – Sept- Oct 2022

University Livestock Farm and

Fodder Research & Development Scheme

About

The rich heritage and distinct legacy of ULF & FRDS dates back to 1917 when Thiru – Kochi Government of the Royal Cochin Dynasty established it as Ollukara Farm (OF). Post-independence, ULF& FRDS was transferred to Department for Animal Husbandry, as State Livestock Farm, Mannuthy and then in 1955 to the Government Veterinary College, Mannuthy. On transfer to Kerala Agricultural University, in 1972 the State Livestock Farm, Mannuthy was then redesignated as ULF&FRDS. In 2010, the farm became an official part of Kerala Veterinary and Animal Sciences University, Pookode , Wayanadu.

ULF & FRDS has 250 cattle and produces on an average 1000 Litres of milk daily. Cattle consist of a herd that is predominantly of Frieswal origin as it is a part of Progent Testing Sceme run nationwide by Project Directorate on Cattle, ICAR, Govt of India. Farm also has 80 Buffaloes that produces daily on an average 130 litres of milk. Herd consist predominantly of Murrah breeds that are systematically graded up. Fodder section has 40 acres of land and is cultivated occasionally with cereal purpose fodders namely Maize and Sorghum. Parennial cultivated grasses namely, guinea grass, para grass, congo signal and cross bred napier variants namely CO3, CO4 and CO5 are the main crops available.

Teaching Research and Extension (TRE) mandates of University Livestock Farm & FRDS

ULF & FRDS is a centre for teaching BVSc, B Tech and various diploma/certificate students of the university various aspects as diversified as internship training, farm training, farm practice, entrepreneurial development trainings in a systematic way. ULF is hosting 4 doctoral researches one each from disciplines of Animal Nutrition, Livestock Production Management, Animal Reproduction and Veterinary Surgery. Post graduate research programmes hosted are two each from Animal Nutrition and Preventive Medicine, one from Livestock Production Management, Animal Reproduction and Veterinary Surgery. A State of art Milking Parlour is being installed at ULF & FRDS to demonstrate germ free milk production using modern technologies to both students as well as farmers visiting the station. A Stipendiary course titled Fodder Crop

Development Army has started at this station to enhance entrepreneurships in fodder cultivation and processing among rural youth.

(MVSc., PhD and MSc.)

LPM

1. Predictive potential of physio-biochemical parameters for periparturient production diseases in cross bred dairy cows (PhD)

2. Evaluation of calf rearing practices to develop new strategies for producing healthy replacement heifers (PhD)

3. Skin surface temperature changes to mastitis and micro-climate variables in crossbred dairy cows in three climate zones in Kerala

4. Climatic comfort of dairy cows in relation to housing provisions in hot humid climate of Kerala (PhD)

Animal Reproduction:

1. Influence of season on follicular development and oocyte competence in crossbred dairy cattle

2. Intra-uterine ozone treatment for subclinical endometritis in crossbred dairy cows

Animal Nutrition:

1. Evaluation of milk replacers containing alternative protein sources in cross bred calves.

2. Feeding value of grass silage incorporated with propionic acid & bacterial inoculum in cross bred heifers

3. Nutritional evaluation of concentrate mixture containing varying levels of dried Moringa (moringa oleifera) leaves in Murrah Buffalo heifers

4. Nutritional evaluation of feeding practices of wild ungulates at Zoological Park in Thrissur district

5. Influence of dietary levels of rumen undegradable protein on growth of crossbred calves

Animal Breeding and Genetics

1. Transcriptome profiling of peripheral blood mononuclear cells from crossbred and vechur cattle in response to thermal stress

Veterinary Biochemistry

1.Effect of heat stress on milk fatty acid profile and expression of stearoyl CoA desaturase gene in crossbred and Vechur cattle

2.Investigation of free circulating replication component circular DNA in cattle and its presence in canine mammary tumour (PhD)

3. Expression of profiling of micro RNA in lipopolysaccharide challenged peripheral mononuclear cells of cattle

Veterinary Surgery and Radiology

Efficacy of autologous platelet rich fibrin (PRF) gel for treatment of sole ulcer in dairy cattle

Veterinary Physiology

1. Impact of heat stress on dairy cows in late gestation and their newborn calves

2. Impact of heat stress on physio-biochemical parameters during early lactation of crossbred dairy cattle

MSc. Biostatistics

1.Modelling time from last calving to culling dairy cattle using survival models

2.Modelling productive lifespan of dairy cattle

3.Modelling the production and price of milk in Kerala

4.Modelling lactation curve in buffaloes

Dairy Microbiology

Metabolomic profiling of milk from Vechur, Murrah & Malabari breeds fermented with wild strains of lactic acid bacteria (PhD)

MSc. Biochemistry

1. Analysis of amino acid profile of milk & milk products of cattle and buffalo using HPLC.

2. Characterisation of Anti-Mullerian Hormone gene of cross bred and Vechur cattle

3. Determination of water soluble vitamins in the milk and milk products of cattle and goat using UHPLC

4. Molecular characterisation of coding region of Interleukin-4 gene of Vechur & crossbred cattle

5. Assessment of lipid mobilization and liver enzyme levels during early lactation in crossbred cows

Student training during the year Livestock Farm Practice for 2019 BVSc & AH students

- Farm training for Dairy Diploma students
- Farm Training for BTech Dairy Students
- Internship Training Programme for 2016 and 2017 BVSc & AH students
- Ambulatory Clinic for 2018 BVSc & AH Students
- One-year Stipendiary Training programme for 03 Fodder Crop Development Army trainees
- On The Job Training for 30 Students of VHSC, GVHSS, Ayanthole in Cattle & Buffalo of ULF & FRDS
- Dairy Technology practical class for BTech Dairy students

Fodder maize cultivation in new fodder plots

Centre for Pig Production and Research

The present pig farm was started as Pig Breeding Farm under Kerala Agricultural University on 12.05.1965. Later it was renamed as Centre for Pig Production and Research (CPPR) in 1995 and continues under KVASU from May 2011 onwards.

Staff strength

Scientific staff	4
Administrative staff	5
Farm Supervisors	2
Labourers	29 (2 from employment exchange)
Daily wage employees	4

Animal strength

Large White Yorkshire	545
Landrace	122
Duroc	48
Desi	80
50% cross	129
75% cross	250
Total	**1174**

Major activities

1. Research on all aspects of pig production and health. 3 Ph.D., 3 M.V.Sc. and 1 M.Sc. research works were conducted in the year.
2. Repository of elite germplasm of different pig breeds (Large White Yorkshire, Landrace, Duroc) and conservation of native germplasm (Ankamali and Desi crossbreds).
3. Function as an instructional farm for conducting training to professional, students and farmers. Given training for 2 batches of Assistant Directors of AHD and 1350 farmers during the year.
4. Human resource development in the area of pig husbandry and bio-waste management. Established Effluent Treatment Plant for waste water recycling.
5. Conduct extension activities as model demonstration unit to pig farmers.
6. Production and supply of quality breeding and fattening piglets to farmers and increase the revenue.
7. Function as a centre for technology transfer, validation and assess its impact on socio-economic status of pig farmers.
8. Collaborate with National and International Institutes to carry out research on pig production.
9. Provide consultancy service for farmers, entrepreneurs and funding agencies.

Animal sales

Fattening	1273
Breeding	207

Facilities

Farrowing shed

There are 6 sheds with 210 farrowing pens including the newly constructed shed under ICAR Mega Seed Project. Three of the sheds are under maintenance work.

Grower and boar sheds

Three sheds are for growers and boars. It includes 56 pens for growers and 80 pens for boars.

Breeding pen

Breeding pen is under maintenance work

Effluent Treatment Plant

Effluent treatment plant is an answer to environment pollution due to large quantum of effluent generated from pig farms and also helps to recycle water to a great extent. The plant has a capacity to treat 75,000 -80,000 litres of effluent and able to reclaim 60,000 litres of water per day. The total outlay of the project was 50 lakhs.

Farrowing shed constructed under ICAR Mega Seed Project

There are 20 farrowing pens in the shed with protective guard rail and separate creeping space.

University Goat and Sheep Farm

About

The farm was established in 1965 and a total area of 4.10 acres to with the following objectives:

- Promote and undertake research on all aspects of goat production and health.
- Operate as an instructional farm to students
- Conduct extension activities as model unit and supply breeding animals to farmers,

Organizational structure:

Sl.No	Designation	Sanctioned	In Position	Vacant
1	Professor	Nil	1	Working arrangement (After noon session)
2	Associate Professor	Nil	1	
2	Farm supervisors	2	2	1 employment
3	Class IV	1	1	Daily wage
4	Labourers-permanent	12	11	1

Number of animals: 436 Nos.

Malabari goats: 125; Attappady black: 92; Crossbred: 142; Sheep: 77

Breeds of animals maintained

Malabari, Attappady black and crossbred goats, Mecheri sheep, and Ramnad white

Farm activities

Milk/year: 7160.8L; Animals sold/year (Young): 134; Animals sold/year (Adult): 144

Plan Projects:

1. Strengthening of Goat and Sheep Farm
2. Conservation and Evaluation of Malabari and Attappadi Black Goats

Student projects

MVSc Research – Department of Veterinary Parasitology- Ivermectin resistance in GI nematodes of goats

MVSc Thesis work - Growth performance of Malabari kids fed complete diets containing spent cumin seeds - Dept. of Animal Nutrition

MVSc - Dept. of preventive medicine - Molecular characterization of Anaplasm and therapeutic studies of anaplasmosis in goats

PG Academic work - Preventive Medicine - Collection and examination of goat blood smear, faecal sample and blood sample

MVSc Thesis - Dept. of Animal Nutrition - Growth performance of Malabari kids feed complete diets containing spent cumin seeds.

Ph.D Research – ARGO – Fertility of cryopreserved Malabari buck semen on post thaw

supplementation of goat seminal plasma.

Diploma in Dairy Techniques-Department of Veterinary Parasitology

Trainings conducted

Student trainings: 263; Farm training: 1; No. of farmers visited: 1172

University Poultry and Duck Farm

The UPDF was established in 1950 under Erstwhile Cochin State with the mandate of providing facilities for research and practical training to UG and PG students. At present, the farm maintains 28 breeds of poultry including chicken, duck, turkey, guinea fowl, Japanese quail and goose. The hatchery unit has 15,000 eggs hatching capacity per week. The farm supplies parent stocks chicks of Gramasree chicken to Regional Poultry Farms under Animal husbandry Department, Kerala. The farm also supplies day old chicks of various breeds of poultry to farmers in Kerala and neighbouring states and imparts training and consultancy services to farmers and entrepreneurs Revenue received by sale of animals/ products was 181.16 lakhs.

Present Stock

Category	Number
Chicken	8021
Duck	800
Turkey	4
Quail	1381
Goose	66
Guinea Fowl	24

Details of supply of germplasm and other inputs to farmers and institutions

Chicks	319030
Egg	383869
Meat	13806
Manure	61080

Rabbit Breeding Farm

The farm was established in 1982. Dr. Marykutty Thomas, Assistant Professor, Department of AGB is the officer in charge. Other staff strength includes one farm supervisor and four labourers. The farm maintains different rabbit breeds such as New Zealand White (120), Soviet Chinchilla (75), Grey Giant (35), White Giant (100), Dutch (25), Palomio Golden (25) and cross bred (30) rabbits as well.

Major activities

1. Supply of rabbit seed stock to farmers- distributed 463 numbers of breeding stock to farmers
2. Functions as an instructional farm for conducting training to professionals, students and farmers

3. Provides consultancy service for farmers, entrepreneurs and funding agencies.
4. Conducts extension activities as model demonstration unit to rabbit farmers

THESES

i. Ph.D.

Sl. No.	Name of the student and Admission Number	Title of the Thesis	Name of major advisor	Department
1	Dr. Alphine Joseph (20-DVM-02)	Comparative histomorphology and ultrastructure of the skeletal muscles of broiler and Kuttanad ducks	Dr. S. Maya	Veterinary Anatomy
	Vasudhar Bhat S. V. (19-DVM-18)	Evaluation of anticancer property of recombinant goat lactoferrin	Dr. Uma R.	Veterinary Biochemistry
	Divya P. D. (18-DVM-04)	Analysis of differential expression of microRNA in lipopolysaccharide challenged lymphocytes of Vechur and crossbred cattle	Dr. Shynu M.	
	Dr Ambily V R (2018-DVM-01)	Clinico-therapeutic and ultrastructural studies on canine atopic dermatitis with special reference to filaggrin gene polymorphism	Dr Usha Narayana Pillai	Veterinary Clinical Medicine, Ethics and Jurisprudence
	Dr. Sarika N. (17-DVM-12)	Comparative efficacy of different tests for ante-mortem diagnosis of bovine tuberculosis	Dr. Binu K. Mani	Veterinary Microbiology
	Dr. Vivekanandan R (18-DVM-13)	Efficacy of campylophages and selected phytochemicals in the control of campylobacter biofilms	Dr. B. Sunil	Veterinary Public Health
	Dr. S. Sankaralingam (17-DVM-10)	Transcriptome analysis of pectoral muscle among pekin and Kuttanad ducks.	Dr. P. Anitha	Poultry Science
	Dr. Laiju M. Philip (18 DVM 08)	Autologous platelet rich plasma for treatment of sole lesions and expression profile of associated biomarkers in dairy cattle	Dr. John Martin. K.D.	Veterinary Surgery and Radiology

	Dr Amritha Aravind	Follicular dynamics and expression profile of B- cell lymphoma- 2 gene in Malabari doelings supplemented with Moringa oleifera leaves	Dr Shibu Simon	Animal Reproduction, Gynecology and Obstetrics
	Dr Magnus Paul K	Assessment of myometrial contractility, gene expression of hormone receptors in uterus and foeto-maternal velocity indices in canine uterine inertia	Dr C. Jayakumar	
	Dr. Devi S. S, 2018-DVM-03	Histomorphological, immunohistochemical and molecular studies on desmoplastic reactions in canine mammary tumours	Dr. Ajith Jacob George	Veterinary Pathology
	Dr. Safeer M. Saifudeen 19-DVM-12	Prediction of protein coding genes in rumen metagenomic reads of cattle using machine learning based approach	Dr. K. Anilkumar	Animal Genetics and Breeding

ii. M.V.Sc

Sl. No.	Name of the student &Admission Number	Title of the Thesis	Name of major advisor	Department
	Radhika R. (20-MVM-57)	Evaluation of Vitamin and Mineral Status in Chronic Skeletal Disorders in Dogs	Dr. Aziz Zarina	Veterinary Physiology
	G. Srujana Sai (20-MVM-58)	Evaluation of Vitamin and Mineral Status in dermatological Disorders in Dogs	Dr. V. Babitha	
	Dr Nimna Ajay (20-MVM-033)	Characterisation of acid soluble collagen from Daggertooth Pike Conger (*Muraenesox Cinereus*) and its application in wound healing	Dr. Varuna P. Panicker	Veterinary Biochemistry
	Dr. Akshara B. Venu (20-MVM-32)	Expression profiling of microRNA in lipopolysaccharide challenged peripheral blood mononuclear cells of cattle	Dr. Divya P. D.	

	Archana Raj 20-MVM-55	Sub-acute toxicity of indoxacarb and its reversal with hesperidin and ascorbic acid in rats	Dr. Suresh N. Nair	Veterinary Pharmacology and Toxicology
	Arya Mohan 19-MVM-13	Comparative study of berberine and capsaicin as efflux pump inhibitors in quinolone resistant *Staphylococcus aureus* isolates from bovine mastitis	Dr. Nisha A R	
	V. Keerthika 19-MVM-23	Antineoplastic activity of silver nanoparticles biosynthesised from seeds of *Sesamum indicum* (Sesame) in Dalton's lymphoma ascites	Dr. Nisha A R	
	Reshmi Raveendran	Genetic analysis of host resistance to gastro-intestinal nematode infection among native goat breeds of Kerala	Dr. K. Syamala	Veterinary Parasitology
	Shaik Nikhat Reena	Characterisation of amitraz resistance in *Rhipicephalus sanguineus*	Dr. Bindu Lakshmanan	
	Merin Das V. J.	Evaluation of benzimidazole resistance in gastrointestinal nematodes of cattle	Dr. Priya M.N	
	Greeshma Raju (19-MVM-18)	Development of diagnostic protocol for riemerellosis in ducks	Dr. Priya P.M.	Veterinary Microbiology
	Lina Kunjamma Mathews (20-MVM-043)	Assessment of immunogenic potency of inactivated vaccine against riemerellosis in breeder ducks	Dr. Priya P.M.	
	Ashtamy M. G. (20-MVM-42)	Antibiotic resistance profiling of bacteria isolated from corneal ulcers in dogs	Dr. Binu K. Mani	
	Sruthy Chandran B.	Genotypic characterisation of Infectious bronchitis virus isolates from Kerala	Dr. Surya Sankar	
	Vidya P.	Molecular detection and characterisation of chicken anaemia virus from Kerala	Dr. Surya Sankar	
	Akhila Joy (19-MVM-04)	Isolation and characterisation of Infectious *bursal disease virus* from field outbreaks in Kerala	Dr. Sreeja R. Nair	
	Sriji A. P.	Epidemiological investigation of risk factors associated with occurrence of Leptospirosis in dairy cattle	Dr. K Vrinda Menon	Veterinary Public Health

	Pravitha C. P.	Isolation and detection of antimicrobial resistance of thermophilic *Campylobacter* from layer farms and chicken processing lines	D. Deepa Jolly	
	Radikha A. N.	Detection of colistin and quinolone from poultry processing line	Dr. Binsy Mathew	
	Devika D. Sunil	Antibiotic resistance in enteropathogenic *Escherichia coli* and *Campylobacter* spp. from beef and raw cow milk	Dr. Binsy Mathew	
	D. PremKumar	An exploratory study on the determinants of occupational hazards among veterinarians of Kerala	Dr. Binsy Mathew	
	Kavya A.	In vivo efficacy of garlic and chitosan for control of *Campylobacter* spp. in meat type chicken	D. Deepa Jolly	
	Jisna Jamal P.P.	Occurrence of enrofloxacina and tetracycline resistant *Klebsiella pneumoniae* and *Salmonella* spp. in beef and cow milk	Dr. C Latha	
	Miyada Yoosuf	Phytocontrol strategies using silver nanoparticles and activated charcoal against coliforms in water	D. Deepa Jolly	
	M Bindhupushpa	Detection of *Coxiella brunetii* in milk and vaginal swabs of goat with history of reproductive disorders	Dr. Sethulekshmi C	

	Dr. Vishnu Dev R.S. (19-MVM-67)	Impact of enrichment of grazing meadow with automated water trough on the welfare of crossbred cattle	Dr. Harikumar S.	Livestock Production and Management
	Dr. Livin Raj V. L. (19-MVM-28)	Behavioural and physiological response of captive macaques to stressors	Dr. Biju. S.	
	Dr. Ramesh S. (20-MVM-19)	Assessment of udder skin surface temperature changes in relation to mastitis and microclimatic variables in cross-bred dairy cows in three climatic zones in Kerala	Dr. Biju S	
	Hridhya Vijay C.	Effect of repeated freezing and thawing on the quality of spent cattle and buffalo meat	Dr. Irshad A	Livestock Products Technology
	Anjitha Jose K.	Effect of moringa (*Moringa oleifera*) leaf extract and nisin on quality and shelf life of Japanese quail meat	Dr. Irshad A	
	Akhila V.V.	Development and evaluation of enrobed chicken nuggets incorporating millets and hydrocolloids	Dr. Sathu T	
	Manasa M.	Development and quality evaluation of organic briquettes incorporating slaughterhouse waste and sewage sludge	Dr. V.N.Vasudevan	
	Aleena Thomas (19MVM 05)	Sonologic features of mammary gland neoplasms and its correlation with surgical margins and malignancy in dogs	Dr. Sudheesh S Nair	Veterinary Surgery and Radiology
	Aiswarya C. Babu (19MVM 03)	Comparison of multimodal anaesthesia protocol with Isoflurane and sevoflurane maintenance in geriatric canine patient	Dr. Soumya Ramankutty	
	Reny Raj (19MVM 49)	Management of long bone fractures in cats by external skeletal fixator with intramedullary pin tie-in configuration using epoxy putty	Dr. S Anoop	

	Shakir S. N. (19MVM 58)	Supracutaneous locking compression plating for the management of long bone fractures in dogs	Dr. Laiju M. Philip	
	Deny Jennes (19 MVM 14)	Autologous platelet rich plasma for treatment of canine superficial corneal ulcers –a comparison between subconjuctival and topical application	Dr. Soumya Ramankutty	
	Abhiram M. J. (20MVM 65)	Homologous platelet rich plasma gel for treatment of sole lesions in dairy cattle	Dr. Laiju M. Philip	
	Aswathy Mohan A (20MVM 67)	Decellularised porcine cornea as an acellular scaffold graft for the management of corneal ulcers in dogs	Dr. S Anoop	
	Jayakrishnan V. (20MVM 68)	Clinical evaluation of a multimodal anaesthetic protocol using butorphanol-dexmedetomidine-idazolam-ketamine-isoflurane and lignocaine continuous rate infusion in bovines	Dr. Sudheesh S Nair	
	Rahul B. (20MVM 69)	Evaluation of dexmedetomidine - butorphanol - zolazepam – tiletamine anaesthesia for elective surgery in cats	Dr. Syam K Venugopal	
	Tamaraiselvi P. (20MVM 71)	Minimal invasive percutaneous cystostomy using paediatric suprapubic catheters for management of urethral obstructions in tom cats	Dr. Sudheesh S Nair	

	Dr. Kamalu S. Kumar (2019-MVM-21)	Comparative evaluation of fluralaner and Doramectin in the management of canine demodicosis	Dr. Ambily V. R.	Veterinary Clinical Medicine, Ethics and Jurisprudence
	Dr. Anjaly Francis (2019-MVM-06)	Evaluation of point of care tests for the detection of subclinical ketosis in early postpartum cows	Dr. Ambily V. R.	
	Dr. Athulya Gopal (20-MVM-35)	Clinical investigations on mucocutaneous lesions in dogs	Dr Ambily V R	
	Dr. Parvathy J. (2019-MVM-38)	Clinico-therapeutic studies on non-regenerative anaemia in dogs with special reference to *Babesia gibsoni* infection	Dr. Arun George	
	Dr. Remyakrishna U.S. (20-MVM-38)	Evaluation of electrocardiographic and biochemical changes in arrhythmias associated with respiratory, renal and gastrointestinal diseases in dogs	Dr. Arun George	
	Dr. Neethu Balakrishnan (20-MVM-37)	Evaluation of oxidative stress in stage III chronic kidney disease in dogs and its management	Dr. Madhavan Unny	
	Dr. Greeshma J. (20-MVM-36)	Evaluation of coagulation status in mitral valvular disease of dogs	Dr. Sindhu K. Rajan	
	Dr. B. Akhila, 20 MVM 31	Role Performance and Capacity Need Assessment of field extension functionaries of Dairy Development Kerala	Dr. Subin K. Mohan	Veterinary and Animal Husbandry Extension
	Dr.Akshay D. (20-MVM-26)	Semen quality and preservability in aseel, kadaknath and native chicken of Kerala.	Dr. Harikrishnan S	Poultry Science
	Dr.Archana S. (20-MVM-27)	Enrichment of chicken egg by dietary inclusion of flaxseed oil, fish oil and their combination.	Dr. S. Sankaralingam	
	Dr. Arundhathi U. (20-MVM- 28)	Effect of fermented cottonseed meal on growth performance, gut microflora and carcass traits in broilers.	Dr. P. Anitha	
	Dr. Reshma Raveendran (20-MVM-30)	Effect of Probiotics in corn replaced rice based diet in broiler chicken.	Dr. Binoj Chacko	

	Anaina S. (20-MVM-40)	Evaluation of biofilm formation and antimicrobial resistance profiling of coagulase negative staphylococci isolated from bovine subclinical mastitis		Veterinary Epidemiology and Preventive Medicine
	Alphiya Joseph (20-MVM-39)	Molecular characterization of canine adenovirus infections and its pathology in dogs		
	Himadri Biswas (20-MVM-41)	Molecular identification of *Anaplasma* spp. and therapeutic studies of Anaplasmosis in goats		
	Putuluru Satish Reddy 19-MVM-42	Assessment of nano zin supplementation in Malabari kids fed on complete ration with different energy levels	Dr Deepa Ananth	Animal Nutrition
	Reshma R. Chandran 20-MVM-09	Dietary inclusion of Indukantham Kashayam residues on growth performance and carcass traits of broiler rabbits	Dr Shyama K	
	Akhil Prasad K A 20-MVM-06	Feeding value of grass silage incorporated with propionic acid and bacterial inoculum in crossbred heifers	Dr Dipu MT	
	Nikhila Mohan 19-MVM-35	Dietary supplementation of selected essential amino acids in Large White Yorkshire piglets	Dr Dipu M T	
	Febina K.P. 20 – MVM – 08	Nutritional evaluation of feeding practices of wild ungulates at Zoological park in Thrissur District	Dr Ajith K S	

	H. Neelakanta Nikshepa Nithish (19-MVM-19)	Intrauterine ozone treatment for subclinical endometritis in crossbred dairy cows	Dr C Jayakumar	Animal Reproduction, Gynecology and Obstetrics
	Kodange Omkar Tukaram (19-MVM-24)	Immunohistochemical localisation of progesterone, oestrogen and KI-67 receptors in genital tract tumours of female dogs	Dr Shibu Simon	
	Anjitha K. (19-MVM-07)	Comparative study on the cryotolerance of in vitro matured and vitrified bovine oocytes supplemented with L-carnitine and niacin	Dr. Amritha Aravind	
	Nikhila E.S. (19-MVM-34)	Assessment of Fertilty and Fecundity in female dogs by sonographic, hormonal and genomic studies	Dr. Magnus Paul.K	
	Aja Taj Nazer (20-MVM-12)	Clinical and Laboratory Evaluation of Response to Chemotherapy in Canine Transmissible Veneral Timour	Dr. Bibin Becha	
	Urmila S. (20-MVM-18)	Freezability and in vitro fertility of Malabari buck semen cryopreserved in liposome-based extender	Dr. Lekshmibhai K.	
	Arya Theres (20-MVM-14)	Follicular fluid exosome supplementation on in vitro maturation competence of bovine oocytes exposed to heat stress	Dr R.S.Abhilash	
	Princy Johnson (20-MVM-17)	Foeto-Maternal Haemodynamics and Combined Thickness of Uterus and Placenta for Prediction of Time of Whelping in Canines	Dr. Magnus Paul.K	
	Bareera Vallikkadan (20 MVM 15)	Induction of oestrus using long term and short term progesterone based protocols in anoestrus goats	Dr. Amritha Aravind	
	Arya Krishnan S. (20 MVM 13)	Medical Management of Canine Pyometra with Prostaglandin E1 Analogue And Progesterone Receptor Antagonist	Dr. Hiron M. Harshan	

	Dr. Arathy P. S. 20-MVM-49	Evaluation of host cellular behaviours to decellularised extracellular matrix based porcine tunica vaginalis scaffolds in rat model	Dr. Dhanush Krishna B	Veterinary Pathology
	Dr. Jessil Joseph 20-MVM-52	Pathological Evaluation Of Central Nervous And Reproductive Systems Of Porcine Circovirus-2 Infected Pigs	a. Dr. Dhanush Krishna B	
	Dr. Navya Elizabeth Sajeev 19-MVM-32	Immunohistochemical localisation of M2 macrophages in canine mammary tumours using CD163 marker	Dr. Sajitha I. S	
	Dr. Arya Nair M. L 20-MVM-50	Immunohistochemical evaluation of the expression of calcium calmodulin dependent kinase 2 alpha in the brain of rabies affected dogs	Dr. Divya C	
	Dr Pullagura Nikhithasree 20-MVM-54	Immunohistochemical evaluation of the expression of glutamate ammonia ligase in the brain of rabies affected dogs	Dr. Divya C	
	Dr Blessy John 20-MVM-51	Immunohistochemical evaluation of Eukaryotic Translation Initiation Factor 4e-Binding Protein 1, Phosphorylated, Eukaryotic Translation Initiation Factor 4e- Binding Protein 1 and Eukaryotic Translation Initiation Factor 4g in canine mammary tumours	Dr. Devi S. S	
	Dr Keerthana Santhosh 20-MVM-54	Histomorphological evaluation of stromal collagen and immunohistochemical analysis of heat shock protein 47 in canine mammary tumours	Dr. Devi S. S	

	Dr. Michelle Elizabeth Roy 20-MVM-02	A genome-wide scan for selection signatures in Ankamali pigs and its genomic comparison with exotic pig breeds	Dr. Manoj. M.	Animal Genetics and Breeding
	Dr. V. N. Sahana 20-MVM-03	Genetic variability of growth hormone gene and its association with growth and carcass traits in native ducks of Kerala	Dr. Bindya Liz Abraham	
	Dr. Teenu Thomas 20-MVM-04	Association of mucin6 genotypic variants with gastro-intestinal parasitic resistance traits in Malabari goats of Kerala	Dr. Marykutty Thomas	
	Dr. Aishwary Vibhuti 19-MVM-02	Expression profiling if Ecto-NOX Disulfide-Thiol Exchanger 2 (*ENOX2*) gene in response to heat stress in goats	Dr. R. Thirupathy Venkatachalapathy	
	Dr. Arya Gopal 19-MVM-12	Evaluation of candidate gene associated with canine mammary tumour	Dr. Radhika G.	
	Dr. Saranya S. K. 19-MVM-55	Analysis of *gonadotropin releasing hormone receptor gene* polymorphisms and their association with litter size in native goat breeds of Kerala	Dr. Marykutty Thomas	
	Dr. M. Priyadharshini 17-MVM-07	Assessment of sire evaluation methods in crossbred cattle of Kerala	Dr. K. Anilkumar	

iii. M.Sc.

Sl. No.	Name of the student & Admission Number	Title of the Thesis	Name of major advisor	Department
	Reshma. B. S. 20-MSVM-08	Modelling time from last calving to culling of dairy cattle using survival models	Dr. Gleeja. V. L.	Statistics
	Dhiya Paul 20-MSVM-09	Modelling productive lifespan of dairy cattle	Dr. Gleeja. V. L.	
	Athira. V. 20-MSVM-10	Modelling the production and price of milk in kerala	Dr. Gleeja. V. L.	

	Nandana P. 20-MSVM-11	Modelling lactation curve in buffaloes	Dr. Manoj. M	
	Sreepriya M. 20-MSVM-12	Comparison of amino acid profile of Malabari, Attappady Black goat milk in different geographical locations	Dr. Chinnu M. V.	Veterinary Biochemistry
	Sneha Geevarghese 20-MSVM-13	Cytotoxic potential of methanolic extract of *Curcubitis pepo. L* seed and its fraction in MCF-7 cell lines	Dr. Preethy John Asst. Professor Dept. of Pharmacology & Toxicology, CVAS, Mannuthy (Ph: 9446031275)	
	Arya K. 20-MSVM-14	Analysis of amino acid profile of milk and milk products of cattle and buffalo using UHPLC	Dr. Sreekumar T. R. Assistant Professor Dept. of Veterinary Physiology, CVAS, Mannuthy (Ph: 9037223834)	
	Roshni S. S. 20-MSVM-16	Evaluation of cytotoxic potential of methanolic extract and fractions of *Cyclea peltate* leaves in MCF -7 cell lines	Dr. Sujith S. Assistant Professor Dept. of Veterinary Pharmacology & Toxicology, CVAS, Mannuthy (Ph: 9539511273)	
	Anu Chandran 20-MSVM-17	Antibacterial activity of silver nanoparticles of *Chromolaena odorata* extract loaded carrageenan- gelatin hydrogel against multidrug resistant bacteria	Dr. Suresh N. Nair Assistant Professor Dept. of Veterinary Pharmacology & Toxicology, CVAS, Mannuthy (Ph: 9446919146)	

	Aysha Saleem K. K. 20-MSVM-18	*In vitro* evaluation of anti inflammatory activity of *Tamarindus indica* seed coat extract and its fractions	Dr. Suja Rani S. Assistant Professor, Dept. of Pharmacology & Toxicology, CVAS, Mannuthy (Ph: 9400964104)	
	Athira E. H. 20-MSVM-20	Determination certain water-soluble vitamins in milk and milk products of cattle and goat using UHPLC	Dr. V. Ramnath Professor & Head, Dept. of Veterinary Physiology and Implementing Officer, Centre Instrument Laboratory, CVAS, Mannuthy (Ph: 9446579057)	
	Linda Johnson 20-MSVM-21	*In vitro* evaluation of anti inflammatory activity of methanol extract of *Erythrina variegata* stem bark and its fractions	Dr. Bibu John Kariyil Assistant Professor, Dept. of Pharmacology & Toxicology, CVAS, Mannuthy (Ph: 9895297842)	
	Sreelakshmi Aravind K. 20-MSVM-22	Characterisation of pepsin soluble collagen from Daggertooth pike conger (*Muraenesox cinereus*)	Dr. Varuna P. Panicker	
	Aleesha 20-MSVM-23	Assessment of lipid mobilization and liver enzyme levels during early lactation in crossbred cows	Dr. V. Beena Associate Professor Dept. of Veterinary Physiology, CVAS, Mannuthy (Ph: 9447532177)	
	Yadukrishnan M. B. 20-MSVM-24	Molecular characterisation of ATP1A1 gene in Malabari goats	Dr. Renjith Sebastian Assistant Professor Dept. of Veterinary Biochemistry, CVAS, Pookode (Ph: 9495626304)	

	Gopika Das 20-MSVM-25	Sequencing of promoter and coding regions of serum albumin gene of Vechur cattle and its comparison with crossbred cattles of Kerala	Dr. Shynu M.	
	Sradha Dinesh Kumar (20-MSVM-06)	Assessment of virulence factors of *Riemerella anatipestifer* isolates	Dr. Priya P.M.	Veterinary Microbiology
	Ajomol Joy (19-MSVM-10)	Isolation, identification and antibiogram of bacterial organisms in the reproductive tract of subfertile dogs during oestrum	Dr. Binu K. Mani	
	Aruna C. (20-MSVM-05)	Identification of bacteria isolated from surgical sites employing aseptic protocols during surgical procedure in companion animals	Dr. Binu K. Mani	
	Albin Mathew (19-MSVM-11)	Isolation, identification and antibiogram of bacteria from gastrointestinal tract infections in chicken	Dr. Binu K. Mani	
	Bincy K. Abraham (20-MSVM-07)	Evaluation of multiplex polymerase chain reaction for diagnosis of pasteurellosis, contagious caprine pleuropneumonia and peste des petits ruminants in goats	Dr. Ambily R.	
	Archana T. S.	Isolation, antibiogram and phylotyping of *Escherichia coli* associated with canine pyometra	Dr. Surya Sankar	
	Ms. Remya John (19-MSVM-07)	Polymorphism studies of *Lysozyme* gene (*lyz*) and their association with mastitis resistance in crossbred cattle and Murrah buffaloes of Kerala	Dr Jamuna Valsalan	School of Biotechnology
	Ms Anly Alex (20-MSVM-01)	Isolation and characterization of *Staphylococcus spp* in different brands of milk powders marketed in Thrissur District.	Dr. R. Geetha	Dairy Science

	Ms. Manju, C.B. (20-MSVM-02)	Antioxidant activity of herbal yoghurt incorporated with tulsi (*Ocimum sanctum*) and cinnamon (*Cinnamomum zeylanicum*) extracts	Dr. K.Radha	

Research Projects

i. Externally Aided Projects

a. Completed

Sl.No.	Title	Funding agency	Total outlay (Rs.)	Name of PI, Co PIs	Research highlights (four points only- please include relevant photos if any)
	Evaluation of inactivated and subunit vaccines against riemerellosis among ducks in Kerala	**NABARD**	18.50 lakhs	**PI:** Dr. Priya P. M. **Co-PIs:** 1. Dr. M. Mini 2. Dr. Binu K. Mani 3. Dr. Surya Sankar 4. Dr. Ambily R. 5. Dr. Sankaralingam S. 6. Dr. Binoj Chacko 7. Dr. Previn Punnoose 8. Dr. Mahesh M.	The three vaccines (conventional oil adjuvanted inactivated vaccine, montanide adjuvanted inactivated vaccine and subunit vaccine) yielded protective immune responses, though the magnitude of protection varies. It was concluded that montanide adjuvanted inactivated vaccine is equivalently effective as that of the standardised vaccine
	Sustainable parasite management in goats using Anaemia Eye card	**NABARD** Farm Sector Promotion Fund (FSPF)	5.93 lakhs	**PI:** Dr. K. Syamala **Co-PIs:** Dr Bindu Lakshmanan, Dr. Marykutty Thomas	Effective transfer of technology from lab to land. High-rate anthelmintic resistance developed in goat strongyles against Benzimidazole and nor AR against levamisole and ivermectin in small holder goat farms in Thrissur and Palakkad dist. Effective utilization of morbidity parameters of gastro intestinal strongylosis for management of parasitism was done in organized goat farms

	Investigation of calf rearing practices to evolve better replacement heifers for Kerala	**Animal Husbandry Department** (AHD) Government of Kerala	3.60 lakhs	**PI:** Dr. Manju Sasidharan **Co-PIs:** Dr. A. Kannan, Dr. Joseph Mathew, Dr. Mohammed Aslam	Majority of farmers of Kerala were unaware of pre-weaning calf management practices. Ad libitum milk feeding for five weeks and supplementation of calf starter with essential oils and feeding of roughages had enhanced growth and development of calves. Digestibility of nutrients and rumen development were not affected by *ad libitum* milk feeding. Expression of *IGF1* m-RNA from liver tissue was comparable between all treatment groups.

b. Ongoing

Sl.No.	Title	Funding agency	Total outlay (Rs.)	Name of PI, Co PIs	Research highlights (four points only- please include relevant photos if any)
	Molecular characterisation, antibiogram and geospatial analysis of leptospiral isolates from Kerala	**ICMR**	37.24 lakhs	**PI:** Dr. Ambily R. **Co-PI:** Dr. M. Mini Dr. Binu K. Mani Dr. Surya Sankar Dr. Naicy Thomas	Microscopic agglutination test of serum samples from dogs revealed Bataviae as the most prevalent serovar. Hardjo was the most prevalent serovar in cattle. Real time PCR and MLST standardised

	Development of small molecular weight bioactives and polysaccharides from marine and coastal bivalves to develop prospective nutraceutical products	**ICAR** National Agriculture Science Fund (NASF)	33.00 lakhs	**PI:** Dr. Bibu John Kariyil **Co-PI:** Dr. Anoopraj R.	The screening of the extracts and their fractions in RAW 264.7 macrophage cell line revealed that the methanolic extract and polysaccharide fraction of *Saccostrea cucullata*, methanolic extract and polysaccharide fraction of *Gelonia erosa*, methanolic extract and polysaccharide fraction of *Meretrix meretrix* and methanolic extract and polysaccharide fraction of *Perna indica* exhibited anti-inflammatory property. All the extracts and their fractions did not show any signs of toxicity except methanolic extract of *Pernia indica* and its polysaccharide fraction which showed fluid filled uterus when dosed at 2000mg/kg. Acute inflammatory studies using carrageenan induced model in mice revealed that all the extracts and their fractions showed potent anti-inflammatory activity when compared to the standard drug at 5h.
	Corroborating host-vector-pathogen interplay in subclinical forms of arthropod-borne hemoparasitic diseases in goats.	**DST-SERB** Startup Research Grant	29.40 lakhs	**PI:** Dr. Ajith Y.	Mapping ectoparasitic arthropods identified from goats and probe the shreds of evidence on their emerging vector potential in hemoparasitic diseases.Characterizing genetic variability of pathogenic species/strains in subclinical forms of vector-borne hemoparasitic diseases in goats.

	Bioactivity guided fractionation and isolation of bioactive molecules from *Thespesia populnea* medicinal plant with anticancer potential against triple negative breast cancer	National Medicinal Plants Board (NMPB)	21.38 lakhs	**PI**: Dr. Bibu John Kariyil **Co-PIs:** Dr. Suja Rani S., Dr. Sanis Juliet	HPTLC profiling of the crude and potent fractions were carried out. Identified terpenoid bioactive molecules from *Thespesia populnea* having anticancer potential in triple negative breast cancer cells. The identified molecules showed apoptosis in vitro.

	Role of parkin mediated mitophagy in metastatic melanoma in the *in vivo* mouse and *in vitro* anoikia models	**DST-SERB** Teachers Associateship for Research Excellence (TARE)	18.30 lakhs	**PI:** Dr Leena Chandrasekhar	Production of two new stable cell lines for studying mitophagy in live animals with minimal invasive techniques.B16-F10 melanoma cell line was used to develop cell lines with overexpressed Parkin by competent cell preparation and plasmid transformation utilizing E. *coli* strain, DH5α. The plasmid was isolated by alkaline lysis and gravity column method. The isolated plasmid DNA was analysed by agarose gel electrophoresis. The plasmid vector was transfected into the cells followed by selection and stable cell line preparation. Standardization of tumor development in mice and evaluation of tumor growth dynamics was done followed by evaluation of tumor tissues for mitophagy markers. Further the role of parkin in assisting tumor dissemination *via* the anoikia model and in *vitro* assays are being analysed. The transfected cell lines were found to be more resistant to certain drugs confirming that mitophagy promotes survival.

	Development of an eco-friendly smart organo-gel based drug delivery system for administration of antibiotics in aquaculture and evaluation of its efficacy as targeted drug delivery system in fishes	**KSCSTE** Science Research Scheme (SRS)	17.22 lakhs	**PI:** Dr. Suresh N. Nair **Co-PI:** Dr Sanis Juliet Dr Gijo Ittoop	The research project is in initial stage and specific findings are yet to derive. Standardized the preparation of organogels using Soyabean oil and Sunflower wax/beeswax and found out the ideal combination (96:4). Incorporation of OTC into organogel was standardized and the sample are kept for stability study. Standardised the antimicrobial assay testing protocol. Standardised the rearing system for aquatic invertibrates. Viz Daphnia and brine shrimp
	Development of recombinant protein based diagnostic kit for visceral schistosomosis and sero- epidemiological study of the infection in ruminants	**KSCSTE** Science Research Scheme (SRS)	12.57 lakhs	**PI**: Dr. Bindu Lakshmanan **Co-Pi:** Dr M.N Priya, Dr. T. V. Aravindakshan, Dr. R. Ambily	Cloning of 22kda tegumental protein coding gene of *Schistosoma spindale.* PCR RFLP standardized for *S. spindale* and *S. indicum*

ii. State plan projects

Sl. No.	Title	Department allocation	Name of faculty involved	Research highlights (four points only- please include relevant photos if any)
	Strengthening of NABL accredited Quality Control Laboratory	4,00,000	Dr. B. Sunil	Purchased water bath, hygrothermometer, pH meter and a glass thermometer and did maintenance work in the lab, purchased media, calibration of equipment and conducted PT test The new NABL accreditation as per ISO 17025:2017 was obtained for a period of two years

	Augmenting the quality and safety of foods of animals origin and waste valorization for entrepreneurship facilitation"	3,00,000	Dr. B Sunil	Analysed milk and meat products for the presence of food borne pathogens and collected samples for the isolation of Keratolytic bacteria from poultry feather disposal sites. 63.33% (19/30) and 53.33% (16/30) of the collected milk sample collected from Thrissur were positive for E coli and Staphylococcus repectively. Antibiotic resistance patterns of positive isolates of *S.aureus* showed antibiotic resistance to Ampicillin (100 %), Penicillin G (100 %), Cefaperazone (100 %), Oxytetracycline (47.36 %), Doxycycline (42.10 %) and Methicillin (21.05 %) and that of *E.coli* showed antibiotic resistance to Ampicillin (100 %),Penicillin G (100 %), Cefaperazone (100 %), Cephalothin (100 %), Ciprofloxacin (43.75 %), Sulphafurazole (25 %) and Enrofloxacin (12.5 %).
		3,00,000	Dr K Radha Dr R Geetha	Developed Freeze dried starter cultures and low-fat dairy products
	Prevalence of zoonotic diseases among companion animals and pet birds in Kerala	4,99,999	Dr. K. Vrinda Menon	Assessed the presence of zoonotic parasites and *C. psittacii* and *C. pneumoniae* in pet birds and cats collected from university hospital at Mannuthy and Thrissur
		1,00,000	Dr Prasanna K. S	Rabies was diagnosed in 159 out of 374 companion animals (144 dogs and 15 cats positive for rabies). Rota virus detected in 3 pups. . Leptospirosis detected in 10 dogs. The immunohistochemical expression of 2 proteins – CAMK2A and GLUL was assessed and evaluated in rabid dog brains. The proteins were found to be elevated in different anatomical sites of brain in rabies, with relatively higher degree of localization in furious form of rabies compared to the dumb form
		1,00,000	Dr Tresamol, Professor and Head	Project is ongoing

	Studies on awareness, molecular epidemiology and sero conversion of Rabies in domestic animals	1,50,000	Dr. B Sunil	Conducted awareness workshop on Rabies for the stakeholders-Health, Veterinary and Local Self-government representatives at Ollukkara block. A survey was conducted to assess the awareness of public regarding rabies awareness. Responses were recorded from 100 people using structured questionnaire. Three panchayats, Pananchery, Madakkathara and Puthoor under the Ollukkara block was surveyed. The survey population consisted of 51.02% males and 48.98% females. Only 24 people out of the 98 people surveyed owned any kind of pet animals in their household which constitutes about 24.49% of the total; 19 of them had dogs and 10 of them had cats as pets in their home. Only 15.31% of dogs are vaccinated and the number of cats which are vaccinated is even low. While 42.9% of the owners licensed their pet dogs 21.4% dog owners were unaware of pet animal licensing. 99% of the dog owners who licensed their pet did not find any difficulty with the procedure of licensing while one owner had found difficulty with transportation. There needs to be implementation of strict rules regarding pet dog licensing. Out of 98 people interviewed, 6 of them owned exotic pets. 29 people had poultry in their backyard and 10 people owned cattle. 22.4% of the people thought that applying traditional remedies like turmeric, leaf extracts etc. can be beneficial in preventing rabies infection. 88.8% were of the opinion that wound site should be immediately washed under running tap water using soap. The people were aware and satisfied with medical and veterinary services in their panchayat and had post bite vaccination facilities in the public health centres. As a part of the project brochure, poster and leaflets on Rabies awareness were printed in English and Malayalam
		1,50,000	Dr Tresamol, Professor and Head	Project is ongoing

	"Novel diagnostic techniques for economically important bacterial, viral and parasitic diseases of large ruminants (22-23 RSP/22-23/VI-7) (Combined Project)	3,25,000	Dr. Surya Sankar	Polymerase chain reaction was standardised for the detection of the bacterial pathogens, *Pasteurellla multocida*, *Histophilus somnus* and *Mycoplasma mycoides* subsp. *mycoides* and viral pathogens, Infectious bovine rhinotracheitis virus, Bovine viral diarrhoea virus, Bovine respiratory syncytial virus and Parainfluenza virus-3 in cattle. None of the 20 samples screened turned out to be positive for these pathogens.
		4,05,628	Dr, Priya M. N.	Procured consumables for conducting the project Microscopic examination of the 160 Giemsa stained blood smears revealed *Theileria* spp. in 72 (45%) samples, *Babesia* spp. in five (3.12 %) and *Trypanosoma* in two (1.25%) samples. Standardization of PCR for *Theileria orientalis* and *B.bigemina* was carried out. Out of the total 160 samples, 81 (50.63%) were found to be positive for *Theileria* spp., and seven (4.38%) were positive for *Babesia bigemina* by PCR. Standardisation of PCR for *Trypanosoma* is continuing.
		2,14,872	Dr. Devi S. S	Samples from 50 numbers of large ruminants (both necropsy and clinical cases) were examined, out of which definitive diagnosis was made in 33 cases. The diseases identified were mainly bacterial - 12 cases having Pasteurellosis, three cases with Colibacillosis, and a single case with Leptospirosis. Mixed bacterial infection was observed in five number of cases. Hemoprotozoans like *Theileria Sp.* and *Anaplasma Sp.* were identified to be associated with bacterial infections in six cases. No other viral agents could be identified from the examined cases except for rabies virus in eight cases. In three clinical cases with respiratory signs, cytological examination revealed presence of anaplastic cells suggestive of sinus tumour. Two cases of mycoplasmosis were diagnosed in goats. Illustrated the gross and histopathological lesions in these cases. Immunohistochemistry was employed to study the role of surfactant protein SFTPA1 and the level variation of the protein was found to influence the pathology of respiratory illnesses in various species.

	Standardisation of in-ovo nutrition and vaccination in chicken and development of strategies for enhancement of poultry welfare in production systems by resource integration in selected five districts of Kerala	9,50,000	Dr. Vimal Antony Muttathettu	In-ovo inoculation in fertile broiler hatching eggs and their effect in the growth and immune status of the hatched out chicks were studied. The feed conversion efficiency, antibody titre and the expression of genes coding for growth hormone were also studied in the project.
		9,00,000	Dr. Anu George Dr Subin K Mohan Dr. Reeja George Dr.Jiji R S	Studied the poultry production systems in Thrissur district. Conducted capacity building programmes to the poultry farmers.
	Molecular markers for thermos-tolerance and strategies for alleviation of thermal stress in ruminants	2,00,000	Dr. V. Ramnath	Project is ongoing
		3,50,000	Biochemistry	Standardized the expression of stearoyl CoA desaturase gene in heat stressed Vechur and cross bred cattle

	Comprehensive *in vitro* and *in vivo* study of microvasculature and microenvironment associated with tumor hypoxia in the laboratory mouse model of triple negative breast cancer and canine mammary tumors.	8,12,500	Dr Leena Chandrasekhar	Establishment of cell culture facility in the department of Veterinary Anatomy has been initiated. Carbon dioxide incubator for cell culture was purchased. The project was supporting three internal post graduate students and one post graduate student from Cochin University of Science and Technology. Research works on angiogenesis in relation to tumor development, hypoxia in relation to epithelial mesenchymal transformation, apoptosis and reactive oxygen species was initiated with the help of this project. Study of the normal anatomy of the laboratory mouse in relation to vasculature and lymphatics is being conducted. The mouse model for triple negative breast cancer was standardized and cell culture techniques were taught to the postgraduate research scholars.
		4,47,5000	Dr Prasanna K. S	The study revealed that extensive fibroplasia occurred in the stroma of malignant CMTs which was evidenced by increased localisation of HSP 47, Fibroblast activation protein Alpha SMA and Col1A1. Remodelling of the stromal matrix was also evaluated using MMP-9 which was identified as an independent metastatic marker in CMTs. The role of Transforming Growth factor Beta-1 was also evaluated and it was identified that the cytokine was involved in invasion and metastases of tumour cells.
	Augmenting productivity of livestock through genomic and nutritional interventions	28,50,000	Dr. Gleeja. V. L	Forecasted production and price of different categories of milk in Kerala.. Modelled the productive lifetime of cattle in Keala
	Strengthening of NABL accredited feed analysis laboratory	4,00,000	Dr Ally K	Accreditation procedures were completed

	Revamping of small animal breeding station	9,00,000	Dr Ally K	New stock of animals was introduced. Incinerator was installed
	Strengthening of School of Animal Nutrition and Feed technology	6,00,000	Dr Ally K	Training hall was inaugurated. Pet feed was launched
	Strengthening of Artificial Insemination Centre, Mannuthy	20,00,000	Dr. Jayakumar C Dr. Bibin Becha B Dr. Hiron M H Dr. Abhilash R S	Improved research facilities on cryopreservation of semen Improved technologies for the development and popularization of artificial insemination technique among goat farmers. Modified the cryopreservation protocol in goats to improve conception rates of A.I
	Comprehensive health care of livestock and pet animals	2,75,000	Dr. Jayakumar C Dr. Amritha Aravind Dr. Shibu Simon Dr. Benajamin E D	The developmental competence of oocyte quality in different seasons was assessed. Impact of heat stress on in vitro fertilization capacity was assessed
	Universal Veterinary Health Coverage for Optimizing productivity of Livestock	14,00,000	Dr. Preena P.	Diagnosis and treatment of production diseases in cattle and goats like postpartum metabolic and infectious diseases. Timely maintenance of diagnostic equipment. Availability of rare medicines and advanced diagnostic services to farmers. Suitable cleaning systems and bio safety measures will be established to avoid. transmission of diseases from animal to animal and to human beings

	Comprehensive health care management of animals and birds under field condition	10,00,000	Dr. Divya C. Dr. Nisha A. R.	Maintenance of Veterinary ambulatory clinical service to rural farmers. Extending technical help to Animal Husbandry Department for conducting camps for tackling difficult clinical cases. Veterinary health care services to the marginal farmers at their door step. Maintaining clinical and molecular laboratory for the identification of haemoparasites and haemorickettsiales in infected animals.
	Investigation on the impacts of vector-borne haemoparasitic diseases in goats	10,00,000	Dr. Ajith Y.	Studying the occurrence of common vector-borne haemoparasitic diseases in goats. Investigating different clinical manifestations and metabolic impacts of such vector-borne haemoparasites in affected goats. Identifying prognostic metabolic biomarkers for early prediction of treatment outcomes in clinical cases of vector-borne diseases.

iii. Consultancy projects/ Industry linked or funded projects

Sl.No.	Title	Funding agency	Name of faculty involved
	Effect of the natural ingredients on physico-chemical, microbiological and organoleptic quality of beef under chilled (4°C) storage	AVT naturals Pvt Ltd	Dr.V.N.Vasudevan
	Effect of supplementation of natural antioxidants and omega 3 in broiler feed on chicken meat quality	Arjuna Naturals Pvt Ltd	Dr. Sathu T.

Other postgraduate and diploma programmes

a. Postgraduate programmes

Master of Science in Biostatistics

Master of Science in Biostatistics was started in 2011 to cater to the growing demands for Statisticians. Duration of the program is four semesters. The curriculum of the programme focuses on application of Statistics with strong theoretical foundation. The program seeks to provide students with an in depth understanding of principles of statistics, epidemiology and bioinformatics. Students apply their knowledge by conducting a research study and writing a comprehensive dissertation supervised by a committee. Students are trained practically to use various software like SAS, SPSS, R, PYTHON etc. Students of 2020 admission passed out in 2022-23 and Dhiya Paul (20-MSVM-09) secured first rank.

Students of Master of Science in Biostatistics

M.Sc. Biochemistry and Molecular Biology

The MSc program in Biochemistry and Molecular Biology was started by the Department of Veterinary Biochemistry in 2012 and so far, 70 students have successfully completed their program. At present 17 students are undergoing the program. Students who have passed out of the programme are working as Ph.D. scholars in foreign and national universities, Assistant Professors/ Lecturers, Research Assistants in National and State laboratories.

M.Sc. in Applied Toxicology

This course is offered by the Department of Veterinary Pharmacology and Toxicology course and covers laboratory animal handling, management and bioassays, poisoning conditions and its toxicological aspects. It also provides students a hands-on experience in various toxicological studies. The course is highly beneficial for the students to secure jobs in laboratory animal facilities as well as contract research organisations.

M.Sc. Applied Microbiology

This course was started in the Department of Veterinary Microbiology, in 2012. The programme is designed to enable the student to acquire sufficient knowledge for becoming a professional specialist in the field of Applied Microbiology. Till date 49 students were awarded degree and presently, four students are in different stages of completion of the course.

M.Sc. Animal Biotechnology

MSc Animal Biotechnology, is a two-year (Four Semesters) course offered by SAAPBT and the eligibility for admission includes B.Sc / B.Tech in Biotechnology, B.Tech in Dairy Technology or Degree in Life Science Subjects. This course offers career opportunities in research organizations, academic institutions, biotechnology industries, food processing units, pharmaceutical industries etc. The course focuses mainly on different molecular techniques, genetic engineering, reproductive biotechnology, animal cell culture, animal genomics, applied immunology and bioinformatics.

M.Sc. Quality control in Dairy industry

The Department of Dairy Science, offers a two-year PG programme in Quality control in Dairy industry. The programme offers comprehensive knowledge on various chemical and microbiological aspects of milk and milk products, techniques for detection of contaminants in dairy products, application of HACCP system in dairy and food industry with in-plant training in renowned dairy processing plants.

M.Sc. Animal Science

This is a two-year programme offered by Department of Livestock Production Management. The course help students to develop an understanding on the biology of domestic, captive and wild animals and covers current issues in dairy farming in India, production trends of monogastric animals, ruminants and poultry sector. It also includes a research component and trainings in various farms and dairy plant.

b. Diploma programmes

Diploma in Dairy Science

Department of Dairy Science under Kerala Veterinary and Animal Sciences University offers a two-year diploma course for +2 science stream and VHSE students to equip them with the knowledge and skills to take up these jobs with farm and dairy plant trainings.

Diploma in Laboratory Techniques

Diploma in Laboratory Techniques offered by the departments of Veterinary Parasitology, Pathology and Veterinary Public Health is a one-year programme (two semesters) offering elaborate theory classes and hands on practical sessions in techniques of sample examination, media and stain preparation, blood and urine analysis, assistance to necropsy and handling of microscopes and other advanced diagnostic equipment. Qualifying candidates will be competent to deal with maintenance of a clinical lab with special emphasis on animal diseases.

Diploma in Feed Technology

The School of Animal Nutrition and Feed Technology (SANFT) offers this course with a view to train qualified personnel for feed mills. This is a one-year Diploma course, designed with the aim of addressing the shortage of man power in feed mill technicians and operators. Hands on training is imparted on various aspects of feed manufacturing, machinery operations and quality assessment. Eligibility for admission is pass in Plus two /VHSE.

c. PG Diploma programmes

PG Diploma in Climate Services in Animal Agriculture

As part of training of individuals to enhance capacity building in climate change education, research and extension, a one-year PG diploma in 'Climate Services in Animal Agriculture' has been developed for graduates in the field of Veterinary studies by the Centre for Animal Adaptation to Environment and Climate Change Studies (CAADECCS).

PG Diploma in Climate Services

In order to prioritize the training of individuals to enhance capacity building in climate change education, a one-year PG diploma in 'Climate Services' has been developed for graduates (B.Sc/B.Tech/BE) by CAADECCS.

PG Diploma Small Animal Theriogenology

This programme is a technology enabled learning programme for small animal practitioners offered by the Department of Animal Reproduction, Gynaecology and Obstetrics. This course envisages application of the latest research in small animal theriogenology in the field level and helping practicing veterinarians to keep abreast these developments. The current batch has 47 scholars including one foreign student from Sri Lanka. The duration of the programme is 12 months including contact classes, hands on clinical training and examinations. Dr.Shibu Simon is the Course Director for the programme.

PG Diploma in Therapeutic management of infectious diseases of pet animals and pet birds

This programme envisages enabling the veterinarians to handle infectious diseases of the pet animals and the pet birds. The programme is designed to generate qualified veterinarians who are well versed in management of infectious diseases of pet animals especially exotic animals and pet birds which are not dealt with in detail in the graduate curriculum. The numbers of exotic animals like marmoset, iguana, sugar gliders *etc*. are gaining momentum during this period. In this scenario, pet owners are demanding more qualified veterinary service. The hands-on training during the contact class and the

d. Post graduate certificate courses

Post graduate certificate in Veterinary Homoeopathy

This course, first of this kind in India, is coordinated from the Department of Veterinary Pharmacology and Toxicology and is a technology enabled distance education program of six months for veterinarians. The course was started in the year 2015 and presently around 450 veterinarians have been trained in the field of Veterinary Homeopathy.

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Peer reviewed journals

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135. Vivekanandhan R., Sunil B., Latha C., Vrinda K.M., Jolly D., Mathew B. and Muralikrishna P. 2022. Occurrence of *Campylobacter* spp. in a pork processing line in Thrissur, Kerala. *Pharma Innov. J.* **11**: 719-723.

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138. Yamin, D., Beena, V., Ramnath, V., Aziz Zarina., Harikumar, S., Thirupathy V. R. and Gleeja, V.L. 2022. Impact of thermal stress on physiological, behavioural and biochemical parameters in native and crossbred goats. *Small Rum. Res.* **216**: 106794.

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Presented papers

1. Aarathi, S.N., Binu, K.M., Amritha, S.K., Teja, V.G.N. and Mini, M. 2022. Mixed bacterial infection associated with canine mastitis [abstract]. In: Proceedings, 14 th Kerala Veterinary Science Congress, 12 th to13 th November, 2022, Mannuthy. KeralaVeterinary and Animal Sciences University. p. 172. Abstract No. O-VI-S-6.

2. Akhila, J., Nair, S. R., Ambily, R., Mini, M. and Sajitha, I.S. 2022. Isolation and characterisation of Infectious bursal disease virus from field outbreaks in Kerala [abstract]. In: Proceedings, 14th

Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p.187. Abstract No. AD-P-I-F-I.

3. Anitha, P.- Lead paper presented on the topic 'Ducks in Rural Poultry Production' in 'ducks, Turkey and Guiena Fowls'in national conference on Native Chicken on 'Relevance of climate smart traditional farming systems in the Era of Omics' at Madras Veterinary College, Chennai.
4. Anseena, A.K.- Cholangio cellular carcinoma in a white plymouth rock chicken- a case report - International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022).
5. Arathy, P.S.- Nephroblastoma in an adult turkey: A case report-International Veterinary Pathology Conference held at Hyderabad (17-19November 2022).
6. Aravind, K.U. - Cryptorchidism *vis a vis* testicular pathology in a dog- - International Veterinary Pathology Conference held at Hydera bad (17-19 November 2022)
7. Archana, T.S., Sankar, S., Binu, K.M., Harshan, M.H. and Vidya, P. 2022. Phylo grouping, virulence profile and antibiogram of *Eschericha coli* strains associated with canine pyometra [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 42. Abstract No. P-I-S-9.
8. Ashtamy, M.G., Mani, B.K., Mini, M., Ambily, R. Anoop, S. and Vidya, P. 2022. Quinolone resistance in bacterial isolates from corneal ulcers in dogs [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 189. Abstract No. AD-O-VI-S-1.
9. Asha, R., Lucy, S., Radhika, R., Devada, K., Gleeja, V.L. Status of benzimidazole resistance in organized goat farms and small holder flocks of Kerala. 14th Kerala Veterinary Science Congress, College of Veterinary and Animal Sciences, Mannuthy, 12th to13th November, 2022.
10. Bhupendra, C. - Aspergillosis in backyard poultry – A case report- International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022)
11. Bincy, K.A., Ambily, R., Sarika, N., Mani, B.K. and Sankar, S. 2022. Evaluation of multiplex polymerase chain reaction for diagnosis of respiratory infections in goats [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 66. Abstract No. P-II-S4.
12. Charitha, P., Ambily, R., Nikhil Teja, V.V.G., Amritha, S.K. and Mini, M. 2022. Isolation and identification of Escherichia coli from a Macaw [abstract]. In: Proceedings, 14 th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 180. Abstract No. P-VI-S-7.
13. Devi, S.S. -Matrix Metalloproteinase - 9 as an independent metastases marker in canine mammary tumours – 14th Kerala Veterinary Science Congress held at CVAS, Mannuthy, 12th to13th November 2022.
14. Devi, S.S - Histomorphological, immunohistochemical and molecular studies on desmoplastic reactions in canine mammary tumours–International Veterinary Pathology Conference held at Hyderabad (17-19 November, 2022)
15. Divya, C.- An overview of haemoparasitic infections in canine and feline pet population of central

Kerala- 14th Kerala Veterinary Science Congress held at CVAS, Mannuthy, 12th to13th November 2022.

16. Jessil Joseph - Undifferentiated sarcoma in a guinea pig – International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022).
17. Kumar, A.S., Ambily, R., Sanal, A.B., Oviya, G and Mini, M. 2022. Isolation, identification and antibiogram of microorganisms isolated from canine otitis externa [abstract]. In: Proceedings, 14 th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 42. Abstract No. P-I-S-10.
18. Manju, C.B., Radha, K., Binsy, M. and Jamuna, V. 2023 Antioxidant activity of herbal yoghurt incorporated with Cinnamon bark extract and tulsi leaf extract oral presentation in national seminar on Antimicrobial resistance in probiotics Organized by Department of dairy microbiology, Varghese Kurien Institute of dairy and Food Technology-25th March, 2023.
19. Mathews, L.K., Priya, P.M., Raju, S., Ashtamy, M.G., Vidya, P. and Mini, M. 2022. Marek's disease outbreak in turkeys in an organized government farm in Kerala [abstract]. In: Compendium, National conference on native chicken, 22nd to 23rd September, 2022. Chennai, Madras Veterinary College.
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21. Nikhil Teja., V.V.G., Ambily, R., Charitha, P., Kumar, A.S., Nair, A. S., Oviya, G., Nair, S.R. and Mini, M. 2022. Report of in an organized poultry farm in Thrissur [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 41. Abstract No. P-I-S-8.
22. Prasanna, K.S. Challenges in the management of elephant diseases in Kerala. International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022).
23. Princy Thomas - Newcastle disease in turkey- A case report-International Veterinary Pathology Conference held at Hyderabad (17-19November 2022).
24. Radha, K, Rosemol, J. and C.T. Sathian. Anti- oxidant activity of paneer whey fermented with different lactic acid bacteria oral presentation in national seminar on Antimicrobial resistance in probiotics Organized by Department of dairy microbiology, Varghese Kurien Institute of dairy and Food Technology-25th March 2023.
25. Radhika, R., Javed, J.A., Shyam, K. Venugopal. 2022. Report of feather mite *Megninia* sp. in birds of Thrissur, Kerala. XXXIth National Congress of Veterinary Parasitology and National Symposium on "Green management of animal parasites to enhance livestock production, livelihood and one health" Odisha University of Agriculture & Technology, Bhubaneswar, 6-8th December 2022.
26. Reshma, P.S., Roshni, M., Sarika, N., Anjali, C.B., Joseph, J., Ambily, R. and Mini, M. 2022. Leptospirosis in pigs in Kerala: molecular detection and isolation [abstract] .In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary

and Animal Sciences University. p. 113. Abstract No. P-IV-S-7.

27. Reshma, K.A. - A case report on clear cell hepatocellular carcinoma in A Rottweiler dog– International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022).

28. Reshma, P.S., Sarika, N., Roshni, M., Raj, A., Sruthi, S., Ambily, R., and Mini, M. 2022. Leptospira abortion in dairy cows: A neglected threat to public health [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 113. Abstract No. P-IV-S-7.

29. Roshni, M., Ambily, R., Reshma, P.S., Sarika, N. and Mini, M. 2022. Assessment of seroprevalence and molecular diagnosis of leptospirosis in dogs and cats [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 177. Abstract No. P-VI-S-2.

30. Sajitha, I.S.- Galactin-3 as a marker to detect circulating tumour emboli and micro-metastases in a xenograft lung cancer model- International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022)

31. Sankaralingam, S., Suja, C.S. Beena, C.J., Binoj, C. and Anitha, P.- Production performance of long-term selected purewhite leghorn strains. XXXVII Indian Poultry Science Association Conference (IPSACON 2022) and National Symposium on "Recent Advances in Sustainable Poultry Production for Livelihood and Nutritional Security, November 4-6, 2022.

32. Sarika, N., Mani, B.K., Mini, M., Saradadevi, K.L., Priya, P.M., Vidya, P., Reshma, P.S., Sunil, B. and Ajith, J.G. 2022. Isolation of *Mycobacterium tuberculosis* from organised dairy farm-the need of an integrated one health approach [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 99. Abstract No. O- IV-F1.

33. Sasidharan, M., Kannan, A., Mathew, J. Harikumar, S. Shyama, K.,Raji, K. and Sunanda, C. 2022. Colostrum Immunoglobulin (IgG) on health of calves reared on different feeding strategies in Kerala. Proceedings of 14th Kerala Veterinary Science Congress on One health approaches in the management of animal health care - new paradigms. pp 129-132.

34. Sethulekshmi, M.S., Sankar, S., Binu, K.M. and Hiron, M.H. 2022. Detection of biofilm forming *Escherichia coli* and *Staphylococcus aureus* associated with cainine pyometra [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 26. Abstract No. O1-F-5.

35. Shaik, N.R., Bindu, L., Suresh, N. N., Radhika, R. and Syamala, K. 2022. Evaluation of amitraz resistance in *Rhipicephalus sanguineus sensulato* in dogs of Kerala, India. Proceedings of the 31st National Congress of Veterinary Parasitology and National Symposium and National Symposium on Green management of animal parasites to enhance livestock production, livelihood and one health". College of Veterinary Science and Animal Husbandry, OUAT, Bhubaneshwar during 6th-8th December, 2022. Pp.227

36. Sruthi, S.- Fidelity of cytodiagnosis in canine mammary tumours-International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022).

37. Sruthy, C.B, Sankar, S., Mini, M., Priya, P. M. and Dhanush, K. B. 2022. Typing of field isolates of Infectious bronchitis virus from Kerala using reverse transcriptase polymerase chain reaction-restriction fragment length polymorphism [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p.33. Abstract No. OI-S-11.

38. Suja, C.S., Sankaralingam, S. Joseph, B.C. Chacko, B. and Anitha, P.- Comparative evaluation of production performance of six generations of Tellichery chicken breed of Kerala. 14th Kerala Veterinary Science Congress 2022. 12th to13th November, 2022 College of Veterinary and Animal Sciences,Mannuthy Thrissur, Kerala - 680 651

39. Suja, C S, Beena, C. J., Binoj, C. and Anitha, P.-Heritability for egg production and other traits in long-term selected population of white leghorn. XXXVII Indian Poultry Science Association Conference (IPSACON 2022) and National Symposium on "Recent Advances in Sustainable Poultry Production for Livelihood and Nutritional Security, November 4-6, 2022.

40. Suja, R.S, Joshua, A.J., Senthilkumar, A., Vijayabalaji. 2022. *Cinnamomum cassia* Bark: A Potential Antidiabetic Nutraceutical to modulate Protein Tyrosine Phosphatase -1B. XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology and International Symposium on "New Horizons in Veterinary Pharmacology and Toxicology Research: Way Forward to Augment Livestock Health and Production" organized by Dept. of Veterinary Pharmacology and Toxicology, Veterinary College and Research Institute, Namakkal, Tamil Nadu- 637 002 held from 02-04 November, 2022.

41. Syamala, K., Devada, K., Bindu, L., Raji, K. Lucy, S. and Thirupathy, V.R. Morbidity parameters associated with gastro- intestinal strongylosis in goats for effective management of parasitism with limited chemotherapy. ISSGPU National Seminar cum Annual Conference. 2022. ICAR-CSWRI, Avikanagar.

42. Syriac, M., Lakshmanan, B., Anand, A., Priya M.N. and Uma, R. 2022. In silico analysis of 14-3-3 tegumental protein of *Schistosoma spindale*- A possible diagnostic candidate". Proceedings of the 31st National Congress of Veterinary Parasitology and National Symposium and National Symposium on Green management of animal parasites to enhance livestock production, livelihood and one health". College of Veterinary Science and Animal Husbandry, OUAT, Bhubaneshwar during 6th-8th December, 2022. Pp.14

43. Udhayakumar, C. - Multisystemic involvement of *Escherichia coli* in African grey parrot – A case report - - International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022)

44. Vidya, P., Sankar, S., Priya, P. M., Sajitha, I. S. and Mini, M. 2022. Seroprevalence of chicken anaemia virus in poultry flocks of Kerala [abstract]. In: Proceedings, 14th Kerala Veterinary Science Congress, 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University. p. 33. Abstract No. OI-S-12.

45. Vimal, A., Anitha, P. and Binoj, C.- In-ovo Inoculation of Normal Saline and Dextrose Saline and The Effect on Hatchability of Fertile Gramasree Eggs. 14th Kerala Veterinary Science Congress, 2022. 12th to13th November, 2022. College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala - 680 651.

Abstracts in conferences/seminars

1. Ambika Nandini, R. M. and Syamala. K. Vertical stratification of bird species from heronry in Thrissur, Kerala. 14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy. 12th to13th November, 2022.
2. Amrutha, A., Bindu, L., Radhika, R. and Sheelu, L. 2022.Detection of *Brugia malayi* in domestic cat by PCR of ITS-2 and Hha1. 14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy. 12th to13th November, 2022. pp.109.
3. Aparna, S. Sivapriya, Priyanka, M.K., HariSankar, V.J. Docking studies of Andrographolide and Hordenine against Proteins associated with gram positive infected wounds. XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology. Veterinary College & Research Institute, Namakkal. November 2-4, 2022.
4. Aparna, S. S., Priyanka, M. K., Suresh, N.N. and Nisha. A.R. Screening of novel modulators of human calcium gated chloride channels. Biological Innovations and Computational Exploration for Pandemic Challenges. Bishop Heber College, Tiruchirappalli. February 24-25, 2022.
5. Ancy, T., Vinodkumar, K., Justin, D., Reshma, P.S. 2022. Combined infection of Leptospira icterohaemorrhagiae and javanica serovars in a pug[abstract]. In: Compendium, 14th Kerala Veterinary Science Congress- One Health Approaches in Management of Animal HealthCare-New Paradigms"; 12th to13th November, 2022, Mannuthy. Kerala Veterinary and Animal Sciences University.
6. Anseena, A.K.- Cholangio cellular carcinoma in a white plymouth rock chicken- a case report - International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022)
7. Aravind, K. U. - Cryptorchidism vis a vis testicular pathology in a dog- - International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022).
8. Arathy, P.S.- Nephroblastoma in an adult turkey: A case report-International Veterinary Pathology Conference held at Hyderabad (17-19November 2022).
9. Arundhathy, S.N., Suja Rani, S., Nisha, A.R. Ciitosan based hydrogel as a prospective dressing material for effective burn wound management. Second International Conference on Science and Technology of Advanced materials, 2023. Mar Athanasius College, Kothamangalam. April 18-20, 2023.
10. Arundhathy, S.N., Priyanka, M. K., Suja Rani, S., Nisha, A. R. In Silico Screening for Novel Modulators of the Acetylcholinesterase Enzyme. XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology. Veterinary College and Research Institute, Namakkal. November 2-4, 2022.
11. Arundhathy, S. N., HariSankar, V.J., Suresh, N. N., Nisha, A.R. Screening of novel modulators of human two pore calcium channels. Biological Innovatons & Computational Exploration for Pandemic Challenges. Bishop Heber College, Tiruchirappalli. February 24-25, 2022
12. Asha, R., Lucy, S., Radhika, R., Devada, K. and Gleeja, V.L. Status of benzimidazole resistance in organized goat farms and small holder flocks in Kerala. 14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy 12th to13th November, Pp 56,2022

13. Athira, C.P., Syamala, K. and Bindu, L. Dynamics of strongyle infection in goats of Kerala-Result from a year-roundstudy.14th Veterinary Science Congress, College of Veterinary and Animal Sciences, Mannuthy, 12th to13th November, 2022.

14. Bhupendra Chauriya - Aspergillosis in backyard poultry – A case report- International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022)

15. Binsy, M., Latha, C., Sunil, B., Sethulekshmi, C. and Vivekanandhan, R. 2022. Molecular confirmation of antibiotic resistance in *Campylobacter coli* isolated from retail chicken in Kerala. International Symposium on "Zoonotic and Transboundary Diseases: Breaking the Chain through Multidisciplinary Approach" and XVIIIth Annual Conference of Indian Association of Veterinary Public Health Specialists (IAVPHS) during 1st and 2nd December, 2022 at Umiam, Meghalaya

16. Chandran, A., George, A., George, R.P., Jiji, R.S. and Gleeja, V.L. 2022. Knowledge of Veterinary Students about the risks associated with Zoonotic Diseases, In Proceedings of 14th Kerala Veterinary Science Congress, 12th to13th November, 2022 held at Thrissur, pp 110.

17. Chinnu, M.V., Uma, R. and Ammu, R. Standardisation of PCR for the detection of Bovine Meat and Milk Factors from cattle serum. Proceedings of VI Annual Convention of SVBBI and National Symposium to be organized by Department of Veterinary Physiology and Biochemistry, College of Veterinary Science & Animal Husbandry, NDVSU, Jabalpur on January 5th and 6th 2023.

18. Dalbin, P.B., Radhika, R., Asha, R., Shynu, M. and Devada, K. Development of multiplex copro PCR for detection of economically important strongyles in cattle. XXXIth National Congress of Veterinary Parasitology and National Symposium on "Green management of animal parasites to enhance livestock production, livelihood and one health" Odisha University of Agriculture & Technology, Bhubaneswar, 6-8th December 2022.

19. Deepa, J., Sunil, B., Latha, C., Vrinda, K.M., Mini, M. and Aravindakshan, T. V. 2022. Effect of various sanitizers on *Campylobacter jejuni* NCTC 11168 biofilms on stainless steel, fibre and aluminium surfaces & quot; in XVIII Annual conference of IAVPHS and International Symposium on; Zoonotic and Transboundary Diseases: Breaking the Chain through Multidisciplinary Approach ICAR RC NEH, Meghalaya December 1st -2nd, 2022.

20. Deepa, J., Sunil, B., Latha, C., Vrinda, K.M. and Nithya, K.R. 2022. Survivability study of *Campylobacter jejuni* NCTC 11168 in river-waters of Kerala - in 35th Kerala Science Congress on 12th -14th February 2023

21. Devi, S.S.-Matrix Metalloproteinase -9 as an independent metastases marker in canine mammary tumours – 14th Kerala Veterinary Science Congress held at CVAS, Mannuthy, 12th and 13th November 2022.

22. Devi, S.S - Histomorphological, immunohistochemical and molecular studies on desmoplastic reactions in canine mammary tumours –International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022)

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24. Devu, B. N., Sujith, S., Nisha, A.R. Evaluation of cytotoxic effect of ethanolic extract of *Saraca asoca* bark in MCF-7 cell lines. Second International Conference on Science and Technology of Advanced materials, 2023. Mar Athanasius College, Kothamangalam. April 18-20, 2023.

25. Devu, B. N., Sujith, S., Nisha, A.R. Molecular docking studies of natural plant compounds against acetyl choline esterase enzyme. Workshop on defining ethics and welfare in preclinical research and preparing B-forms and the conduct of IAEC. Sree Chithira Tirunal Institute for Medical Sciences and Technology. 14-15th November, 2022.

26. Divya, C.- An overview of haemoparasitic infections in canine and feline pet population of central Kerala- 14th Kerala Veterinary Science Congress held at CVAS, Mannuthy, 12th to13th November 2022.

27. Divya, R.N., Jida, M.D., Nisha, A.R. Evaluation of antibacterial efficacy of essential oil; In silico approach Antimicrobial Resistance in Probiotics'- A food safety concern. Verghese Kurien Institute of Dairy and Food technology. 25th March 2023.

28. Divya, R.N., Jida, M.D, Nisha A.R. Combating Antimicrobial Resistance of bacterial isolates from mastitis by geraniol November 2-4, 2022. XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology. Veterinary College and Research Institute, Namakkal. November 2-4, 2022.

29. Divya, R.N., Jida, M.D., Devu, B.N., Suresh, N. N., Sujarani, S., Bibu, J.K. Molecular docking study on action of phytochemicals against SARSCoV-2-ORF 3a. Biological Innovatons and Computational Exploration for Pandemic Challenges. Bishop Heber College, Tiruchirappalli. February 24-25, 2022.

30. HariSankar, V.J., Anu, C., Suresh, N.N. Loading and evaluation of Praziquantel to K-carrageenan gelatin hydrogel. XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology. Veterinary College & Research Institute, Namakkal. November 2-4, 2022.

31. Hiba, B.E., Bindu, L., Syamala, K. Sunkara, P., Sharun, P.S. and Devada, K. *Pthirus pubis* Infestation in Humans-A Case Report. 14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy 12th to13th November, 2022. pp.38

32. Jessil, J.-Undifferentiated sarcoma in a guinea pig – International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022).

33. Merin Das, V.J., Priya, M.N., Asha, R. and Bindu, L. 2022. Benzimidazole resistance detection in cattle of Thrissur district in Kerala.Proceedings of the 31st National Congress of Veterinary Parasitology and National Symposium and National Symposium on Green management of animal parasites to enhance livestock production, livelihood and one health". College of Veterinary Science and Animal Husbandry, OUAT, Bhubaneshwar during 6th -8th December, 2022. Pp.186.

34. Merin Das, V.J., Priya, M.N., Asha, R. and Bindu, L. 2022. Prevalence of Gastrointestinal Parasitic Infection in Cattle of Thrissur District, Kerala. 14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy 12th -13th November,2022. pp.41.

35. Nisaath, B., Sujith, S. and Nisha, A.R. Anti proliferative effect of methanolic extract in C127I cell line. 14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy 12th -13th November, 2022.

36. Prathyusha, S., Radhika, R., Bindu, L., Jain, J.K., Javed, J.A., Vinodkumar, K. and Syam, K.V. Molecular Detection of *Babesia ovis* by Semi-Nested Polymerase Chain Reaction in Kerala. 14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy 12th -13th November,2022. pp.38.

37. Prathyusha, S., Radhika, R., Bindu, L., Javed, J.A., Justin, D.K. Molecular confirmation of *Hepatozoon* species infecting domestic cats in Kerala, India. XXXIth National Congress of Veterinary Parasitology and National Symposium on "Green management of animal parasites to enhance livestock production, livelihood and one health" Odisha University of Agriculture and Technology, Bhubaneswar, 6-8th December Pp: 100, 2022.

38. Princy, T. - Newcastle disease in turkey- A case report-International Veterinary Pathology Conference held at Hyderabad (17-19November 2022).

39. Priyanka, M. K., Aparna, S., Sivapriya, Arundhathy, S.N. and Bibu, J.K. *In silico* prediction of phytoconstituents from *S. cordifolia* and *E. triplinervis* targeting Bcl2 in cancer. XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology. Veterinary College and Research Institute, Namakkal. November 2-4, 2022.

40. Reena, N., Bindu, L., Suresh, N. N., Radhika, R. and Syamala. K. Characterisation of Amitraz Resistance in *Rhipicephalus Sanguineus sensu lato* in dogs of Kerala, India.2022. 14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy 12th -13th November, 2022. pp- 28.

41. Reshma, K. A. - A case report on clear cell hepatocellular carcinoma in a rottweiler dog– International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022)

42. Reshmi, R., Syamala, K., Bindu, L., Asha, R. and Marykutty, T. 2022. Analysis of host resistance and resilience to strongylosis among native goat breeds of Kerala. Proceedings of the 31st National Congress of Veterinary Parasitology and National Symposium and National Symposium on Green management of animal parasites to enhance livestock production, livelihood and one health". College of Veterinary Science and Animal Husbandry, OUAT, Bhubaneshwar during 6th -8th December, 2022. Pp.176.

43. Rodricks, C.C, Bindu, K.A., Aravindakshan., T.V., Tresamol, P.V., Abhilash, R.S. and Pramod. S. Molecular Variation in KITLG gene.2023. In: National Symposium on"Animal Genetic Resources (AnGR) Management for Rural Livelihood Enhancement; 23rd and 24th February 2023. College of Veterinary and Animal sciences, Parbhani, Maharashtra.p.138

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45. Rodricks, C.C, Bindu, K.A., Aravindakshan., T.V., Tresamol, P.V., Abhilash, R.S. and Pramod. S. 2022. Relative Expression of KITLG gene in Malabari and Attappady

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Science Congress; 12th to13th November 2022, College of Veterinary and Animal sciences, Mannuthy, Thrissur, Kerala. p. 153

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50. Sethulekshmi, J., Asha, R., Bindu, L. and Deepa, A. Concurrent infestation of *Lynxacarus* and *Demodex* in a hamster.14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy 12th to13th November, 2022. pp.179.

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54. Udhayakumar, C. - Multisystemic involvement of *Escherichia coli* in African grey parrot – A case report - - International Veterinary Pathology Conference held at Hyderabad (17-19 November 2022).

55. Varuna, P.P., Narayanan, A., Usaha. N.P. and Ajithkumar, S. Standardisation of a real time PCR based absolute quantification method for studying treatment efficacy by determining the level of parasitaemia. Proceedings of VI Annual Convention of SVBBI and National Symposium to be organized by Department of Veterinary Physiology and Biochemistry, College of Veterinary Science and Animal Husbandry, NDVSU, Jabalpur on January 5th and 6th 2023.

56. Vijay, D., Bedi, J.S., Dhaka, P., Singh, R., Singh, J., Arora, A.K. and Gill, J.P.S. Perspective of stakeholders on Antimicrobial Usage andResistance in the Dairy Chain from Punjab, India. Healthy Livestock/ArMoR event. organized by the Antimicrobial Resistance Monitoring and Research (ARMoR) Program at Wageningen, Netherlands on February 16th 2023.

Popular articles (Newspaper articles, leaflet/ folder/pamphlet/brochure)

1. George, A. 2022. Thanathu kannukalinangalute samrakshanam kalathnte avashyam [Malayalam]

Keralakarshakan, August, 2022:12-14

Books edited

1. Dr. Beena V. and Dr. S. Harikumar edited a book titled "Mrigasamrakshanam Marunna kalavasthayil" Published By:Directorate of Entrepreneurship, KVASU, CAADECCS ISBN: 978-93-91716-4
2. Dr. T.S. Rajeev, Dr. Shahaji Phand, Dr. C.T. Sathian, Dr. R. Geetha and Dr. Sushrirekha Das edited a book titled "Kheerameghalayile Gunanilavara Niyanthranam" Jointly Published by Directorate of Entrepreneurship KVASU and MANAGE, Hyderabad.

Book chapters

1. Ramnath, V. and Sreekumar, T.R. 'General Functions of Gastrointestinal Tract and Their Control' by Chapter 44. in Dukes Physiology of Domestic Animals. 13th edition. Indian adaptation. Wiley India Pvt. Ltd.
2. Sankaralingam, S. 2022. Duck production and management strategies. ISBN 9789811660993
3. Chacko, B.P. and Mani, B.K. 2022. Learning management system- Digital learning techniques in digital culture, digital literacy and inclusive education in India. Kanishka publishers, distributors, New Delhi. ISBN: 978-93-91450-06-9.
4. Mini, M. and Ambily, R. 2023. Detection of antimicrobial resistance in veterinary bacterial pathogens. In: Mothadaka, M.P., Vaiyapuri, M., Rao Badireddy, M., Nagarajrao Ravishankar, C., Bhatia, R., Jena, J. (eds) Handbook on Antimicrobial Resistance. Springer, Singapore. https://doi.org/10.1007/978-981-16-9723-4_30-1.
5. Beena. V. Marunnakalavasthayum Mrigasamrakshana meghalayum chila samanya vichinthanangal'in a book entitled "Mrigasamrakshanam Marunna kalavasthayil" Published By: Directorate of Entrepreneurship, KVASU &CAADECCS ISBN: 978-93-91716-4
6. Harikumar S. Chithrasalabhangal –kaalaavasthaavyathiyanathinte jaivasoojakangal'in a book entitled "Mrigasamrakshanam Marunna kalavasthayil" Published By: Directorate of Entrepreneurship, KVASU &CAADECCS ISBN:978-93-91716-4

vii. Books Authored

1. J.S. Bedi, Deepthi Vijay and Pankaj Dhaka. Textbook on Zoonoses. Publishers: Wiley 2022 (under publication stage) [Book link: https://www.wiley.com/en-us/Textbook+of+Zoonoses-p-81119809517] ISBN: 1119809517, 9781119809517.

Faculty Development Programmes

i. Faculty Development Programmes

1. Seminars/trainings/workshops/conferences

Conducted

i. Seminars

Sl.No.	Name	Name of faculty involved	Agency	Period
1	Statistics in Science- Modalities and applications	Dr. Gleeja. V. L.	Academic Staff College, KVASU	10-10-2022 to 14-10-2022
2	14th Kerala Veterinary Science Congress-2022	Dr. Bindu Lakshmanan	Indian Veterinary Association, Kerala	12-11-2022 to 13-11-2022
3	Dr. K Vrinda Menon	Kerala Antimicrobial resistance meet 2022.One Health response to AMR	ReAct Asia Pacific,IVA Kerala and Department of VPH	23-11-22
4	Dr. C Sethulekshmi	Strategic formulation for sustained management of rabies at block panchayat level at ollukara block panchayat hall	Department of of VPH	20-12-2022

ii. Trainings

Sl.No.	Name	Name of faculty involved	Agency	Period
1	Laboratory Animals as Experimental Models	Dr. Sujith S	Revolving Fund, KVASU	16-05-2022 to 20-05-2022

2	Hands-on training –Entrepreneurship development in fresh and processed meat	Dr.V.N Vasudevan Dr. Sathu T Dr. Irshad A Dr. Silpa Sasi	Department of livestock products technology, Meat Technology Unit, College of Veterinary and Animal Sciences, Mannuthy	19-05-2022 to 20-05-2022
3	Laboratory Animals as Experimental Models	Dr. Sujith S	Revolving Fund, KVASU	23-05-2022 to 27-05-2022
4	Departmental Obligatory Training at Meat Technology Unit, Mannuthy for assistant directors in the department of animal husbandry government of Kerala	Dr.V.N Vasudevan, Dr. Sathu T Dr. Irshad A Dr. Silpa Sasi	Department of livestock products technology, Meat technology unit, College of Veterinary and Animal Sciences, Mannuthy	06-06-2022 to 07-06-2022
5	Outreach Programme on Food Safety	Dr.V.N Vasudevan	Department of livestock products technology, Meat technology unit, College of Veterinary and Animal Sciences, Mannuthy at Kalyan Opal flat, Nettiserry	13-06-2022
6	Hands-on training –Entrepreneurship development in fresh and processed meat	Dr.V.N Vasudevan Dr. Sathu T Dr. Irshad A Dr. Silpa Sasi	Department of livestock products technology, Meat technology unit, College of Veterinary and Animal Sciences, Mannuthy	15-06-2022 to 17-06-2022
7	Laboratory Animals as Experimental Models	Dr. Sujith S	Revolving Fund, KVASU	20-06-2022 to 24-06-2022
8	Hands-on training - Entrepreneurship Development in fresh and processed meat	Dr.V.N Vasudevan Dr. Sathu T Dr. Irshad A Dr. Silpa Sasi	Department of livestock products technology, Meat technology unit, College of Veterinary and Animal Sciences, Mannuthy	14-07-2022 to 16-07-2022

9	Basic Biomethodology in Laboratory Animal Science	Dr. Suja Rani S	Revolving Fund, KVASU	18-07-2022 to 22-07-2022
10	Training on primal subprimal and secondary cuts of buffalo carcasses	Dr.V.N Vasudevan, Dr. Sathu T Dr. Irshad A Dr. Silpa Sasi	Department of livestock products technology, Meat technology unit, College of veterinary and animal sciences, Mannuthy	20-07-2022 to 22-07-2022
11	Outreach Programme on Food Safety	Dr. Silpa Sasi	Department of livestock products technology, Meat technology unit, College of veterinary and animal sciences, Mannuthy at Axis Skyline flats, Kalathode	26-07-2022
12	Laboratory animal models and biomethodology	Dr. Bibu John Kariyil	Revolving Fund, KVASU	29-08-2022 to 31-08- 2022
13	Trainer's training for veterinary surgeons on abattoir management and meat inspection	Dr. Irshad A	Department of livestock products technology, Meat technology unit, College of veterinary and animal sciences, Mannuthy	11-10-2022 to 13-10-2022
14	Training on "Economics of Poultry Rearing and preparation of project"	Dr.S. Sankaralingam	KVASU	13-10-2022
15	Hands on training on skill development in slaughter and dressing of food animals	Dr.V.N. Vasudevan Dr. Sathu T. Dr. Irshad A.	Department of livestock products technology, Meat technology unit, College of veterinary and animal sciences, Mannuthy	25-10-2022 to 26-10-2022

16	Butchery techniques and hygienic meat production	Dr. Sathu T	Department of livestock products technology, Meat technology unit, College of veterinary and animal sciences, Mannuthy	14-11-2022 to 25-11-2022
17	Webinar on " Turkey Rearing"	Dr. Suja C S	LMTC	03-12-2022
18	Butchery techniques and hygienic meat production	Dr. Silpa Sasi	Department of livestock products technology, Meat technology unit, College of veterinary and animal sciences, Mannuthy	05-12-2022 to 09-12-2022
19	ldentification and Characterisation of phytochemicals and their possible targets of action	Dr Suresh N Nair	Revolving Fund, KVASU	01-12-2022 to 14-12-2022
20	Butchery techniques and hygienic meat production	Dr. Silpa Sasi	Department of livestock products technology, Meat technology unit, College of veterinary and animal sciences, Mannuthy	16-01-2023 to 20-01-2023
21	Orientation training on meat production and value addition for potential new entrepreneurs	Dr. Irshad A	Department of livestock products technology, Meat technology unit, College of veterinary and animal sciences, Mannuthy	12-01-2023
22	Chick embryo inoculation for virus isolation	Dr. Binu K. Mani	KVM Institute of Paramedical Science, Cherthala	31-01-2023
23	Virus isolation in embryonated eggs	Dr. Surya Sankar	Co-operative institute of Health Sciences, Mannayad,Thalassery	02-02-2023

24	Virus isolation in embryonated eggs	Dr. Ambily R.	Co-operative institute of Health Sciences, Mannayad, Thalassery	04-02-2023
25	Analytical instrumentation for high quality research in life sciences	Dr. Sujith S	Academic Staff College	08-03-2023 to 21-03-2023
26	Recent Updates on Feline Medicine	Dr K Vinodkumar	Kerala State Veterinary Council	10-03-2023
27	Chick embryo inoculation for virus isolation	Dr. Priya P.M.	Presentation Centre of Allied Sciences, Manancherikkunnu, Puthenvelikkara	25-03-2023
28	Laboratory Animals as Experimental Models	Dr. Sujith S	Revolving Fund, KVASU	27-03-2023 to 31-03-2023
29	Rabbit Meat Processing	Dr. Sathu T	Department of livestock products technology, Meat technology unit, College of veterinary and animal sciences, Mannuthy	29-03-2023 to 30-03-2023

iii. Workshops

Sl.No.	Name	Name of faculty involved	Organised by	Period
1	Patent clinic	Dr. Jiji R. S.	Inter University Centre for IPR Studies (IUCIPRS) in collaboration with Cochin University of Science and Technology	25-05- 2022
2	One day workshop on basic techniques in diagnostic Parasitology for paramedical students.	Dr. K. Devada Dr.Bindu Lakshmanan Dr. Radhika R. Dr. Asha Rajagopal Dr. Syamala K. Dr. Priya M. N.	ICAR Emeritus scheme	16-07-2022

3	One day workshop on Basic techniques in diagnostic Parasitology for paramedical students	Dr. K. Devada Dr.Bindu Lakshmanan Dr. Radhika R. Dr. Asha Rajagopal Dr. Syamala K. Dr. Priya M. N.	ICAR Emeritus scheme	23-07-2022
4	One day workshop on updates in the Diagnosis of parasitic diseases for PG students of medical institution	Dr. K. Devada Dr.Bindu Lakshmanan Dr. Radhika R. Dr. Asha Rajagopal Dr. Syamala K. Dr. Priya M. N.	ICAR Emeritus scheme	27-08-2022
5	International dose response boot camp	Dr Nisha A R	TERA USA and KVASU	17-10-2022 to 21-10-2022
6	One day workshop for faculty dealing student related and extension activities	Dr. S.Sankaralingam	DoE, KVSU	29-10-2022

Participated

i. Seminars

Sl. No.	Name of seminar	Name of faculty involved	Agency	Period
1	Eco- Friendly Technologies & Innovations for Sustainable Livestock Production systems to augment rural prosperity	Dr. Manju Sasidharan	Utkarsha National Livestock Conference, Visakhapatanam, Andhra Pradesh	11-04-2022 to 13-04-2022
2	State level seminar on care of companion animals	Dr K Vinodkumar	KGVOA, Kerala	21-04-2022

3	National Webinar on "E-Waste Management"	Dr. Deepa Jolly	ICAR-NAHEP-CAAST Project and "Centre of Excellence for Advanced Research on Animal Food Safety".	25-04-2022
4	International Webinar on Impact of Climate Change and Heat Stress on Dairy Cattle and Mitigation Strategies organized by Animal Physiology Division of ICAR - National Dairy Research Institute, Karnal	Dr. Prasanna K S Dr.Sajitha I. S. Dr. Devi S. S.	ICAR-NDRI	20-06-2022
5	One Day National Seminar on on the occasion of World Zoonoses Day 2022	Dr. Deepa Jolly	ICAR-NAHEP-CAAST project-Centre of Excellence for Advanced Research on Animal Food Safety	06-07-2022
6	PPAK-NVF Vetopia, CVE	Dr. K. Vinodkumar	National Veterinary Foundation, New Delhi	16-07-2022 to 17-07-2022
7	Vigyan Utsav on the theme Intellectual Property Rights	Dr.Jiji R.S.	KSCSTE	24-08-2022
8	National Symposium on 'Newer Concepts and Approaches in Small Animal Practice and Welfare'	Dr. Hiron M. Harshan Dr. B. Bibin Becha	College of Veterinary and Animal Sciences, Navania, Udaipur, Rajasthan and Indian Society for Advancement of Canine Practice	22-09-2022 to 24-09-2022

9	National Webinar on "Advances of Veterinary Sciences during 75 Years of Indian Independence (1947-2022)"	Dr. Sajitha I S Dr.Devi S.S.	Madras Veterinary College, Chennai - 600 007, Tamil Nadu and Dr. C.M. Singh Endowment Trust Bareilly, UP	30-09-2022
10	Online Platform for effective teaching	Dr. Asha Rajagopal	Directorate of Entrepreneurship	17-10-2022 to 18-10-2022
11	National seminar cum Annual Conference on Prospects and Potential of Small Ruminants Production for Enhancing Income Under Changing Scenarios	Dr K Syamala	ISSGPU, CSWRI Avikanagar	10-11-2022 to 12-11-2022
12	14th Kerala Veterinary Science Congress	Dr. N. Ashok Dr. K. M. Lucy Dr. A.R. Sreeranjini Dr. Leena Chandrasekhar Dr. N. S. Sunilkumar Dr. K. B. Sumena (Department of Veterinary Anatomy)	Indian Veterinary Association, Kerala, KVASU	12-11-2022 to 13-11-2022
13	14th Kerala Veterinary Science Congress 2022	Dr. Priya P.M. Dr. Binu K Mani, Dr. Surya Sankar Dr. Ambily R. (Department of Veterinary Microbiology)	Indian Veterinary Association, Kerala, KVASU	12-11-2022 to 13-11-2022
14	14th Kerala Veterinary Science Congress 2022	Dr. Sajitha I. S. Dr. Devi S S Dr. Divya C	Indian Veterinary Association, Kerala, KVASU	12-11-2022 to 13-11-2022

15	14th Kerala Veterinary Science Congress 2022	Dr. Sujith S	Indian Veterinary Association, Kerala, KVASU	12-11-2022 to 13-11-2022
16	14th Kerala Veterinary Science Congress-2022	Dr. Bindu Lakshmanan Dr.Asha Rajagopal Dr. K. Syamala Dr. Priya M.N Dr. K Devada.	Indian Veterinary Association, Kerala, KVASU	12-11-2022 to 13-11-2022
17	14th Kerala Veterinary Science Congress- 2022	Dr. Deepa Jolly	Indian Veterinary Association, Kerala, KVASU	12-11-2022 to 13-11-2022
18	International Symposium on "37th Convention of ISSAR and National symposium on "Optimising animal reproduction through recent techniques of biotechnology, nutraceuticals and alternative medicine"	Dr Jayakumar C Dr. R.S.Abhilash	By ISSAR at College of Veterinary Science and Animal Husbandry, NDVSU, Jabalpur	16-11-2022 to 18-11-2022
19	'Interventions for the control of AMR: harnessing one health knowledge'	Dr. Binsy Mathew	CIFT	21-11-2022 to 22-11-2022
20	Kerala Antimicrobial Resistance Meet 2022: One health response to AMR	Dr.Nisha A R	KVASU	23-11-2022
21	Kerala Antimicrobial Resistance Meet 2022: One health response to AMR	Dr.Suresh N Nair	KVASU	24-11-2022
22	Kerala Antimicrobial Resistance Meet 2022: One health response to AMR	Dr. Suja Rani S	KVASU	25-11-2022

23	Orientation programme for NSS programme officers of KVASU	Dr. Asha Rajagopal	Directorate of Entrepreneurship/ Directorate of Students Welfare at Academic Staff College, CVAS, Mannuthy	10-02-2023
24	Kerala Science Congress	Dr. Sujith S.	KSCSTE	12-02-2022 to 14-02-2023
25	Healthy Livestock/ Antimicrobial Resistance Monitoring and Research (ARMoR) Program	Dr.Deepthi Vijay	ARMOR cluster event by the Federation of Veterinarians of Europe, Wageningen, Netherlands	16-02- 2023
26	4th Ministry of Home Affairs National Seminar on K-9 at DBTS, CRPF, Bengaluru.	Dr. K. Vinodkumar	Ministry of Home Affairs, Govt. of India	23-02-2023 to 24-02-2023
27	Antimicrobial Resistance in Probiotics' – A Food safety Concern"	Dr.Deepthi Vijay	Department of Dairy Microbiology, Verghese Kurien Institute of Dairy and Food Technology and Probiotic Association of India	28-03-2023

ii. Trainings

Sl.No.	Name	Name of faculty involved	Agency	Period
1.	Molecular Biology and Bioinformatics Tools for Advanced Life Science Research	Dr. Manju Sasidharan	School of Applied Animal Production and Biotechnology, KVASU, Mannuthy	30.03.2022 to 13.04.2022

2	10 days online training on " Safety, security and quality assurance of food: recent updates"	Dr. Deepa Jolly	Department of Veterinary Public Health and Epidemiology, College of Veterinary Science and Animal Husbandry, Rewa, M.P	04-04-2022 to 13-04-2022
3	Dose response assessment boot camp	Dr Nisha A R	Toxicology Excellence For Risk Assessment Cincinnati, Ohio, USA	25-04-2022 to 29-04-2022
4	ANH Jadcherla Premix Plant tour and Technical presentation	Dr. Ajith K.S.	DSM Nutritional products, India Ltd	28-06-2022 to 29-06-2022
5	Online Four Week Certificate Course on "Enhancing livestock production and food safety through one health approach"	Dr. Deepa Jolly	Department of Veterinary Public Health and Epidemiology, College of Veterinary Science and Animal Husbandry, Rewa, M.P	20-08-2022 to 18-09-2022
6	Orientation course for Programme Officers of National Service Scheme	Dr. Asha Rajagopal	Empanelled Training Institute, University of Calicut, Malappuram	15.09.2022 to 21.09.2022
7	Certificate course on enhancing livestock production and food safety through one health approach	Dr. Vrinda Menon	Mumbai Veterinary College	20-09-2022 to 18-10-2023
8	Laboratory Quality Management System and Internal Audit as per ISO/IEC 17025 : 2017	Dr. Ajith K.S.	Sophisticated Test and Instrumentation Centre (STIC)	26-09-2022 to 29-09-2022
9	Online Platform for Effective teaching	Dr. Manju Sasidharan	Academic Staff College, Directorate of Entrepreneurship , KVASU	17.10.2022 to 18.10.2022
10	Training programme on " online platform for effective teaching	Dr. Sethulekshmi C	DE, KVASU	17-10-2022 to 18-10-2022

11	Training programme on " online platform for effective teaching	Dr. Binsy Mathew	DE, KVASU	17-10-2022 to 18-10-2022
12	Refresher course in life sciences	Dr George Sherin K	University of Delhi	28-10-2022 to 11-11-2022
13	Advances in Analytical techniques	Dr. Sujith S	Academic Staff College, KVASU	02-11-2022 to 15-11-2022
14	Advances in Analytical Techniques	Dr. Priya M. N.	Academic Staff college, KVASU	02-11-2022 to 15-11-2022
15	Role of Science and Technology in sustainable Agriculture, Horticulture, Animal Husbandry and Allied Sectors: A retrospective and prospective approach	Dr. Sreeja R. Nair	ICAR-Indian Grassland and Fodder Research Institute, Southern Regional Research Station, Dharwad and National Agriculture Development Cooperative Ltd. (NADCL), Baramulla, J & K	09-11-2022 to 29-11-2022
16	Identification and characterization of phytochemicals and their possible targets of action	Dr Nisha A R	Department of Veterinary Pharmacology and Toxicology,CVAS, Mannuthy	01-12-2022 to 14-12-2022
17	Online Short term course "One Health: A Health Promotion Perspective" (Part I)	Dr. Deepa Jolly	Department of Veterinary Public Health and Epidemiology, College of Veterinary Science and Animal Husbandry, Rewa, M.P	15-12-2022 to 21-01-2023

18	Sustainable Livestock Production: Prospects for innovation	Dr. Manju Sasidharan	National Institute of Agricultural Extension Management , Rajendranagar, Hyderabad	19-12-2022 to 23-12- 2022
19	Antimicrobial residue analysis in Chicken meat by Liquid Chromatography-Tandem Mass Spectrophotometry	Dr. Deepthi Vijay	ICAR- NAHEP-CAAST project entitled 'Centre for Excellence for Advanced research on animal food safety' by Mumbai Veterinary College	01-01-2023 to 12-01-2023
20	Hands on training on Basics of Echocardiography and Doppler Ultrasonography in animals	Dr. C. Jayakumar, Dr. Hiron M. Harshan	Division of Surgery, Indian Veterinary Research institute	16-01-2023 to 25-01-2023
21	Statistical Techniques for Data Analysis in Research Work	Dr Udayasree V J	Department of Animal Genetics and Breeding, Nagpur Veterinary College	16-01-2023 to 20-01-2023
22	UGC approved refresher programme: Design, Development and Delivery of MOOCs	Dr. Bibu John Kariyil	IGNOU STRIDE	06-02-2023 to 17-02-2023
23	One Health:A Health Promotion perspective	Dr. Binsy Mathew	IIT Karagpur	06-02-2023 to 05-03-2023
24	National Intelletual property awareness Mission (NIPAM)	Dr. Sreeja R. Nair	Intellectual property Office, Gov. of India	01-03-2023
25	Analytical instrumentation for high quality research in life sciences	Dr. Biya Ann Joseph	Academic Staff College, Directorate of Entrepreneurship , KVASU	08-03-2023 to 21-03-2023
26	Refresher training on 'Analytical instrumentation for high quality research in life sciences'	Dr. Amritha Aravind Dr.S.Sangaralingam	Academic Staff College, KVASU, Mannuthy	08-03-2023 to 23-03-2023

27	Online course on "Microbiological Diagnostic Techniques for Foodborne and Zoonotic Diseases"	Dr. Deepa Jolly	Department of Veterinary Public Health and Epidemiology, College of Veterinary Science and Animal Husbandry, Rewa, M.P	10-03-2023 to 23-03-2023
	Workshop on training need analysis on one health at KILA Thrissur	Dr. Vrinda Menon	KILA, Thrissur	15-03-2023

iii. Workshops

Sl.No.	Name	Name of faculty involved	Agency	Period
1	Dose response assessment boot camp	Dr Nisha A. R.	Toxicology Excellence for Risk Assessment Cincinnati, Ohio, USA	25-04-2022 to 29-04-2022
2	One world one health	Dr. Vrinda Menon	Health Depatment, Govt. of Kerala	12-05-2022
3	State level workshop for strengthening laboratory	Dr. Vrinda Menon Dr. Sreeja R. Nair	State Health Systems Resource Centre- Govt. of Kerala	13-09-2022 to 14-09-2022
4	One day workshop for faculty dealing with student related and extension activities	Dr Asha Rjagopal	Directorate of Entrepreneurship/ Directorate of Students Welfare at VKIDFT, Mannuthy	29-10-2022
5	State level workshop on Mission Zero Rabies	Dr K Vinodkumar	KGVOA, Kerala	16-11-2022 to 17-11- 2022
6	Antimicrobial resistance meet 2022	Dr. Ambily R.	Jointly organized by Department of VPH, CVAS, Mannuthy, ReAct Asia Pacific and IVA, Mannuthy unit	23-11-2022

7	Kerala Antimicrobial resistance meet 2022.One Health response to AMR	Dr. Sethulekshmi C Dr. Binsy Mathew Dr. Deepa Jolly	ReAct Asia Pacific,IVA Kerala and Department of VPH	23-11-2022
8	Climate Change and Livestock Production: Current Scenario and Way Forward	Dr S. Harikumar	ICAR-NIANP, Bangalore	05-01-2023 to 06-01-2023

iv. Conferences

Sl.No.	Name	Name of faculty involved	Agency	Period
1	2022 SOT Annual Meeting, in San Diego, California. USA	Dr.Nisha A R	Society of Toxicology	27-03-2022 to 31-03- 2022
2	Eco- Friendly Technologies & Innovations for Sustainable Livestock Production systems to augment rural prosperity	Dr.Manju Sasidharan	The Indian Society of Animal Production and Management, Utkarsha National Livestock Conference, Visakhapatanam, Andhra Pradesh	11-04-2022 to 13-04-2022
3	Dermatology Conference	Dr. Udayasree V J	TANUVAS	01-06- 2022 to 03-06-2022
4	National Conference on Native Chicken	Dr. Priya P.M.	Indian Poultry Science association (TN chapter), Chennai	22-09-2022 to 23-09-2022

5	47thWorld Small Animal Veterinary Association Congress held from the 28th to 31st of October, 2022 at Lima, Peru.	Dr. Shibu Simon	WSAVA	28-10-2022 to 31-10- 2022
6	XXII Annual Conference of Indian Society of Veterinary Pharmacology & Toxicology	Dr. Suja Rani S Dr Nisha A R	Indian Society of Veterinary Pharmacology & Toxicology	02-11-2022 to 04-11-2022.
7	One health approaches in management of animal health care – New paradigim.	Dr. Sethulekshmi C Dr. Binsy Mathew	IVA, CVAS, Mannuthy	12-11-2022 to 13-11-2022,
8	International Veterinary Pathology Conference	Dr. Prasanna K S Dr. Sajitha I. S. Dr. Devi S S	IAVP	17-11-2022 to 20-11- 2022
9	XVIII th Annual Conference of Indian Association of Veterinary Public Health Specialists, ICAR Research Complex for NEH region, Umiam.	Dr. Surya Sankar Dr.Deepa Jolly	ICAR Research Complex for NEH region, Umiam	01-12-2022 to 02-12- 2022
10	International seminar on Zoonotic and transboundry diseases breaking the chain through multidisciplinary approach and XVII annual conference of IAVPHS	Dr. Vrinda Menon	IAVPHS	01-12-2022 to 02-12-2022

11	31st National Congress of Veterinary Parasitology and National Symposium and National Symposium on Green management of animal parasites to enhance livestock production, livelihood and one health	Dr. Bindu Lakshmanan Dr. K Syamala Dr. Priya M.N Dr. K Devada.	College of Veterinary Science and Animal Husbandry, OUAT, Bhubaneshwar	06-12-2022 to 08-12-2022
12	Antimicrobial Resistance and Antimicrobial Use in Food Animals in Asia and the Pacific"	Dr. Deepthi Vijay	Organisation of the United Nations	06-02-2023 to 08-02-2023
13	ISVM Kerala chapter	Dr Sangeetha S Gireesh Dr Ambily V. R. Dr. Udayasree V. J.	CVAS, Mannuthy	26-03-2023 to 27-03- 2023

Awards

i. Faculty

Sl.No.	Name of Faculty	Instituted by	National/ International	Position
1	Dr.K.Vijayakumar, Faculty Dean, CVAS, Mannuthy	Indian Veterinary Association	National	Best Teacher Award,2022
2	Dr.K.Vijayakumar, Faculty Dean, CVAS, Mannuthy	SAARC, Regional Veterinary Association	International	Eminent Veterinarian Award

3	Dr.K.Vijayakumar, Faculty Dean, CVAS, Mannuthy	Indian Society for Advancement of Veterinary Research	National	Fellow of the Society, 2023
4	Dr.K.Vijayakumar, Faculty Dean, CVAS, Mannuthy	Indian Society for Veterinary Medicine	National	Fellow of the Society, 2020
5	Dr. N. S. Sunilkumar	Faculty Excellence Award constituted by Indian Veterinary Association, CVAS, Mannuthy Unit	Unit level	First prize for oral presentation
6	Dr. Manju Sasidharan	The Indian Society of Animal Production and Management, Utkarsha, National Livestock Conference, Visakhapatanam, Andhra Pradesh	National	First prize for oral presentation
7	Dr. Manju Sasidharan	Indian Veterinary Association Kerala-14th Kerala Veterinary Science congress	National	Third prize for oral presentation
8	Dr. N.S. Sunilkumar	Indian Veterinary Association Kerala-14th Kerala Veterinary Science congress	National	Second prize for oral presentation
9	Dr. Ambily R.	Indian Veterinary Association Kerala-14th Kerala Veterinary Science congress	National	First prize for oral presentation
10	Dr. Surya Sankar	Indian Veterinary Association Kerala-14th Kerala Veterinary Science congress	National	First prize for oral presentation
11	Dr. Ajith K. S.	Indian Veterinary Association Kerala-14th Kerala Veterinary Science congress	National	First prize for oral presentation
12	Dr. Sajitha I. S.	Indian Veterinary Association Kerala-14th Kerala Veterinary Science congress	National	Second prize for poster presentation
13	Dr. Devi S. S.	Indian Veterinary Association Kerala-14th Kerala Veterinary Science congress	National	First prize for oral presentation
14	Dr. Divya C.	Indian Veterinary Association Kerala-14th Kerala Veterinary Science congress	National	Third prize for oral presentation
15	Dr. Asha Rajagopal	14th Kerala Science congress, 2022, Indian Veterinary Association	National	First prize for oral presentation

16	Dr. K. Syamala	14th Kerala Science congress, 2022, Indian Veterinary Association	National	Second prize for oral presentation
17	Dr. Priya M.N.	14th Kerala Science congress, 2022, Indian Veterinary Association	National	Third prize for oral presentation
18	Dr. Binsy Mathew	14th Kerala Science congress, 2022, Indian Veterinary Association	National	Second prize for oral presentation
19	Dr.Varuna P. Panicker	VI Annual Convention of SVBBI and National Symposium to be organized by Department of Veterinary Physiology and Biochemistry, College of Veterinary Science & Animal Husbandry, NDVSU, Jabalpur on January 5th & 6th 2023	National	First prize for oral presentation
20	Dr.Chinnu M.V.	VI Annual Convention of SVBBI and National Symposium to be organized by Department of Veterinary Physiology and Biochemistry, College of Veterinary Science & Animal Husbandry, NDVSU, Jabalpur on January 5th & 6th 2023	National	First (Poster)
21	Dr Ambily V. R.	ISVM–Kerala chapter March 2023	(National)	Best Research Article award
22	Dr Sangeetha S. Gireesh	JIVA	National	Best case report award for 2022
23	Dr. Subin K. Mohan	3rd National conference of the society of Krishi Vigyan during 17th - 19 th October 2022 at Ujjain, Madya Pradesh	National	Young Scientist award
24	Dr. Subin K. Mohan	3rd National conference of the society of Krishi Vigyan during 17th - 19 th October 2022 at Ujjain, Madya Pradesh	National	First prize for oral presentation
25	Dr. Subin K. Mohan	3rd National conference of the society of Krishi Vigyan during 17th - 19 th October 2022 at Ujjain, Madya Pradesh	National	Elected as the ‘fellow of the society of Krishi Vigyan

26	Dr. Irshad A.	Tamilnadu Association of intellectuals and Faculty (TAIF) and GRABS Educational Charitable Trust	National	Best Young Scientist Award 2022
27	Dr. Irshad A.	Ratna Prasad Multidisciplinary Research and Educational society	National	Indo Asian Research Excellence Award 2022
28	Dr. Priya P.M.	"National conference on native chicken" in association with Indian Poultry Science association (TN chapter) at Madras Veterinary College, Chennai on 22nd and 23rd September, 2022.	National	First prize for oral presentation
29	Dr. Surya Sankar	XVIIIth Annual Conference of Indian Association of Veterinary Public Health Specialists	National	Third for oral presentation
30	Dr K. Vrinda Menon	XVIIIth Annual Conference of Indian Association of Veterinary Public Health Specialists	National	First prize for oral presentation
31	Dr. Deepa Jolly	XVIIIth Annual Conference of Indian Association of Veterinary Public Health Specialists	National	First prize for oral presentation
32	Dr. Deepthi Vijay	XVIIIth Annual Conference of Indian Association of Veterinary Public Health Specialists	National	Best Doctoral thesis award
33	Dr K. Vrinda Menon	37th Convention of ISSAR and National symposium on "Optimising animal reproduction through recent techniques of biotechnology, nutraceuticals and alternative medicine" held from 16-18th November 2022 at College of Veterinary Science and Animal Husbandry, NDVSU, Jabalpur	National	Best research paper award

34	Dr. Devi S. S.	IAVP - International Veterinary Pathology Congress	International	First prize for oral presentation
35	Dr.Nisha A.R	Society of Toxicology, USA-TERA, Cincinnati, Ohio, USA	International	Global senior scholar exchange programme
36	Dr Suja Rani S.	XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology and International Symposium on "New Horizons in Veterinary Pharmacology and Toxicology Research: Way Forward to Augment Livestock Health and Production	National	First prize for Oral Presentation
37	Dr. Bibu John Kariyil	Dr M Krishnan Nair Award	National	Best teacher under the age of 45.
38	Dr.Bindu Lakshmanan	31st NCVP at CVS, Bhubaneswar, Orissa 6th -7th December, 2022.	National	Shri S.M Ismail Oration Award-2021 for the contributions in Veterinary Helminthology
39	Dr.Bindu Lakshmanan	31st NCVP at CVS, Bhubaneswar, Orissa 6th -7th December, 2022.	National	Second Prize-Oral Presentation
40	Dr K. Syamala	ISSGPU National Seminar cum Annual Conference. 2022. ICAR-CSWRI ,Avikanagar	National	First prize for oral presentation
41	Dr. Binsy Mathew	Dr Mohan Nemali- Instituted for PhD thesis of KVASU	State	Best Doctoral thesis award

ii. Student Awards

Sl. No.	Name and Admission No.	Department	Instituted by	Prize
1	Resmi Ravindran (19-MVM-50)	Veterinary Parasitology	31st NCVP at CVS, Bhubaneswar, Orissa 6th -7th December, 2022.	3rd prize- oral presentation

2	Dr. Merin Das V. J. (20 - MVM – 47)	Veterinary Parasitology	Indian Veterinary Association, Kerala Kerala Veterinary Science Congress 2022	1st prize (Poster presentation)
3	Dr. Sunkara Prathyusha (21-DVM-18)	Veterinary Parasitology	Indian Veterinary Association, Kerala Kerala Veterinary Science Congress 2022	2nd prize (Poster presentation)
4	Dr. Nikitha Shajan (21-MVM-54)	Veterinary Parasitology	Indian Veterinary Association, Kerala Kerala Veterinary Science Congress 2022	3rd prize (Poster presentation)
5	Dr. Nisaath Beegum (21-DVM-20)	Veterinary Pharmacology and Toxicology	Indian Veterinary Association, Kerala Kerala Veterinary Science Congress 2022	3rd prize- oral presentation
6	Dr. Ananthapad-manabhan T.P. (21-MVM-10)	Dept. of ARGO	Maharashtra Animal and Fishery Science University, Nagpur 6th National online clinical case conference - 25-27 April 2023	2nd Prize oral presentation
7	Dr. Ayana C. I. (21-MVM-11)	Dept. of ARGO	Maharashtra Animal and Fishery Science University, Nagpur 6th National online clinical case conference - 25-27 April 2023	3rd Prize oral presentation
8	Dr. Rahul Ram S. (21-MVM-13)	Dept. of ARGO	Maharashtra Animal and Fishery Science University, Nagpur 6th National online clinical case conference - 25-27 April 2023	3rd prize oral presentation
9	Dr. Sruthi S. (20-DVM-14)	Veterinary Pathology	IAVP International Veterinary Pathology Congress	1st prize (Poster)
10	Dr. Megha K. G. (18-MVM- 49)	Veterinary Pathology	IAVP International Veterinary Pathology Congress	2nd prize (MVSc Thesis award)

11	Dr. Anseena A.K. (21-MVM-57)	Veterinary Pathology	KVASU and Kerala Food Safety department 12Quiz Competition	1st prize
12	Dr. Reshma K. A. (21-MVM-58)	Veterinary Pathology	KVASU and Kerala Food Safety department Quiz Competition	1st prize
13	Dr. Anseena A.K. (21-MVM-57)	Veterinary Pathology	IVA Quiz competition- World Milk Day	1st prize
14	Dr. Aravind K. Unni (21-MVM-60)	Veterinary Pathology	IVA Quiz Competition- World Milk Day	1st prize
15	Hari Sankar V.J (2021-MVM-63)	Veterinary Pharmacology and Toxicology	ISVPT XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology & International symposium on "New Horizons In Veterinary Pharmacology And Toxicology Research : Way Forward To Augment Livestock Health And Production"	1st prize (Oral presentation)
16	Priyanka Menon K. (2021-MVM-65)	Veterinary Pharmacology and Toxicology	ISVPT XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology & International symposium on "New Horizons In Veterinary Pharmacology And Toxicology Research : Way Forward To Augment Livestock Health And Production"	1st prize (Oral presentation)

17	Aparna S. Sivapriya (2021-MVM-66)	Veterinary Pharmacology and Toxicology	ISVPT XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology & International symposium on "New Horizons In Veterinary Pharmacology And Toxicology Research : Way Forward To Augment Livestock Health And Production"	1st prize (Oral presentation)
18	Arundhathy S. Nair (2021-MVM-64)	Veterinary Pharmacology and Toxicology	ISVPT XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology & International symposium on "New Horizons In Veterinary Pharmacology And Toxicology Research : Way Forward To Augment Livestock Health And Production"	1st prize (Oral presentation)
19	Shankar R. (2020-MVM- 56)	Veterinary Pharmacology and Toxicology	ISVPT XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology & International symposium on "New Horizons In Veterinary Pharmacology And Toxicology Research : Way Forward To Augment Livestock Health And Production"	1st prize (Oral presentation)
20	Divya Rajaselvi N. (2021-MVM-69)	Veterinary Pharmacology and Toxicology	ISVPT XXII Annual Conference of Indian Society of Veterinary Pharmacology and Toxicology & International symposium on "New Horizons In Veterinary Pharmacology And Toxicology Research : Way Forward To Augment Livestock Health And Production"	1st prize (Oral presentation)

21	Hari Sankar V.J (2021-MVM-63)	Veterinary Pharmacology and Toxicology	Department of Veterinary Public Health, CVAS, Mannuthy and School of Zoonoses Public Health and Pathobiology World Zoonoses Day 2022, E-poster competition	1st prize
22	Divya Rajaselvi N. (2021-MVM-69)	Veterinary Pharmacology and Toxicology	International Virtual Conference on "Biological innovations and Computational exploration for Pandemic Challenges (BICPAC'22)	1st prize
23	Sree Lekshmi M Nair (22-MVM-65)	Veterinary Surgery and Radiology	KVASU Merit award	1st prize
			CVAS, Mannuthy Alumni Association Award	1st prize
			N. P. Panicker Memorial Endowment Award	1st prize
			Trivandrum Livestock Improvement Association Prize	1st prize
			T. V. Kochuvareed memorial prize	1st prize
24	Radhika A.N (19-MVM-43)	Veterinary Public Health	XVIIIth ANNUAL CONFERENCE OF IAVPHS International Symposium on "Zoonotic and Transboundary Diseases: Breaking the Chain through Multidisciplinary Approach" which is organised at ICAR RESEARCH COMPLEX FOR NEH REGION, MEGHALAYA. December 1st and 2nd 2022	Student Travel grant award
25	Chendhu Bharat Prasad (20-DVM-17)	Veterinary Public Health	XVIIIth ANNUAL CONFERENCE OF IAVPHS International Symposium on "Zoonotic and Transboundary Diseases: Breaking the Chain through Multidisciplinary Approach" which is organised at ICAR RESEARCH COMPLEX FOR NEH REGION, MEGHALAYA. December 1st and 2nd 2022	Third best oral presentation award

26	Krupa Rose Jose (20-DVM-13)	Department of Veterinary Epidemiology and Preventive Medicine	39th annual convention of Indian Society of Veterinary Medicine, organized at CVAS, G.B. Pant University of Agriculture & Technology, Pantnagar, Uttarakhand from 22nd – 24th February, 2023	First prize in poster presentation session
			14th Kerala Veterinary Science congress, Organized by IVA, Kerala on 12th & 13th November, 2022	Third Prize in the oral presentation
27	Athira K (21-DVM-17)	Department of Veterinary Epidemiology and Preventive Medicine	39th annual convention of Indian Society of Veterinary Medicine, Organized at CVAS, G.B. Pant University of Agriculture & Technology, Pantnagar, Uttarakhand from 22nd – 24th February, 2023	First Prize in the oral presentation
			National seminar on 'Antimicrobial resistance in probiotics' – A food safety concern, organized Verghese Kurien Institute of Dairy and Food Technology, on 25th March 2023	Second prize in the oral presentation
			14th Kerala Veterinary Science congress, Organized by IVA, Kerala on 12th & 13th November, 2022	First Prize in the oral presentation
			Inaugural convention of Indian society for veterinary medicine, Kerala chapter, organized at CVAS, Mannuthy, Thrissur, Kerala on 26th & 27th March 2023	Third prize in the oral presentation
28	Gowri Venugopal (22-MVM-30)	Department of Veterinary Epidemiology and Preventive Medicine	Inaugural convention of Indian society for veterinary medicine, Kerala chapter, organized at CVAS, Mannuthy, Thrissur, Kerala on 26th & 27th March 2023	First prize in the oral presentation
29	Raina Varghese (22-MVM-31)	Department of Veterinary Epidemiology and Preventive Medicine	Inaugural convention of Indian society for veterinary medicine, Kerala chapter, organized at CVAS, Mannuthy, Thrissur, Kerala on 26th & 27th March 2023	Second prize in the oral presentation

30	Bincy K. Abraham (20-MSVM-07)	Veterinary Microbiology	14th Kerala Veterinary Science Congress 12th to 13th November 2022	III prize in 'Farm Animal Health' session
31	Varsha Suresh	Diploma Lab tech student	KVASU Gold Medal for Diploma programmes	1st prize
32	Dhiya Paul (20-MSVM-09)	Statistics	KVASU Gold Medal for MSc programmes	First rank in MS/M.Sc 2020

COLLEGE OF VETERINARY & ANIMAL SCIENCES, POOKODE

1. Academic Excellence

College of Veterinary & Animal Sciences, Pookode is the second Veterinary College of the state of Kerala. The campus is sprawled over 100 acres in the scenic hilly terrain of Wayanad. It was started as a constituent college of Kerala Agricultural University and was operating in Mannuthy campus, since 28thOctober 1998. Later on, the college started functioning in the Pookode campus on 11thDecember 2004. Subsequent to the formation of Kerala Veterinary and Animal Sciences University (KVASU), College of Veterinary and Animal Sciences, Pookode became a constituent college of the new University. The college which is barely 10 years old has state of the art facilities for undertaking academic, research, extension and entrepreneurship activities in livestock and allied sectors.

MANDATES

The faculty headed by the Dean is striving for the attainment of following mandates

1. To impart quality veterinary education
2. Technology innovation, generation and dissemination through research, teaching and extension activities
3. Strengthen animal health for sustainable livestock production
4. To function as a national referral centre in the area of tropical animal production and veterinary medicine

2. Admission Excellence

(Detailed information of admission procedure, courses, departments, staff strength, student strength)

ADMISSION PROCEDURE

* Selection of students for admission to B.V.Sc. & A.H. Degree Course is on the basis of merit through NEET exam. 85% students allotted through CEE GoK and remaining 15% through VCI.
* Selection of students for admission to MVSc & PhD course are based on merit through entrance exam conducted by ICAR and KVASU separately.
* Selection of students for admission to Diploma in Dairy Science, BSc PPBM and MVSc Wildlife is on the basis of merit through entrance exam conducted by KVASU

DETAILS OF STUDENTS

Details of Student-2022 Admission			
2022 Admission	**State**	**VCI**	**Lakshadweep**
BVSc& AH	86	13	1
MVSc	37	9	
PhD	4	0	
Diploma	23		

COURSES

1. BVSc & AH
2. MVSc
3. Phd (Veterinary)
4. Phd (Biosciences)
5. Diploma in Dairy Science
6. BSc PPBM
7. MSc Wildlife

STAFF STRENGTH

Sl. No.	Department	Professor	Assoc. Professor	Asst. Professor
1	Veterinary Anatomy & Histology	02	01	02
2	Animal Reproduction, Gynaecology & Obstetrics	01	01	02
3	Animal Nutrition	0	02	02
4	Animal Genetics & Breeding	0	01	05

5	Veterinary Microbiology	01	0	02
6	Veterinary Physiology	0	01	03
7	Veterinary Epidemiology & Preventive Medicine	0	02	02
8	Veterinary Biochemistry	0	0	04
9	Livestock Production and Management	01	01	03
10	Livestock Products Technology	01	0	01
11	Dairy Science	0	0	01
12	Veterinary And Animal Husbandry Extension Education	0	0	02
13	Veterinary Public Health	0	01	03
14	Veterinary Clinical Medicine, Ethics & Jurisprudence	01	01	05
15	Poultry Science	0	0	04
16	Veterinary Parasitology	01	01	02
17	Veterinary Pathology	01	0	03
18	Veterinary Pharmacology & Toxicology	01	0	02
19	Surgery & Radiology	01	01	05
20	Biostatistics			
21	Physical Education	0	0	02
22	Instructional Livestock Farm Complex	0	01	01

STUDENTS STRENGTH

	Course	Male	Female	Total
1	BVSc & AH Programme	222	322	544
2	MVSc Programme	36	75	111
3	PhD Programme	12	8	20
Total				**675**

Myriad of Learning pathways: Diverse courses and departments (courses, departments, staff strength, student's profile)

Departments offering PG Diploma/MSc./BSc./Diploma/certificate courses

1. Veterinary Public Health- PG Diploma in One Health
2. Centre for Wildlife sciences- MSc.(Wild life studies)
3. Poultry Science- BSc. (poultry production and Business management)
4. Dairy Science- Diploma in Dairy Science
5. TVCC- Certificate programme in Veterinary nursing

DETAILS OF STUDENTS

	Course	Male	Female	Total
1	Ms/Msc Programme	0	0	0
2	BSc Programme	30	15	45
3	Diploma Programme	15	29	44
Total				**89**

3. **Tapestry of expertise and desiccation: empowering faculty (**Faculty details, capacity building programmes, faculty achievements, outstanding faculty)

FACULTY DETAILS

Sl No	Name	Designation
1	Dr Bindya Liz Abraham	Associate Professor
2	Dr Lali F Anand	Assistant Professor
3	Dr Muhasin Asaf V.N.	Assistant Professor
4	Dr E.M.Muhammed	Assistant Professor
5	Dr Rojan P.M	Assistant professor(on study leave)
6	Dr Bimal C B	Assistant Professor(on study leave)
7	Dr. Maya S.	Professor & Head
8	Dr Indu V. Raj	Professor
9	Dr Rajani C.V.	Associate Professor
10	Dr Patki H.S.	Assistant Professor
11	Dr. Surjith K.P.	Assistant Professor
12	Dr. BIJU CHACKO	Associate Prof. & Head
13	Dr. S. Senthil Murugan	Associate Prof.
14	Dr. Jasmine Rani. K	Assistant Professor
15	Dr. Ani Bency Jacob	Assistant Professor(On deputation to Govt. of India)
16	Dr. Divya P.D.	Assistant Professor
17	Dr. Renjith Sebastian	Assistant Professor
18	Dr Madhavan Unny N	Professor
19	Dr Vinu David P	Associate Professor
20	Dr Biju P Habeeb	Assistant Professor
21	Dr Sindhu K Rajan	Assistant Professor (on Working arrangement at CVAS, Mannuthy)
22	Dr Umesh C G	Assistant Professor (on PhD deputation at CVAS, Mannuthy)
23	Dr Manju K Mathew	Assistant Professor (on PhD deputation at CVAS, Mannuthy)
24	Dr Sindhu O K	Assistant Professor (on PhD deputation at CVAS, POOKODE)
25	Dr. Bimal P. Bashir	Assistant Professor and HOD (i/c)
26	Dr. Anjali K. Babu	Assistant Professor
27	Dr. Renuka Nayar	Professor

28	Dr. Kavitha Rajagopal	Assistant Professor
29	Dr. Magna Thomas	Assistant Professor
30	Dr. Reghu Ravindran	Professor
31	Dr. Ajith Kumar K.G.	Associate Professor
32	Dr. Deepa C.K.	Assistant Professor
33	Dr. Anju Varghese	Assistant Professor
34	Dr. Ajith Jacob George	Professor and Head
35	Dr. Pradeep M	Assistant Professor
36	Dr. Dhanush Krishna B	Assistant Professor
37	Dr. Hamza Palekkodan	Assistant Professor (on study leave)
38	Dr.Sanis Juliet	Professor & Head
39	Dr.Preethy John	Assistant Professor
40	Dr.Ranjith D	Assistant Professor (On Study leave)
41	Dr.Shiji S. Saju	Assistant Professor
42	Dr.Rejitha Joseph	Assistant Professor
43	Dr.Pratheesh M. D.	Assistant Professor
44	Dr. K. Raji	Associate Professor
45	Dr Beena C Joseph	Assistant Professor
46	Dr Aswathi P B	Assistant Professor
47	Dr Abdul Muneer K	Assistant Professor (on deputation for PHD)
48	Dr Simi	Assistant Professor (on deputation for PHD)
49	Dr. Deepa. P.M	Associate Professor and Head
50	Dr.Bipin . K.C	Associate professor
51	Dr. Janus. A	Assistant Professor
52	Dr.Ratish RL	Assistant Professor
53	Dr.S.Anoop	Professor & Head
54	Dr.S.Sooryadas	Associate professor
55	Dr.George Chandy	Assistant professor (On WA at CWS)
56	Dr.Dinesh P.T	Assistant professor
57	Dr.Jinesh Kumar	Assistant professor (On PhD deputation)
58	Dr.Remya.V	Assistant professor (On WA at TVCC)
59	Dr. Chintu Ravishankar	Professor and Head
60	Dr Rajasekhar R	Assistant Professor
61	Dr.Sumod K.	Assistant Professor
62	Dr Prejit	Associate professor and Head i/c (Relieved on 17/1/2023)
63	Dr Vinod V K	Asst prof
64	Dr Jess Vergis	Asst prof
65	Dr Asha K	Asst prof

Capacity building programmes attended

Sl. No.	Name and designation of the Scientist	Title of the Programme	Duration		Place
			From	To	
1	Dr Muhasin Asaf V. N.	All Kerala Study Tour of CDST, Pookode	12-09-2022 to 22-09-2022		All Kerala
2	Dr Bindya Liz Abraham	Study tour for MS-wildlife students	01-12-2022 to 09-12-2022		Rann of Kutch, Gujarat
3	Dr Bindya Liz Abraham	National Symposium of SOCDAB on "Animal genetic resources management for rural livelihood enhancement"	23-24th February, 2023		Parbhani, Maharashtra
4	Dr Lali F. Anand	DST SERB TARE project 'Genomic approach for genetic improvement and conservation of important aquaculture species, Etroplussuratensis and Trachinotusblochii under changing climate scenario'	01-04-2022 to 29-06-2022		ICAR-CMFRI, Kochi
5	Dr Patki H.S.	XXXVI Annul convention and international symposium of IAVA	20-22nd December, 2022		CVAS, Udaipur, Rajasthan
6	Dr Surjith K.P.	XXXVI Annul convention and international symposium of IAVA	20-22nd December, 2022		CVAS, Udaipur, Rajasthan
7	Dr. Bimal P. Bashir & Dr. Anjali K. Babu Assistant Professor Dept. of Extension	14th Kerala Veterinary Science Congress organized by IVA Kerala	12th & 13th November 2022		CVAS, Mannuthy
8	Dr. Bimal P. Bashir Assistant Professor Dept. of Extension	ICAR sponsored winter school on "Advanced analytical tools for social science research"	11-31 January 2023		IVAR- Central Marine Fisheries Research Institute

9	Dr. Bimal P. Bashir	Training cum workshop programme on "Ethnographic research for tribal development professionals organized by National Institute of Rural Development and Panchayat raj, Rajendranagar, Hyderabad, Telengana	30th to 31st March 2023	Online
10	Dr. Anjali K. Babu	Training programme on 'Statistics in Science: Modalities and Applications' organized by Academic Staff College, KVASU	10th to 14th October 2022	Academic Staff College, KVASU
11	Dr. Anjali K. Babu	Symposium on 'One World, One Health: Emerging Zoonoses and Stratergies for the Future' organized by Hume Centre for Ecology and Wildlife Biology, COHEART, CVAS, Pookode	21st November 2022	Smart Class Room, CVAS, Pookode
12	Alimudeen. S and Arul Sabareeswaran T A	Symposium on 'One World, One Health: Emerging Zoonoses and Stratergies for the Future' organized by Hume Centre for Ecology and Wildlife Biology, COHEART, CVAS, Pookode	21st November 2022	Smart Class Room, CVAS, Pookode
13	Alimudeen. S and Arul Sabareeswaran T A	Training programme on 'Statistics in Science: Modalities and Applications' organized by Academic Staff College, KVASU	10th to 14th October 2022	Academic Staff College, KVASU

14	Alimudeen S	International Conference on 'Rabies: One Health, Zero Deaths' organized by Department of Veterinary Preventive Medicine, Madras Veterinary College, TANUVAS	27th August 2022	
15	Alimudeen S	Dr. Ashish Memorial Intercollegiate Quiz Competition organized by ROOF Alumni Association, CVAS, Pookode	29th August 2022	
16	Alimudeen S and Arul Sabareeswaran T A	14th Kerala Veterinary Science Congress with the theme 'One Health Approaches in Management of Animal Health Care – New Paradigms' organized by IVA, Kerala	12th and 13th November, 2022	
17	Alimudeen S	National Seminar on 'Recent Biotechnological Advances in Health and Management Practices to Augment Productivity of Livestock and Poultry' organized by VCRI, Tirunelveli and The Society for Veterinary Science and Biotechnology, Indore	22nd to 24th September 2022	
18	Dr DEEPA C.K.	Training on Advances in Analytical Techniques	2.11.22 to 15.11.22	Academic Staff college, Mannuthy
19	Dr.Ajith Jacob George	Kerala Medical Technology Consortium (KMTC) Stakeholder Connect Meet	29th November 2022	CUSAT, Kochi
20	Dr.Ajith Jacob George	Industry – Academia – Health Care Discussion Meet	24th September, 2022	Malabar Cancer Center,

21	Dr. Pradeep M	One day workshop for faculty under DoE, KVASU dealing student related and extension activities organized by DoE, KVASU	29/10/2022	VKIDFT, Mannuthy
22	Dr. Pradeep M	One day symposium on: One World, One Health: Emerging Zoonoses and Strategies for the Future' conducted	21/11/2022	college of Veterinary and Animal Sciences, Pookode
23	Dr.HamzaPalekkodan	INDUSTRY – ACADEMIA – HEALTH CARE DISCUSSION MEET	24th September, 202	Malabar Cancer Center
24	Dr Dhanush Krishna B	Training on "Statistics in Science - Modalities and applications" Mannuthy on	October 10-14, 2 0 22.	KVASU Academic Staff College
25	Dr Dhanush Krishna B	XVIII National Workshop on Toxicologic Pathology organised by The Indian Board of Toxicologic Pathology (IBTP) and Society of Toxicologic Pathology – India (STP-I) at	15-16 July 2022.	Coraltree Hotel, Bangalore – 560 032
26	Dr Dhanush Krishna B	XXXIX Annual Conference of Indian Association of Veterinary Pathologists and XIII Annual Meeting of Indian College of Veterinary Pathologists and International Symposium on "Global Challenges in Rapid Diagnosis and Management of Animal and Poultry Diseases for Improved Health and Productivity"	17 - 20th November, 2022 at Department of Veterinary Pathology, College of Veterinary and Animal Science, Rajendranagar	PVNRTVU, Hyderabad, Telangana

27	Dr Preethy John	Training on advances in analytical techniques	2.11.22 to 11.11.22	Academic staff College, Mannuthy
28	Dr Preethy John	DST SERB SRG - One day workshop on "Experiments for future: Fostering a new research culture"	06/08/2022	VKIDFT, Mannuthy
29	Dr Preethy John	MOOC on digital assessment and evaluation methodologies by NAARM held during	1.09.22 to 30 .09.22	Online
30	Dr.Shiji S. Saju	Statistics in Science: modalities and application	10.10.2022 to 14.10.2022	Academic Staff College, KVASU, Mannuthy
31	Dr. K. Raji	cross disciplinary National Conference of Experts and a hands-on workshop, in Knowledge Translation	16.12.2022 to 17.12.2022	Cochin University of Science and Technology, Kochi.
32	Dr. K. Raji	Basic principles of cell signaling	Feb 2023	Coursera-online learning-offered by Korea advanced institute of science and technology
33	Dr Aswathi P B Asst Professor	IPSACON 2022	2-4th November 2022	DUVASU, Mathura, UP

34	Dr.S.Anoop and Dr.P.T.Dinesh	XVIII Annual Convention of ISACP and National Synposium on "Newer Copncepts and Approaches in Small Animal and Welfare"	22-09-2022 to 24-09-2022	Jaipur, Rajastan
35	Dr.S.Anoop	Defining Animal Welfare and Ethics in Pre-Clinical Research	14-11-2022 to 15-11-2022	SCTIMST, Thiruvanan-thapuram
36	Dr.S.Sooryadas	Annual Congress of Indian Society for Veterinary Surgery		
37	Dr. M.K. Narayanan, Dr.S.Anoop and Dr.P.T.Dinesh,Dr. sooryadasS.,Dr. Jinesh Kumar N S and Dr.Remya V.,	ISVS Kerala chapter annual conference	18-12-2022	Thrissur, Kerala
38	Dr. Jinesh KumarN.S., Dr.Remya V	AgMoocs - Fluid therapy and management of clinical syndrome in cattle and ruminants- 6-week online course	22-03-2022 to 2-05-2022	
39	Dr.Jinesh Kumar N. S. Dr.Remya V Dr Dinesh P. T.	Agmoocs- management of metabolic and production disorders in cattle- 6-week online course	31-05-2022 to 10-07-2022	
40	Dr Vinod V K	Antimicrobial peptides (AMPs) as an alternative to antibiotics: Hands on training for designing, chemical synthesis, characterization and applications of synthetic AMPs	24th January to 13th February, 2023	IVRI, Izatnagar

FACULTY ACHIEVEMENTS

Sl No	Faculty	Award/ Honour
1	Dr Bindya Liz Abraham	➢ PG Nair Endowment Best Teacher Award, July, 2022 ➢ Best paper for poster presentation in ISAGB, December, 2022
2	Dr. Lali F. Anand	➢ Topper in the NPTEL online certification course- Human Molecular Genetics Jan-Feb 2023 organized by IIT Madras ➢ Certificate of successfully uploading the data for All India Higher Education Survey, CVAS, Pookode for the year 21-22. Honoured by Deputy Director General, Department of Higher Education, Ministry of Education, Government of India on 18-01-2023
3	Dr Maya S,	Best Teacher award, 2022 by IVA Kerala Chapter
4	Dr. Indu V Raj.	IVA Special Award 2022, Editor, JIVA
5	Rajani C. V., Surjith K. P., Patki H. S., Simanta P., Raghu N.K., Indu V.R., Pradeep M. and Maya S.	Second prize in poster presentation competition held during 14 th Kerala Veterinary science congress 2022 held at CVAS Mannuthy during Nov 2022.
6	Patki H. S., Surjith K. P., Rajani C. V.,Indu V.R., Raghu N.K. and Maya S. bagged Dr M.D. Hafeezuddin Silver Jubilee Medal	First prize in oral presentation in anatomy of wild and zoo animals held during XXXVI IAVA annual convention and international symposium held at Udaipur during Dec 20-22.
7	Dr. Biju Chacko	Dr. Biju Chacko secured the award of first prize for best paper by poster presentation in Scientist Section in the 35th Kerala Science Congress held at Kuttikkanam, Idukki from 12-2-2023 to 14-2-2023 for the paper entitled, “Soy Milk: A Novel and Economic Milk Replacer for calves”. Biju Chacko and Fahmida. V

8	Dr. Biju Chacko	Dr. Biju Chacko as mentor of the team of 5 students Nithin Raj V.G., Abhina K.S, Jithy G.J., Muhammed Yasir P, FamidhaSherin P.T. representing CVAS, Pookode who won the Young Innovator's Project (YIP 2020) for Idea No. 1158 titled, "Characterisation of locally available unconventional feeds and its potential use as livestock feed in the post pandemic scenario" under the Theme,"Post Pandemic Innovations" organized by the Kerala Development and Innovation Strategic Council (KDISC), Govt. of Kerala. Result declared on 13-3-2023.
9	Dr.Divya P.D.	Awarded second prize in oral presentation in VIth Annual Conference of SVBBI held on 5 and 6th January 2023 at NDVSU, Jabalpur
10	Dr Vinu David P	Reviewer appreciation for the year 2022 by the international journal of livestock research
11	Dr Vinu David P	Student guide - Dr Anju K Daniel received award for Best MVSc thesis in Veterinary Medicine- Susheela pathak memorial award for the year 2022
12	Dr Vinu David P	Student guide - Dr Anju K Daniel received award for Best MVSc thesis-Indian Society for Agricultural Science & Technology for rural empowerment, Raichur, Karnataka for the year 2022
13	Dr Sindhu O. K	Authored the paper which was awarded first prize in farm animal medicine session-Clinical conference organised by TANUVAS
14	Dr Vinu David	Student advisors- Third prize- ISVM Kerala Chapter Conference- 26th and 27th March 2023 at CV&AS, Mannuthy
15	Dr Vinu David P	Student advisor- First prize- ISVM Kerala Chapter Conference- 26th and 27th March 2023 at CV&AS, Mannuthy
16	Dr Vinu David P, Dr Biju P Habeeb	Student Advisors- First prize for the paper presented at the 39th Annual convention and national conference of ISVM- 22nd to 24th February2023
17	Dr Umesh C.G.	Staff advisor- Third prize- ISVM Kerala Chapter Conference- 26th and 27th March 2023 at CV&AS, Mannuthy
18	Dr Sindhu O K	Best case report award 2022, by Journal of Indian Veterinary Association

19	Dr. Bimal P. Bashir	Best teacher award in the 5th national conference on "Doubling farmer's income for sustainable and harmonious agriculture" (DISHA-2022). Organized by KNIDSS, Sultanpur, UP, in association with GAPS, Dhanbad, Jharkhand and PKVSS, Bihar. Green professional Society on 11th to 12th June 2022.
20	Alimudeen S, Arul Sabareeswaran T A, Induja T R, Chethan G N	First place in e-poster -International Veterinary Students' Association, Pookode and Centre for One Health Education, Advocacy, Research and Training, KVASU
21	Alimudeen S, Arul Sabareeswaran T A, Chethan G N, Induja T R, Bimal P Bashir	Best Oral Presentation Award -Veterinary College and Research Institute, Tirunelveli, TANUVAS and Society of Veterinary Science & Biotechnology, Indore
22	Alimudeen S	Best Research Scholar Award -Agricultural &Environmental Technology Development Society, Uttarakhand
23	Alimudeen S	Best Article Award- AgriGate – An International Multidisciplinary Monthly e-Magazine
24	Alimudeen S, Arul Sabareeswaran T A, Bimal P Bashir	Third place in poster presentation - Department of Veterinary Preventive Medicine, Madras Veterinary College, TANUVAS
25	Alimudeen S	Certificate of Accomplishment- Agricultural & Environmental Technology Development Society (AETDS), Uttarakhand
26	Alimudeen S, Arul Sabareeswaran T A	Certificate of Appreciation- Parents Teachers Association,CVAS, Pookode
27	Alimudeen S	Best Student Award- Tamil Society for Veterinary Sciences
28	Arul Sabareeswaran T A	Letter of Appreciation-IVA, Kerala – Pookode Unit
29	Arul Sabareeswaran T A	Dr.Bhagabat Panda National Award of Excellence in Poultry Science, Pashudhanpraharee magazine
30	Arul Sabareeswaran T A	Smt. Rajvanshi Devi Memorial Award 2022-Pashudhanpraharee magazine
31	Dr Deepa C.K.	Mrs. Saraswathi Anandan Award (2022) for the best Ph.D. Thesis by Indian Association of Advancement in Veterinary Parasitology
32	Dr.Ajith Jacob George	First - Best paper - 14th Kerala veterinary Science Congress
33	Dr.Ajith Jacob George	Best Poster Award during the Session of Molecular Pathology and Oncology for the research work Entitled Histomorphological, immunohistochemical and molecular studies on desmoplastic reactions in canine mammary tumors (Major advisor)-39th IAVP International Conference

34	Dr.Ajith Jacob George, Dr Pradeep M, Dr Hamza Palekkodan, Dr Dhanush Krishna B	Second Best ICVP Poster Award at XIII Annual Meeting of Indian College of Veterinary Pathologists Name of Student: Tamilvani P (as student mentors)
35	Dr Dhanush Krishna B	Cleared the certification examination of the Indian Board of Toxicologic Pathologists (IBTP)-2022 and became IBTP diplomate held at Coraltree Hotel, Bangalore – 560 032 on July 17, 2022
36	Dr Dhanush Krishna B	Received ICVP (Indian College of Veterinary Pathologists) diplomate Award at 39th IAVP International Conference on 17 - 20th November, 2022
37	Dr Dhanush Krishna B	IAVP-Dr Ram Raksha-Kiran Shukla Best MVSc Thesis Award Thesis Title: Evaluation of omentum based extracellular matrix scaffolds for soft tissue repair Name of Student: Dr K.G. Megha (as Major Advisor) on 17 - 20th November, 2022
38	Dr. K. Raji	Reviewer excellence award-Indian Journal of Animal Research- Article Title: -The effect of vitamin C on oxidative stress, nitric oxide, and viability of broiler finisher blood cells subjected to high ambient temperature
39	Dr. Pratheesh M D	Reviewed for Frontiers in Veterinary Science Article title: Regenerative medicine in lung diseases: A systematic review
40	Dr. Pratheesh M D	Reviewed for Frontiers in Veterinary Science Article title: Immunomodulatory-associated gene transcripts of in vitro bovine fluid amniotic mesenchymal stem cells
41	Dr Aswathi P B	Young Scientist award 2022 from Indian Poultry Science Association
42	Dr. Janus. A	Second prize in oral presentation in the session farm animal health at the 14th Kerala Veterinary Science Congress, organized by IVA, Kerala during 12 th and 13th November 2022
43	Dr. Janus A	Second prize in oral presentation at 39th Annual convention of Indian Society for Veterinary Medicine at College of Veterinary & Animal Sciences, G.B Pant University of Agriculture & Technology, Pant Nagar from 22-24 February 2023.

4. **Prospering university life: Vibrant campus experiences** (Sports, games, co-curricular activities, union, travel, performing arts and aesthetic developments)

SPORTS AND GAMES

A well implemented, comprehensive sports and games programme is an essential component for the development of health, fitness and wellness.Presently, the College of Veterinary and Animal Sciences, Pookode has the following facilities for games/events. Athletic Track (200 mts), Basketball Concrete Court, Cricket & Football Field, Volleyball Court (2), Cricket Nets, Badminton Court (outdoor), Table Tennis Board - 5 Nos.

Farewell Ceremony of Dr. Koshy John - The teaching and non-teaching staff of CVAS, Pookode organized a farewell ceremony for Dr. Koshy John, Professor and Head, Department of Veterinary Microbiology on 8th March 2023 at 2.00 pm at Kabani auditorium.

Photos taken on the retirement of Dr. Koshy John, Professor and Head, Department of Veterinary Microbiology, and former Dean, College of Veterinary and Animal Sciences, Pookode on 10 March 2023

Lady Vet Day Programme-College of Veterinary and Animal Sciences Pookode and IVA Pookode unit jointly celebrated Lady Vet Day at 7th March 2023 at Kabani Auditorium.

Lady Vets Day 2023-Cultural Programmes by Students and Teachers

- **World Spay Day 2023**-College of Veterinary and Animal Sciences Pookode and IVA Pookode unit jointly conducted World spay day on 28th March 2023 at TVCC Pookode. Free Spaying Camp was arranged at TVCC Pookode.

Dr Sooryadas S, Associate Professor, Veterinary surgery and Radiology, handling a session on spaying

Free Spaying Camp

Session by Dr. M.K. Narayanan, Dean, CVAS Pookode on the topic Canjne Spaying: An ethical approach for wellbeing.

Panel Discussion on the topic Canine reproductive disorders and management.

- **Football match organized-**A football match of faculty in association with the Retirement of Dr Koshy John, Former Dean, CVAS, Pookode was conducted on 09th March 2023 at 5.00 pm. Four teams participated in the match. The team Brazil led by Dr Kozhy John won the match. Dr M K Narayanan, Dean, CVAS, Pookode distributed trophies to winning teams.

5. Exploring Library trends (details from college administration)

CVAS POOKODE LIBRARY 2022-23

The primary mission of the library is to support the educational and research programs of the Kerala Veterinary and Animal Sciences University by providing physical and intellectual access to information, consistent with the present and the anticipated educational and research functions of the institute. We serve as a resource center for the scholars and scientific community of the arena of Veterinary and Animal Husbandry . This library offers Web-oriented services, Remote login services, Online and Offline content searches, Reference and Referral Services, Circulation Service including Inter Library Loan and Document Delivery Service, CAS & SDI display of recent additions of periodicals and books, Literature search, Internet Browsing, Consultancy Service , User guidance & education etc.

Library timings : All workingdays : 9 AM - 7 PM; Holidays (Sundays & Second Saturdays) : 9 AM -3 PM

Circulation (Issue/Return) : 9 AM - 6 PM

Login to Library web portal through the link: https://covas-opac.l2c2.co.in/

or by browsing the QR Code

SCAN TO OPEN ON SMARTPHONE

Services and Facilities

- The CoVAS ,Pookode Library has implemented the International Library Management System ***KOHA*** on cloud with following web-based facilities:
  - 24 x7 Web based online public access catalogue (WEB-OPAC)
  - Online renewal of Library documents
  - Current Awareness Service (CAS)/ SDI (Selective Dissemination of Information)
  - New Arrival alert services
  - Document Delivery Request System (DDR)

- Implemented the RFID based services and security surveillance system with the CCTV monitoring.
- The Library has been proving full text access to 2922 national/international-journals and 1140 e-books through the CeRA (Consortium for e-Resources in Agriculture), the ICAR Consortium.
- The library has DELNET Membership. DELNET-Developing Library Network is a major resource sharing library Network in India connecting more than 8100 institutions in 28 states and 6 union territories in India and few other countries comprising of Universities, Colleges, R&D organisations, medical hospitals, etc. It helps the members to access the Discovery Portal, Knowledge Gainer Portal and Vision Portal (Video Lectures). The single window discovery layer which encourages the users to explore the networked library/knowledge resources offered through DELNET in a feature-rich environment.
- Member in KALNET (Kerala Academic Library Network), which is a shared platform for academic resources of libraries, has come into being in the State. Developed by the Kerala State Higher Education Council (KSHEC). The platform brings together 15 lakh titles of 11 universities and 147 libraries and offers a single, unified catalogue to search for items across the collections of different academic libraries in Kerala. In addition to books, other library resources such as journals/periodicals, PhD theses, postgraduate dissertations, Daisy Digital talking books (audio books) and various reports are also indexed.
- Library offers regular orientation programmes to the newly joined members
- Resource sharing and document delivery facilities established with the Kerala Agricultural University (KAU) and the Kerala University of Fisheries and Oceanography (KUFOS) .
- The responsibility of plagiarism checking as a part of instituting academic honesty has been done by the Librarian by using the UGC recommended Plagiarism checking software “Original (Urkund)”.
- The Kerala State Higher Education Council (KSHEC) extended the consortium based support to the KVASU Library through the “KNIMBUS” platform where the members of this library can access the “Scopus database” and Elsevier Journals remotely anytime anywhere.

Total Thesis/dissertation etc. uploaded to Krishi-kosh as on 30/03/2023	893 nos.
Availability of Wi-Fi	Entire library premises
Internet facility	Provided through 35 workstations
Digital Library and Language Lab facility Language **Lab RazPlus**	
e-journals other than CeRA	24
e-books other than CeRA	467
Books	13274
Print journals	9
News papers	6
Registered members as on 31/03/2023	1025
Daily visitors	100-150

Staff Position in the Library

Name of Post	Sanctioned	Name	Filled	Vacant
Assistant Librarian& Head	01	Dr.Mohanlal E K	01	0
Reference Officer	01	Smt.Nisa Y M	01	0
Reference Assistant	02	1.Dhanya 2.Emina	(Temporary)	01 01
Office Attendant	04		04	0

1. **Infrastructure created**
2. **Scholarships**

Sl. No.	Name of the Scholarships	Course	Number of students receiving scholarships
1	E-grantz	BVSc, DDS, MVSC, BSc PP&BM, PhD	309
2	National Scholarships -(MCM)	BVSc	39
3	National Scholarships -Post matric scholarships for students with disabilities	BVSc	1
4	National Scholarships- Prime Ministers scholarships scheme for central armed police forces & assam rifles	BVSc	1

5	Competency Stipend (Internship allowance)	BVSc	210
6	Merit Scholarships (KVASU)	BVSc	6
7	Merit Cum Means scholarships (KVASU)	BVSc	2
8	Assistantship	MS Wild Life	3
9	South India Study Tour allowance	BVSc	82
10	All India Study Tour allowance	BVSc	79
11	Senior Research Fellowship (SRF)	PhD	8
12	Junior Research Fellowship (JRF)	MVSc	67
13	Residency Fellowship	MVSc	7
14	Research Grant	PhD, MVSc	39
15	ICAR NTS	BVSc, MVSc	34
16	ICAR JRF	MVSc	2
17	ICAR MCM	BVSc	32
18	ICAR Veterinary Internship	BVSc	87

3. **Hostel and housing**

MH

Hostel	**Strength**
Main Hostel	108 (42rooms)
Game villas (Total 3- 1 isolation)	16
PG hostel above Clinics (2 room)	10
Old Vythiri	4 (pg)
Quarters (new)	14 (3PhD & 11PG)
Kalpetta	36 (28 Iyears + 8 BSc PPBM))

LH

Hostel	**Strength**
Main Hostel	200 (Capacity 170)
Annex	76 (Capacity 80)
Thushara	63 (Capacity 110)

Men's Hostel

Ladies Hostel

4. **Outreach programme**

5. **Sports, Physical education and co-curricular activities Photos, brief description, union activities**

Activities of the Department of Physical Education

- **Physical Fitness Training:** Physical Fitness Training for I year, II year and III year B.V.Sc students at 4.30 pm to 6.00 pm. This will help the students to improve their physical fitness components, motor abilities and to maintain good health.
- **Specific Training Programme:** The Specific training programme for selected students in various disciplines like Athletics, Football, Volleyball, Shuttle Badminton, Cricket, Chess and Table Tennis. The training is giving scientific and systematic manner for preparation of sportsperson for the highest level of sports performance.
- **Interclass Competitions:** Every year inter class competitions was conducted in various events. The events conducted for men Football, Volleyball, Shuttle Badminton, Cricket, Chess, Table Tennis and Athletics. The events conducted for women Volleyball, Shuttle Badminton, Chess, Table Tennis and Athletics.
- **Intercollegiate Competitions:** Every year Inter Collegiate competitions was conducted in the following events. Football (M), Cricket (M), Volleyball (M&W), Shuttle Badminton (M&W), Chess (M&W), Table Tennis (M&W) and Athletics (M&W). Our college secured KVASU overall championship in athletics consecutively for four years 2016-17, 2017-18, 2018-19 and 2019-20. Secured runner up in the years 2015-16 and 2022-23. Every year many of our college students secured positions in All India Inter Agricultural Universities sports and games meet.
- **Health club:** College of Veterinary and Animal Sciences Fitness Centre is functioning in the ground floor of kabani auditorium. This facility is open to all staff and students. Expert's consultation was available to guide the men and women.

  The fitness centre focuses its attention on maintaining and developing physical fitness, weight reduction and body building. Fitness Centre has wide range of fitness machine, most of them were

motorized. Modern weight training like 12 station multi gym are available for exercising various parts of the body. Other equipments like Tread Mill, Bicycle Ergometer, elliptical cross trainer, free weights etc., are also available to develop the overall fitness. The centre is functioning on all working days. The working hours are 6.30 am to 8.30 am in the morning and 4.00 pm to 7.00 pm in the evening.

- **Yoga:** Yoga training programme is conducted by our faculty members to the students and the staffs. The training is coordinated by the Department of Physical Education.

Achivements in the year 2022-2023

Wayanad District Athletic Meet 2023: CVAS, Pookode secured the following positions in Men Section at Wayanad District Athletic Meet 2023.

Triple Jump	- First Position
Long Jump	- Second Position
High Jump	- Second Position
Javelin	- Third Position
Shot put	- Third Position

Wayanad District Table Tennis Tournament:

- **Men Category**:Kevin Thomas (2021 Batch) - Runner up and selected to participate in state level tournament
- **Women Category:** S. Devika (2021 Batch) - Winner and selected to participate in state level tournament
- Neeraja (2020 Batch) and Niveditha (2021 Batch) selected to participate in state level tournament
- **KVASU Inter Collegiate Games 2022 – 2023:** CVAS, Pookode secured the following positions in the KVASU Inter collegiate games.

Table Tennis (M)	- Winners
Chess (W)	- Runner up
Table Tennis (W)	- Runner up

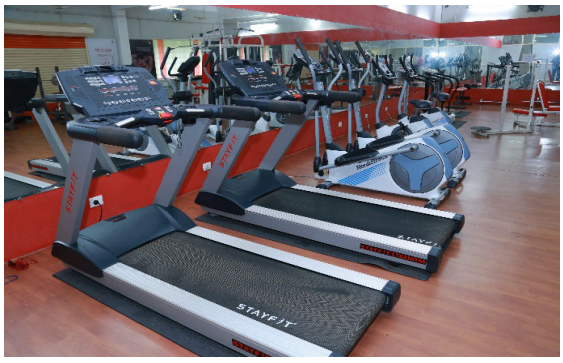
KVASU Inter Collegiate Athletic Meet 2022 – 2023: CVAS, Pookode secured the runner up position in the KVASU Inter collegiate athletic meet 22-23

All India Inter Agri Sports and Games 2022 – 2023: 8 boys and 2 girls from CVAS, Pookode participated in All India Inter Agri Sports and Games meet, held at CCS Haryana Agriculture University, Hisar between 20.02.2023 and 24.02.2023.

South Zone Inter University Volleyball (W) Tournament 2022-2023: 2 girls from CVAS, Pookode (Famida Sherin 2018 Batch and Vaishali Negi 2018 Batch) represented for KVASU team to participate in

South Zone Inter University Volleyball (W) Tournament 2022-2023 held at M. G. University, Kottayam.

South Zone Inter University Football (M) Tournament 2022-2023: One boy from CVAS, Pookode (Vivek A. M., B. Sc, PPBM) represented for KVASU team to participate in South Zone Inter University Football (M) Tournament 2022-2023 held at University of Calicut.



6. **NSS/NCC**

- The blood donation camp was organized on 4th May 2022 by College of Veterinary and animal

sciences, Pookode NSS unit in collaboration with Ospease charity society, Old vythiri and Indian red cross society, vythiri. The camp held at St. Claret Public School. The Students of CVAS, Pokkoode actively participated and donated blood. There were 40 Plus donors. Blood donation camp started at 9.00 AM and was closed at 2.00 PM. The donors were taken a good care and provided with refreshments.

- 3rd C.G Kiran memorial lecture 'A symposium on Odonate 'was organized on 21st and 22nd of May 2022 by College of veterinary and animal sciences, Pookode NSS unit with the help of Society for odonate studies, Forest department of Kerala, Kerala veterinary and animal sciences university, Thumbi puranam, Ratufa nature club.
- Wall painting programme in Sugandagiri GUP School was held on 28th and 29th of May 2022 by College of Veterinary and animal sciences, Pookode NSS Unit in collaboration with PTA of Sugandagiri GUP School.
- A total of 19 NSS volunteers participated in assisting in digitization of important documents of Tribals in Vythiri Village. Details like SSLC, Ration Cards etc were uploaded to personalized digilocker created for the individual household. This was in association with State IT Mission
- NSS unit of CVAS, Pookode, in association with Centre for Wildlife Sciences, Pookode and Ratufa Nature Club, CVAS, Pooode organised a three-day photography Exhibition form June 6 to 8, 2022 at Chandragiri Auditorium.
- July 6th World Zoonosis Day. Vaccination camp organised by CVAS POOKODE at Chanthanchira Colony, Manikau. Volunteers vaccinated 46 dogs owned by tribal families against rabies
- Cleaned 3 anganwadis and three schools at Sugandhagiri in association with Tribal Extension Office, Vythiri
- NSS Volunteers visited the goat farmers of Pozhuthana village, Padinjaretharra to study the rotine activities, problems faced and challenges by the farmers.
- August 21, 2022- Completed the Anganwadi Face lift at Chembetty Colony, Adopted Village.
- September 3, 2022- "Shramadaan" to clear the undergrowth of trees in Wayanad Wildlife Sanctuary where the vultures breed.
- October 6, 2022- Volunteers visited KFRI Peechi to study about the modalites of establishing a butterfly garden in Pookode Campus. The team visited KFRI butterfly garden, and attended sessions handled by Dr. TV Sajeev, Registrar, KFRI and Ms. Sebi, Project Assistant
- October 11- Quiz competition was organised as a part of anti-substance absue campaign of Govt. of Kerala. 26 volunteers participated. Akhila R emerged victorious and partkciated in district level competition.
- October 13- One day workshop on Ecotheatre for climate change was organised in campus. NSS Volunteers from 5 colleges of Wayanad participated. The volunteers were instilled with idea of using theatrescapte to spread the message of eco-conservation.

- October 15- Services of NSS Volunteers were requested by the college administration to attend three emergency cases of cows that were attacked by a tiger at Cheeraal, Wayanad. The volunteers were led by Dr. Dinesh PT (assoc prof, dept. Of surgery) and Dr. Rathish R L (asst. Prof. Dept of Veterinary Epidemiology and Preventive Medicine).

- October 22- Volunteers of NSS Unit, CVAS, Pookode NSS collected and remitted Rs. 10,300 as a part of We Care Programme.

- October 29- Volunteers helped in cleaning a house that was devastated by landslide and floods at Tribal Colony, Sugandhagiri. The programme was carried out with aide of the Tribal Extension Office, Vythiri

- Feb 09, 2023 - As a part of mass cleaning of road sides of Vythiri Grmam Panchayath, All youth organizations were requested to help. NSS Unit responded by clearing plastic waste along National Highway from gate of Veterinary University to Upavan Resort.

- Feb 11, 2023 NSS unit in collaboration with Hume Centre for Ecology and Wildlife Biology organized a Children‟s Science Congress to facilitate the school students who participated in state level and national level science congress.

- Kantharam, the seven-day special camp of NSS unit of CVAS, Pookode was envisaged with the following objectives

    1. To give a filed level exposure to young veterinary graduates on the concept of human- wildlife interface zones

    2. how society perceives human- wildlife conflicts and relevance of conserving biodiversity

    3. Impress on the NSS volunteers the concept of One Health and the role of Veterinarians in the society.

- The special camp was decided to conduct from 20/02/2023 to 27/02/2023 at Noolpuzha Grama Panchayath, Wayanad. Arrangements were made by volunteers under the guidance of programme officer Dr. Rathish R L.

Awards in curricular, extra- curricular activities/co- curricular

- Dr. Anju K. Daniel had won Sushila Pathak memorial award by National Academy of Veterinary Nutrition and Animal Welfare for the best MVSc. thesis under the guidance of Dr Vinu David.
- Dr. Anju K. Daniel had won best thesis award from Indian Society of Agricultural Science & Technology for rural employment, Raichur under the guidance of Dr. Vinu David.
- Dr. Anju K. Daniel was awarded third prize for oral presentation in an international e-symposium on "Current practices in companion animal nephrology" and virtual workshop on "Renal interventional procedures" organized by Madras Veterinary College, Chennai from 21-22 April 2022.
- Dr. Anju K. Daniel was awarded first prize for oral presentation at First Indian Congress for Veterinary Dermatology International Conference on "Advancing Veterinary Dermatology practice, education & research in developing countries" at Madras Veterinary College, Chennai from 9th to 11th June 2022
- . Anju K. Daniel was awarded first prize for a case conference presentation at Second Indian Congress for Veterinary Dermatology International conference on "Advances in Veterinary Dermatology and emerging skin health challenges of animals" at Holiday Inn Hotel, Kochi from 19 to 21 May 2023.
- Dr. Sindhu O. K. was awarded third prize for case conference presentation at Second Indian Congress for Veterinary Dermatology International conference on "Advances in Veterinary Dermatology and emerging skin health challenges of animals" at Holiday Inn Hotel, Kochi from 19 to 21 May 2023.
- Dr. Anju K. Daniel was awarded first prize for the clinical case presentation competition at the inaugural convention of Indian Society for Veterinary medicine, Kerala Chapter held at COVAS, Mannuthy from 26-27 March 2023.
- Dr.Thasleena M. was awarded first prize for the poster presentation (Infectious diseases of ruminants section) at 39th Annual convention of Indian Society for Veterinary Medicine at College of Veterinary & Animal Sciences, G.B Pant University of Agriculture & Technology, Pant Nagar from 22-24 February 2023.
- Dr. Veni V. was awarded third prize for the clinical case presentation competition for the companion animal medicine-infectious section at the inaugural convention of Indian Society for Veterinary medicine, Kerala Chapter held at COVAS, Mannuthy from 26-27 March 2023.
- Dr. Malavika J. was awarded first prize for the clinical case presentation competition for the companion

animal medicine-infectious section at the inaugural convention of Indian Society for Veterinary medicine, Kerala Chapter held at COVAS, Mannuthy from 26-27 March 2023.

- Dr. Veni V. was awarded third prize for oral presentation at First Indian Congress for Veterinary Dermatology International Conference on "Advancing Veterinary Dermatology practice, education & research in developing countries" at MadrasVeterinary College, Chennai from 9th to 11th June 2022.
- Dr. Mary Grace M. was awarded third prize for oral presentation at the "Integro"-Kerala Veterinary University students science congress organized by university
- Dr. Nidhin B. won the best-case report award by JIVA for the year 2022.
- Dr. Nidhin B. was awarded second prize for the oral presentation (Non-Infectious diseases of small animals' section) at 39th Annual convention of Indian Society for Veterinary Medicine at College of Veterinary & Animal Sciences, G.B Pant University of Agriculture & Technology, Pant Nagar from 22-24 February 2023.
- Dr. Nidhin B. was awarded first prize for the clinical case presentation competition (farm animal infectious section) organized by TANUVAS at Madras Veterinary College, Chennai from 10-11 August 2022.
- Dr. Namratha Valsalan won second place in poster presentation- in the National Seminar on importance of meat processing and technologies for value addition of meat. Organised by Meat Products of India (Ltd.), Eroor, Kollam. 3rd December 2022.
- Dr.Alimudeen S, MVSc. Scholar from Department of Veterinary and Animal Husbandry Extension, CVAS, Pookode presented with Best Student Award of Agricultural Scientific Tamil Society, New Delhi during Eighth National Conference on Agricultural Scientific Tamil. Organised by Tamil Nadu Dr. J. Jayalalitha Fisheries University, Nagapattinam on 25 & 26, February, 2023. The national level award was presented for the year 2022.
- Dr.Alimudeen S, MVSc Scholar from Department of Veterinary and Animal Husbandry Extension-First place in e-poster- International Veterinary Students' Association, Pookode and Centre for One Health Education, Advocacy, Research and Training, KVASU.
- Dr.Alimudeen S, MVSc Scholar from Department of Veterinary and Animal Husbandry Extension-Best Oral Presentation Award-Veterinary College andResearch Institute, Tirunelveli, TANUVAS and Society of Veterinary Science &Biotechnology, Indore.
- Alimudeen S, MVSc Scholar from Department of Veterinary and Animal Husbandry Extension-Best Research Scholar Award- Agricultural & Environmental Technology Development Society, Uttarakhand.
- Dr.Alimudeen S, MVSc Scholar from Department of Veterinary and Animal Husbandry Extension-Best Supporting Editor- AgriGate – An International Multidisciplinary Monthly e-Magazine.
- Dr.Alimudeen S, MVSc Scholar from Department of Veterinary and Animal Husbandry Extension-Third place in poster presentation- Department of Veterinary Preventive Medicine, Madras Veterinary College, TANUVAS.

6. Students Union/Hostel/sports day celebrations

Students' union 2022-23 (Adwaya) has conducted the following programmes

- Interclass volleyball, football matches
- Environmental day celebrations
- Valentine's day celebrations
- Librations
- Music night
- Live telecasting football world cup inaugural match
- Fresher's day, Coat ceremony, fresher's sports meet
- Sargotsavam
- Halloween day celebrations
- Onam, Holi celebrations, gender neutral mega thiruvathira
- Career guidance class
- World zoonosis day celebrations
- Sent off to Dr. Koshy John, Dean

7. Students' counseling and placement services

- Conducts routine counseling sessions by Counselling Psychologist twice a month
- Runs a platform to inform the students on various job opportunities in Govt. and private sector

- A training programme titled "Training for researchers" by Mr. Tojo G Tharayil, Head, Nexgene research lab and Director, Chromozon, Ernakulam was arranged for first year MVSc and PhD students of the college on 22-03-23 from 9.00 am to 2.00 pm. This was to impart information regarding various products and techniques in molecular biology labs for the students entering into research.
- Assisted in conducting an awareness lecture by District Social Justice office, Wayanad on the welfare of transgenders for the students of CVAS, Pookode on 22-03-23 from 2-4 pm.

8. Corporate relations

- An international collaborative project on Human Wildlife Conflict Mitigation in India entitled "Developing Situation Analysis to understand impact of zoonotic diseases and Ecosystem Health Curriculum Development" funded by Deutsche GesellschaftfürInternationaleZusammenarbeit (GiZ) is being implemented under the supervision of Dr. Prejit, Assistant Professor Department of Veterinary Public Health, College of Veterinary and Animal Sciences, Pookode, KVASU
- Dr. Prejit, Assistant Professor Department of Veterinary Public Health, College of Veterinary and Animal Sciences, Pookode, KVASU was selected as WHO Technical Officer, One Health and Zoonoses

9. Students' intake details

Details of Student-2022 Admission			
2022 Admission	**State**	**VCI**	**Lakshadweep**
BVSc& AH	86	13	1
MVSc	37	9	
PhD	4	0	
Diploma	23		

DEPARTMENT PROFILES

DETAILING DEPARTMENTS

(Details of Departments under each station)

1. Exploring Research Frontiers- Past Achievements and CurrentVentures

Sl No.	Project Title	Funding agency	Investigators	Financial Outlay (in lakhs)
1	Lion-tailed Macaque (Macaca silenus): Feeding ecology and management of an endangered species in captivity	Dept. of Science & Technology (DST) - Woman Scientist Scheme-A	MONISHA. V (PI) S. Senthil Murugan (Mentor)	19.72 lakhs
2	Evaluation of dietary supplementation of exogenous fibrolytic enzymes on in vitro nutrient digestibility for ruminants	Dr.S. Senthil Murugan	M/s. Kemin Industries, Chennai	6.96 lakhs
3	Exploiting encapsulated nanoparticle conjugated phytochemicals to combat antimicrobial resistance in poultry	NASF, ICAR	Dr. Jess Vergis Dr.Sanis Juliet Dr. Lijo John	41.227
4	Development of an eco-friendly smart organogel based drug delivery system for administration of antibiotics in aquaculture and evaluation of its efficacy as targeted drug delivery system in fishes	KCSTE	Dr.Suresh N Nair Dr. Sanis Juliet	30.00
5	“An Open Label Randomized Multicentric Study to Assess Safety and Immunogenicity of Indian Immunologicals Limited Manufactured Infectious Bovine Rhinotracheitis Recombinant Vaccine (Inactivated) in Cattle.”	Indian Immunologicals Ltd	Dr.Deepa PM(PI) Dr. Bipin.K.C(CoPI)	30,44,600/-

6	Establishment of state-of-the-art laboratories for diagnosis, research, teaching and demonstration facilities in the field of tick and tick-borne diseases for the mitigation of economic losses to the livestock farmers" (KE/RKVY-ANHB/2019/1422)	RKVY-RAFTAAR	1. PI: Dr. Ajith Kumar K.G Co-PI: 1.Dr. Reghu Ravindran 2. Dr Deepa C.K 3. Dr. Anju Varghese	224
7	Exploiting encapsulated nanoparticle conjugated phytochemicals to combat antimicrobial resistance in poultry	ICAR- NASF	Dr. Jess Vergis	41.22476

2. Noteworthy attainments in Science and Technology (in 2-3 bulletpoints)

3. Academic Manuscripts, Investigative Pursuits, Widely-read articles,Literary Volumes and Technical Documents, Details of Research papers published.

Sl No	Article	Authors	Details of publication
ANIMAL GENETICS & BREEDING			
1	Screening of InDel variants in PRDM6, myostatin and IGF2BP1 genes and association analysis with body measurement traits in Malabari and Attappadi black goats	Soubramaniane Manjutha, Muhammed E.M., Bindya Liz Abraham, Muhasin Asaf, Senthil Murugan, S. and Radhika G. (2023)	Animal Biotechnology March, 2023
2	Immunohistochemical localization of Glutamate Ammonia Ligase (GLUL) in cerebrum in different clinical forms of canine rabies	Nikithasree P., Divya C., Arya Nair M. L., Krithiga K., K. S. Prasanna, Lali F. A. John Bernet Johnson	Journal of Veterinary and Animal Sciences January, 2023 (Accepted for publication)
3	Comparison of lipid profiles in the faeces of beef cattle fed three common temperate grass silage diets and their relevance to dietary composition.	Muhammed Elayadeth-Meethal, M. Jordana Rivero, Andrew Mead, Michael R.F. Lee and Thomas. H. Misselbrook.	2023.Journal of Animal and Feed Sciences (Accepted for publication).
4	Performance and enteric methane emissions from housed beef cattle fed silage produced on pastures with different forage profiles.	Meo-Filho, P., Hood, J., Lee, M.R.F., Fleming, H., Meethal, M.E. and Misselbrook, T.	2023. Animal, p.100726.

5	The profile of HSPA1A gene expression and its association with heat tolerance in crossbred cattle and the tropically adapted dwarf Vechur and Kasaragod.	Elayadeth-Meethal, M., Tiambo, C.K., Naseef, P.P., Kuruniyan, M.S. and Maloney, S.K.,	Journal of Thermal Biology, 111, 2023.p.103426.
VETERINARY ANATOMY & HISTOLOGY			
5	Gross and morphometrical characteristics of thyroid gland of large white yorkshire pigs (sus scrofa domesticus) of wayanad district in kerala.	Simanta P., Rajani C.V., Indu V. R., Leena C. and Lijo J.	J. Indian Vet. Assoc. 19(3): 48-53.
6	Preparation of dry inflated models of equine stomach, intestine and taxidermy of equine head	S.Patgiri, C.V. Rajani, H.S. Patki, K.P. Surjith, N.K. Raghu and V.R. Indu	Indian Journal of Veterinary Anatomy 34(1): 55-57, June 2022
7	Morphology of stomach of Indian spotted Chevrotain (Moschiola indica)	C. V. Rajani, K. P. Surjith, H. S. Patki, Simanta, P., Raghu, N.K., Indu V Raj, M. Pradeep, and S. Maya.	Indian Journal of Veterinary Anatomy 34(1): 91-94, December 2022.
8	Morphology and topography of the pan creatic ducts during posthatch development in Kuttanad duck (Anas platyrhynchos domesticus).	Patki, H.S., Ashok, N., Lucy, K.M. and Gleeja, V.L.	Indian J. Vet. Anat. 34(1): 15-20. 2022.
VETERINARY BIOCHEMISTRY			
9	Analysis of Differential Expression of microRNA, bta-miR-451 in Lipopolysaccharide Challenged Peripheral Blood Mononuclear Cells of Crossbred and Vechur Cattle	P.D. Divya, M. Shynu, K.K. Jayavardhanan, R. Uma, T.V. Aravindhakshan, G. Radhika and M.V. Chinnu	Journal of Animal Research: v.13 n.01, p. 13-19. February 2023
10	In-silico analysis of target genes of bta-miR-200a: A differentially expressed microRNA in lipopolysaccharide challenged peripheral blood mononuclear cells of crossbred and Vechur cattle	P.D. Divya, M. Shynu, K.K. Jayavardhanan, R. Uma, T.V. Aravindhakshan and G. Radhika	The Pharma Innovation Journal 2023; 12(1): 3066-3069
11	Production of polyclonal viperin antisera using N-terminal deleted recombinant bovine viperin.	Sravanthi, M., Sebastian, R., Krishnaswamy, N., Mahadappa, P., Dechamma, H.J., Umapathi, V. and Sanyal, A.	Animal Biotechnology, 2022; 12: 1-8.

12	Evaluation of etiology, risk factors and clinical signs of feline lower urinary tract disease(FLUTD) in Northern Kerala.	Nithin,B., Sindhu,O.K., Habeeb,B.P., Umesh,C.G., Madhavan Unny,N. and Sebastian R	J. Vet. Anim. Sci. 2023; 54(1):269-274
13	Electrocardiographic changes associated with hyperkalaemia in domestic cats.	Bakshi,S.P., Ajithkumar,S., Sindhu,O.K., Madhavan Unny,N., Sebastian,R.	J. Vet. Anim. Sci. 2023; 54(1):115-124
	VETERINARY CLINICAL MEDICINE, ETHICS & JURISPRUDENCE		
14	Therapeutic Management of perosis in a White Silkie – a Case report.	Vinu David P, Yamuna N. P. K, Hansa C. H. and Sindhu O.K.	JIVA 20(2):89-92.
15	Congenital sub-crystal ventricular septal defect in a pup.	Sindhu O.K., Himjyoti H., Vinu David P., Anoopraj R. and Ajithkumar S.	JIVA 20(2):76-80.
16	Epidemiological Aspects and Clinico-Therapeutic Studies in Goats with MuscleWeakness.	Krishnanand M., Vinu David P., Sindhu O.K., Sanis Juliet and Ajithkumar S.	IJIRSET11(4): 3665-3668.
17	Blood transfusion therapy in a case of bovine babesiosis.	Ranilakshmi Bai, K.C., Biju P. Habeeb, Hamsa Palakkoden, N. Madhavanunny and Ajithkumar S.	The Pharma Innovation Journal. 11(4):191-194.
18	Molecular characterization of malassezia pachydermatis isolates obtained from cases of dermatitis and otitis externa in dogs.	Daniel, A.K., David, P.V., Ravishankar, C. and Sumith, K.S.	Indian Journal of Animal Health.61(1):55-59.
19	Evaluation of different therapeutic protocols for canine malasseziosis.	Daniel, A.K., David, P.V., Ravishankar, C. and Sumith, K.S	Indian Journal of Animal Health.61(1):71-77.
20	Molecular detection and control of non-regenarative anaemia associated with Babesia gibsoni and Anaplasma platys co-infection in a dog.	Arun George,Usha Narayana Pillai, S. Ajithkumar, T.V.Aravindakshan, K.K. Jayavardhanan, N. Madhavanunny and Bindu Lakshmanan	J.Vet.Anim.Sci.53:79-84.

21	Diagnosis of Cardiovascular Renal Axis Disorder Subtype Hin Non-azotemic dogs .	Rupalee S. Ghag, Madhavan Unny N, Usha N. Pillai, Ajithkumar S, John Martin K. D and Shynu. M	Ind J Vet Sci and Biotech (2022): 10.21887/ ijvsbt.18.2.22
22	Evaluation of oxidative stress and efficacy of antioxidant therapy in dogs with haemorrhagic gastroenteritis.	Krishna Nath,M.R., Madhavan Unny,N., Sindhu,K.R., Usha,N.P. and Ramnath,V.	J. Vet. Anim. Sci. 54(1):86-90
23	Antioxidant effect of N-acetyl cysteine in dogs with chronic kidney disease	Balakrishnan,N., Madhavan Unny,N., Ambily,V.R., Usha,N.P and Uma,R.	J. Vet. Anim. Sci. 54(1):138-143
24	Extracorporeal Ultrafiltration Therapy in Dogs with Congestive Heart Failure	R.S. Ghag, M.N. Unny, N.P. Usha, S. Ajithkumar, K.D. John Martin and M. Shynu	Indian Vet. J. 97 (11) - pages 31 to 35
25	Diagnosis and therapeutic management of infectious kerato-conjunctivitis associated with Mycoplasma conjunctivae in goats	K. S. Sumith, C. G. Umesh, C. Ravishankar, M. K. Mathew, S. Ajithkumar and A. K. Daniel	Indian J Anim Health (2022), 61(1): 147- 150
26	Comparative evaluation of the therapeutic efficacy of rumen buffers and direct fed microbials (DFM) in sub-acute ruminal acidosis in dairy cows.	Unni, S.K., Umesh, C.G., Thomas, M., Sindhu, O.K. and Ajithkumar, S.	J. Vet. Anim. Sci. 53(4)
27	Evaluation of etiology, risk factors and clinical signs of feline lower urinary tract disease	Nithin,B., Sindhu,O.K., Habeeb,B.P., Umesh,C.G., Madhavan Unny,N. and Sebastian	J. Vet. Anim. Sci. 54(1):269-274
28	Evaluation of xylazine-midazolam-lignocaine-ketamine continuous rate infusion (cri) for maintenance in Xylazine-	Lalit Kenjale, Reji Varghese, Dinesh P .T, Sooryadas S. and Umesh C.G.	J. Indian Vet. Assoc. 20 (2) August 2022
29	Occurrence of allergic dermatitis in dogs with special reference to canine atopic dermatitis in Kerala	VR Ambily, NP Usha, S Ajithkumar, C Deepa, P Vinu David, TV Aravindakshan, S Maya, B Dhanush Krishna	J. Vet. Anim. Sci. 53(4): 767-771 December 2022

22	Serum NT-pro BNP estimation for diagnosisof cardiac diseases in dogs withand withoutholter electrocardiographic arrhythmias	Himjyoti, H., Sindhu, O.K., Ajithkumar, S., Vinu, D.P., Bipin, K.C., Lijo, J. and Bakshi, S.P.	J. Vet. Anim. Sci. 53(4): 592-595 2022
23	A prospective study on haemato-biochemical aspects of atopic dermatitis indogs	V.R. Ambily, N.P. Usha, S. Ajithkumar, C Deepa, P. Vinu David,, Maya S, T V. Aravindakshanand B. Dhanush Krishna	J. Vet. Anim. Sci. 53(4): 731-739 2022
ANIMAL NUTRITION			
24	Evaluation of the in vitro degradability of total mixed ration by synergistic supplementation of herbal extract-probiotic mixture in ruminants	Neenu Ouseph, Surej Joseph Bunglavan, Biju Chacko, S. Senthil Murugan, E. M. Muhammed, Arathi Salim, S. J. Sreeja, M. Sabarinath, A. Amrutha, C.T. Merin Sneha.	Jou rnal of Veterinary and Animal Sciences. 2022. 53(1): 105-111.
25	Effect of varied levels of dietary Chlorella vulgaris extract on blood biochemical profile and immune organ status in broilers	C.T Merin Sneha, Surej Joseph Bunglavan, Biju Chacko, S. Senthil Murugan and P.B. Aswathi.	2022. J. Vet. Anim. Sci. 53 (3): 435-440.
26	Calcium intake on Gramasree male bird's semen quality	E. Sabarinath, S. Murugan, B. Chacko, S. J. Bunglavan and K. Promod.	Indian J. Anim. Nutr. 2021. 38 (4): 436-442.
27	Effects of Replacing Palm Oil with Rapeseed Oil on Fatty Acid Concentration of Broiler Chicken	Sudharsan Chinnasamy, Senthil Murugan S. and Sanis Juliet.	Biological Forum – An International Journal (2022). 14(2): 457-460.
28	Effects of oil source on breast muscles of broiler chicken.	Sudharsan Chinnasamy, Senthil Murugan S, Solomon Rajkumar, Shelcy S Akkara, Ashitha K and Renuka Nayar.	The Pharma Innovation Journal 2022; SP-11(5): 20-21.
29	Evaluation of Energy and Methionine Level Requirements in Meat Type Duck Diet	Amritha A., Senthil Murugan S., Biju Chacko, Surej B., Abdul K Muneer and H.S Patki.	International Journal of Current Science. 2021. 11(4): 189-198.
30	Environmental Enrichment to Abate Aggressive Biting Episodes in Weaned Piglets	Shehnaz Rahman., N. Geetha., Balusami C.., Sabin George and Senthil Murugan S.	International Journal of Current Science. 2022. 12(1): 560-564.

31	Effect of different methionine levels on growth performance, carcass parameters and intestinal histo-morphology of meat type ducks	Amritha A., Senthil Murugan S., Biju Chacko, Surej B., Abdul Muneer K and H.S Patki.	Indian Journal of Poultry Science (2021) 56(3): 243−247.
32	Effect of Dietary Supplementation of Rumen Protected Rapeseed Oil on Milk Omega-3 Fatty Acid Profile of Lactating Crossbred Cows	G. Subrahmanyeswar, S. Senthil Murugan, Sanies Juliet, C. Sudharsan and Biju Chacko.	Ind. J. Vet. and Anim. Sci. Res. 2021. 50(4): 36-46.
33	Effect of Egg Shell Supplementation on Gramasree Male Birds.”.	Sabarinath E., Senthil Murugan S., Promod K.., Biju Chacko and Surej Joseph Bunglavan.	International Journal of Current Science. 2021.11(4): 206-215
34	Effect of Dietary Incorporation of Saraswatha Gritham Residue on Haemato-Biochemical Parameters of Malabari Kids	G. Seshidhar, Biju Chacko, Senthil Murugan, Deepa Ananth, Balusami C., Sunanda C., Ajay. P. Kuriakose and Ambili K.	Ind. J. Pure App. Biosci. (2022) 10(6): 45-52.
35	Effect of Dietary Incorporation of Ayurvedic Pharmaceutical Tiktaka Gritham Residue on Haemato-Biochemical Parameters of Malabari Kids	Febina C., Biju Chacko, Senthil Murugan., Surej Joseph Bunglavan, John Abraham and Sunanda C.	Ind. J. Pure App. Biosci. (2022) 10(4): 14-20.
36	Nutritional composition of wild fruits and flowers eaten by lion tailed macaque (Macaca silenus) at silent Valley National Park, Kerala, India	Monisha V., Murugan S., George S., Chinnappan B., Abraham J., Chacko B.	Indian Journal of Animal Nutrition.2022. 39(2): 200-204.
37	Effect of supplementation of biotin in total mixed ration of dairy cows on rumen fermentation characteristics by in vitro gasproduction technique	Jasmine Rani K., Dildeep V., Ally K., Syam Mohan, K.M. Aravindakshan T.V. and Anil K.S.	J. Vet. Anim. Sci.2022. 53(2): 285-291.
38	In vitro assessment of nutrient digestibility and microbial biomass production of total mixed ration supplemented with different levels of thermostable yeast in crossbred dairy cows	Jasmine Rani K., Dildeep V., Ally K., Syam Mohan, K.M. Aravindakshan T.V. and Anil K.S.	JIVA. 2022. 20(1):23-32.
LIVESTOCK PRODUCTS TECHNOLOGY			

39	Microbial quality of retort processed traditional chicken curry	Vismitha Sree, V., Renuka Nayar, C.O. Mohan, Namratha Valsalan, Kavitha Rajagopal, V.N. Vasudevan and P.B. Aswathi	Journal of Veterinary and Animal Sciences 53(4): 757-759.
40	Retort processing of traditional chicken biriyani and its microbiological quality	Namratha Valsalan Renuka Nayar, C.O. Mohan, Vismitha Sree, V., Kavitha Rajagopal, T. Sathu and Magna Thomas	Journal of Veterinary and Animal Sciences 53(4): 748-750.
41	Influence of different mixtures of ingredients on the nutritional properties of a high protein extruded snack	Kavitha Rajagopal, Renuka Nayar, J. Bindu, Magna Thomas and Prejit	The Pharma Innovation Journal 12(2): 2462-2467
42	Effect of extrusion conditions on physical properties of an extruded snack incorporated with chicken meat, rice flour and jackfruit bulb and seed powders	Kavitha Rajagopal, Renuka Nayar, J. Bindu, Vasudevan V.N. and Sathu T.	The Pharma Innovation Journal 12(2): 2058-2062
43	Nutritive and sensory quality of buffalo meat dried by hot air and combination of hot air- microwave stored under different packaging systems.	Sivaranjani M., Renuka Nayar, Kavitha Rajagopal, Vasudevan V.N. and Bimal P. Bashir	Journal of Animal Research 13(1): 153-160.
44	Physico chemical and microbiological characteristics of buffalo meat dried by hot air	Sivaranjani M., Renuka Nayar, Kavitha Rajagopal, Vasudevan V.N. and Bimal P. Bashir	The Pharma Innovation Journal 11(12): 5462-5465.
VETERINARY AND ANIMAL HUSBANDRY EXTENSION EDUCATION			
45	Physio-chemical and microbiological characteristics of buffalo meat dried by hot air.	Sivaranjini, M., Nayar, R., Rajagopal, K., Vasudevan, V.N., and Bashir, B.P.	The Pharma Innovation journal, 11(12):5462-5465., 2022
46	Determinants of scientific knowledge gain on goat farming among schedule cast.	Bimal, P.B., Chethan., G.N., Alimudeen, S., Sabareeswaran, T.A.A., Induja, T.R., Babu,	J. Krishi Vigyan, 11(2):50-56., 2023
47	Nutritive and sensory quality of buffalo meat dried by hot air and combination of hot air – microvan stored under different packaging systems.	Sivaranjini, M., Nayar, R., Rajagopal, K., Vasudevan, V.N., and Bashir, B.P.	Journal of animal research. 13(1):153-160., 2023

48	Utilization Pattern of Social Media for Education Among Veterinary Science Post-Graduate Students	Bimal P Bashir, Alimudeen S, Arul Sabareeswaran T A and Induja T R	Journal of Krishi Vigyan, 11(1): 373-380
49	Constraints of Buffalo Farming in Kallakurichi District of Tamil Nadu, India	Annadurai Rajadurai, SirajudeenAlimudeen and Natarajan Kumaravelu	Bufalo Bulletin, 41(3): 481-485
50	A SWOT matrix Analysis of Livestock Development for Livelihood Support Programme Implemented in Wayanad District of Kerala	Chethan G.N., Senthilkumar Rand ReejaGeorge P	The Pharma Innovation Journal. 2022.; 11(12): 2791-2796.
VETERINARY PARASITOLOGY			
51	Research note on parasitic pathology of Ascaridia columbae infection in a Racing Homer (Columba livia domestica).	Dhanya, T., Pradeep, M., Prasanna, K.S., Ravindran, R., Elizabeth, V., Kumar, G.S., Anoopraj, R., Hamza, P., Ajith, J.G.,	Indian Veterinary Journal (2022): 99: 30 - 33
52	Effects of flumethrin on the germinative cells of engorged females of Rhipicephalus annulatus..	Sreelekha, K., Pious, A., Kartha, H.S., Nair, S.N., Ravindran, R., Juliet, S., and Ghosh, S.,	2022. Experimental Parasitology, 239, 108304
53	Molecular detection of pathogens in the ova and unfed larvae of Rhipicephalus annulatus and Haemaphysalis bispinosa ticks infesting domestic cattle of south India.	Hembram, P. K., Kumar, G. S., Kumar, K. G. A., Deepa C. K., Varghese, A., Bora C. A. F., Nandini, A., Malangmei, L., Kurbet, P. S., Dinesh, C. N., Juliet, S., Ghosh, S., Ravindran, R.,	2022Acta Tropica, 235: 106656.
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136	Fresh preserved canine amniotic membrane (CAM) as graft for surgical management of melting corneal ulcer/keratomalacia in a dog	Anju May John., N.S.Jineshkumar., S.Sooryadas., P.T.Dinesh., K.P.Surjith., V.Remya and S.Anoop	J. Vet and Anim.Sci. 54(1): 266-268

137	Burn inducing device with temperature control to generate experimental cutaneous burn wounds in animal models	Anjana satheesh., Abhijith Padukana., Reji Vargheese., Anandu radhakrishnan., P.T.Dinesh and George Chandy	J. Vet and Anim.Sci. 53(1): 18-21
138	Observations on tiletamine-zolazepam-butorphanol-dexmeditomidineanaesthesia in six dogs undergoing various surgeries	Sruthi Chandramohan., Sooryadas Surendran., Dinesh P., Jinesh Kumar N.S., V.remya., S.Anoop and Vinu David	J. Vet and Anim.Sci. 54(2): 336-342
139	Infrared Thermography as an adjunct tool for the diagnosis of fracture in a racing buffalo bull- A case report	Giggin T., Deny Jennes., Anoop Sainulabdeen and K.D.John Martin	J. Vet. Physio and Patho. 2(1): 1-4
140	Radiographic evaluation of hoof affections in dairy cattle	R.Anees., P.T.Dinesh., C.J.Nithin., S.Sooryadas., George Chandy and Vinu David	J.Vet.Anim.Sci. 53(2):158-162
141	Evaluation of xylazine-midazolam-lignocaine-ketamine continuous rate infusion (CRI) for maintenance in xylazine ~~butorphanol~~midazolam-ketamine (XBMK) anaesthetized dogs	Lalit Kenjale., Reji Vargheese., Dinesh P.T., Sooryadas.S and umeshC.G	J. Indian Vet. Asso. 20(2):51-59
142	Para-osseous clamp assistesd cerclage wiring for management of tibial fracture in a dog	Akhila T.R., Jineshkumar N.S., Dinesh P.T., Sooryadas S., Vargheese R and Surjith K.P	J. Indian Vet. Asso. 20(3): 108-111
VETERINARY PUBLIC HEALTH			
143	Anti-oxidant,Anti-bacterial and Anti biofilm potential of Green Synthesized Silver Zzinc Oxide Nano composites from Curcuma linga extract against MDR Enteroaggregrative E.coli	P.R.Arya, P,Abhishad V.K.Vinod, Jess Vergis and D.B.Rawool	Med sci forum (Peer reviewed Journal
144	Eco friendly one pot synthesis of zinc oxide nano particles using catkin extract of Piper longum:Invitro antibacterial,anti-oxidant and anti-biofilm potential against multi drug resistant enteroaggregative E.coli.	V.Unni,P.Abishad V.K.Vinod, and Jess Vergis	Med sci forum (Peer reviewed Journal

4. Technological Advancements Crafted and Transmuted

- Transfer of Technologies
- Disseminations of Innovations to society and institutions

5. **Consultancy and Public Advocacy**

- Dr.S.Senthil Murugan - Technical consultant to Brahmagiri Development Society for implementation of Kerala Chicken Project from '2020
- International Conference on "Advancing Veterinary Dermatology Practice, Education & Research in Developing Countries", and the "Inaugural Convention and Satellite Symposiums of the Indian Association of Veterinary Dermatology" during 9 to 11 June 2022 (Dr Vinu David acted as Co-chairman)
- Dr Umesh C.G. as a rapporteur for a session in ISVM Kerala Chapter Conference- 26th and 27th
- Dr Vinu David P- Member reviewer panel of the international journal of livestock research
- Dr Biju P Habeeb- Annual board examination – IVthB.V.Sc.&A.H., Veterinary Clinical Medicine Paper I, on 18.8.2022, VC&RI, Namakkal, TANUVAS.
- Dr. Bimal P Bashir- reviewer of Journal of Veterinary and Animal Sciences, KVASU. Pookode for the year (2022-23 financial year)
- Dr. Bimal P Bashir- reviewer of International Journal of Livestock Research, for the year (2022-23 financial year)
- Alimudeen S – Member in Editorial Board of The Science World e magazine since 06/01/2023Associate Editor in AgriGate e magazine
- Expert member of District level Facilitation and Monitoring Committee of Poultry waste Rendering Units of Wayanad district- Dr. Renuka Nayar
- Expert member of District level Facilitation and Monitoring Committee of Poultry waste Rendering Units of Pathanamthitta district- Dr. Kavitha Rajagopal
- Dr. DEEPA C.K. Handled a session (14/06/22) in the training programme for Veterinary Surgeons on Latest Trends in Large Animal Treatment organized by AHD At IMG, Kozhikode

6. **Patents**

- Inventor: **John Abraham**, Applicants: John Abraham & Dhalin D, No. IN 401547 (5963/CHE/2013)-Rocker type milking machine for dairy cows. Date of Grant: 18/07/2022

7. Unveiling Human Resources: Unlocking Potential and Pursuits

Seminars/ Workshops/ Summer Institutes/ Symposium/ Winter School

Sl. No.	Name and designation of the Scientist	Title of the Programme	Duration		Place	Approx. cost involved
			From	To		
1	Dr Muhasin Asaf V. N.	All Kerala Study Tour of CDST, Pookode	12-09-2022 to 22-09-2022		All Kerala	
2	Dr Bindya Liz Abraham	Study tour for MS-wildlife students	01-12-2022 to 09-12-2022		Rann of Kutch, Gujarat	
3	Dr Bindya Liz Abraham	National Symposium of SOCDAB on "Animal genetic resources management for rural livelihood enhancement"	23-24th February, 2023		Parbhani, Maharashtra	-
4	Dr Lali F. Anand	DST SERB TARE project 'Genomic approach for genetic improvement and conservation of important aquaculture species, Etroplussuratensis and Trachinotusblochii under changing climate scenario'	01-04-2022 to 29-06-2022		ICAR-CMFRI, Kochi	-
5	Dr Patki H.S.	XXXVI Annul convention and international symposium of IAVA	20-22nd December, 2022		CVAS, Udaipur, Rajasthan	**10,000/-**
6	Dr Surjith K.P.	XXXVI Annul convention and international symposium of IAVA	20-22nd December, 2022		CVAS, Udaipur, Rajasthan	**10,000/-**
7	Dr. Bimal P. Bashir & Dr. Anjali K. Babu Assistant Professor Dept. of Extension	14th Kerala Veterinary Science Congress organized by IVA Kerala	12th & 13th November 2022		CVAS, Mannuthy	
8	Dr. Bimal P. Bashir Assistant Professor Dept. of Extension	ICAR sponsored winter school on "Advanced analytical tools for social science research"	11-31 January 2023		IVAR- Central Marine Fisheries Research Institute	

9	Dr. Bimal P. Bashir	Training cum work-shop programme on "Ethnographic re-search for tribal devel-opment professionals organized by National Institute of Rural De-velopment and Pancha-yat raj, Rajendranagar, Hyderabad, Telengana	30th to 31st March 2023	Online	
10	Dr. Anjali K. Babu	Training programme on 'Statistics in Sci-ence: Modalities and Applications' orga-nized by Academic Staff College, KVASU	10th to 14th October 2022	Academic Staff College, KVA-SU	
11	Dr. Anjali K. Babu	Symposium on 'One World, One Health: Emerging Zoonoses and Stratergies for the Future' organized by Hume Centre for Ecology and Wildlife Biology, COHEART, CVAS, Pookode	21st November 2022	Smart Class Room, CVAS, Pookode	
12	Alimudeen. S and Arul Sabareeswaran T A	Symposium on 'One World, One Health: Emerging Zoonoses and Stratergies for the Future' organized by Hume Centre for Ecology and Wildlife Biology, COHEART, CVAS, Pookode	21st November 2022	Smart Class Room, CVAS, Pookode	
13	Alimudeen. S and Arul Sabareeswaran T A	Training programme on 'Statistics in Sci-ence: Modalities and Applications' orga-nized by Academic Staff College, KVASU	10th to 14th October 2022	Academic Staff College, KVA-SU	

14	Alimudeen S	International Conference on 'Rabies: One Health, Zero Deaths' organized by Department of Veterinary Preventive Medicine, Madras Veterinary College, TANUVAS	27th August 2022		
15	Alimudeen S	Dr. Ashish Memorial Intercollegiate Quiz Competition organized by ROOF Alumni Association, CVAS, Pookode	29th August 2022		
16	Alimudeen S and Arul Sabareeswaran T A	14th Kerala Veterinary Science Congress with the theme 'One Health Approaches in Management of Animal Health Care – New Paradigms' organized by IVA, Kerala	12th and 13th November, 2022		
17	Alimudeen S	National Seminar on 'Recent Biotechnological Advances in Health and Management Practices to Augment Productivity of Livestock and Poultry' organized by VCRI, Tirunelveli and The Society for Veterinary Science and Biotechnology, Indore	22nd to 24th September 2022		
18	Dr DEEPA C.K.	Training on Advances in Analytical Techniques	2.11.22 to 15.11.22	Academic Staff college, Mannuthy	**Nil**
19	Dr.Ajith Jacob George	Kerala Medical Technology Consortium (KMTC) Stakeholder Connect Meet	29th November 2022	CUSAT, Kochi	
20	Dr.Ajith Jacob George	Industry – Academia – Health Care Discussion Meet	24th September, 2022	Malabar Cancer Center,	

21	Dr. Pradeep M	One day workshop for faculty under DoE, KVASU dealing student related and extension activities organized by DoE, KVASU	29/10/2022	VKIDFT, Mannuthy	
22	Dr. Pradeep M	One day symposium on: One World , One Health: Emerging Zoonoses and Strategies for the Future' conducted	21/11/2022	college of Veterinary and Animal Sciences, Pookode	
23	Dr.HamzaPalekkodan	INDUSTRY – ACADEMIA – HEALTH CARE DISCUSSION MEET	24th September, 202	Malabar Cancer Center	
24	Dr Dhanush Krishna B	Training on "Statistics in Science - Modalities and applications" Mannuthy on	October 10-14, 2 0 22.	KVASU Academic Staff College	
25	Dr Dhanush Krishna B	XVIII National Workshop on Toxicologic Pathology organised by The Indian Board of Toxicologic Pathology (IBTP) and Society of Toxicologic Pathology – India (STP-I) at	15-16 July 2022.	Coraltree Hotel, Bangalore – 560 032	

26	Dr Dhanush Krishna B	XXXIX Annual Conference of Indian Association of Veterinary Pathologists and XIII Annual Meeting of Indian College of Veterinary Pathologists and International Symposium on "Global Challenges in Rapid Diagnosis and Management of Animal and Poultry Diseases for Improved Health and Productivity"	17 - 20th November, 2022 at Department of Veterinary Pathology, College of Veterinary and Animal Science, Rajendranagar	PVNRTVU, Hyderabad, Telangana	
27	Dr Preethy John	Training on advances in analytical techniques	2.11.22 to 11.11.22	Academic staff College, Mannuthy	
28	Dr Preethy John	DST SERB SRG - One day workshop on "Experiments for future: Fostering a new research culture"	06/08/2022	VKIDFT, Mannuthy	
29	Dr Preethy John	MOOC on digital assessment and evaluation methodologies by NAARM held during	1.09.22 to 30 .09.22	Online	
30	Dr.Shiji S. Saju	Statistics in Science: modalities and application	10.10.2022 to 14.10.2022	Academic Staff College, KVASU, Mannuthy	**Rs. 3500/-**
31	Dr. K. Raji	cross disciplinary National Conference of Experts and a hands-on workshop, in Knowledge Translation	16.12.2022 to 17.12.2022	Cochin University of Science and Technology, Kochi.	

32	Dr. K. Raji	Basic principles of cell signaling	Feb 2023	Coursera-online learning-offered by Korea advanced institute of science and technology	
33	Dr Aswathi P B Asst Professor	IPSACON 2022	2-4th November 2022	DUVASU, Mathura, UP	**Registration fee 6000/- (reimbursed from college**
34	Dr.S.Anoop and Dr.P.T.Dinesh	XVIII Annual Convention of ISACP and National Synposium on "Newer Copncepts and Approaches in Small Animal and Welfare"	22-09-2022 to 24-09-2022	Jaipur, Rajastan	
35	Dr.S.Anoop	Defining Animal Welfare and Ethics in Pre-Clinical Research	14-11-2022 to 15-11-2022	SCTIMST, Thiruvananthapuram	
36	Dr.S.Sooryadas	Annual Congress of Indian Society for Veterinary Surgery			
37	Dr. M.K. Narayanan, Dr.S.Anoop and Dr.P.T.Dinesh,Dr. sooryadasS.,Dr. Jinesh Kumar N S and Dr.Remya V.,	ISVS Kerala chapter annual conference	18-12-2022	Thrissur, Kerala	
38	Dr. Jinesh KumarN.S., Dr.Remya V	AgMoocs - Fluid therapy and management of clinical syndrome in cattle and ruminants-6-week online course	22-03-2022 to 2-05-2022		

39	Dr.Jinesh Kumar N. S. Dr.Remya V Dr Dinesh P. T.	Agmoocs- management of metabolic and production disorders in cattle- 6-week online course	31-05-2022 to 10-07-2022		
40	Dr Vinod V K	Antimicrobial peptides (AMPs) as an alternative to antibiotics: Hands on training for designing, chemical synthesis, characterization and applications of synthetic AMPs	24th January to 13th February, 2023	IVRI, Izatnagar	**NIL**

- **Training Program / short courses/ Any other program organized(details from each department separately)**

1. Two-day Hands-on-training on "Basic Bioinformatics Tools for Molecular Genetics research", Dept of AGB, Pookode, from 24-25th November
2. Two-day Hands-on-training on "Basic Bioinformatics Tools for Molecular Genetics research", Dept of AGB, Pookode, from 29-30th November, 2022
3. MANAGE-KVASU online 5-day training on "Sustainable Livestock production: Prospects for Innovation", organized by Dept of AGB, CVAS, Pookode, 19-23 December, 2022
4. Dr Umesh C.G – Course director, Post graduate diploma in Veterinary Forensic medicine – Six days training during 1st to 8th August, 2022
5. Dr Biju P Habeeb- Co-ordinator of three months obligatory training programme for the Assistant Direcotrs of AHD, Gov. of Kerala from 4.4.2022 to 2.7.2022
6. Dr Biju P Habeeb- Co-ordinator of three months obligatory training programme for the Assistant Direcotrs of AHD, Gov. of Kerala from 4.7.2022 to 3.10.2022
7. Dr Vinu David – co ordinator of three months obligatory training programme for the Assistant Direcotrs of AHD, Gov. of Kerala ,31/08/2022
8. Dr. Bimal P. Bashir & Dr. Anjali K. Babu, Assistant Professor- Co-ordinator for the "Three months obligatory training programme for the Assistant Directors of Animal Husbandry Department, GoK organized by Directorate of Entrepreneurship, KVASU from 4th July to 3rd October 2022
9. Dr. Bimal P. Bashir & Dr. Anjali K. Babu, Assistant Professor- Training co-ordination for 45 goat farmers uber SHG group of Nigiri Development Society (NDS), Nilagiri on 19th October 2022.
10. CVE programme on Clinical and Diagnostic Parasitology organised by Directorate of Entrepreneurship, KVASU Pookode and Department of Veterinary Parasitology, CVAS Pookode

funded by Kerala State Veterinary Council and during 22-06-22 to 24-06-22 and 29-06-22 to 01-07-22.

11. Training on Mosquito Taxonomy for Specialist Veterinarians on 18.04.23 to 19.04.23 organised by Directorate of Entrepreneurship, KVASU Pookode and Department of Veterinary Parasitology, CVAS Pookode funded by Kerala State Veterinary Council

12. Dr. Shiji S. Saju acted as co - ordinator for the three-month obligatory training programme for the assistant directors of animal husbandry department, Government of Kerala from 04.04.2022 to 02.07.2022

13. Dr. K. Raji- Resource person for 14-day hands on training from l5'11'2022 to 28.11.2022 at SAAPBT- session on "Basic Concepts of Epigenetics"

14. Dr. Pratheesh M D delivered an invited lecture on 'Role of Wnt signaling pathway in MSC regulated angiogenesis' in a 21-day Centre for Advanced Faculty Training program conducted on 'Stem cell therapeutics on livestock and pets' at Department of Veterinary Physiology and Climatology, ICAR-Indian Veterinary Research Institute on 20 January 2023.

15. Dr. Pratheesh M D delivered an invited lecture on 'Role of signaling pathway in stem cell differentiation' in a 7-day Training program conducted on 'Stem cell therapeutics on livestock and pets' at Department of Veterinary Physiology, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, India on 18 December 2022

16. Need based Hands-on training in Techniques in Small Animal Anaesthesia, (5 Batches- 22 participants)

17. National Workshop on Working Dogs Edition III- "Role of Working Dogs in Investigation and Security" from 19-12-2022 to 22-12-2022 at Kerala Police Academy, Thrissur

18. Three months Obligatory Training Programme for the Assistant Directors of the AHD from 4-4-2022 to 3-7-2022

8. Strategic Resources additions- New/ innovative achievements

9. **Awards and Honors/ Endowments (each departments wise detailing)**

Sl No	Faculty	Award/ Honour
1	Dr Bindya Liz Abraham	➢ PG Nair Endowment Best Teacher Award, July, 2022 ➢ Best paper for poster presentation in ISAGB, December, 2022

2	Dr. Lali F. Anand	➢ Topper in the NPTEL online certification course- Human Molecular Genetics Jan-Feb 2023 organized by IIT Madras ➢ Certificate of successfully uploading the data for All India Higher Education Survey, CVAS, Pookode for the year 21-22. Honoured by Deputy Director General, Department of Higher Education, Ministry of Education, Government of India on 18-01-2023
3	Dr Maya S,	Best Teacher award, 2022 by IVA Kerala Chapter
4	Dr. Indu V Raj.	IVA Special Award 2022, Editor, JIVA
5	Rajani C. V., Surjith K. P., Patki H. S., Simanta P., Raghu N.K., Indu V.R., Pradeep M. and Maya S.	Second prize in poster presentation competition held during 14 th Kerala Veterinary science congress 2022 held at CVAS Mannuthy during Nov 2022.
6	Patki H. S., Surjith K. P., Rajani C. V.,Indu V.R., Raghu N.K. and Maya S. bagged Dr M.D. Hafeezuddin Silver Jubilee Medal	First prize in oral presentation in anatomy of wild and zoo animals held during XXXVI IAVA annual convention and international symposium held at Udaipur during Dec 20-22.
7	Dr. Biju Chacko	Dr. Biju Chacko secured the award of first prize for best paper by poster presentation in Scientist Section in the 35th Kerala Science Congress held at Kuttikkanam, Idukki from 12-2-2023 to 14-2-2023 for the paper entitled, “Soy Milk: A Novel and Economic Milk Replacer for calves”. Biju Chacko and Fahmida. V
8	Dr. Biju Chacko	Dr. Biju Chacko as mentor of the team of 5 students Nithin Raj V.G., Abhina K.S, Jithy G.J., Muhammed Yasir P, FamidhaSherin P.T. representing CVAS, Pookode who won the Young Innovator’s Project (YIP 2020) for Idea No. 1158 titled, “Characterisation of locally available unconventional feeds and its potential use as livestock feed in the post pandemic scenario” under the Theme,”Post Pandemic Innovations” organized by the Kerala Development and Innovation Strategic Council (KDISC), Govt. of Kerala. Result declared on 13-3-2023.
9	Dr.Divya P.D.	Awarded second prize in oral presentation in VIth Annual Conference of SVBBI held on 5 and 6th January 2023 at NDVSU, Jabalpur

10	Dr Vinu David P	Reviewer appreciation for the year 2022 by the international journal of livestock research
11	Dr Vinu David P	Student guide - Dr Anju K Daniel received award for Best MVSc thesis in Veterinary Medicine- Susheela pathak memorial award for the year 2022
12	Dr Vinu David P	Student guide - Dr Anju K Daniel received award for Best MVSc thesis-Indian Society for Agricultural Science & Technology for rural empowerment, Raichur, Karnataka for the year 2022
13	Dr Sindhu O. K	Authored the paper which was awarded first prize in farm animal medicine session-Clinical conference organised by TANUVAS
14	Dr Vinu David	Student advisors- Third prize- ISVM Kerala Chapter Conference- 26th and 27th March 2023 at CV&AS, Mannuthy
15	Dr Vinu David P	Student advisor- First prize- ISVM Kerala Chapter Conference- 26th and 27th March 2023 at CV&AS, Mannuthy
16	Dr Vinu David P, Dr Biju P Habeeb	Student Advisors- First prize for the paper presented at the 39th Annual convention and national conference of ISVM- 22nd to 24th February2023
17	Dr Umesh C.G.	Staff advisor- Third prize- ISVM Kerala Chapter Conference- 26th and 27th March 2023 at CV&AS, Mannuthy
18	Dr Sindhu O K	Best case report award 2022, by Journal of Indian Veterinary Association
19	Dr. Bimal P. Bashir	Best teacher award in the 5th national conference on “Doubling farmer’s income for sustainable and harmonious agriculture” (DISHA-2022). Organized by KNIDSS, Sultanpur, UP, in association with GAPS, Dhanbad, Jharkhand and PKVSS, Bihar. Green professional Society on 11th to 12th June 2022.
20	Alimudeen S, Arul Sabareeswaran T A, Induja T R, Chethan G N	First place in e-poster -International Veterinary Students’ Association, Pookode and Centre for One Health Education, Advocacy, Research and Training, KVASU
21	Alimudeen S, Arul Sabareeswaran T A, Chethan G N, Induja T R, Bimal P Bashir	Best Oral Presentation Award -Veterinary College and Research Institute, Tirunelveli, TANUVAS and Society of Veterinary Science & Biotechnology, Indore
22	Alimudeen S	Best Research Scholar Award -Agricultural &Environmental Technology Development Society, Uttarakhand
23	Alimudeen S	Best Article Award- AgriGate – An International Multidisciplinary Monthly e-Magazine
24	Alimudeen S, Arul Sabareeswaran T A, Bimal P Bashir	Third place in poster presentation - Department of Veterinary Preventive Medicine, Madras Veterinary College, TANUVAS
25	Alimudeen S	Certificate of Accomplishment- Agricultural & Environmental Technology Development Society (AETDS), Uttarakhand

26	Alimudeen S, Arul Sabareeswaran T A	Certificate of Appreciation- Parents Teachers Association,CVAS, Pookode
27	Alimudeen S	Best Student Award- Tamil Society for Veterinary Sciences
28	Arul Sabareeswaran T A	Letter of Appreciation-IVA, Kerala – Pookode Unit
29	Arul Sabareeswaran T A	Dr.Bhagabat Panda National Award of Excellence in Poultry Science, Pashudhanpraharee magazine
30	Arul Sabareeswaran T A	Smt. Rajvanshi Devi Memorial Award 2022- Pashudhanpraharee magazine
31	Dr Deepa C.K.	Mrs. Saraswathi Anandan Award (2022) for the best Ph.D. Thesis by Indian Association of Advancement in Veterinary Parasitology
32	Dr.Ajith Jacob George	First - Best paper - 14th Kerala veterinary Science Congress
33	Dr.Ajith Jacob George	Best Poster Award during the Session of Molecular Pathology and Oncology for the research work Entitled Histomorphological, immunohistochemical and molecular studies on desmoplastic reactions in canine mammary tumors (Major advisor)-39th IAVP International Conference
34	Dr.Ajith Jacob George, Dr Pradeep M, Dr Hamza Palekkodan, Dr Dhanush Krishna B	Second Best ICVP Poster Award at XIII Annual Meeting of Indian College of Veterinary Pathologists Name of Student: Tamilvani P (as student mentors)
35	Dr Dhanush Krishna B	Cleared the certification examination of the Indian Board of Toxicologic Pathologists (IBTP)-2022 and became IBTP diplomate held at Coraltree Hotel, Bangalore – 560 032 on July 17, 2022
36	Dr Dhanush Krishna B	Received ICVP (Indian College of Veterinary Pathologists) diplomate Award at 39th IAVP International Conference on 17 - 20th November, 2022
37	Dr Dhanush Krishna B	IAVP-Dr Ram Raksha-Kiran Shukla Best MVSc Thesis Award Thesis Title: Evaluation of omentum based extracellular matrix scaffolds for soft tissue repair Name of Student: Dr K.G. Megha (as Major Advisor) on 17 - 20th November, 2022
38	Dr. K. Raji	Reviewer excellence award-Indian Journal of Animal Research-Article Title: -The effect of vitamin C on oxidative stress, nitric oxide, and viability of broiler finisher blood cells subjected to high ambient temperature
39	Dr. Pratheesh M D	Reviewed for Frontiers in Veterinary Science Article title: Regenerative medicine in lung diseases: A systematic review

40	Dr. Pratheesh M D	Reviewed for Frontiers in Veterinary Science Article title: Immunomodulatory-associated gene transcripts of in vitro bovine fluid amniotic mesenchymal stem cells
41	Dr Aswathi P B	Young Scientist award 2022 from Indian Poultry Science Association
42	Dr. Janus. A	Second prize in oral presentation in the session farm animal health at the 14th Kerala Veterinary Science Congress, organized by IVA, Kerala during 12 th and 13th November 2022
43	Dr. Janus A	Second prize in oral presentation at 39th Annual convention of Indian Society for Veterinary Medicine at College of Veterinary & Animal Sciences, G.B Pant University of Agriculture & Technology, Pant Nagar from 22-24 February 2023.

10. Distinguished Visitors in departments

11. Beyond the Horizons: Exploring other activities

12. Other Academic activities

13. Other Research activities

14. Other Extension activities

1	Dr Vinu David P handled one day awareness class on Haemoprotozoal infection in small animals at LMTC, Kannur on 31/01/2023
2	Dr Vinu David P handled one day Interactive session on Revival of Technical Panel at LMTC, Kannur on 08/11/2022.
3	Dr Vinu David P acted as resource person for veterinary surgeons at IMG Kozhikode on 06/08/2022.
4	Dr Sindhu O K, handled a session on “Latest trends in large animal treatment” at IMG (institute for Management in Government) Kozhikode from 13 June to 15 June 2022
5	Dr Sindhu O K, took an awareness class for the veterinarians of Kozhikode district at DVC, Kozhikode organised by DAHO, Kozhikode on 20/06/2022
6	Dr Vinu David P handled a session on “Latest trends in large animal treatment” at IMG (institute for Management in Government) Kozhikode on 15 June 2022 for veterinarians in AHD
7	Dr Vinu David P handled a session on “Latest trends in small animal treatment” at IMG (institute for Management in Government) 23/08/2022 for veterinarians in AHD
8	Dr. Kavitha Rajagopal handled class on processing of livestock products to entrepreneurs organised by District Industrial Centre, Wayanad
9	Dr. Kavitha Rajagopal handled class on Entrepreneurship in meat sector to college students of St. Mary’s College, SulthanBathery organised by Kerala Institute of Entrepreneurship Development, Kochi
10	Department of Pharmacology and Toxicology-Class of laboratory animal handling to 7th April, 2022- III-year BSc., MLT students from AKG Co-Operative Institute of Health Sciences (AKG CIHS), Kannur

11	Resource person for training to farm supervisors of kerala chicken -28/1/2023 Resource person in ARS KAU POOppoli, ambalavayal- training in Entrepreneuer ship in poultry sector-7/1/2023
12	Need based Hands-on training in Techniques in Small Animal Anaesthesia.
13	Surgical consultancy service to the public, private farms and polic dog squad.

VERGHESE KURIEN INSTITUTE OF DAIRY AND FOOD TECHNOLOGY MANNUTHY, THRISSUR

I. NURTURING MINDS: GLIMPSE INTO ACADEMIC HAVEN

1. Academic Excellence

Verghese Kurien Institute of Dairy and Food Technology, formerly known as College of Dairy Science and Technology Mannuthy have been instrumental in contributing quality manpower to the dairy and allied industries in India and abroad for the past three decades. College of Dairy Science and Technology Mannuthy, the first of its kind in the state, offering four-year graduate programme in Dairy Technology was established in the year 1993. The college witnessed its dream of an independent building as Verghese Kurien Institute of Dairy and Food Technology (VKIDFT) amidst the celebration of its successful completion of 25 years in 2019. B. Tech Food Technology programme started in 2015 at College of Food Technology, Thumburmuzhy under the aegis of the Kerala Veterinary and Animal Sciences University. In August 2018,Thumburmuzhy Cattle Breeding Farm adjacent to the College and the College premises were badly affected by the flood and hence the College was shifted to KVASU Mannuthy campus. In 2021, College of Food Technology got merged with College of Dairy Science and Technology Mannuthy and the institute was renamed as Verghese Kurien Institute of Dairy and Food Technology Mannuthy. The institute now offers four-year graduate professional programs in Dairy Technology & Food Technology and Post graduate and Doctoral programs in Dairy Technology, Dairy Chemistry and Dairy Microbiology. The course curricula for B. Tech (Dairy Technology& Food Technology) are prepared as a unique job-oriented degree programme which leads to a total development of graduates and make them capable to face varied situations in their field of work. Additionally, the graduates get acquainted with various facts of professionally managed industries which include production management, raw material purchases, personnel management, sales and marketing by virtue of industrial in-plant training. The aim of the institute is to provide quality education of the highest standard in the field of Food and Dairy to cater the need of professionals in the field of Dairy and Food processing in the country. The B.Tech Dairy Technology course has got the accreditation of both ICAR & AICTE. The M. Tech Dairy Technology, Dairy Microbiology and Dairy Chemistry have also got accreditation from ICAR. This really manifests the quality of students graduating from our college.

2. Admission Excellence

The college is offering four year professional B.Tech Programme (4 years) in Dairy Technology and Food Technology, M.Tech (2 years) and PhD in Dairy Technology, Dairy Microbiology and Dairy Chemistry. Candidates admitted to B. Tech (Dairy Tech.& Food Tech.) programme are selected through the Common Engineering Entrance Examination conducted by Govt. of Kerala. The candidates who have passed the Higher Secondary Examination, Kerala or examinations recognized as equivalent thereto, with minimum 50% marks in Mathematics separately, and 50% marks in Mathematics, Physics and Chemistry put together are eligible for admission. The college also admits students from ICAR quota for the UG programme. The admission to M. Tech and Ph.D programmes is done through

the Entrance examination conducted by the University. One seat in the M. Tech course is earmarked for student admitted under the Senior Residency programme.

3. **Myriad of Learning Pathways: Diverse courses and Departments**

Courses Offered:

Sl. No.	Title of the Programme	Level	Duration (Yrs)	Year of Starting	Sanctioned annual intake
1	B.Tech (Dairy Technology)	UG	4	1993	40
2	B.Tech (Food Technology)	UG	4	2015	22
3	M.Tech (Dairy Technology)	PG	2	2012	2regular+ 1resident
4	M.Tech (Dairy Chemistry)	PG	2	2017	2 regular + 1resident
5	M.Tech (Dairy Microbiology)	PG	2	2017	2 regular + 1resident
6	PhD (Dairy Technology)		3	2019	1
7	PhD (Dairy Chemistry)		3	2019	1
8	PhD Dairy Microbiology)		3	2019	1

Departments:

Sl. No.	Department
Dairy Technology	
1	Dairy Technology
2	Dairy Engineering
3	Dairy Microbiology
4	Dairy Chemistry
5	Dairy Business management
6	Dairy Extension
7	Dairy Husbandry
Food Technology	
8	Food Process Technology
9	Food Process Engineering
10	Food Safety and Quality Assurance
11	Food Business Management
12	Basic Sciences and Humanities

13	Food Plant Operations
14	Basic Engineering

Course Curriculum:

UG programme

Department-Wise Distribution of Courses for B.Tech (Dairy Tech) degree programme

No.	Name of the Department	Credit Hours
1	Dairy Technology	33 (21+12)
2	Dairy Engineering	34 (21+13)
3	Dairy Business Management Dairy Extension & Dairy Husbandry	27 (20+7)
4	Dairy Microbiology	17 (11+6)
5	Dairy Chemistry	17 (11+6)
	Total	**128**

Non-Credit Courses

No.	Catalogue No. of course	Name of the course	Credit Hours
1	SREV 1201	Students READY Exposure Visit I -7 days	5 (0+5) *
2	SREV 2201	Student READY Exposure Visit – II -23 days	5 (0+5) *
3	DT 4112	Student READY In-Plant Training	20(0+20)
4	DT 4113	Student READY experiential Learning Module	10(0+10)
		Total	**40 (0 + 40)**

* - Non credit course (not included in the credit load)

** - Non credit optional course (not included in the credit load)

Total Class room credits (uptoVIIthsemester) = 128

Total credits for work experience = 30

Total credit load (excluding non creditcourses) = 128

Total credits for Non credit courses = 40

Department-Wise Distribution of Courses for B. Tech (Food Tech.) degree programme

No.	Name of the Department	Credit Hours
1	Food Process Technology	43(28+15)

2	Food Process Engineering	32(22+10)
3	Food Business Management	16(11+5)
4	Food Safety and Quality Assurance	31(20+11)
5	Basic Science and Humanities	8(7+1)
6	Food Process Engineering	36(0+36)
7	Basic Engineering	15(7+8)
	Total	**181(95+86)**

No.	**Name of the course**	**Credit Hours**
1	Physical Education (Non-Credit Course)	1(0+1)
2	NCC/NSS (Non-Credit Course)	1(0+1)
	Total	**2(0+1)**

Total Class room credits (uptoVIIthsemester) = 91

Total credits for work experience = 86

Total credit load (excluding non creditcourses) = 181

Total credits for Non credit courses = 02

PG programme

M.Tech (Dairy Technology, Dairy Microbiology and Dairy Chemistry) Course Structure – at a Glance

Major	20
Minor	09
Supporting	05
Seminar	01
Research	20
Total Credits	**55**

+Non credit compulsory courses – 06

PhD programme

PhD (Dairy Technology, Dairy Microbiology, DairyChemistry) Course Structure – at a Glance

Major	17
Minor &Supporting	11
Seminar	02
Research	45
Total Credits	**75**

+Non credit compulsory courses – 04, if not taken for masters' programme

Student Strength (as on 31.03.2023):

Total Student Strength	**307**	
UG Students (2022-2023)	DT: 202	FT: 96
	Total: 269	
PG Students (2022-2023)	**7**	
Dairy Technology	2	
Dairy Microbiology	3	
Dairy Chemistry	2	
PhD Students (2022-2023)	**2**	
Dairy Technology	0	
Dairy Microbiology	1	
Dairy Chemistry	1	

Staff Strength (as on 31.03.2023):

Sl No	**Department**	**Present Status**				
		Prof	**Asso. Prof**	**Asst. Prof.**	**TA**	**Total**
1	Dairy Technology	1	0	3(1 AP –Deputation)	5	9
2	Dairy Engineering	0	0	1 AP (Dairy Plant)	4	5
3	Dairy Chemistry	0	0	3	3	6
4	Dairy Microbiology	1	0	2	3	6
5	Dairy Husbandry	0	0	1	0	1
6	Dairy Business Management	0	0	0	4	4
7	Dairy Extension	0	0	0	0	0
8	Food Process Technology	0	0	1 (Deputation)	3	4
9	Food Process Engineering	0	0	0	2	2
10	Food Safety and Quality Assurance	0	0	2 (1-LWA)	3	5
11	Food Business Management	0	0	0	1	1

12	Basic sciences and Humanities	0	0	0	0	0
13	Food Plant Operations	0	0	0	0	0
14	Basic Engineering	0	0	0	0	0
15	Physical Education	0	0	1	0	1
	Total	**2**	**0**	**14**	**28**	**44**

Administrative Status (as on 31/03/2023)

Category	Sanc-tioned	Perma-nent	Tempo-rary	Vacant	To-tal	Remarks
Administrative Officer	1	1	-	-	1	
Section Officers	2	2	-	-	2	
Office superinten-dent(HG)	1	1	-	-	1	
Office superintendent	-	-	-	-		
Assistants	6	6	-	-	6	
Computer Assistant	1	1	-	-	1	
Clerical Assistant	3	3	-	-	3	
LDV Driver	1	-	1	-	1	
Class IV	5	3	2	-	5	
Total	**20**	**17**	**3**	-	**20**	

4. Tapestry of Expertise and Dedication: Empowering Faculty

Faculty Profile:

VERGHESE KURIEN INSTITUTE OF DAIRY AND FOOD TECHNOLOGY, MANNUTHY

DEAN Dr. S. N. RAJAKUMAR

Ph: 9495882953

E mail: deancdstmty@gmail.com, rajakumar@kvasu.ac.in

Sl No	DEPART-MENT	NAME	DESIGNATION	Contact No.	E mail ID
I	**DAIRY TECHNOLOGY**				
1	Dairy Technology	Dr. S. N. Rajakumar	Professor & Head	9495882953	rajakumar@kvasu.ac.in nageshrajakumar@yahoo.co.in

2	Dairy Technology	Dr. Dinker Singh	Assistant Professor	9539449016	dinker.bhu@gmail.com
3	Dairy Technology	Ms. Divya K B	Assistant Professor	9495796738	kbdivya2002@gmail.com
4	Dairy Technology	Ms. Rashmi K.G	Assistant Professor (Deputation)	9895245661	rashmikg85 @ gmail.com
5	Dairy Technology	Ms. Gloria Jacob	Teaching Assistant	9744925057	gloriakjacob@gmail.com
6	Dairy Technology	Ms. Jithu Rappai	Teaching Assistant	9605331462	jithurappai@gmail.com
7	Dairy Technology	Ms. Vandhana P S	Teaching Assistant	9747544997	Vandhu1693@gmail.com
8	Dairy Technology	Mr. Mohammed Riyas	Teaching Assistant	8157059197	riyaskottukkara950@gmail.com
9	Dairy Technology	Ms. Ambili M V	Teaching Assistant	9497533946	ambilimala@gmail.com
II	**DAIRY ENGINEERING**				
10	Dairy Engineering	Er. Aswin S Warrier	Assistant Professor KVASU Dairy Plant	7559067959	aswinswarrier @ kvasu.ac.in
11	Dairy Engineering	Er. Amulya P R	Teaching Assistant, Dairy Engineering	9400608878	amulyapr45@gmail.com
12	Dairy Engineering	Dr. Antony P Pallan	Teaching Assistant, Dairy Engineering	9995351137	antony.paulpallan@gmail.com
13	Dairy Engineering	Er. Gritty P T	Teaching Assistant, Dairy Engineering	9496125855	grittypt@gmail.com
14	Dairy Engineering	Ms. Janice E J	Teaching Assistant	9496418831	jani0087@gmail.com
III	**DAIRY MICROBIOLOGY**				
15	Dairy Microbiology	Dr. A K Beena	Professor & Head	9446293686	akbeena@kvasu.ac.in
16	Dairy Microbiology	Dr.Lijimol James	Assistant Professor	9567086007	lijimoljames @ kvasu.ac.in ligi11@rediffmail.com

17	Dairy Microbiology	Dr. Aparna. Sudhakaran V	Assistant Professor	7558067959	aparna@kvasu.ac.in aparna.asv@gmail.com
18	Dairy Microbiology	Dr.Vinod Viswanath	Teaching Assistant	9895367266	vinodkomattil@gmail.com
19	Dairy Microbiology	Ms. Syama Mohan	Teaching Assistant	9349812789	Syma82@gmail.com
20	Dairy Microbiology	Ms.Sreya Unnikrishnan	Teaching Assistant	9446923673	Sreyaunni730@gmail.com
IV	**DAIRY CHEMISTRY**				
21	Dairy Chemistry	Dr. Divya M P	Assistant Professor	9895424209	divya@kvasu.ac.in
22	Dairy Chemistry	Ms. Indu B	Assistant Professor	9400503677	indubthayyil @gmail.com
23	Dairy Chemistry	Ms. Smitha J Lukose	Assistant Professor	9495866742	smitha.lukose @kvasu.ac.in
24	Dairy Chemistry	Ms. Anumol Devassykutty	Teaching Assistant	9847772617	jijoanumol@gmail.com
25	Dairy Chemistry	Mr. Vyshak V L	Teaching Assistant	8281850472	anjujacob1995kpl@gmail.com
26	Dairy Chemistry	Ms. Anjumol Jacob	Teaching Assistant	9895951728	vlvyshak13@gmail.com
	DAIRY BUSINESS MANAGEMENT				
27	Dairy Business Management	Bincy T.J	Teaching Assistant	8304808287	bincythattil@gmail.com
28	Dairy Business Management	Asha Alphonse	Teaching Assistant	9633994990	aachu1985@gmail.com
29	Dairy Business Management	Dr. Neethu Lazar	Teaching Assistant	9633003010	neethu.lazar@yahoo.co.in
30	Dairy Business Management	Kesiya Eliza Giji	Teaching Assistant	9497226154	elizakesiya99@gmail.com
V	**DAIRY HUSBANDRY**				
31	Dairy Husbandry	Dr. Yancy Mary Issac	Assistant Professor	9440027590	dryancymaryissac@gmail.com

VI	**FOOD QUALITY ASSURANCE**				
32	Food Safety and Quality Assurance	Dr. Athira S.	Assistant Professor (LWA)	9497888348	athira05dairy@gmail.com
33	Food Safety and Quality Assurance	Ms. Aysha C. H.	Assistant Professor	9605373428	chaysha@gmail.com, aysha@kvasu.ac.in
34	Food Safety and Quality Assurance	Ms Simi M S	Teaching Assistant	9605775539	simimarottikkal@gmail.com
35	Food Safety and Quality Assurance	Ms Suhaila A A	Teaching Assistant	7594848597	suhailasuhailari-yadh@gmail.com
36	Food Safety and Quality Assurance	RittyKuriakose	Teaching Assistant	8589837371	rittykuriakose@gmail.com
VIII	**FOOD PROCESS TECHNOLOGY**				
37	Food Process Technology	Mr. Faisal I	Assistant Professor (Deputation)	9947039755	ismailfaisal90@gmail.com
38	Food Process Technology	Dr. Arya K Salu	Teaching Assistant	9526287694	aryaksalu@gmail.com
39	Food Process Technology	Mr. Ajay R	Teaching Assistant	9895732516	ajaykarthika.ajayr077@gmail.com
40	Food Process Technology	Mr. Subith C	Teaching Assistant	9562811011	subisubiyan@gmail.com
	FOOD ENGINEERING				
41	Food Processing Engineering	Er. Jithin Mohan K.	Teaching Assistant	8089353553	erjithinmk@gmail.com
42	Food Processing Engineering	Er. Sasmila Bai S. M.	Teaching Assistant	8281016352	sasmila@gmail.com
	FOOD BUSINESS MANAGEMENT				
43	Food Business Management	Ms Radhika K S	Teaching Assistant	9048375488	radhikasobhanan@gmail.com
IX	**PHYSICAL EDUCATION**				

44	Physical Education	Dr. Jose Mathew	Assistant Professor	9448743373	josemthew@kvasu.ac.in

Capacity building programs:

Name & Designation	Name of Event	Venue	Date
Dr. Divya M.P Assistant Professor Dairy Chemistry	Special Summer School (Refresher Course)	Conducted by the HRDC, Calicut	08/06/2022 to 21/06/2022
Dr. Ligimol James Assistant Professor Dairy Microbiology	Webinar on the topic 'Eat right to make your health right'	FOODSALVATIO'22-VKIDFT in association with Food safety department and Association of food scientist and Technologists.	10/06/2022
Ms. Aysha C.H Assistant Professor Food Safety and Quality Assurance	Webinar on the topic 'Eat right to make your health right'	FOODSALVATIO'22-VKIDFT in association with Food safety department and Association of food scientist and Technologists.	10/06/2022
Dr. Indu.B Assistant Professor Dairy Chemistry	Webinar on the topic 'Eat right to make your health right'	FOODSALVATIO'22-VKIDFT in association with Food safety department and Association of food scientist and Technologists.	10/06/2022
Mr.Faizal I. Assistant Professor (Deputation) Food Processing Technology	Webinar on the topic 'Eat right to make your health right'	FOODSALVATIO'22-VKIDFT in association with Food safety department and Association of food scientist and Technologists.	10/06/2022
Mr. Ajay R. Teaching Assistant Food Processing Technology	Webinar on the topic 'Eat right to make your health right'	FOODSALVATIO'22-VKIDFT in association with Food safety department and Association of food scientist and Technologists.	10/06/2022
Ms. Sasmila Bai Teaching Assistant Food Process Engineering	Webinar on the topic 'Eat right to make your health right'	FOODSALVATIO'22-VKIDFT in association with Food safety department and Association of food scientist and Technologists.	10/06/2022

Ms. Ritty Kuriakose Teaching Assistant Food Safety and Quality Assurance	Webinar on the topic 'Eat right to make your health right'	FOODSALVATIO'22-VKIDFT in association with Food safety department and Association of food scientist and Technologists.	10/06/2022
Ms. Radhika K.S. Teaching Assistant Food Business Management	Webinar on the topic 'Eat right to make your health right'	FOODSALVATIO'22-VKIDFT in association with Food safety department and Association of food scientist and Technologists.	10/06/2022
Dr. Arya K. Salu Teaching Assistant Food Processing Technology	Webinar on the topic 'Eat right to make your health right'	FOODSALVATIO'22-VKIDFT in association with Food safety department and Association of food scientist and Technologists.	10/06/2022
Dr. Jose Mathew Assistant Professor Physical Education	Two Days National Seminar on "Swastha Bharat in India: Problem – Prospects asway forward"	Karnataka State Akkamahadevi Women's University, Vijaypura, Karnataka	16/06/2022 to 17/06/2022
Dr. Dinker Singh Assistant Professor Dairy Technology	2 week entrepreneurship course	Turnip Innovations Private Limited	11/07/2022 to 24/07/2022
Ms.Rashmi K G Assistant Professor (Deputation) Dairy Technology	2week entrepreneurship course	Turnip Innovations Private Limited	11/07/2022 to 24/07/2022
Dr. A.K Beena Professor & Head Dairy Microbiology	Online workshop-"Awareness on Food Safety Act,2006 its regulations and FSSAI initiatives"-FRCC National Workshop 2022	Online mode- FSSAI	13/07/2022 to 17/07/2022
Ms.Rashmi K G Assistant Professor (Deputation) Dairy Technology	Online workshop-"Awareness on Food Safety Act,2006 its regulations and FSSAI initiatives"-FRCC National Workshop 2022	Online mode- FSSAI	13/07/2022 to 17/07/2022

Dr. Aparna Sudhakaran V Assistant Professor Dairy Microbiology	Online workshop- "Awareness on Food Safety Act,2006 its regulations and FSSAI initiatives"- FRCC National Workshop 2022	Online mode- FSSAI	13/07/2022 to 17/07/2022
Dr. Ligimol James Assistant Professor Dairy Microbiology	Online workshop- "Awareness on Food Safety Act,2006 its regulations and FSSAI initiatives"- FRCC National Workshop 2022	Online mode- FSSAI	13/07/2022 to 17/07/2022
Dr. Ligimol James Assistant Professor Dairy Microbiology	Participated in IP awareness/ Training programme under National intellectual property awareness mission	Organized by Intellectual property office	20/07/2022
Dr. S N Rajakumar Professor and Head Dairy Technology	Brain Gain Programme–Workshop on "Cheese making; Cheddar and Ricotta"	VKIDFT, KVASU In association with Kerala Higher Education council	22/07/2022 to 23/07/2022
Dr.Dinker Singh Assistant Professor Dairy Technology	Brain Gain Programme –Workshop on "Cheese making; Cheddar and Ricotta"	VKIDFT, KVASU In association with Kerala Higher Education council	22/07/2022 to 23/07/2022
Ms. Divya K B Assistant Professor Dairy Technology	Brain Gain Programme –Workshop on "Cheese making; Cheddar and Ricotta"	VKIDFT, KVASU In association with Kerala Higher Education council	22/07/2022 to 23/07/2022
Ms. Rashmi K G Assistant Professor (Deputation) Dairy Technology	Brain Gain Programme –Workshop on "Cheese making; Cheddar and Ricotta"	VKIDFT, KVASU In association with Kerala Higher Education council	22/07/2022 to 23/07/2022
Ms. JithuRappai Teaching Assistant Dairy Technology	Brain Gain Programme –Workshop on "Cheese making; Cheddar and Ricotta"	VKIDFT, KVASU In association with Kerala Higher Education council	22/07/2022 to 23/07/2022
Ms. Gloria Jacob Teaching Assistant Dairy Technology	Brain Gain Programme –Workshop on "Cheese making; Cheddar and Ricotta"	VKIDFT, KVASU In association with Kerala Higher Education council	22/07/2022 to 23/07/2022

Mr.Mohammed Riyas P Teaching Assistant Dairy Technology	Brain Gain Programme –Workshop on "Cheese making; Cheddar and Ricotta"	VKIDFT, KVASU In association with Kerala Higher Education council	22/07/2022 to 23/07/2022
Ms.Rashmi K G Assistant Professor (Deputation) Dairy Technology	"Refresher programme on continual education for Dairy professionals"	CDSTGA and VKIDFT, Mannuthy Thrissur	30/09/2022 to 01/10/2022
Ms. Divya K B Assistant Professor Dairy Technology	"Refresher programme on continual education for Dairy professionals"	CDSTGA and VKIDFT, Mannuthy Thrissur	30/09/2022 to 01/10/2022
Ms. Rashmi K G Assistant Professor (Deputation) Dairy Technology	Two days virtual training Programme on "Statistical Methods in Food Processing" organized by AFSTI	Online mode	10/10/2022 to 11/10/2022
Dr.Dinker Singh Assistant Professor Dairy Technology	Participated in Training on Online platform for effective teaching organized by DE, KVASU	Academic staff college	17/10/2022 to 18/10/2022
Dr.Aparna Sudhakaran V Assistant Professor Dairy Microbiology	Refresher programme on Continual Education for dairy professionals	College of Dairy Science and Technology Graduates Association	30/9/2022 and 1/10/2022
Mr.Faizal I. Assistant Professor (Deputation) Food Processing Technology	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, ThrissurDistrict, IDA (Kerala Chapter)	17/10/2022

Dr. Arya K. Salu Teaching Assistant Food Processing Technology	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Ms.Aysha C.H Assistant Professor Food Safety and Quality Assurance	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Mr. Ajay R Teaching Assistant Food Processing Technology	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Ms.Suhaila A A Teaching Assistant Food Safety and Quality Assurance	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022

Ms.SasmilaBai Teaching Assistant Food Process Engineering	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Ms.RittyKuriakose Teaching Assistant Food Safety and Quality Assurance	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Ms.Radhika K.S. Teaching Assistant Food Business Management	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Ms. Simi Teaching Assistant Food Safety and Quality Assurance	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022

Dr.Aparna Sudhakaran V Assistant Professor Dairy Microbiology	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Dr.Ligimol James Assistant Professor Dairy Microbiology	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Ms. Gloria Jacob Teaching Assistant Dairy Technology	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Mr. Mohammed Riyas P Teaching Assistant Dairy Technology	National level seminar on topic "Recent trends in food processing technology"	FOOD ZONE'22 Organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter)	17/10/2022
Dr. Indu B Assistant Professor Dairy Chemistry	Refresher Programmeon: Advances in Analytical Techniques	Academic Staff College, Mannuthy	02/11/2022 to 15/11/2022

Ms.Aysha C.H Assistant Professor Food Safety and Quality Assurance	PAi conference and international symposium on "Psychobiotics and Gut: Potential in neurological disorders"	Organized by probiotic association of India (PAi)	05/12/2022 to 06/12/2022
Dr. A.K Beena Professor and Head Dairy Microbiology	PAi conference and international symposium on "Psychobiotics and Gut: Potential in neurological disorders"	Organized by probiotic association of India (PAi)	05/12/2022 to 06/12/2022
Dr. Ligimol James Assistant Professor Dairy Microbiology	PAi conference and international symposium on "Psychobiotics and Gut: Potential in neurological disorders"	Organized by probiotic association of India (PAi)	05/12/2022 to 06/12/2022
Dr.AparnaSudhakaran V Assistant Professor Dairy Microbiology	PAi conference and international symposium on "Psychobiotics and Gut: Potential in neurological disorders"	Organized by probiotic association of India (PAi)	05/12/2022 to 06/12/2022
Ms. Aysha C H Assistant Professor Food Safety and Quality Assurance	PAi conference and international symposium on "Psychobiotics and Gut: Potential in neurological disorders"	Organized by probiotic association of India (PAi)	05/12/2022 to 06/12/2022
Dr.Aparna Sudhakaran V Assistant Professor Dairy Microbiology	29th Indian Convention of Food Scientists and Technologists	Association of Food Scientists and Technologists (India)	05/01/2023 to 07/01/2023
Dr. Ligimol James Assistant Professor Dairy Microbiology	29th Indian Convention of Food Scientists and Technologists	Association of Food Scientists and Technologists (India)	05/01/2023 to 07/01/2023
Dr. A.K. Beena Professor and Head Dairy Microbiology	National Virtual Conference on Food & Health Sciences: The Futuristic Outlook	NIFTEM, Thanjavoor	09/02/2023 to 10/02/2023

Dr.Aparna Sudhakaran V Assistant Professor Dairy Microbiology	National Virtual Conference on Food & Health Sciences: The Futuristic Outlook	NIFTEM, Thanjavoor	09/02/2023 to 10/02/2023
Dr. Ligimol James Assistant Professor Dairy Microbiology	National Virtual Conference on Food & Health Sciences: The Futuristic Outlook	NIFTEM, Thanjavoor	09/02/2023 to 10/02/2023
Dr. Divya M.P Assistant Professor Dairy Chemistry	Orientation programme for NSS Officers of Kerala Veterinary and Animal sciences University	Organized by Directorate of Entrepreneurship/ Directorate of Students Welfare, KVASU at Academic Staff college, Mannuthy	10/02/2023
Ms. Vandhana P S Teaching Assistant Dairy Technology	35th Kerala science congress	Christian college of Engineering and Technology, KuttikanamPeermade, Idukki	12/02/2023 to 14/02/2023
Mr. Muhammed Riyas P Teaching Assistant Dairy Technology	National Seminar" Indian Dairy Industry: Vision 2030" organised by Dairy Development Department and IDA	VKIDFT Mannuthy	15/02/2023
Ms. Rashmi K G Assistant Professor (Deputation) Dairy Technology	National Seminar" Indian Dairy Industry: Vision 2030" organised by Dairy Development Department and IDA	VKIDFT Mannuthy	15/02/2023
Ms. Divya K B Assistant Professor Dairy Technology	National Seminar" Indian Dairy Industry: Vision 2030" organised by Dairy Development Department and IDA	VKIDFT Mannuthy	15/02/2023

Dr. Divya M.P Assistant Professor Dairy Chemistry	35th Kerala Science Congress	Mar Baselious College, Kuttikanam	12/02/2023 to 14/02/2023
Dr. Indu B Assistant Professor Dairy Chemistry	National Seminar on 'Indian Dairy Industry-Vision 2030'	Organised by Milma, DDD and IDA held at VKIDFT, Mannuthy	15/02/2023
Ms. Smitha J Lukose Assistant Professor Dairy Chemistry	National Seminar on 'Indian Dairy Industry-Vision 2030'	Organised by Milma, DDD and IDA held at VKIDFT, Mannuthy	15/02/2023
Dr. Divya M.P Assistant Professor Dairy Chemistry	National Seminar on 'Indian Dairy Industry-Vision 2030'	Organised by Milma, DDD and IDA held at VKIDFT, Mannuthy	15/02/2023
Dr. Divya M.P Assistant Professor Dairy Chemistry	Azad Sena District level programme officers Training workshop	Organized by State NSS Office, at Govt. Engineering College, Thrissur	28/02/2023
Ms. Rashmi K G Assistant Professor (Deputation) Dairy Technology	Training on "Analytical instrumentation for high quality research in Life sciences"	Academic Staff college, KVASU	08/03/2023 to 21/03/2023
Ms. Smitha J Lukose Assistant Professor Dairy Chemistry	National Seminar on Antimicrobial resistance in Probiotics –A food safety concern	Department of DairyMicrobiology, VKIDFT, Manuthy in association withProbiotic Association of India	28/03/2023
Dr. Divya M.P Assistant Professor Dairy Chemistry	National Seminar on Antimicrobial resistance in Probiotics –A food safety concern	Department of Dairy Microbiology, VKIDFT, Manuthy in association with Probiotic Association of India	28/03/2023
Dr. Dinker Singh Assistant Professor Dairy Technology	National seminar on "Antimicrobial resistance in probiotics"-A food safety concern.	Department of Dairy Microbiology, VKIDFT, Manuthy in association with Probiotic Association of India	28/03/2023

Ms. Rashmi K G Assistant Professor (Deputation) Dairy Technology	National seminar on "Antimicrobial resistance in probiotics"-A food safety concern.	Department of Dairy Microbiology, VKIDFT, Manuthy in association with Probiotic Association of India	28/03/2023
Ms. Divya K B Assistant Professor Dairy Technology	National seminar on "Antimicrobial resistance in probiotics"-A food safety concern.	Department of Dairy Microbiology, VKIDFT, Manuthy in association with Probiotic Association of India	28/03/2023
Dr. Indu.B Assistant Professor Dairy Chemistry	National Seminar on Antimicrobial resistance in Probiotics –A food safety concern	Department of Dairy Microbiology, VKIDFT, Manuthy in association with Probiotic Association of India	28/03/2023

Faculty Achievements:

- Dr. AparnaSudhakaran V, Assistant Professor, Dairy Microbiology secured 1st prize in the National level essay competition conducted by the Department of Economics & statistics, Thrissur, on the occasion of 16th National Statistics Day Celebration held on 16th June 2022
- Dr.DivyaM.P.,Assistant Professor, Department of Dairy Chemistry- Facilitator, Young Innovators Programme (YIP) 2022
- Dr.Divya M.P, Assistant Professor, Department of Dairy Chemistry- Compiler and editor of Annual Research report, KVASU (2022-23)
- Dr. Divya M.P, Assistant Professor, Department of Dairy Chemistry- Served as a resource person in the seminar series on 'A roadmap to resesrch' conducted by St. Theresa's College, Ernakulam on 17/07/2022 and handled a session on 'Review of literature'
- Mrs. Smitha J Lukose, Assistant Professor, Department of Dairy Chemistry acted as coordinator for the training conducted for the staff of VaidyaratnamOushadhaslaPvt.Ltd./Vaidyaratnam Ayurveda Research Institute on 19/07/2022
- Mrs. Smitha J Lukose, Assistant Professor, Department of Dairy Chemistry acted as Chairman of venue/Technical committee of "Refresher programme on continual education for dairy professionals" conducted on 30th September and 1st October 2022.
- Mrs. Smitha J Lukose, Assistant Professor, Department of Dairy Chemistry acted as judge in Sensory evaluation competition conducted as part of the World Food Day Programme-FOODZONE '22- October 2022
- Ms.Rashmi K G, Assistant Professor (Deputation), Dairy Technology- Judge in "FOODSALVATIO'22" – organized by VKIDFT Mannuthy in association with AFSTI and Food Safety Department on 07/06/2022

5. Prospering University Life: Vibrant Campus Experience

Verghese Kurien Institute of Dairy and Food Technology, Mannuthy is known for its vibrant campus life, hosting a variety of cultural and technical events throughout the year. College is the home to several active communities, which cater to a wide range of interests. Students can actively engage in activities such as arts, sports, NSS activities and celebrations such as World Milk Day, National Milk Day, World Food Safety Day, World Food Day and many others.These programmes not only provide avenues for knowledge-sharing and skill development but also contribute to the personal and professional growth of students. The college takes immense pride in the achievements of its students, with many of them earning national-level recognition and awards. These accolades are a testament to the quality of education and opportunities provided by the college. Sports also play a significant role in the college's vibrant atmosphere. The sports team at VKIDFT comprises talented individuals, including university and state players. Students excel in a wide range of sports, including, football, cricket, Shuttle Badminton and many others. The college encourages physical fitness and promotes the importance of a well-rounded education that extends beyond academics. In conclusion, VKIDFT, offers a holistic educational experience. With its rigorous academic curriculum, strong industry connections, excellent placement opportunities, vibrant campus life, and dedicated faculty, the college nurtures the talents of its students and prepares them for successful careers in the field of engineering. The combination of academic excellence, extracurricular activities, and a supportive environment makes VKIDFT a prime choice for aspiring students.

II. EDUCATION, STUDENTS WELLBEING, ENRICHMENT ACTIVITIES

1. Infrastructure created (2022-2023)

Sl No.	Financial Year	Facilities
1	2022-23	Improvement of existing playfield at VKIDFT
2	2022-23	Construction of retaining wall for outdoor sports facilities (Play Field)
3	2022-23	Installation of Various Equipment at Laboratories
4	2022-23	Installation of Desktops, Printers, Laptop and inverter at various departments

2. Scholarships

Sl No	Name of scholarship Number of Students	Number of Students
		2021-22
1	Central sector scholarship	25
2	KVASU Merit cum means Scholarship	3

3	KVASU Merit scholarship	4
4	Other Scholarships	Nil

3. **Hostel and Housing- Dr. Jose Mathew, Dr. Ligimol James**

Ladies Hostel:

- Ladies' hostels of the institute are located at five different sites inside the campus. A totalof 166 students can be accommodated in these facilities. Hostelfacilities are provided to Ph.D., M.Tech. and B.Tech. Food Technology andDairy Technology students

Men's Hostel:

- Men's hostels of the institute are located at two different building inside the campus. A total of 57 students are accommodated in these facilities. Hostel facilities are provided to B.Tech. Dairy and Food Technology students. College Hostels offers comfortable accommodation for male students with modern amenities such as high-speed internet, TV. Room, Reading Room, Drinking water facilities and recreation facilities etc.

4. **Outreach Program**

Internship:

Dairy Technology

2018 Admission **In plant Training** **Training Period - 23.08.2022 – 05.01.2023**		
1	MRCMPU (Milma)	05
2	ERCMPU	04
3	TRCMPU (Milma)	03
4	VERKA	05
5	HATSUN	02
6	NESTLE	02
7	MYMUL	02
8	AMUL FED	02
9	MILKY MIST	03
10	LACTALIS	03
11	CENTRAL DAIRY	01
	Total	**32**

2018 Admission Farm Training Schedule Training Period – 30.11.2022 – 05.01.2023		
1	ULF Farm, Mannuthy	14
2	KLDB Farm, Kulathupuzha	05
3	KLDB Farm, Kolahalamedu	07
4	KLDB Farm, Mattuppetty	04
5	Dhoni	02
	Total	**32**

Food Technology

2018 admission In-plant training Training period - 13/9/2022 to 13/12/2022		
1	Bell foods	1
2	Meat products of India, Koothatukulam	1
3	Milma Thrissur	1
4	Kera Fed, Kollam	1
5	ID fresh foods, Gujarat	1
6	Enjoy Ice creams, Manjery	1
7	7 seas distillery, Thrissur	1
8	ManjllasFoods,Thrissur	3
9	Innovavite foods, Ernakulam	1
10	Hatson, Salem	1
11	Lulu flight kitchen, Kochi	3
12	Star foods, Malapuram	1
13	Palanpur co-operative dairy	3
	Total	**19**

Hands-on-training:

Dairy Technology

- As a part of final year course work of 2017 admission B. Tech Dairy Technology students, Three Days hands on Training programme on preparation of various milk products was conducted from 27/06/2022 to 30/06/2022. 25 farmers from different parts of Kerala participated in the programme. Classes and demonstration on preparation of various products such as Paneer, paneer pickle, set curd and ghee was carried out as part of the training.

Food Technology

- As part of the course requirement of 2018 admission students (B. Tech Food technology programme),

Three-days hands-on training on preparation of various food products was conducted from 27/06/2022 to 30/06/2022. The training conducted at VKIDFT Mannuthy had a participation of 20 people from different parts of the state.

5. **Sports, Physical Education and co- curricular activities**

To maintain the health of the students, various indoor games, outdoor games, fitness centre and recreation facilities are available. The students are trained for inter-collegiate, inter-university, state level and national level competitions in various sports and games events. The practice and coaching sessions are conducted from 06:30 to 08:00 am and 4.30 to 6.30 pm. Recreation facilities are arranged in the college to encage the students during the leisure time. Every year, the students are divided into four groups and interclass sports and games including Badminton, Chess Cricket, Football, Table tennis, Volley ball and Athletics are conducted.

Health and Fitness Programme:

Considering the importance of health and fitness aspects of the whole community of the college, a health and fitness centre that houses modern equipment is set up in the college premises. The facilities are made available to students and faculty during all working days from 6.00 am to 9.00 am in the morning and 4.30 pm to 7.00 pm in the evening.

Sports activities &Achievements:

- Two students Participated in South Zone Interuniversity Football (M) Tournament 2022-2023 held from 23rd to 31st December 2022 organized by University of Calicut, Kerala at JDT College, Calicut.
- Devika Titu (2020-BDM-10) represented KVASU in the All India Inter University Aquatics (Men & Women) Championship 2022-23 conducted from 26th – 29th December 2022 at KISS - Deemed to be University, Bhubaneswar.
- Six Students Participated in South Zone Interuniversity Volleyball (W) Tournament 2022-23 Organized by Mahatma Gandhi University, Kottayam at Pavanatma College Murickassery, Idukki from 27th to 31st December 2022
- Three Students of VKIDFT Mannuthy participated in All India Inter Agricultural Universities Sports and Games Meet-2022-23 held at Chaudhary Charan Singh Haryana Agricultural University, Hisar from 20-24 February 2023

6. **NSS/ NCC**

NSS

The National Service Scheme unit 4 of Verghese Kurien Institute of Dairy and Food Technology, Mannuthy, has been functioning well with so many activities furnishing development of the volunteers as well as the community. There is one unit with 100 volunteers functioning in the college. Volunteers are enrolled from the first- and second-year students. A student volunteer who has completed 240 Hrs of work, and has attended a special camp during the course of two years, is eligible for N.S.S. certificate from the Kerala Veterinary and animal Sciences University. This certificate gives weightage to higher studies, and is an additional qualification for appointment in public service.

The Programme Officer Dr. Jose Mathew gives his best with the support of the Dean, Dr S.N Rajakumar and other faculties of the college. The NSS Unit has successfully completed one more year with more meaningful and community involvement programmes.The programmes are mainly aimed to inculcate the spirit of voluntary work among the volunteers through sustained community interactions and promote personality development. A new unit has been allotted to VKIDFT, Mannuthy with DR. Divya M.P as the Programme Officer. The activities and programmes are focused to identify the needs and problems of campus and community.

Sl. No	Date	Programme	No Of Volunteers
1	26/04/2022	Organized Orientation and Ice Breaking Session- Mr. Muhamed Aksath Rahil [EX VS, NSS CEA & Arise Tutor].	100
2	31/05/2022	celebrated 'World No Tobacco Day and organized poster designing competition	100
3	05/06/2022	celebrated 'The World Environment Day' organized-*plantforfuture*challenge and planted the saplings	80
4	15/06/2022	Conducted awareness programme on snake diversity and its venomous nature named 'പാമ്പറിവ്'	85
5	21/06/2022	Celebrated Yoga Workshop' on International Day of Yoga	100
	29/07/2022	Organized and pledge taking programme in related with Drug Day as part of Nashamukt Bharat Abhiyan	100
6	08/08/2022	Flood relief activities conducted at Flood relief camps where the cattle were relocated due to flooding at Chalakudy and Koratty in Thrissur	15
7	15/08/2022	Celebrated our 76th Independence Day	62
8	03/09/2022	Onam celebrations, we decided to join hands with 'ഓമനിക്കാൻഒരാണക്കാലം' campaign. We distributed the essentials required for onamsadhya to Thanal VMV orphanage	100
9	24/09/2022	Celebrated 'NSS Day' by conducting a Collage Making Competition on the topic 'Dog Attacks on Rise: Man's Best Friend or Foe?'.	45
10	11/10/2022	Organized an Anti-Drug Awareness Quiz Competition in connection with 'ലഹരിവിമുക്തകേരളം' Campaign at the VKIDFT Conference Hall	35
11	26/10/2022	Donated Rs. 11,000/- toe the "WE CARE", Kerala Social Security Mission	50

12	31/10/2022	Celebrated the Rashtriya Ekta Diwas on 31st October 2022 to mark the birth anniversary of Sardar Vallabhai Patel; the Iron man of India by taking the Ekta pledge	100
13	01/11/2022	Organized anti-drug pledge and formed the anti-drug human chain on Kerala Piravi Day, to mark the end of the first phase of the state government's 'No to drugs' campaign.	100
14	02/11/2022	Conducted Fit India Programme for the NSS Volunteers	55
15	21/11/2022	Conducted campus cleanliness drive for 1 hour in the college campus and collected plastic garbage from every nook and corner of the college premises	40
16	27/11/2022	Visited St. Joseph Special School, Peringavu, Thrissur conducted activities and volunteers prepared and served meals for special school children's	22
17	04/01/2023 to 06/01/2023	Organized Foundational Leadership Programme-jointly with Indian Council of Agricultural Research, Heartfulness Education Trust and Heartful campus	100
18	04/01/2023	conducted an Anti-drug awareness program	100
19	24/01/2023	organized a travel brochure-making competition as a part of observing National tourism day	80
20	26/01/2023	celebration of the 74th Republic Day	100
21	10/02/2023 to 15/02/2023	PADAVU Volunteering, Flashmob and Stall work as part of Dairy farmers' meet in Thrissur - "PADAVU" 2023, a State-level dairy farmers' meet,	100

Camps

Sl. No	Date	Programme	No of Volunteers
1	15/05/2022 to 21/05/2022	National Integration Camp scheduled at Mar Baselious College of Engineering, Peermade	1
2	18/05/2022 to 24/05/2022	Two Volunteers participated in the National Integration Camp at Bharathiar University, Coimbatore	2

3	16/06/2022 to 18/06/2022	Nature camp scheduled at Silent Valley Division, Manarkkad	48
4	01/07/2022 to 03/07/2022	State Leadership Camp of NSS Volunteers at Sanadhana Dharma College, Alapuzha	1
5	06/07/2022	Nature camp scheduled at Chimmony Wildlife Sanctuary	49

Competitions:

Sl. No	Date	Programme	No. of Volunteers
1	11/10/2022	District Level Anti-Drug Awareness Quiz Competition on topic "Drug Free Kerala" at Kerala Agricultural University, Vellanikara	3

NCC

The 1(Kerala) Remount and Veterinary Squadron NCC unit located in the Veterinary College, Mannuthy campus is one of its kind in the state. B.Tech (Dairy Technology) students can get trained in this unit for equestrian events.The interested students voluntarily join NCC through university system.

***Training*:** All the cadets of NCC have to undergo training in a session for 40 days in the evening at Mannuthy units. The NCC training is the part time course and is of two years duration for Senior Division and Junior Division Cadets. After two years of training and attending one camp, the cadet is eligible to appear in B certificate examination with 75 % parade attendance. After the 3rd year the cadet is eligible for C certificate examination, if he/she has passed the B-certificate exam and has attended two camps.

***The NCC camps*:** Camps are generally held including:

- Combined Annual Training Camp
- Army Attachment Camp
- NIC Camp etc.

7. **Awards in curricular, extra-curricular/ co- curricular activities**

- Deepa Pauly Chakiath of B. Tech 2017 admission secured 9th Rank (General category) in the ICAR PG Entrance Examination (Dairy Sciences)- 2022
- Aswathi S of B. Tech 2014 admission secured 10th Rank (General category) in the ICAR PG Entrance Examination (Dairy Sciences)- 2022
- Helena Jojo of B. Tech 2017 admission secured the Rank 1696 in GATE 2022
- Sukritha K. of B. Tech 2017 admission secured the Rank 3293 GATE 2022

- Aleena K.S. (2021 Admission PhD)- got selected for ARS (Dairy Chemistry) interview.
- Aiswarya V.G of 2020 M.Tech admission secured 8th Rank (General category) in the ICAR PhD Entrance Examination (Dairy Chemistry)- 2022
- Helna Pious of 2017 M.Tech admission secured 7th Rank (General category) in the ICAR PhD Entrance Examination (Dairy Chemistry)- 2022
- Ambili M.V of 2020 M.Tech admission secured 10th Rank (General category) in the ICAR PhD Entrance Examination (Dairy Technology)- 2022
- Haritha C of 2019 M.Tech admission secured 11th Rank in General category (Category rank-2) in the ICAR PhD Entrance Examination (Dairy Technology)- 2022
- Aswathy V. A. (2021 PhD Dairy Technology) qualified UGC NET with JRF-2022
- Haritha C of 2019 M.Tech admission qualified UGC NET-2022
- Devika Titu (2020-BDM-10) represented KVASU in the All India Inter University Aquatics (Men & Women) Championship 2022-23 conducted from 26th – 29th December 2022 at KISS - Deemed to be University, Bhubaneswar
- Three Students of VKIDFT Mannuthy participated in All India Inter Agricultural Universities Sports and Games Meet-2022-23 held at Chaudhary Charan Singh Haryana Agricultural University, Hisar from 20-24 February 2023
- Mr. Vyshak V L (M.Tech Dairy Chemistry 2020 admission) cleared UGC NET-March 2023
- Ms. Aiswarya S R (M.Tech Dairy Microbiology2020 admission) cleared UGC NET-March 2023
- Mr.Akshay Aravind (M.Tech Scholar) secured 2nd prize in product innovation contest-Seminar on Antimicrobial resistance in probiotics-A food safety concern" jointly organized by Department of Dairy Microbiology, VKIDFT and Probiotic Association of India 2023 on 25th March, 2023 at VKIDFT, Mannuthy

8. **Students Union/ Hostel/ Sports Day Celebrations**

The college is working towards the overall development of the student community. The focus is not merely on the academic development, but the students' physical, mental and social wellbeing are taken care through various organized forums and committees functioning under the College Students Union and with the able guidance of the Dean of the Institute.The Students Union provides the opportunity for every student to learn, express and develop their talent and skill in various arts/cultural and literary, debating as well as sports events. Each of these activities is performed under the banner of various clubs/committees/forums viz., literary & debating, arts club, nature club, sports committee etc. Every forum is led by an elected student representative who has interest, skill and exposure in the relevant field. The students themselves are given opportunity to organize various programmes to express their talents and they are also supported well in participating in the events organized outside the campus, which includes competitions organized at University, District, Regional and State level.

Various activities carried out by the Student's Union during the reporting period are:

Sl. No	Date	Programme
1	23/04/2022	Organized Iftar Meet 2022
2	26/04/2022	Conducted farewell function to outgoing students- 2017 batch
3	01/06/2022	Celebrated World Milk Day
4	07/06/2022	Released wall magazine
5	07/06/2022	Celebrated Food Safety Day
6	14/06/2022	Conducted Interclass athletic meet
7	02/09/2022	Onam Celebration
8	15/10/2022 to 17/10/2022	Foodzone 22 World Food Day
9	31/10/2022	Released College Magazine
10	01/11/2022	Celebrated Kerala Piravi& Dairy Plant Day Programme
11	11/11/2022 to 13/11/2022	Organized short film festival

9. Students Counselling and Placement services

The college has a separate Career Guidance and Placement Cell to provide information to the students on various employment opportunities available. The cell also offers advice, guidance and opportunities available to the students in building up their career. The placement cell maintains a library with books for those aspiring for civil services examination and other competitive examinations organized by various Government, Public Sector and Sponsored Agencies. The cell regularly updates the employment opportunities available, opportunities available for oversees education and employment as well as self- employment opportunities to the students. The placement cell makes arrangements for campus interviews through which many students have secured campus placements in various companies/ organizations of repute in the country and abroad. Placement of students in various Non-Governmental Organizations functioning in the State is also duly taken care. The placement cell arranges for special lectures on Personality Development and Career Prospects for the outgoing student.

10. Corporate relations

Indeed, strong corporate relations can be highly beneficial for an educational institution like VKIDFT in finding Internships and Job Opportunities. Having good corporate relations can lead to opportunities for students to secure internships and jobs at prestigious multinational companies and cooperatives. This not only enhances the students' practical skills but also improves their employability. The outgoing batch has secured internships at prestigious multinational companies like Nestle, Abbott, Cargill, Delmonte, Symega, and Britannia as well as in co-operatives such as AMUL and MILMA. The collaboration with corporations allows the institute to stay updated on industry trends and requirements. This can lead to the development of a curriculum that is more closely aligned with the needs of the dairy industry, ensuring that students receive relevant and up-to-date education. The alumni who have a corporate background and who are experts in the field

have joined VKIDFT by conducting guest lectures and workshops, exposing students to practical insights and knowledge beyond the classroom. Building relationships with corporations also means building a network of industry contacts. This network can be valuable for students seeking mentors, advice, or job connections after graduation. Collaborations with reputable companies can enhance the institute's reputation, making it more attractive to potential students, faculty, and future corporate partners. Overall, maintaining strong corporate relations can help VKIDFT in its mission to provide high-quality education and research in the dairy and food technology field, while also benefiting the industry through knowledge exchange and skilled graduates.

11. Alumni relation

The alumni of the college formed CDST Graduates' Association (CDSTGA) during 2003, providing a comprehensive platform to involve actively in the welfare of college alumni and work to support the milk producers and processors in the state. The alumni of the college are scattered across the globe. Some organizations where our alumni work include AMUL, NDDB, DFRL, Mother Dairy, Cadburys, Reliance Industries, Almarai, Milma etc. and Banking institutions such as SBI, ICICI, HDFC, IOB, PNB, SIB etc. The alumni take active interest in the college and its activities. Activities undertaken during the year 2022-23 are:

- **'Revibe 2022', Refresher Programme on Continual Education for Dairy Professionals:**

  A grant event was conducted by CDST Graduates Association in connection with Annual General Body meeting consist of a Refresher training programme for dairy professional, Alumini connect and a musical night on 30th September and 1st October2022. The programme was inauguarated by Smt. Nirmala Kurien (Daughter of Dr.Verghese Kurien) and the valedictory fuction was inaugurated by Sri.K Radhakrishnan(Honerable minister for Welfare of SC/St). In the Alumini connect Mr.Siby Mon B, Mr. Balachandran MK and Ms. Farzana Bijur lead the sessions

- **State Level Quiz Competition in connection with National Milk Day- 2022**

  In connection with National Milk Day Celebrations, CDST Graduates Association and VKIDFT Students Union 22- 23 jointly organized a State Level Quiz Competition- for School students on 22/11/2022. National Milk Day Message was given by Dr. S. N Rajakumar (Dean, VKIDFT Mannuthy).

- **Intensive Online Crash course:**

  Dairy Graduates Association (CDSTGA) organized online study class for competitive exams in dairy sector.Over 40 active classes were conducted from 5th December 2022 to 24th January 2023, led by experts in dairy, agronomy, extension and animal husbandry. Evening classes were conducted online for one-and-a-half-hour duration.

- **Promo Video release**

  A promo video was made by College of Dairy Science and Technology Graduates Association (CDSTGA) greeting Padav 2023 - State Dairy Meet organized from February 10 to 15 at Mannuthy Veterinary University Campus under the auspices of Dairy Development Department, Government of Kerala. VKIDFT Dean Prof. Dr. SN Rajkumar released the video.

- **Meet The Legend'- Interactive session with Dr.RS Sodhi**

An interactive session with India's Dairy Giant Dr.RS Sodhi was organized by CDST Graduates association and students Union at VKIDFT conference hall on 15/02/2023

12. Students' Performance

Student Details	No. of students in the final year (2022-23)		No. of students passed out (2022-23)	
UG	**DT**	**FT**	**DT**	**FT**
Students admitted	32 (2018 Admn) + 1 (2015 Admn) + 1 (2016 Admn) + 1 (2017 Admn)	19 (2018 Admn)	29 (2018 Admn) + 1 (2015 Admn) + 1 (2016 Admn) + 1 (2017 Admn)	18 (2018 Admn)
PG				
Students admitted	5		5	
PhD				
Students admitted	2		2	

13. Students intake details

Student Intake Details (2022 Admission)

Student Details	No. of students admitted	
UG	**DT**	**FT**
Students admitted	41	18
PG		
Students admitted	7	
PhD		
Students admitted	2	

DEPARTMENT PROFILES

DAIRY TECHNOLOGY

1. Exploring Research Frontiers- Past achievements and current ventures

Ongoing projects:

Year	Name of PI & Depart-ment	Funding Agency	Title of Project	Total Outlay (Lakhs)

2022-23	Dept of Dairy Technology	State	Technological Interventions for improvingsocio economic condition of Dairy entrepreneurs through value addition of Dairy products—-8.25 lakhs	22 (Received 8.25)

Implemented Projects: RSP/22-23/VII-4:

- Technological Interventions for improving socio economic condition of Dairy entrepreneurs through value addition of Dairy products—-8.25 lakhs

Research work for Master's degree M.Tech:

SI No	Name of the student	Admission No.	Name of project	Department
1	Ms. Soumyasree P T	2021-MDM-02	Process standardization for development of herbal dietetic Gujiya	Dairy Technology
2	Ms. Anisha Das	2021-MDM-01	Process standardization of high protein functional cookies for women using composite flour pre mix and casein hydroyl-sates	Dairy Technology

Ph.D. Research Projects

SI No	Name of the student	Admission No.	Name of project	Department
1	Ms. Divya K B	2020-DDM-01	Instant Kaalan-Process optimisation and metabolomic studies	Dairy Technology

Research projects-External students:

Sl. No.	Name of the student & Institution	Title of project	Major Advisor	Department
1	Fousiya Ibrahim M.Voc Food processing and Technology St,Teresascollege Ernakulam	Development of peda incorporated with green gram flour and pumpkin and pumpkin pulp	Ms. Rashmi K G	Dairy Technology
2	NafiyaFazal M.Voc Food processing and Technology St,Teresas college Ernakulam	Development of Ready to reconstitute breakfast smoothie powder mix	Ms. Divya K B	Dairy Technology

3	Sreelakshmi M N M.Voc Food processing and Technology St,Teresas college Ernakulam	Process Standardization for development of Sambharam	Dr. Dinker Singh	Dairy Technology
4	Nayana M N M.Sc Food science and Technology Thara nanellur Arts and Science College,Thanissery, Irinjalakkuda	Process standardization for development of ready to eat symbiotic sambharam	Dr. Dinker Singh	Dairy Technology
5	Namitha Rajesh M.Sc Food science and Technology Thara nanellur Arts and Science College,Thanissery, Irinjalakkuda	Process standardization for development of symbiotic sambharam	Dr. Dinker Singh	Dairy Technology

Noteworthy attainments in Science and Technology

- Development of a ready to reconstitute breakfast smoothie powder mix
- Development of ready to eat symbiotic sambharam
- Development of peda incorporated with green gram flour, pumpkin and pumpkin pulp

2. Academic Manuscripts, Investigative Pursuits, Widely- read articles, Literary Volumes and Technical Documents, Details of research papers published

Research article:

- **Rashmi K. G** and Sniya Varghese.2022. Optimization and preparation of whey based diabetic cookies by incorporation of sucralose. The Pharma Innovation 2022:411-414.
- Ajmi, S. S., **Rajakumar, S. N., Divya, K. B**., Aysha, C. H. and Aparna, S. V. 2022. Study on effect of refrigerated storage on physicochemical, microbiological and sensory attributes of lutein incorporated calcium and vitamin D fortified Shrikhand. J. Vet. Anim. Sci. 53(3): 356-362
- Divya G. N, **Rashmi K G**, P Sudheerbabu and **S N Rajakumar**,(2022). A comparative study on dahi powder prepared from spray dried and vaccum tray dried process. The Pharma Innovation 2022:427-430

- Beena R. L, **Rajakumar S .N**, Sudheerbabu P, Beena A. K, Dvya M .P, Athira S, and Purushothaman S(2022). Development of high protein composite flour pre mix for women using response surface methodology. Indian jiurnal of Nutrition (9)2-2022
- S Archana, **KB Divya, SN Rajakumar** and PS Babu(2023) .Development and characterisation of yoghurt incorporated with Dates(Phoenix Dactylifera Linn) extract. Indian J Dairy Sci 76(2): 114-120
- Ambili M.V, Dinker S., **Rajakumar S.N**., Beena R.L., Rejeesh R., James,L., Rashmi K.G.and Divya K.B. 2023. Shelf Life and Storage Studies on the Sensory Attributes of Dietetic Herbal Rasmalai. Environment and Ecology 41 (1A): 321—325.
- Vyshak,V.L., Rahila,M.P., Faisal,I., Lukose,S.J., Divya,M.P., Sudhakaran,A. and **Rajakumar,S.N**. 2023. Extraction and characterization of nutmeg (Myristicafragrans) fruit pericarp essential oil to utilize as a surface coating material to improve the shelf life of paneer. J. Vet. Anim. Sci. 54(1): 144-152
- Aiswarya,V.G., Rachana,C.R., Rejeesh,R., Aiswarya,S.P., **Rajkumar,S.N**., Divya,M.P. and Rahila,M.P. 2023. Effect of differential heat treatments on antibacterial activity of fermented goat milk. J. Vet. Anim. Sci. 54(1):105-114

Books: Contributed in the book:

- **Ms. Jithu Rappai**- Book chapter –Chapter 2-Pathogenesis of Listeria monocytogenes- "Microbiology Research Advances" –
- Book title: Phytochemicals and Medicinal plants in Food design –Chapter- Gut microbiota-specific food design written by Aparna V Sudhakaran and Himanshi Solanki- Apple academic press publishers- May 2022

3. Consultancy and Public Advocacy

- In person -15
- Over telephone -3

4. Unveiling Human Resources: Unlocking Potential and Pursuits

- **Training Program/ Short courses/ Any other program organized (details from each department)**

➢ As a part of final year course work of 2017 admission B. Tech Dairy Technology students, Three Days hands on Training programme on preparation of various milk products was conducted from 27/06/2022 to 30/06/2022. 25 farmers from different parts of Kerala participated in the programme. Classes and demonstration on preparation of various products such as Paneer, paneer pickle, set curd and ghee was carried out as part of the training

➢ Farmers contact programme was conducted as part of Farmers Day at Cherumkuzhy Milk Co-operative Society on 17/08/2022. 40 farmers participated in the event. The class on thetopic "Value added Milk products" was handled by Ms. Divya K.B, Assistant Professor,Department of Dairy Technology."

- Training II - "Capacity building of Tribals of Vaniyampara,Thrissur district through Hands on Training in value added milk products"- KVASU in collaboration with ICAR –Central coastal Agriculture research institute- 26/10/2022

5. Other Academic activities

External Examiner/ Question paper Setter:

- Dr. S N Rajakumar, Professor and Head, Dairy Technology evaluated PhD thesis entitled by "Development of extruded functional reconstituted skim milk paneer" by Mr. Kushal Solanki, Dairy Science College , Hebbal, Bangalore) on 23/06/2022
- Ms. Divya K B, Assistant Professor, Dairy Technology as Question Paper setter: for the subject "Food Technology I" PVNRTVU, Hyderabad 30/07/2022
- Dr. S N Rajakumar, Professor and Head, Dairy Technology evaluated PhD thesis entitled by "Evaluation of dipeptidyl peptidase IV inhibitory potential of hydrolysate of β- and k- casein isolated from Gir cow milk" by Harshita Sonarthi, ICAR-National Research Institute, Bengaluru – August 2022
- Dr. S N Rajakumar, Professor and Head, Dairy Technology evaluated PhD thesis entitled by "Development of ricotta cheese with extended shelf life from cow milk system" by Shelke Prashant Ashok on 20/10/2022
- Dr. S.N Rajakumar- M.Tech thesis examiner- Utilization of dairy by products (paneer whey) for development of Low-calorie whey Lassi. Dairy Science college, Hebbal, Bengalore
- Ms. Divya K B, Assistant Professor, Dairy Technology as Question Paper setter: for the subject "By products Technology" PVNRTVU, Hyderabad

Reviewer of journal:

- Ms. Divya K B, Assistant Professor, Dairy Technology reviewed the articles for Indian Journal of Dairy Science on 07/12/2022

6. Other Extension activities

- Mr. Mohammed Riyas P,Teaching Assistant, Dairy Technology served as programme coordinator for organizing programs of World Milk Day celebrations 2022 on 01/06/2022
- Ms.Rashmi K G, Assistant Professor (Deputation), Dairy Technology served as Memberof organizing committee of two day" Workshop on cheese Technology: Cheddar and Ricotta" as a part of Brain Gain Programme, KVASU in collaboration with KSCHE at VKIDFT Mannuthy from 22/07/2022 to 23/07/2022
- Dr. Dinker Singh, Assistant Professor, Dairy Technology served as Member of organizing committee of two day" Workshop on cheese Technology: Cheddar andRicotta" as a part of Brain Gain Programme, KVASU in collaboration with KSCHE at VKIDFT Mannuthy from 22/07/2022 to 23/07/2022
- Ms. Divya K.B, Assistant Professor, Dairy Technology served as Member of organizing committee of two day "Workshop on cheese Technology: Cheddar and Ricotta" as apart of Brain Gain Programme,

KVASU in collaboration with KSCHE at VKIDFTMannuthy from 22/07/2022 to 23/07/2022

- Mr. Muhammed Riyas P, Teaching Assistant, Dairy Technology served as Member of organizing committee of two day "Workshop on cheese Technology: Cheddar andRicotta" as a part of Brain Gain Programme, KVASU in collaboration with KSCHE atVKIDFT Mannuthy from 22/07/2022 to 23/07/2022
- MsJithu Rappai, Teaching Assistant, Dairy Technologyserved as Member of organizing committee of two day "Workshop on cheese Technology: Cheddar and Ricotta" as a partof Brain Gain Programme, KVASU in collaboration with KSCHE at VKIDFT Mannuthy from 22/07/2022 to 23/07/2022
- Ms. Vandhana P.S, Teaching Assistant, Dairy Technology served as Member of organizing committee of two day "Workshop on cheese Technology: Cheddar and Ricotta" as a part of Brain Gain Programme, KVASU in collaboration with KSCHE at VKIDFT Mannuthy from 22/07/2022 to 23/07/2022
- Ms Gloria Jacob, Teaching Assistant, Dairy Technology served as Member of organizing committee of two day "Workshop on cheese Technology: Cheddar and Ricotta" as a partof Brain Gain Programme, KVASU in collaboration with KSCHE at VKIDFT Mannuthy from 22/07/2022 to 23/07/2022
- Ms Haritha C, Teaching Assistant, Dairy Technologyserved as Member of organizing Committee of two day "Workshop on cheese Technology: Cheddar and Ricotta" as a part of Brain Gain Programme, KVASU in collaboration with KSCHE at VKIDFT Mannuthy from 22/07/2022 to 23/07/2022
- Ms. Divya K B, Assistant Professor, Dairy Technology, as resource person for the training "Capacity building of Dairy farmers through preparation of value-added dairy products"on 19/08//2022
- Ms.Rashmi K G, Assistant Professor (Deputation), Dairy Technology served as guestfaculty of "Capacity building of tribals of Vaniyampara, Thrissur district through Hands on training in value added milk products" under the project "establishment ofFPO/SHG/CO for augmenting income of Tribal farmers of Kerala under financialassistance of ICAR scheduled tribe components at VKIDFT, Mannuthy, Thrissur organized by ICAR-CCARI, Ella,Goa in collaboration with KVASU Pookode on19/09/2022& 20/09/2022
- Dr. Dinker Singh, Assistant Professor, Dairy Technology served as guest faculty of "Capacity building of tribals of Vaniyampara, Thrissur district through Hands on training on value added milk products" under the project "establishment of FPO/SHG/CO foraugmenting income of Tribal farmers of Kerala under financial assistance of ICARscheduled tribe components at VKIDFT, Mannuthy, Thrissur organized by ICAR-CCARI, Ella,Goa in collaboration with KVASU, Pookode on 19/09/2022& 20/09/2022
- Ms. Divya K.B, Assistant Professor, Dairy Technology served as guest faculty of "Capacity building of tribals of Vaniyampara, Thrissur district through Hands on training in value added milk products" under the project "establishment of FPO/SHG/CO foraugmenting income of Tribal farmers of Kerala under financial assistance of ICARscheduled tribe components at VKIDFT, Mannuthy, Thrissur organized by ICAR-CCARI, Ella,Goa in collaboration with KVASU, Pookode on 19/09/2022 & 20/09/2022
- Mr. Muhammed Riyas P, Teaching Assistant, Dairy Technology served as guest faculty of "Capacity building of tribals of Vaniyampara, Thrissur district through Hands ontraining in value added milk

products" under the project "establishment of FPO/SHG/CO for augmenting income of Tribal farmers of Kerala under financial assistance of ICAR scheduled tribe components at VKIDFT, Mannuthy, Thrissur organized by ICAR-CCARI, Ella, Goa in collaboration with KVASU, Pookode on 19/09/2022& 20/09/2022

- Ms Gloria Jacob, Teaching Assistant, Dairy Technology served as guest faculty of "Capacity building of tribals of Vaniyampara, Thrissur district through Hands on trainingin value added milk products" under the project "establishment of FPO/SHG/CO foraugmenting income of Tribal farmers of Kerala under financial assistance of ICARscheduled tribe components at VKIDFT, Mannuthy, Thrissur organized by ICAR-CCARI, Ella, Goa in collaboration with KVASU, Pookode on 19/09/2022 & 20/09/2022
- Ms Jithu Rappai, Teaching Assistant, Dairy Technology served as guest faculty of "Capacity building of tribals of Vaniyampara, Thrissur district through Hands on trainingin value added milk products" under the project "establishment of FPO/SHG/CO foraugmenting income of Tribal farmers of Kerala under financial assistance of ICAR scheduled tribe components atVKIDFT, Mannuthy, Thrissur organized by ICAR-CCARI, Ella,Goa in collaboration with KVASU, Pookode on 19/09/2022& 20/09/2022
- MsVandhana P.S, Teaching Assistant, Dairy Technology served as guest faculty of "Capacity building of tribals of Vaniyampara, Thrissur district through Hands on trainingin value added milk products" under the project "establishment of FPO/SHG/CO foraugmenting income of Tribal farmers of Kerala under financial assistance of ICARscheduled tribe components at VKIDFT, Mannuthy, Thrissur organized by ICAR-CCARI, Ella,Goa in collaboration with KVASU, Pookode on 19/09/2022& 20/09/2022
- Ms Haritha C, Teaching Assistant, Dairy Technology served as guest faculty of "Capacity building of tribals of Vaniyampara, Thrissur district through Hands on training in value added milk products" under the project "establishment of FPO/SHG/CO foraugmenting income of Tribal farmers of Kerala under financial assistance of ICARscheduled tribe components at VKIDFT, Mannuthy, Thrissur organized by ICAR-CCARI, Ella,Goa in collaboration with KVASU, Pookode on 19/09/2022& 20/09/2022
- Ms. Rashmi K G, Assistant Professor (Deputation), Dairy Technology served as Member of organizing committee of "Refresher Programme on Continual Education for Dairy Professionals" organized by CDSTGA with VKIDFT from 30/09/2022 to 01/10/2022
- Dr. Dinker Singh, Assistant Professor, Dairy Technology served as Member of organizing committee of "Refresher Programme on Continual Education for Dairy Professionals" organized by CDSTGA with VKIDFT from 30/09/2022 to 01/10/2022
- Mr. Mohammed Riyas P,Teaching Assistant, Dairy Technology served as coordinator of programme committee of "Refresher Programme on Continual Education forDairy Professionals" organized by CDSTGA with VKIDFT from 30/09/2022 to 01/10/2022
- Ms.Rashmi K G, Assistant Professor (Deputation), Dairy Technology served as Convenor for organizing World Food Day programmes--Sensage -FOODZONE -22 organized by VKIDFT students union and Kerala Food Safety Department at VKIDFTMannuthy from 15/10/2022 to 17/10/2022

- Mr. Mohammed Riyas P,Teaching Assistant, Dairy Technology served as Convenor for organizing World Food Day programmes-Food Buzz Quiz -FOODZONE -22organized by VKIDFT students union and Kerala Food Safety Department at VKIDFT Mannuthy from 15/10/2022 to 17/10/2022
- Ms.Gloria Jacob,Teaching Assistant, Dairy Technology served as Convenor for organizing World Food Day programmes-Sensage -FOODZONE -22organized by VKIDFT students union and Kerala Food Safety Department at VKIDFTMannuthy from 15/10/2022 to 17/10/2022
- Ms.Vandhana P S,Teaching Assistant, Dairy Technology served asJudge in Sensory Evaluation competitionconducted as part of World Food Day programmes FOODZONE -22organized by VKIDFT students union and Kerala Food Safety Department at VKIDFTMannuthy from 15/10/2022 to 17/10/2022
- Mr. Mohammed Riyas P, and Ms. Haritha C Teaching Assistants, Dairy Technology served as resource person for the Ksheerasankamam-Alangad on 26/11/2022 and handled a session on "Value added Dairy Products".
- Dr. S.N. Rajakumar, Dean, VKIDFT Mannuthy served as Course Director of Hands- on training programme on "Preparation of Milk products for small scale enterprises" as a part of "Technology Management development Programme" Organized by KVASU in association with Department of Industries and commerce at VKIDFT, Mannuthy from 15/12/2022 to 28/12/2022
- Ms. Rashmi K G, Assistant Professor (Deputation), Dairy Technology served as Co-ordinator and Resource person of Hands-on training programme on "Preparation of Milk products for small scale enterprises" as a part of "Technology Management development Programme" Organized by KVASU in association with Department of Industries andcommerce at VKIDFT, Mannuthy from 15/12/2022 to 28/12/2022
- Ms.Divya K.B, Assistant Professor, Dairy Technology served as Co-ordinator and Resource person of Hands on training programme on "Preparation of Milk products forsmall scale enterprises" as a part of "Technology Management development Programme"Organized by KVASU in association with Department of Industries and commerce atVKIDFT, Mannuthy from 15/12/2022 to 28/12/2022
- Dr. Dinker Singh, Assistant Professor, Dairy Technology served as Co-ordinator and Resource person of Hands-on training programme on "Preparation of Milk products forsmall scale enterprises" as a part of "Technology Management Development Programme" Organized by KVASU in association with Department of Industries and commerce atVKIDFT, Mannuthy from 15/12/2022 to 28/12/2022
- Mr. Muhammed Riyas P, Teaching Assistant, Dairy Technology served as Resource person of Hands-on training programme on "Preparation of Milk products for small scale enterprises" as a part of "Technology Management development Programme" Organized by KVASU in association with Department of Industries and commerce at VKIDFT,Mannuthy from 15/12/2022 to 28/12/2022
- Ms. Gloria Jacob, Teaching Assistant, Dairy Technology served as Resource person of Hands-on training programme on "Preparation of Milk products for small scaleenterprises" as a part of "Technology Management development Programme" Organizedby KVASU in association with Department of Industries and commerce at VKIDFT,Mannuthy from 15/12/2022 to 28/12/2022
- Ms. Haritha C, Teaching Assistant, Dairy Technology served as Resource person of Hands-on training

programme on "Preparation of Milk products for small scaleenterprises" as a part of "Technology Management development Programme" Organized by KVASU in association with Department of Industries and commerce at VKIDFT,Mannuthy from 15/12/2022 to 28/12/2022

- Ms. Jithu Rappai, Teaching Assistant, Dairy Technology served as Resource person of Hands-on training programme on "Preparation of Milk products for small scale enterprises" as a part of "Technology Management development Programme" Organizedby KVASU in association with Department of Industries and commerce at VKIDFT,Mannuthy from 15/12/2022 to 28/12/2022
- Ms. Ambili M.V, Teaching Assistant, Dairy Technology served as Resource person of Hands-on training programme on "Preparation of Milk products for small scaleenterprises" as a part of "Technology Management development Programme" Organized by KVASU in association with Department of Industries and commerce at VKIDFT,Mannuthy from 15/12/2022 to 28/12/2022
- Ms. Divya K.B., Assistant Professor, Dairy Technology handled a session in Madhyama seminar conducted in association with state ksheerasangamam on 10/02/2023

DEPARTMENT OF DAIRY ENGINEERING

1. **Exploring Research Frontiers- Past achievements and current ventures**

Completed past plan projects:

- Application of Solar energy for the Preparation of Heat DesiccatedTraditional Indian Milk Products
- Generation of fuel from Plastic Packaging Wastes from DairyIndustry
- Estimation of Thermal Properties of Milk and Milk Productsavailable in Kerala
- Strengthening of laboratories in Dairy engineering department

2. **Academic Manuscripts, Investigative Pursuits, Widely- read articles, Literary Volumes and Technical Documents, Details of research papers published**

- P R Amulya, Rayees UlIzalm. (2023). Optimization of enzyme assisted extraction of anthocyanins from egg plant peel, Food Chemistry X

DAIRY CHEMISTRY

1. **Exploring Research Frontiers- Past achievements and current ventures**

Various research projects including State Plan, External aided projects and student research projects are being undertaken at the College. The department also offers facilities and guidance for students from other universities in research projects as part of their post graduate programme.

Past achievements:

- **Developed a Technique for Detection of presence of Cow milk in Goat milk**

A rapid platform test was developed for the detection of presence of cow milk in goat Milk

- **Developed adulteration test strips for milk**

  Two different test strips were developed for the detection of neutralizers and glucose in milk

- Determination of safe extent of different cooking oils on repeated heating

Current ventures:

Details of research projects:

Name of Project	Funding Agency	Name of PI	Outlay (Rs.) lakhs
Modification of Milk components to increase the bio availability and nutritive value of Milk based products (RSP/22-23/VII-3)	Kerala State	Dr. Divya M.P	23 Lakhs

Research work for Master's degree M.Tech:

SI No	Name of the student	Admission No.	Name of project	Department
1	Reji A J	2020-MDM-04	Technological characterization offunctional paneer prepared from buffalo milk treated with β - cyclo-dextrin and thyme essential oil.	Dairy Chemistry
2	Aiswarya K Vijayan	2021-MDM-03	Effect of Plectranthusamboinicus on oxidative stability of Vechur ghee	Dairy Chemistry
3	Divya Valsan	2021-MDM-04	Process optimization for flavor enhancement of ghee	Dairy Chemistry

Ph.D. Research Projects:

SI No	Name of the student	Admission No.	Name of project	Department
1	Ms. Smitha J Lukose	2020-DDM-03	Formulation of hypoallergenic whey protein supplement with enhanced iron bioavailability	Dairy Chemistry

Research projects-External students:

Sl. No.	Name of the student&College	Name of Advisor	Title of project	Department
1	Nijin C School of health sciences, university of Calicut	Dr. Divya M.P	Effect of incorporation of chia seed powder and ash gourd crude fiber in physicochemical properties of stirred yoghurt	Dairy Chemistry
2	Fathimath Raseena K T School of Health Sciences, University of Calicut	Ms.Smitha J Lukose	Development and quality assessment of yoghurt incorporaated with banana pseudostem sap	Dairy Chemistry
3	Sibin K S School of Health Sciences, University of Calicut	Ms.Smitha J Lukose	Development of value added yoghurt incorporated with Palmyra fruit	Dairy Chemistry
4	Maziya, St.Teresa's College, Ernakulam	Dr. Divya M.P	Comparative evaluation of processing changes in ghee and vanaspati during repeated high heat frying	Dairy Chemistry
5	Vrindha Vinoj, St.Teresa's College, Ernakulam	Dr. Indu.B	Chemical composition and amino acid profile of paneer and whey from buffalo milk	Dairy Chemistry
6	Sradha Prabhakaran, St.Teresa's College, Ernakulam	Ms.Smitha J Lukose	Physicochemical properties and storage stability of milk fortified with Whey protein concentrate (WPC) – Iron complex.	Dairy Chemistry

7	Devika Sudhevan MSc Food Technology and Quality assurance St George's College Kottyam	Dr.Divya M.P.	Methods to reduce granule separation in ghee	Dairy Chemistry
8	Lakshmi Jayachandran MSc Food Technology and Quality assurance St George's College Kottyam	Ms.Smitha J Lukose	Effect of iron fortification oncoagulation efficiency of thermophilic curd and physicochemical properties of lassi prepared from fortified curd	Dairy Chemistry
9	Divya M.S. MSc Food Technology and Quality assurance St George's College Kottyam	Ms.Smitha J Lukose	Effect of iron fortification on storage stability of iron fortified peda	Dairy Chemistry
10	Anjana M R Tharananellur Arts and Science College, Thanissery, Irinjalakkuda	Dr. Indu B	Preparation of Biscuits by incorporating Ghee Residue and Studying its physico chemical properties	Dairy Chemistry
11	Keerthi S Rajesh Tharananellur Arts and Science College, Thanissery, Irinjalakkuda	Dr. Indu B	Development of Kulfi incorporated with Hibiscus Flower	Dairy Chemistry
12	Amaniya K S Tharananellur Arts and Science College, Thanissery, Irinjalakkuda	Dr. Indu B	Standardisation of Instant coffee powder partially substituted with date seed powder	Dairy Chemistry

13	Sreelakshmi.M.S School of Health Science, Calicut University Campus	Dr. Indu B	Development of milk and walnut based spread enriched with millet	Dairy Chemistry
14	Ammu Lofyraj School of Health Science, Calicut University Campus	Dr. Indu B	Development of nutrient rich Horchata with poongar Rice	Dairy Chemistry
15	Lisna Solomon School of Health Science, Calicut University Campus	Dr. Indu B	Development of millet based breakfast formulation enriched with pumpkin seed	Dairy Chemistry

2. Noteworthy attainments in Science and Technology

- Fortification of milk and milk-based products to suit the nutritional needs of specific targeted population
- Development of test strips for the detection of adulterants in milk and milk products
- Modification of Milk fat/lipids to suit the consumer demands

3. Academic Manuscripts, Investigative Pursuits, Widely- read articles, Literary Volumes and Technical Documents, Details of research papers published

Research articles:

- **Indu.B,** H.M. Jayaprakasha, Prabha. R, B.P.Pushpa. 2022. Effect of fractionation on the physicochemical properties and on the storage stability of Mysore Pak. International Research Journal of Modernization in Engineering Technology and Science. 4(5)3029-3037
- **Indu B,** ***H.M.*** Jayaprakasha, Jayashri P Hiremath, B.P. Pushpa.May 2022. Effect of fractionation on the physicochemical properties and the storage stability of Unniyappam. International Journal of Food Science &Technology. 12(1)7-16.
- Arshath, M., Rahila, M. P., Divya, M. P., **Smitha, J. L.,** Athira, S and Sudheer babu. 2022.Curry leaf (Murrayakoeneigii) extract as a natural source of antioxidants for enhancing the oxidative and thermal stability of ghee.Journal of Veterinary and Animal Sciences53 (3): 450-457.https://doi.org/10.51966/jvas.2022.53.3.450-457
- **Dr. Indu B,** Assistant Professor- The editorial article on 'The significance of Dairy fat' - Acta Scientific Veterinary Sciences (ISSN: 2582-3183) Volume 5 Issue 1 January 2023
- Rose, H., Bakshi, S., Kanetkar, P., **Lukose, S. J**., Felix, J., Yadav, S. P., Gupta , P. K. & Paswan, V. K. (2023). Development and Characterization of Cultured Buttermilk Fortified with Spirulina plantensis and Its Physico-Chemical and Functional Characteristics. *Dairy*, *4*(2), 271-284.

- Vyshak,V.L., Rahila,M.P., Faisal,I., Lukose,S.J., **Divya,M.P.,**Sudhakaran,A. and Rajakumar,S.N. 2023. Extraction and characterization of nutmeg (Myristica fragrans) fruit pericarp essential oil to utilize as a surface coating material to improve the shelf life of paneer. J. Vet. Anim. Sci. 54(1): 144-152

- **Indu,B**. and Jaiprakasha, H. M. (2023). Effect of Fractionation on the Composition, Physico-Chemical Properties, and Oxidative Stability Index of HF Ghee. International Journal of Livestock Research, 13 (2), 15-27

- Vishnu Suresh ., Ligimol James., A. K. Beena.,V. Aparna Sudhakaran and **M. P. Divya** .2023 Isolation, Identification and Characterization of Thermoduric Psychrotrophic Bacteria from Market Samples of Pasteurized Milk Collected from Mannuthy, Kerala State, India. Asian Food Science Journal. 22(4), Page 10-23.

- Anupama, M.,, Dharani Kumar, M**., Divya, MP.,** Davuddin Baig and Beena, AK. (2023). Storage studies on *Low calorie burfi* incorporated with *Sucralose* and *Costusspeciosus* extract**.** Indian Journal of Dairy Science 76(3)

- Rose, H., Bakshi, S., Kanetkar, P**., Lukose, S. J**., Felix, J., Yadav, S. P., ... & Paswan, V. K.(2023). Development and Characterization of Cultured Buttermilk Fortified with Spirulina plantensis and Its Physico-Chemical and Functional Characteristics. *Dairy*, *4*(2), 271-284.

Oral presentations and full paper

- **Dr. Indu B-** Oral presentation on "An effective method to reduce the cholesterol content in Mysore Pak and the assessment of the modified product for other physicochemical attributes" in the 108th Indian Science Congress held on 3- 7 January 2023.

Abstracts presented in national and international seminars

- Development of a technique to detect the presence of cow milk in goat milk VandhanaP.S, **Divya M.P.**35th Kerala Science Congress 10-14 February 2023

- Comparative study of Safety aspects of ghee and other cooking oils on repeated frying –Aleena K.S, **Divya M.P**., 35th Kerala Science Congress 10-14 February 2023

Popular articles:

- പാലിലെ കൊഴുപ്പിനെയും കൊഴുപ്പിതര ഖരപദാർത്ഥങ്ങളെയും ബാധിക്കുന്ന ഘടകങ്ങൾ ഒരു അവലോകനം- **Divya M.P** Ksheerasangamam compendium- February 2023

4. Tech[1]nological Advancements Crafted and Transmuted

5. Consultancy and Public Advocacy

Department of Dairy Chemistry is providing Consultancy services to entrepreneurs and farmers in various areas of quality maintenance. Regular queries are answered by the experts of the department regarding chemical quality analysis of milk and milk products, calibration of laboratory glasswares as well as setting up of a quality control lab. Direct consultation as well as consultation over telephone is offered by the department.

6. Unveiling Human Resources: Unlocking Potential and Pursuits

- **Training Program/ Short courses/ Any other program organized**

  - **Training programme organized for staff of Vaidyaratnam Ayurveda Research Institute on 19/07/2022:**

Dairy Chemistry Department of Verghese Kurien Institute of Dairy and Food Technology

organised a training programme for the staff of Vaidyaratnam Ayurveda Research on 19/07/2022. The training covered theory and practical sessions on composition of milk as well as quality analysis of milk and milk products. A team of five members including representatives from R&D, Quality Assurance and Quality Control Departments of Vaidyaratnam Ayurveda Research participated in the training programme. Dr. Divya M.P (Assistant Professor, Department of Dairy Chemistry), Ms. Indhu B (Assistant Professor, Department of Dairy Chemistry) and Ms. Smitha J Lukose (Assistant Professor, Department of Dairy Chemistry) handled the sessions.

7. Beyond the horizons: Exploring other activities

Department of Dairy Chemistry has a fully functioning milk testing lab which offers its service to public for quality analysis of milk and milk products and calibration of laboratory glasswares. The faculty of the department is also providing consultancy service to the entrepreneurs and farmers. 64 samples (milk and various milk products) were analysed during the reporting period.

8. Other Academic activities

External examiner/ Question paper setter:

- **Dr.DivyaM.P**,Assistant Professor, Department of Dairy Chemistry- External examiner, for conducting vocational practical examination of VHSE students in DPEO on 07/07/2022 at GVHSS Ayyanthole
- **Dr. Divya M.P,** Assistant Professor, Department of Dairy Chemistry**-** External question paper setter for Kerala University of Fisheries and Ocean Studies, December 2022
- **Dr. Divya M.P,** Assistant Professor, Department of Dairy Chemistry**-** External question paper setter for Dairy Science College, Hebbal, Bengaluru-24/01/2023
- **Dr. Divya M.P,**Assistant Professor, Department of Dairy Chemistry**-** External question paper setter for Dairy Science College, Mahagaon Cross, Kalaburagi, January 2023

Reviewer:

- **Dr.Divya M.**P, Assistant Professor, Department of Dairy Chemistryacted as a reviewer for Scientific Reports -May, 2022
- **Dr Indu B,**Assistant Professor, Department of Dairy Chemistry acted as Reviewer of ARCC

journals- 2023

- **Ms. Smitha J Lukose**, Assistant Professor, Department of Dairy Chemistry acted as reviewer of provisional answer key of exam conducted by Kerala PSC on 17/02/2023
- **Dr.Divya M.P**. Assistant Professor,Department of Dairy Chemistry acted as reviewer of provisional answer key of exam conducted by Kerala PSC on 17/02/2023

Internship programme:

- One month internship programme was provided to Ms. Swahila K.A. of Central University, Tamilnadu in the Department of Dairy Chemistry from 01/07/2022 to 31/07/2022

9. Other Extension activities

- **Ms. Smitha J Lukose**, Assistant Professor. Dairy Chemistry- took class for the trainees from Dairy Development Department held on the importance of quality control and adulteration of milk on 04/05/2022
- **Dr. Indu B**, Assistant Professor, Department of Dairy Chemistry- Served as Training Coordinator for Students' Extension Training Programme from July 4 to 12, 2022
- **Mrs. Smitha J Lukose,** Assistant Professor, Department of Dairy Chemistry acted as resource person for the training for the staff of VaidyaratnamOushadhaslaPvt.Ltd./Vaidyaratnam Ayurveda Research Institute on 19/07/2022 and handled the topic Chemical quality of milk and milk fat properties
- **Ms. Smitha J Lukose**, Assistant Professor,Department of Dairy Chemistry- took class for the trainees from Dairy Development Department held on the importance of quality control, sampling, calibration, adulteration of milk on 30/07/2022
- **Dr. Indu B**, Assistant Professor, Department of Dairy Chemistry- Attended Farmers Training Programme on 17thAugust 2022 conducted as part of Farmers Day at Cherumkuzhi APCOS
- **Ms. Smitha J Lukose**, Assistant Professor,Department of Dairy Chemistry- Chairman, technical committee of 'Refresher programme on continual education for dairy professionals' conducted on 30thSeptember and 1st October, 2022
- **Mrs. Smitha J Lukose**, Assistant Professor, Department of Dairy Chemistry acted as resource person of hands-on training programme on "Preparation of milk products for small scale enterprises" as a part of "Technology management development programme" organized by KVASU in association with Department of Industries and commerce from 15/12/2022 to 28/12/2022
- **Dr. Indu B**, Assistant Professor, Department of Dairy Chemistry- Acted as Faculty Coordinator for the successful conduct of the State Ksheerasangamam from 10-15th of February 2023
- **Dr. Indu B**, Assistant Professor, Department of Dairy Chemistry- Acted as Faculty Coordinator in the professional student summit held at Adlux convention centre, Angamaly on 11th February,

2023

- **Dr. Indu B**, Assistant Professor, Department of Dairy Chemistry- Acted as moderator of the interactive session "Current problems perceived on milk quality in Kerala" in the National Seminar on 'Indian Dairy Industry- Vision 2030' Organised by Milma, DDD and IDA on 15/02/2023

DEPARTMENT OF DAIRY MICROBIOLOGY

1. **Exploring Research Frontiers- Past achievements and current ventures**

External aidedprojects:

Sl No	Year	Principal Investigation officer	Funding Agency	Title of the project	Total outlay (Rs)
1	2022	Dr. A.K Beena Head, Department of Dairy Microbiology	KSCSTE – Student Project	Milk as a reservoir of Multiple Drug Resistant bacteria – An assessment	10000
2	2022	Dr.Ligimol JamesAssistant professor Department of DairyMicrobiology	KSCSTE – Student Project	Post pasteurization contaminating bacteria as shelf life determinants of pasteurized milk	10000
3	2022	Dr.Aparna Sudhakaran-VAssistant Professor Department of Dairy Microbiology	KSCSTE – Student Project	Microbiological quality profiling of pasteurized milk during refrigerated storage	10000
4	2022-23	Dr. A.K Beena Professor & Head Department of DairyMicrobiology	Kerala State	Multidisciplinary approach to combat concealed threats in dairy food chain- plan project 2022-2023-RSP/22-23/VII-2	22
5	2022-23	Dr. A.K Beena Professor & Head Department of DairyMicrobiology	Kerala State	Revolving fund starter culture	0.5

Research work for Master's degree M.Tech:

Sl. No	Name of the student	Admission no	Name of the project
1	SreevishnuRajmohanT. (On going)	2019-MDM-06	Effect of high carbon dioxide environment on the microflora of raw milk
2	Ms. AnijaS. M. (Ongoing)	2020-MDM- 07	Bio functional properties of flavoured fermented milk product developed using indigenous lactic acid bacteria.
3	Ms. Silpa K Raj (Completed)	2020-MDM-08	Study on post-fermentation acidification by dahi starter cultures
4	Ms.Aiswarya S.R (Ongoing)	2020-MDM-06	An assessment of resistance and virulence of enterococcal isolates from dahi / thairu samples
5.	Ms. Sneha . K (Ongoing)	2021-MDM-06	Enzymatic profiling of indigenous lactic acid bacteria for food fermentations
6.	Ms. Nishidha N.P (Ongoing)	2021-MDM-05	Evaluation of autochthonous Lactobacillus sp. As adjunct cultures in improving the technofunctional properties of feta type cheese from Malabari goat milk

Ph.D. Research Projects:

Sl. No	Name of the student	Admission No.	Name of project
1.	Ms. Archana Chandran (Completed)	19-DDM-01	Construction of region specific phageresistant dairy starter formulations forthe state of Kerala
2.	Mr. Rejeesh R (ongoing)	2020-DDM-02	Rerouting of fermentative metabolism of Lactic acid bacteria to respiratory metabolism for improved performances as starter concentrates
3.	Ms.Amrita .T.A (Ongoing)	2021-DDM-02	Metabolimic profiling of milk from Vechurmurrah and Malabari breedsferemnted with wild strains of lactic acid bacteria

Research projects-External students:

Sl. No	Name of the student	Major Advisor	Name of the project	Time period
1	Savio peter Fernandez Mount Royal college Munnar	Dr.Aparna Sudhakaran V	Process Standardization of kulfi yoghurt	April-May,2022
2	Anandhu Aromal Mount royal college Munnar	Dr.A.K.Beena	Coconut shell as natural colorant in yoghurt and fermented whey a quality assesement	April-May,2022
3	Shivaji N R Mount Royal college	Dr.A.K.Beena	Process standardization of whey based probiotic spread	April-May,2022
4	Anagha. S Mount royal college Munnar	Dr.A.K.Beena	Development of bio-colorant incorporated fermented milk products using lactic acid bacteria isolated	April-May,2022
	Yusra Fathima Presentation college of Applied science, puthenvelikara	Dr.Aparna Sudhakaran V	Microbial quality of ice cream samples sold in Thrissur area	April-May,2022
5	Anjana Willson	Ligimol James	Activity profiling of lactic acid bacterial cultures during refrigerated storage of fermented milk prepared using them	April-May,2022
6	Nayana Antony Presentation college of applied science puthenvelikara	Dr.Aparna Sudhakaran V	Process standardization and quality evaluation of avcadoflavoured yoghurt	April-May,2022
7	Ms. Aswini S Msc Microbiology Amrita School of Biotechnology, Vallikav	Dr. A. K .Beena	Functional characterization Functional characterization of Lacticaseibacillus-rhamnosusandLimosilactobacillus fermentum isolated from indigenous sources	January-May-2023

8	Mr. Anathakrishnan K.S Msc Microbiology Amrita School of Biotechnology, Vallikav	Dr.Aparna Sudhakaran V	Effect of Withaniasomnifera (Aswagadha) on the fermentation profile of probiotic lactic acid bacteria and development of probiotic fermented drink	January-May-2023
9	Ms. Asna Samad Msc Microbiology Amrita School of Biotechnology, Vallikav	Dr.Ligimol James	Assessment of techno functional properties of raw milk isolates of lactic acid bacteria for development of functional starter cultures	January-May-2023
10	Ms. Sherrin Abraham Msc Food Technology and Quality Assurance Mount Royal College, Munnar	Dr.A.K. Beena	Thermal resistance of Multiple Drug Resistant lactic acid bacteria isolated from household curd	Feb-May,2023
11	Mr. Shojo Raj Msc Food Technology and Quality Assurance Mount Royal College, Muunar		Development of whey based smoothie with the incorporation of corn cob	February-May,2023
12	Mr. Rahul Raja Msc Food Technology and Quality Assurance Mount Royal College, Munnar	Dr.Ligimol James	Assessment of kinetics of acidification and acid tolerance of low and high post fermentation acidifying lactobacilli cultures	February-May,2023
13	Ms. Akansha Sivarajan Msc Food Technology and Quality Assurance Mount Royal College, Munnar	Ms.Sreya Unnikrishnan	Development of a curd based dip using indigenous lactic acid bacteria	February-May,2023
14	Mr. Allwin Lowrance Msc Food Technology and Quality Assurance Mount Royal College, Munnar	Ms. Syama Mohan	Development of fermented milk products using indigenous lactic acid bacteria and herbs	February-May,2023

2. **Noteworthy attainments in Science and Technology**

- Development of well characterized starter cultures of industrial importance-Low acid producing Flavour producing and probiotic cultures
- Development of novel, innovative and value-added fermented milk products including frozen

yoghurts and fermented beverages

3. **Academic Manuscripts, Investigative Pursuits, Widely- read articles, Literary Volumes and Technical Documents, Details of research papers published**

Research articles:

- Vishnu S., **James,L., Beena,A.K., Aparna S.V.**and Divya,M.P.2023. Isolation, Identification and Characterization of Thermoduric Psychrotrophic Bacteria from Market Samples of Pasteurized Milk Collected from Mannuthy, Kerala State, India. Asian Food Science Journal. 22(4):10-23.
- Ambili M.V., Dinker S., Rajakumar S.N., Beena R.L., **Rejeesh R., James,L**., Rashmi K.G.and Divya K.B. 2023. Shelf Life and Storage Studies on the SensoryAttributes of Dietetic Herbal Rasmalai. Environment and Ecology 41 (1A) : 321—325.
- Rajmohan, T. Sree Vishnu and **Beena, A. K. and James, Ligimol** and Babu, P. Sudheer and **Sudhakaran, Aparna and Rejeesh, R.** 2023. Evaluating the Effectiveness of Low Pressure Carbon Dioxide as a Hurdle in Raw Milk Storage. European Journal of Nutrition & Food Safety, 15 (4). pp. 10-15. ISSN 2347-5641
- **AK Beena, V Aparna Sudhakaran**.2022. Isolation of Klebsiellapneumoniae and Acinetobacterradioresistens from Dish Wash Scrubbers. European Journal of Nutrition & Food Safety.14(8):47-51.
- Silpa, R.K., **Ligimol, J., Beena, A.K**., Divya, M.P., Aysha, C.H., **Aparna, S.V.** 2023.Effect of thermization of dahi on post fermentation acidification during refrigerated storage. Vet. Anim. Sci. 54(1):252-256.
- Chandran A, **Beena AK,**Vaiyapuri M, John L, Rajakumar SN, Babu S, **James L** and Rahila MP. Detection of lyticphage infecting flavour-producing strain of Lacticaseibacillusparacasei in the dairy effluents of Kerala. Journal of Dairy https://doi.org/10.1017/S0022029923000274
- Amrutha and **Beena** (2023).Assessment of probiotic properties of lactic acid bacteria isolated from passion fruit and potato in vitro j. Indian vet. Assoc. 21 (1) April 2023
- Vyshak,V.L., Rahila,M.P., Faisal,I., Lukose,S.J., Divya,M.P., **Sudhakaran,A**. and Rajakumar,S.N. 2023. Extraction and characterization of nutmeg (Myristica fragrans) fruit pericarpessential oil to utilize as a surface coating material to improve the shelf life of paneer. J. Vet. Anim.Sci. 54(1): 144-152
- S. M. Anija , U. Sreya , **S. V. Aparna , A. K. Beena , J. Ligimol** and R. L. Beena. Comparative evaluation of the probiotic and antioxidant potential of indigenous Lactic Acid Bacteria
- S. Mariya Divanshi, C. H. Aysha, **Aparna Sudhakaran V. and A.K. Beena**.2023. Lactic Acid Bacteria – An Overview. 2023.In: Vignesh, S., Baskaran, N.,Nambi V.E. and Loganathan,M. (ed.) Prospective Research and Technological Advancements in Food and Health Sciences (1st Ed.) Skyfox Publishing Group,US,pp.229-247
- K. Raj Silpa, **Ligimol James, A. K. Beena, R. Rejeesh**, C. H. Aysha, M. P. Divya. 2023. Assessment of pH variations during extended period of fermentation of cow milk with different

lactic acid bacterial cultures. In: Vignesh, S., Baskatran, N.,Nambi V.E. and Loganathan,M. ed. Prospective Research and Technological Advancements in Food and Health Sciences, Skyfox Publishing Group,US.

Books/ Book chapters:

- Phytochemicals and Medicinal plants in Food design –Chapter- Gut microbiota- specific food design written by **Aparna V Sudhakaran** and Himanshi Solanki- Apple academic press publishers- May 2022

Popular articles:

- **Dr.Ligimoljames**, P55 . Popular article on 'Post-fermentation acidification in fermented milk products an assessment' in the souvenir of 'Padavu' 2022-23, Kerala state ksheerasangamam, Organized by Dairy Development Department, Kerala from 10/02/2023 to 15/02/2023.
- **Dr.Rejeesh.R** ,P61. Popular article on 'New trends in Dairy Products' in the souvenir of 'Padavu' 2022-23, Kerala state ksheerasangamam, Organized by Dairy Development Department, Kerala from 10/02/2023 to 15/02/2023.
- **Dr.Aparna Sudhakaran.V** and Ms.Ayisha C.H ,P65. Popular article on "Probiotics for intestinal disorders" in the souvenir of 'Padavu' 2022-23, Kerala state ksheerasangamam, Organized by Dairy Development Department, Kerala from 10/02/2023 to 15/02/2023.
- **Dr. A. K. Beena, Dr. Aparna Sudhakaran.V** and Ms.Aysha C.H,P 71. Popular article on 'Lactic Acid Bacteria an assessment, in the souvenir of 'Padavu' 2022-23, Kerala state ksheerasangamam, Organized by Dairy Development Department, Kerala from 10/02/2023 to 15/02/2023.

4. **Technological Advancements Crafted and Transmuted**

- **Transfer of Technologies**

➢ **Technology transfer -Mini Incubator-Concept to incept**

Technology transfer – "MININCYO" MoU signing ceremony was held on 23/07/2022 between KVASU and Xilatraon Technologies

5. **Consultancy and Public Advocacy**

- 73 (Over Phone calls and in person)

6. **Unveiling Human Resources: Unlocking Potential and Pursuits**

- **Seminars/ Workshops/ Summer Institutes/ Symposium/ Winter School**

- **National Seminar on "Antimicrobial resistance in probiotics-A food safety concern":**

Department of Dairy Microbiology, VKIDFT and Probiotic Association of India jointly organized a National Seminar on "Antimicrobial resistance in probiotics-A food safety concern" on 25th March, 2023 at VKIDFT, Mannuthy.

- **Training Program/ Short courses/ Any other program organized (details from each department)**

➢ **Training on preparation of fermented milk products- yoghurt and starter culture technology**from 01/02/2023 to 02/02/2023, organized by Revolving fund starter culture, Department of Dairy Microbiology, VKIDFT, Mannuthy in association with IDA Kerala chapter.

Coordinator- Dr. Aparna Sudhakaran.V, Assistant Professor, Department of Dairy Microbiology

Assistant Coordinator-Ms. Syama Mohan, Teaching Assistant Department of Dairy Microbiology

Total Participents-12

➢ **Training on preparation of fermented milk products- yoghurt and starter culture technology-** from 24.02.2023 to 25.02-2023, organized by Revolving fund starter culture, Department of Dairy Microbiology, VKIDFT, Mannuthy in association with IDA Kerala chapter.

Coordinator-Mr. Rejeesh.R , Assistant Professor, Department of Dairy Microbiology

Assistant Coordinator-Dr. Vinod Viswanath, Teaching Assistant Department of Dairy Microbiology

Total Participents-18

7. **Awards and Honors/ Endowments (department wise)**

➢ Dr. Aparna Sudhakaran V, Assistant Professor, Dairy Microbiology secured first prize in the National level essay competition conducted by the Department of Economics & statistics, Thrissur, on the occasion of 16th National Statistics Day Celebration held on 16thJune 2022

➢ Ms. Aiswarya S.R (M.Tech Scholar) presented poster on 'Ultra high temperature milk a potential reservoir of multiple drug resistant bacteria'-29th Indian Convention of Food Scientists and Technologists organized by AFSTI held on05/01/2023 to 07/01/2023

➢ Mr.Akshay Aravind (M.Tech Scholar) secured 2nd prize in product innovation contest-Seminar on Antimicrobial resistance in probiotics-A food safety concern" jointly organized by Department of Dairy Microbiology, VKIDFT and Probiotic Association of India 2023 on 25th March, 2023 at VKIDFT, Mannuthy

8. **Beyond the horizons: Exploring other activities**

Revolving Fund starter culture

- Starter culture sales-66.59 liters
- External MSc.Projects under RFSC-19 students

9. **Other Academic activities**

External Examiner/ Question paper setter:

- Dr. Aparna Sudhakaran.V, Assistant Professor, Department of Dairy Microbiology act as a question paper setter for BIRSA Agricultural university, Ranchi- 02.07.2022

- Dr. Aparna Sudhakaran.V, Assistant Professor, Department of Dairy Microbiology -external examiner (Thesis evaluation-M.Tech),Khamdhenu university, Gandhi Nagar-20/07/2022
- Dr. Aparna Sudhakaran.V, Assistant Professor, Department of Dairy Microbiology -external examiner (Thesis evaluation), Mahatma Gandhi university, Kottayam -11/11/2022
- Dr. Ligimol James Assistant Professor, Department of Dairy Microbiology external examiner-B. Tech Food Technology,KVASU-November,2022
- Dr. Ligimol James Assistant Professor, Department of Dairy Microbiology acted as question paper setter for KUFOS, December 2022
- Dr. Aparna Sudhakaran.V, Assistant Professor, Department of Dairy Microbiology act as a question paper setter for KUFOS, Kochi- 01/07/2022 & 29/12/2022 and
- Dr. Aparna Sudhakaran.V, Assistant Professor, Department of Dairy Microbiology act as a question paper setter for TANUVAS, Chennai-24/12/2022

Reviewer of journal :

- Dr. Ligimol James Assistant Professor, Department of Dairy Microbiology Reviewer of the journal Probiotics and antimicrobial proteins-November,2022
- Dr. Ligimol James Assistant Professor, Department of Dairy Microbiology Reviewer of the journal-Journal of Dairy Research- February-2022, March,2022, October,2022 and November,2022

10. Other Research activities

Sl No	Name of Microorganism	Accession Number	Source	
1	*Enterococcus faecium strain DMAI03*	OR105180	Curd	Aiswarya,S.R., Beena,A.K., Sudhakaran V,A., James,L. and Viswanath,V.
2	*Lactiplantibacillus plantarum strain DMAG02*	OR105028	Goat milk	T A,A., James,L., Beena,A.K., Sudhakaran V,A., Samad,A. and Viswanath,V.
3	*Lactiplantibacillus plantarum strain DMAG03*	OR105041	Goat milk	T A,A., James,L., Beena,A.K., Sudhakaran V,A., Samad,A. and Viswanath,V
4	*Lacticaseibacillusrhamnosus strain DMPP01*	OR105043	Pigeon pea	Sneha,K., Sudhakaran V,A., Beena,A.K., James,L. and Viswanath,V.

5	*Lactiplantibacillus plantarum strain DMCD03*	OR105050	Cow Dung	Sneha,K., Sudhakaran V,A., Beena,A.K., James,L. and Viswanath,V.
6	*Weissellaconfusa strain DMWC02*	OR105052	Green peas	Sneha,K., Sudhakaran V,A., Beena,A.K., James,L. and Viswanath,V.
7	*Pediococcuspentosaceus strain DMAI01*	OR105178	Curd	Aiswarya,S.R., Beena,A.K., Sudhakaran V,A., James,L. and Viswanath,V.
8	*Enterococcus faecalis strain DMAI02*	OR105179	Curd	Aiswarya,S.R., Beena,A.K., Sudhakaran V,A., James,L. and Viswanath,V.

11. Other Extension activities

- Mr. Rejeesh R Assistant professor, Dairy Microbiology delivered a session in induction programme for new ADO/QCO, MRCMPU on 28/05/2022
- Mr. Rejeesh R Assistant Professor, Dairy Microbiology Delivered a radio talk in 93.4 (Club FM) on "Minincyo for yoghurt making" on 27/07/2022
- Mr. Rejeesh R Assistant Professor, Dairy Microbiology handled a session in "Changing consumer, changing trades" organized by MES College, Mampad on 19/09/2022
- Mr.Rejeesh R Assistant Professor, Dairy Microbiology handled a class in "sasthrasadassu" in Kottayam district sheerasangamam on 21/12/2022
- Mr. Rejeesh R Assistant Professor, Dairy Microbiology handled a session on "Latest trends in value addition of milk and milk products" in All indiaagro Entrepreneurship training progaramme organized by viswayuvakkendra ,New Delhi on 01/02/2023
- Mr. Rejeesh R Assistant Professor, Dairy Microbiology handled a session on "Women empowerment-entrepreneurship in dairy industry" as a part of PADAV-23 organized by Government of Kerala on 15/02/2023
- Dr. A. K. Beena, Professor and Head, Department of Dairy Microbiology, Mr Rejeesh.R, Assistant professor Department of Dairy Microbiology, Dr. Aparna Sudhakaran V, Assistant Professor, Dairy Microbiology, Dr.Ligimol James, Assistant Professor, Dairy Microbiology, Ms. Syama Mohan, Teaching Assistant, Department of Dairy Microbiology handled the sessions of trainings organized by Revolving fund starter culture, Department of Dairy Microbiology, VKIDFT, Mannuthy in association with IDA Kerala chapter from 01/02/2023 to 02/02/2023&24/02/2023 to 25/02/2023

DAIRYBUSINESS MANAGEMENT

3. **Other Academic activities**

- Ms. Bincy T. J, Teaching Assistant is providing advice and support for the statistical analysis of both internal and external student projects using softwares such as MS Excel, SPSS etc.
- A computer lab is functioning under Dairy Business Management Department with 22 computers and the facilities for taking printouts and photocopies. Softwares like SPSS, R, AutoCad are installed. Students can avail these facilities for their academic purposes. The lab is accessible to all the students and facultyof the college. The functioning of the computer club typically revolves around creating a vibrant and supportive community for students who share academic, extension and co- curricular activities. The club is usually led by an Executive committee which includesDean, Head of Dairy Business Management Department, facultyincharge of computer club and Students union members.

FOOD TECHNOLOGY

3. **Academic Manuscripts, Investigative Pursuits, Widely- read articles, Literary Volumes and Technical Documents, Details of research papers published**

Popular Articles:

- **Subith. C** ,Dr. R. Mahendran, 2022, Application of AI for identification of toxins in food, Food infotech. https://www.foodinfotech.com/application-of-artificial-intelligence-ai-for-identification-of-toxins-in-food/.

4. **Unveiling Human Resources: Unlocking Potential and Pursuits**

- **Seminars/ Workshops/ Summer Institutes/ Symposium/ Winter School**
- Webinar on 'Eat right to make your health right', FOODSALVATIO'22 was organized by VKIDFT in association with Food safety department and Association of Food Scientists and Technologists on 10/06/2022
- National level seminar on topic "Recent trends in food processing technology", FOOD ZONE'22 was organized by VKIDFT in association with Kerala Food Safety Department, Thrissur District, IDA (Kerala Chapter) on 17/10/2022
- **Training Program/ Short courses/ Any other program organized (details from each department)**- Nil
- Experiential learning program of 2018 batch food technology students was conducted from 11/03/2022 to 21/07/2022

PHYSICAL EDUCATION

Department of Physical Education, the full-fledged department that manages physical education programmewas established with one Assistant Professor in 2015. Department conducts various tournaments which not only improve the sporting talent of the students, but also help them to improve their organizational and leadership qualities. Department conducts extension activities for the benefits of students and society. The Department is fully dedicated to prepare promising sports persons and to mould physically fit, mentally sound, emotionally balanced and socially responsible youngsters for the society.

Major activities of the department:

To maintain the physical fitness of the students, various indoor games, outdoor games, fitness centre and recreation facilities are made available. The students are trained for inter-collegiate, inter-university, state level and national level competitions in various sports and games events. The practice and coaching sessions are conducted from 06:30 to 08:00 am in the morning and 4.30 to 6.30 pm in the evening. Recreation facilities are arranged in the college to engage students during the leisure time. Every year, the students are divided into four groups and interclass sports and games like Badminton, Chess Cricket, Football, Table tennis, Volley ball and Athletics are conducted.

Physical fitness training is provided to B.Tech students from 6.30 am to 8.00 am& 5.00 pm to 6.30 pm. This helps the students to improve their physical fitness components, motor abilities and to maintain good health.

The Department provides coaching to selected students of the College in various disciplines like athletics, volleyball, football, shuttle badminton, table tennis and cricket. The training is given in a scientific and systematic manner as to prepare students for the highest level of performance.

Health and Fitness facilities:

Considering the importance of health and fitness aspects of the whole community of the college, a health and fitness centre that houses modern equipment is set up in the college premises. The facilities are made available to students and faculty during all working days from 6.00 am to 9.00 am in the morning and 4.30 pm to 7.00 pm in the evening.

Facilities available:

The sports facilities in Mannuthy Campus are open to all students of the University and are as given below:-

Games & Sports	Equipment and Infrastructure	No.
Outdoor sport		
Athletics	400 mts Track and Field	1
Cricket	Cricket Field	1
Football	Football Ground	1
Volleyball	Volleyball Court, 2	2
	Cricket Nets	2
	Practice Area	-
Basketball	Basketball Court	1
Indoor sport		
Table Tennis	Table	2

Shuttle Badminton	Shuttle Badminton Court	2
Health and Fitness Centre (Gym)	Equipment Like Treadmill, Upright Cycle, Lat Pull with Mid Row, Lying Leg Curl, Leg Extension, Smith Machine, Ab Conditioner Ladder, Fid Bench 90 Degree Pro Style Dumbells-285kg, Olympic Weight Plates-290kg, Rods-7	1

COLLEGE OF DAIRY SCIENCE AND TECHNOLOGY- POOKODE

1. Academic Excellence

India the largest milk producer in the world offers immense opportunities for dairy professionals across the nation. With a vision to achieve self-sufficiency in dairy sector, our state portrays a favourable scenario for the dairy aspirant's in the fields of production, processing and marketing of milk and milk products. Milk being an indispensable part of human diet, devising suitable techniques for the deliverance of quality assured dairy products requires competent dairy technologists in every processing unit. Comprehending this unceasing necessity for skilled personnel in this arena, the Dairy Technology programme has been designed accordingly to generate graduates proficient enough to address the rising concerns pertaining to various aspects involved in the dairy industry.

College of Dairy Science and Technology, Pookode established in 2015 is located in Kerala veterinary and animal sciences university headquarters campus at Pookode Wayanad. The pristine landscape and cool climate makes Wayanad one of the most ideal places for dairying in the state. The district is also popular for implementation of contemporary methods pertaining to dairy farming. Being situated in such supportive location; this institution guarantees both field and industrial levels of exposure to the students.

The college is following the curriculum and guidelines prescribed by the Indian Council of Agricultural Research (I.C.A.R) for B.Tech (Dairy Technology) programme. As per the curriculum, students would get exposure to the entire spectrum of operations taking place in professionally managed dairy processing units through which they acquire the required skills set and confidence to work as highly motivated professionals. The intake capacity for the B.Tech (Dairy Technology) programme is presently 20 seats owing to the shortage of infrastructure and manpower.

2. Admission Excellence

The candidates are selected through the Common Engineering Entrance Examination conducted by Government of Kerala. The candidates who have passed the qualifying Higher Secondary Examination, Kerala or examinations recognized as equivalent thereto, with 50% marks in Mathematics separately, and 50% marks in Mathematics, Physics and Chemistry put together are eligible for admission.

The college offers four year professional B.Tech Programme. Admission to the UG programme is done based on Entrance Examination conducted by the Commissioner of Entrance Examination, Govt of Kerala (KEAM).

Sl. No.	Title of the Programme	Level	Duration (Yrs)	Year of Starting	Sanctioned annual intake
1	B.Tech (DSc.&Tech.)	UG	4	2015	40 students (2016 September onwards it is 20 2020 onwards it is 22)

Departments

The College of Dairy Science and Technology has got the following five departments:

1. Department of Dairy Technology
1. Department of Dairy Engineering
2. Department of Dairy Business Management
3. Department of Dairy Chemistry
4. Department of Dairy Microbiology

Faculty Strength Details

2.1 Faculty Strength Details 2022-23

Sl No	Department	Present Status				
		Asso. Prof	Asst. Prof.	Deputation	TA	Total
1	Dairy Technology	0	0	2	1	3
2	Dairy Engineering	0	1	0	2	3
3	Dairy Chemistry	0	1	0	2	3
4	Dairy Microbiology	0	1	0	2	3
5	Dairy Business Management	0	0	0	1	1
Total						**13**

Sl. No.	NAME	DESIGNATION	Contact No.	E mail ID
DAIRY CHEMISTRY				
1	Dr. RAHILA M P	AP (Special Officer i/c)	9400587443	rahilasona@gmail.com
2	Ms. HELNA PIOUS	TA	9544484503	helnapious99@gmail.com
3	Mr. MOHAMMED ARSHAD	TA	8848806676	arshadmhd94@gmail.com
DAIRY MICROBIOLOGY				
4	Mrs. ARCHANA CHANDRAN	AP	9744975460	archanac@kvasu.ac.in
5	Ms. ANJALI M K	TA	8547873055	anjaliniranjanam@gmail.com

6	Ms. ARCHANA S	TA	8113899361	archanasouparnika94@gmail.com
DAIRY TECHNOLOGY				
7	Mrs GRACE A THACHIL	DEO on Deputation	9895636751	gracethachil@gmail.com
8	Mrs . ANKITHA ANTO C	DEO on Deputation	9656846425	ankithaanto@gmail.com
9	Ms. ABIDHA P K	TA	9447396206	abidathechiad@gmail.com
DAIRY ENGINEERING				
10	Mrs. AKHILA V.	AP	9497315161	akhilavasu@gmail.com
11	Mr.VYSHAK C.	TA	8943635684	vyshak.surendran@gmail.com
12	Mr. GOPESH KRISHNA	TA	7012399407	gkthenayil@gmail.com
DAIRY BUSINESS MANAGEMENT				
13	Dr. ANEES AJMAL M P	TA	7306446373	anees.iabm@gmail.com

2.2 Non teaching staff

SL NO	DEPARTMENT	NAME	DESIGNATION	CONTACT NO.	EMAIL ID
1	OFFICE	Vinu Soloman	AO	7012022254	vinx37@gmail.com
1	OFFICE	ABHISHA K M	ASO	8921529027	sams.abisha@gmail.com
2	OFFICE	THUSHARA MARIYAM	ASSISTANT	6238955186	mariyathusharathus@gmail.com
4	OFFICE	MARIYAM THAYKATTIL	DATA ENTRY OPERATOR	9961154188	
2	DAIRY MICROBIOLOGY	JYOTHI RAJU	LAB ASSISTANT	8606685052	jyothirajuanu@gmail.com
3	DAIRY CHEMISTRY	ABHINA P.V	LAB ASSISTANT	9745661007	abhinakankol@gmailcom

2.3 Student profile

Details	2015	2016	2017	2018	2019	2020	2021	2022
UG								
Students admitted	40	17	14	19	20	21	21	22
Current strength	40	16	14	16	20	21	16	15

Total	**157**

3. Tapestry of Expertise and Dedication: Empowering Faculty

Sl no	Year	Awards and Achievements
Awards by faculty		
1	2023	Dr. Archana Chandran - Paper entitled Detection of Lytic phage infecting flavour-producing strain of Lacticaseibacillus paracasei in the dairy effluents of Kerala- Published in Journal of Dairy Research, Cambridge University Press

4. Prospering University Life: Vibrant Campus Experience

28-04-2022 – IFTHAR celebrations

6-13th May 2022 – Exhibition stall for 2nd Anniversary celebration of Govt

1-06-2022 – World Milk Day celebrations

05-06/2022- World Environment day celebrations

21-06-2022 – Yoga Day celebrations

25-06-2022 – Farewell for 2017 Batch

02-08-2022 – Onam celebrations

05-09-2022 – Teachers Day celebrations

28-10-2022 – Anti drug campaign

08-11-2022- SAMATVA students union inauguration

26-11-2022 National milk day celebrations

22-12-22 – Christmas day celebrations

23-12-2022 Exhibition Stall

1-01-23 New year celebrations and freshers day (2022 batch)

01-02-2023 Inter class athletic meet

14-02-2023 Valentines day celebrations

19-03-2023- Holi celebrations

28,29-03-2023 Inter class arts fest

30-03-2023 NSS unit inauguration

5. Exploring library trends

The college of Dairy Science and Technology has a Library which possess a collection of scientific books, journals, research papers, publications, annual reports, and electronic media. The library facilities are made available to all the students, trainees, faculty members and non-teaching staff.

II Education, Students well being, Enrichment activities

1. Infrastructure created

The college has infrastructure facilities to support the basic theory and practical sessions prescribed for the first three academic years of B.Tech programme. The Dairy Engineering, Dairy Microbiology, Dairy Technology and Dairy Chemistry laboratories are strengthened with sophisticated equipment to meet the academic/research requirements of concerned departments. A well-equipped dairy Engineering division with drawing hall is arranged in the campus to facilitate the engineering courses prescribed in the B.Tech curricula. An experiential learning lab is constructed to meet the academic and extension activities of the college. A Computer Lab with 10 Desktop PCs (Pentium i3-4160 CPU@3.60 GHz processor) with Internet connection is available for students and faculty. The College Library has good collection of books and journals required for the B.Tech (DSc. &Tech.) students. The seminar hall is equipped with LCD projection facility and various electronic systems.

2. Scholarships

Sl no	Name of scholarship	Number of students
1	KVASU Merit cum means scholarship	4
2	KVASU Merit Scholarship	8
	TOTAL	**12**

3. Hostel and Housing

The institute provides hostel facilities for both boys and girls. Hostel facilities for girl students have been arranged both within and outside (Thalippuzha) campus premises. The boys are accommodated in the men's hostel within the campus. 52 girl students and 19 boy students are residing in college hostels.

4. Outreach programme

The college has organized several trainings and seminars for the technology transfer to students, farmers and entrepreneurs.

1. Exhibition stalls demonstrating milk adulteration tests and preparation of value added dairy products in the month of May 2022
2. Hands on training on Value added milk products held on 27th June 2022
3. Seminar on prospects of Dairying held on 4th November 2022
4. Hands on training on Value added milk products held on 26th November 2022
5. Exhibition stalls demonstrating milk adulteration tests and preparation of value added dairy products in the month of November 2022
6. Seminar on stress management held on 8th February 2023

പാൽ ഉപഭോക്തൃ മുഖാമുഖവും
ദേശീയ ക്ഷീരദിനാചരണവും

5. Sports, Physical education

The institute offers a wide range of sports facilities, both indoor and outdoor, to cater to the needs and interests of their students. These facilities are designed to promote physical fitness, skill development, and a sense of community. These sports facilities are integral to the holistic development of students, promoting physical well-being, teamwork, and a sense of belonging to the institute& community. They also provide opportunities for students to engage in both competitive and recreational sports and contribute to a vibrant campus life.

6.Students Union/ Sport Day/ Hostel Day Celebrations

7. Student counselling and placement services

The placement cell organises several seminars and interactive sessions with dairy professionals globally to acquaint the students with the career opportunities world wide.

- Webinar on Scope for overseas education and Career prospects in Dairy industry held in the month of November 2022
- Webinar on Scope for overseas education and Stress management on 8th February 2023

Placement cell also coordinates with various dairy industries nationally to ensure maximum campus placements.

7.1 Students successfully placed in various firms

- 4 graduates placed in Milma Malabar region
- 1 graduate placed in KC Das Banguluru

8. Awards for Extracurricular activities

- Table tennis Men - 3rd Prize for Intercollegiate sports

III DEPARTMENT PROFILES

1. DEPARTMENT OF DAIRY CHEMISTRY

The Dairy Chemistry Department is responsible for imparting knowledge in the field of Dairy Chemistry, Food Chemistry and Quality Assurance. The department keenly undertakes measures to develop techniques that facilitates quality check at every point in a food processing chain.

Research Projects

- Application of fermentation technology: Process optimisation of daily staples

Achievements and Technology transferred

- Development of low fat dahi incorporated with potato powder
- Impact of partial replacement of raw rice with par boiled rice on idly batter fermentation
- Effect of cream ripening by lactobacillus fermentum on the physicochemical properties of ghee
- Exploration of antidiabetic potential of passion fruit leaf extract
- Exploration of ACE inhibitory property of idly batter
- Identification of antimicrobial compound in Nutmeg pericarp extract
- Development of functional whey gummy using ginger extract

- Effect of Colens barbatus extract on shelf life of paneer during refrigerated storage
- Development of jack fruit powder incorporated bread
- Development of ready to mix batter for idly/dosa
- Bio-chemical characterization of amylase from the yeast isolated from idly batter

2. DEPARTMENT OF DAIRY MICROBIOLOGY

Research project

- Application of fermentation technology: Process optimisation of daily staples

Achievements and Technology transferred

- Evaluation of yeast LAB bacteria consortium for application in fermented foods
- Isolation and characterization of amylase producing yeast from idly batter
- Evaluation of genetic diversity among lactobacillus species by molecular method
- Comparative evaluation of antimicrobial activity of LAB and bacteriophages against Staphylococcus aureus from bovine mastitis.
- Influence of brine concentration and storage temperature on shelf life of feta type cheese made from cow milk.
- Effect of vacuum packaging on shelf life of feta type cheese made from cow milk
- Application of fermentation technology in coffee fermentation
- Effect of supplementation of Lactobacillus sp and yeast on the fermentation prperties of kombuche
- Heterogenecity of lactobacillus plantarum isolated from traditional milks
- Characterisation of amylase producing yeast from traditional fermented foods of Kerala
- Development of flavoured frozen yogurt from goat milk

- Characterization of predominant microflora in coffee fermentation
- Determination of heterolytic activity and one step growth curve of lytic phage against Staphylococcus aureus
- Antibiofilm potential of exopolysaccharide producing lactic acid bacteria
- Identification and characterization of LAB with antimicrobial properties against S. Aureus
- Selection and identification of protective cultures for the application in feta type cheese
- Effect of exopolysaccharide producing starter culture on techno-functional quality of low fat curd
- Whey based fermented beverage using kombucha tea and SCOBY

3. DEPARTMENT OF DAIRY TECHNOLOGY

The Dairy Technology department focuses on imparting research based technical knowledge and proficiency relating to the production, processing, storage and handling of milk and milk products. A special emphasize has been given to development of novel dairy products. Standardization of manufacturing process of regional dairy products for their economic marketing is yet another area of interest in this discipline.

Research Project

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4. DEPARTMENT OF DAIRY ENGINEERING

This department handles the Dairy Engineering courses of the B.Tech programme. The dairy engineering department offers strategic directions to establish a fully functional dairy plant. This particular discipline lays thrust on designing, mechanization and maintenance of processing plants.

Research projects

- Process standardization of cereal supplemented low calorie functional dairy products and evaluation of its nutritional profile and engineering properties.

Achievements and Technology transferred

- Development and process standadrdization of gluten free energy bar enriched with quinoa
- Utilization of soy milk in development of kiwi incorporated shrikhand
- Development and quality evaluation of dietetic kheer with navara rice and palm sugar candy

5. DEPARTMENT OF DAIRY BUSINESS MANAGEMENT

The Department of Dairy Business Management provides input regarding various managerial approaches followed in industries of all kinds. The courses handled by this department grooms the students and transforms them to professionals with impeccable communication skills, enduring entrepreneurial aptitude and human resource management proficiency.

COLLEGE OF DAIRY SCIENCE AND TECHNOLOGY
KOLAHALAMEDU, IDUKKI

1. Academic Excellence

B. Tech (Dairy Technology) is a unique job oriented professional degree programme which leads to the overall development of graduates and make them capable to face various situations in the field of dairy and food industry. The total credits have been apportioned to Dairy Engineering, Dairy Technology, Dairy Chemistry, Dairy Microbiology and Dairy Business Management disciplines with due weightage for each. The students are also required to undertake a South Indian study tour and an All India study tour as a part of the course curriculum during which they are required to visit the important institutions and commercial dairy plants across the country. The last semester of the B. Tech programme is set apart for In-plant training and Farm training.

Students are exposed to the entire gamut of operations taking place in professionally managed dairy processing units, which help them to acquire the required skill-set and confidence to work as highly motivated professionals for the emerging dairy industry. They are also enriched with entrepreneurial qualities to start their own industrial units. For this, they have to successfully complete an 'Experiential Learning Programme' during the seventh semester. All the students are required to undergo hands on training in the experimental dairy plant during the seventh semester and undergo Internship during the final semester. The Internship programme is organized in dairy farms for a period of 30 days and in commercial dairy plants for a period of 70 days. The programme provides every student, the required practical exposure in scientific management of organized dairy farms and also in the operation, maintenance and management of large scale commercial dairy processing units. Apart from this they also undergo a field extension training for a week.

2. Admission Excellence

The candidates admitted to B. Tech (Dairy Technology) programme are selected through the Common Engineering Entrance Examination conducted by Govt. of Kerala and admission is for 20 students per year which is increased to 22 per year from 2020. The course curriculum for B. Tech. (Dairy Technology) is as specified by the Indian Council of Agricultural Research (ICAR), New Delhi. The college has presently admitted 4 batches of students comprising a total of 53 students into the B. Tech. Programme through KEAM. College is functioning with well infrastructure facilities and student amenities.

3. Myriad of Learning Pathways: Diverse Courses and Departments

The candidates admitted to B. Tech (Dairy Technology) residential programme are selected through the Common Engineering Entrance Examination (KEAM) conducted by Govt. of Kerala. They should have completed Class XII or its equivalent examination with Chemistry, Physics and Mathematics as optional subjects and should have secured an aggregate of 50% marks or above in these subjects in the qualifying examination. The candidates can choose their option for this course among other graduate courses in Engineering.

Title of the Programme	Level	Duration (Years)	Year of Starting	Sanctioned annual intake
B. Tech (Dairy Technology)	UG	4 (8 Semesters)	2017	22 students (from 2020 inwards

As on 31-03-2022, there are 7 teachers and 6 non-teaching staff in the college.

STRENGTH OF STUDENTS AND GENDER DISTRIBUTION

Presently, there are 4 batches of students admitted for the programme. 2017 batch (18 students) passed out by February 2022.

Year of Study	Admission	Semester	Total B. Tech (DT)	Male	Female
1st Year	2022	I	11	3	8
2nd Year	2021	V	11	3	8
3rd Year	2020	VI	16	3	13
4th Year	2019	VIII	15	3	12
Total			**53**	**12**	**41**

4. Tapestry of Expertise and Dedication: Empowering Faculty

FACULTY MEMBERS

Sl. No.	Name of the Teaching Staff	Discipline/ Department	Designation	Email ID
1	Ms. Asha Ashok	Dairy Engineering	Special Officer/ Assistant Professor	spocdstklmd@kvasu.ac.in
2	Mr. P Nandagopal	Dairy Technology	Assistant Professor	nandagopal.p@kvasu.ac.in
3	Ms Prema KS	Dairy Microbiology	Teaching Assistant (Daily Wages)	prema11may@gmail.com
4	Ms Rinchu S Rajan	Dairy Business Management	Teaching Assistant (Daily Wages)	rinchu.srajan123@gmail.com

5	Ms Rinjumol K R	Dairy Chemistry	Teaching Assistant (Daily Wages)	rinjukr1994@gmail.com
6	Mr. Anas P	Dairy Engineering	Teaching Assistant (Daily Wages)	anaspottayil0@gmail.com
7	Ms. Milu Emmanuel	Physical Education	Teaching Assistant (Daily Wages)	

OFFICE AND NON-TEACHING STAFF

Sl. No.	Name of the Teaching Staff	Designation	Email ID
1	Mr. Sanoje Kumar A.C	Administrative Officer	officecdstklmd@kvasu.ac.in
2	Ms. Sona S	Assistant	
3	Ms. Shan S	Assistant	
4	Mr. Ajal P	Computer Assistant	
5	Ms. Preethy Prasannan	Assistant	
6	Mr. Sajan CS	Reference Assistant (Daily Wages)	

5. Exploring Library Trends

Rapid advances in Information and Communication Technologies are changing the Library and Information Services drastically. Besides this, expectations of the users have also raised manifold. Libraries are not mere spaces anymore; they are much more than that. It has become a challenge for library management to keep pace with changing information packaging and delivery methods on one hand and meet the user expectations on the other. CDSTK Library has been trying to do the same over the years and as per feedback from its patrons has been quite successful in this venture. CDSTK Library not only proactively works on its collection building and infrastructural augmentation, also put lot of emphasis on facilities for users. Online access to the core journals in dairy science and allied subjects is made available through the consortium CeRA (Consortium of e Resources in Agriculture) which include both national and international journals. Like previous years, this year also focus was on the strengthening of collection and implementation of latest information and communication technologies in its services.

Literary Activities

1. National Reading Day Celebration.
2. Book Review Competition
3. Newspaper Reading Competition
4. Book cover design competition

II-. EDUCATION, STUDENTS WELLBEING, ENRICHMENT ACTIVITIES

1. INFRASTRUCTURE CREATED

The college is functioning with limited infrastructure facilities and student amenities. There are three classrooms, college office, library, four laboratories (DM, DC, DT and DE), computer lab, exam hall, recreation cum drawing hall, auditorium, and experimental dairy plant. College provides accommodation facilities to staff, hostels for boys and girls, guest quarters and canteen with the limited resources. Students are taken to other institutions for conduct of practical especially for basic engineering courses (Govt. Polytechnic College, Muttom and CIFT, Kochi)

Sl. No.	Infrastructure facilities	Details
1	Classrooms	3 (with computer system and projector)
2	Computer lab	8 PC under DBM Dept.
3	Library	1053 books, 2 newspapers, 4 journals
4	Hostel facility	Girls - Capacity- 60 Boys - Capacity-20
5	Experimental Dairy Plant	1
6	Laboratories	For 4 statutory departments – DT,DE,DM and DC
7	KVASU Base Farm	Located at vicinity that facilitate students for practical on farm management
8	KASAVU Canteen	For students and staff
9	KLDB Bull Mother Farm	Used for farm training of students
10	Staff Quarters	For staff accommodation

2. SCHOLARSHIPS

The students are provided scholarships such as KVASU Merit Cum Means Scholarship, KVASU Merit scholarship, NSP-MCM, E-grantz. About 50 students are getting these scholarships every year.

3. HOSTEL AND HOUSING

The college accommodates all staff in the college quarters. All the students in the college are residing in the ladies and men's hostel.

4. SPORTS,PHYSICAL EDUCATION AND CO-CURRICULAR ACTIVITIES

WORLD ENVIRONMENT DAY

The World Environment Day 2022 was celebrated by the College of Dairy Science and Technology, Kolahalamedu with a variety of events from June 3-6, 2022. On June 3, the celebrations were inaugurated by Sri. Vazhoor Soman, Peerumedu MLA.

The newly formed 'Bhoomitra Nature Club' was inaugurated and tree saplings were planted in the campus by honourable MLA. Ms. Naseera.P, Secretary, Social Service League welcomed the gathering and Special Officer Dr. Shyam Suraj S.R, explained about the functions of the club. Ms. Sreelakshmi M.V, Vice President of the Students' Union presided over the function. The prizes for the winners of essay writing competition and poster making competition were given by the honourable MLA.

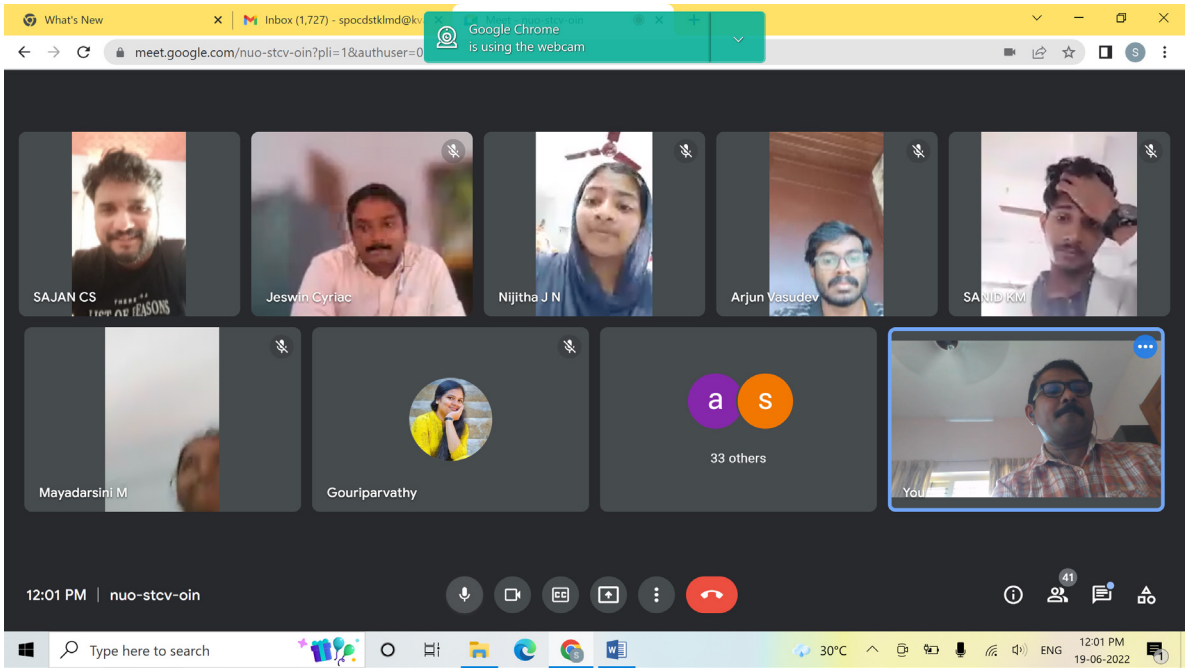
On June 5, the student members of Bhoomitra Nature Club, cleaned the roads adjacent to the college campus and removed the plastic waste and bottles. On June 6, Special Officer along with three students Ms. Sreelakshmi M.V, Ms. Sona Mariyam Anil, Ms. Naseera. P visited Government High School, Vagamon and conducted an orientation class to class X students on the prospects of B. Tech (Dairy Technology) and other courses offered by KVASU. Tree saplings were also distributed to the students.

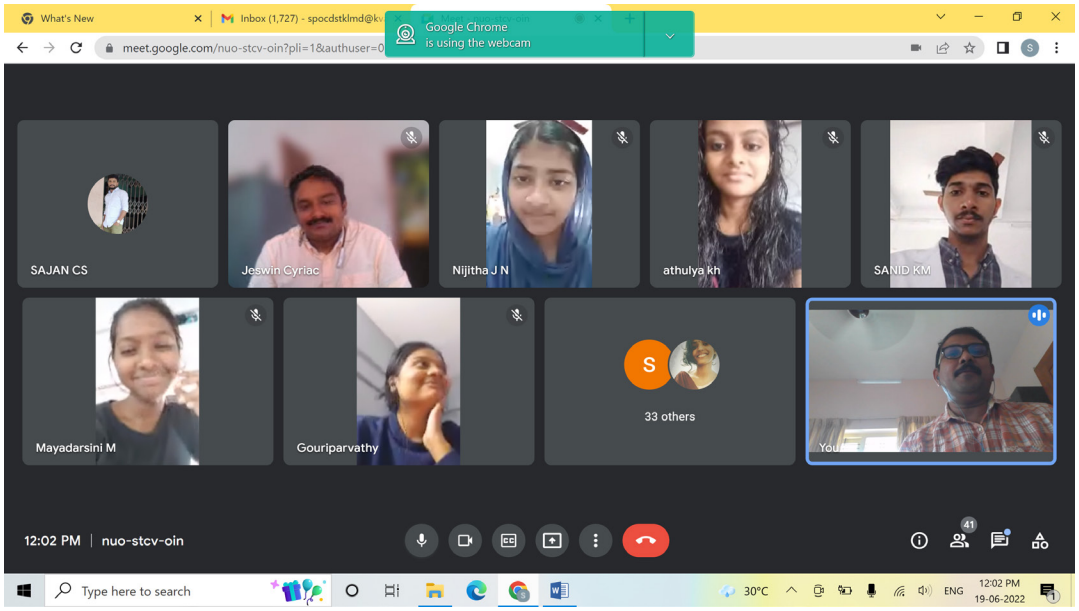
LIBRARY ORIENTATION PROGRAMME

College of Dairy Science and Technology, Kolahalamedu conducted a Library Orientation Programme for students and faculty on 9th June 2022 at the College Auditorium. The programme started with welcome speech by the Special Officer, Dr. Shyam Suraj S.R. A presentation was given by Mr.Sajan C.S, Reference Assistant to put forth the library's wealth of resources, facilities, services, and layout. Library collections and other electronic resources (online journals, databases etc.) were also introduced in the session. The programme ended with vote of thanks by Mr. Ajsal Basim K (2018 batch student).

LITERARY CLUB INAUGRATION

A Literary Club was inaugurated at the College of Dairy Science and Technology, Kolahalamedu and a webinar was conducted on the topic 'Reading: Through the New Media Age' (വായന: നവമാധ്യമകാലഘട്ടത്തിലൂടെ) on 19th June 2022 as part of National Reading Day. The webinar was conducted in Google Meet online platform from 11 am to 12 noon; and the session was handled by Mr. Jeswin Cyric, Assistant Professor, Department of Malayalam, Deva Matha College, Kuravilanged. He gave a comprehensive overview on how reading benefits both physical and mental health, and how it can last for a lifetime. The webinar concluded with a question answer session. It received very good reviews by the participants. The Literary Club was inaugurated by Dr. Shyam Suraj S.R., Special Officer. Ms. Nijitha J.N, Library Club Member welcomed the gathering and Mr. Sajan C.S, Reference Assistant gave the vote of thanks. Feedback was collected from the participants at the end of the webinar by giving a Google Form. Majority of the participants evaluated the Webinar as useful.





KVASU EXHIBITION STALL AT MALAYALA MANORAMA KARSHAKASREE KAARSHIKAMELA

Under the aegis of the College of Dairy Science and Technology, Kolahalamedu, Idukki an exhibition stall of Kerala Veterinary and Animal Sciences University was put up at the Malayala Manorama Karshakasree Kaarshikamela – 2022 held at Rajiv Gandhi International Indoor stadium Kottayam from 11 to 15 May 2022. The stall was organised by the faculty and 2018 batch Dairy Technology students of the college. On 11th May the stall was officially inaugurated by Dr. Shyam Suraj S.R., Special officer.

The stall showcased various posters for creating awareness among the public about the Kerala Veterinary and Animal Sciences University and its various educational programmes including B. Tech (Dairy Technology) and about various milk and milk products. The posters also included information regarding common milk related queries like difference between toned milk and double toned milk, cheese and paneer, what is UHT milk etc.

Visitors were very much interested in posters describing the various methods for checking the adulteration in milk. The stall also had sales of milk products like Gulab jamun, Paneer pickle, Pineapple burfi, Rasogolla, Carrot peda prepared by students undergoing the ELP programme. Students and faculty present at the stall interacted with the visitors and were very successful in removing various misconceptions around milk and milk products. The exhibition stall was also a great medium for publicizing about the university and also about its various UG, PG and PhD programmes.

NATIONAL SERVICE SCHEME 2023-2024

College of Dairy Science and Technology –Kolahalamedu inaugurated NSS Unit for the academic year 2023-2024 on 27th March 2023. The inaugural ceremony began with the NSS Geetham and followed by the Welcome speech delivered by Mr.Sajan C.S, Reference Assistant. Activities of National Service Scheme for the academic year have been inaugurated by Ms. Asha Ashok Special Officer CDSTK.

In her inaugural address, she clearly explained the significance of NSS for the student's community and the advantages of involvement of college students in the NSS Programme. She also explained the different NSS activities such as cleaning, afforestation, creating awareness of such issues as social problems. She encouraged the students that they can learn other skills that help them to lead better life in various situations. The programme came to end with vote of thanks by Mr. Martin George (Student, 2021).

INTERNATIONAL YOGA DAY 2022

College of Dairy Science and Technology, Kolahalamedu celebrated International Yoga Day with a class on the importance of Yoga and live Yoga session. The class was led by Mr. Sudheesh Kumar. N, Director,

Pytric School of Yoga and Ayurveda Treatment Centre, Tiruvalla, Pathanamthitta. The programme was conducted under the auspices of the Students' Union.

WORLD MILK DAY 2022

College of Dairy Science and Technology, Kolahalamedu celebrated June 1st World Milk Day at the campus. The celebrations started with the hoisting of milk day flag by Dr. Shyam Suraj S.R, Special officer CDST Kolahalamedu, followed by the taking a dairy pledge by the students and staff to work towards sustainable development of the dairy sector.

Sales counter for the ELP students was inaugurated by Dr. Naicy Thomas, Head, Base Farm, KVASU. As part of the inauguration 'Payasam' was prepared and distributed by the students. Manager and staff of KLDB Bull Mother farm were also present at the inauguration and they also purchased the different milk products sold by the students.

The afternoon session of the celebrations involved games organised by the College Students' Union. Milk product identification cum memory game and Product recipe 'dump charades' were organised. Certificate was distributed to the winners.

NATIONAL MILK DAY CELEBRATION 2022

DAIRY EXPO 22 JEEVANEEYAM

To commemorate the birth of Dr. Varghese Kurien on 26th November 2022, College of Dairy Science and Technology, Kolahalamedu organized a Dairy Expo "Jeevaneeyam" exhibition from 26th November 2:00 PM PM to 27th November 7:00 PM at KVASU Parking Ground, Vagamon. The expo was open to all the visitors with no entry fee. Approximately around 2500 tourist visited the expo. A total of 9 Box Stalls were organized for the exhibition.

The 1st stall was meant for the brief introduction of the College and the University; raise awareness of the importance of National Milk Day and Dr. Verghese Kurien. The 2nd stall was intended for the

sales of value added dessicated milk products like carrot khoa and kalakand. The 3rd stall was dedicated to brief introduction on the types of forages and its importance. The 4th stall was lent to the 2018 admission students for the Experiential Learning Programme. The products prepared by the students were put on sale. The 5th stall was intended to educate on the adulteration of milk. The 6th stall was set up for sale of coagulated milk products like paneer pakoda, paneer momos etc. The 7th stall was meant to be an education desk for the know-how of the programme or pertaining to the field of dairy science. The 8th stall was lent to the honey manufacturers from Kattapana for sale of honey-based products. The 9th stall was lent to the V-Tech manufacturing group for sale of their products.

The products put on sale by the students were Carrot Peda, Kalakand, Panner Roll, Whey Drink, Khoa Laddu, Gulabjamun, Butter cookies, Palaada Payasam, Milk Sandwich, Sambharam, Paneer momos, and Paneer Pakoda.

The approximate value of the total sales is INR 44,000/-. A feedback corner was provided in the stall and received satisfactory reviews from the tourists/visitors.

A glimpse of the Dairy Expo 22 "Jeevaneeyam"

STALL NO - 1

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പാലുൽപ്പന്നങ്ങൾ
COLLEGE OF DAIRY SCIENCE AND TECHNOLOGY, KOLAKKAYAM, WAYANAD
STALL NO - CARRA K-104
₹15

ADULTERATION CASE

ELP

5. **AWARDS IN CURRICULAR,EXTRA-CURRICULAR ACTIVITIES**

6. **STUDENTS UNION/HOSTEL/SPORTS DAY CELEBRATIONS**

The college has a Students' Union elected on democratic basis with a President, Secretary, Vice President, Joint Secretary, Arts Club Secretary, two University Union Councillors, Editor,

Athletic Captain and Secretaries for Social Service, Hobby Centre and Planning Forum. It also includes the class representatives. Ms. Asha Ashok was the Associate Patron. Ms. Goury Parvathy (2020 batch) as the President and Mr. Muhammed Ansif (2020 batch) as the Secretary during the current year.

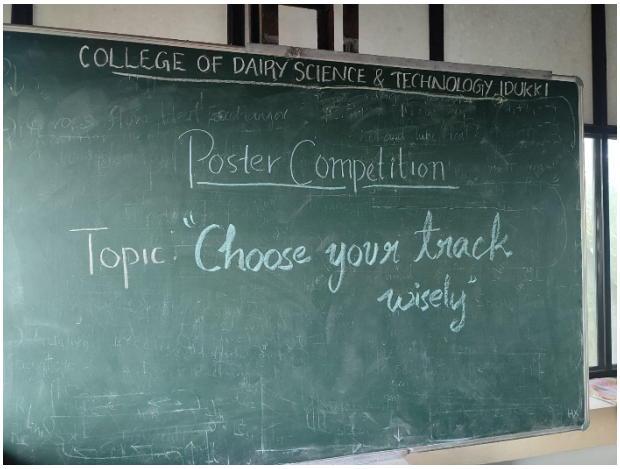
ANTI-DRUG AWARENESS CAMPAIGN 2022

College of Dairy Science and Technology, Kolahalamedu has conducted the following awareness programme for Prevention of Drug Abuse among College Students:

1. Poster Competition
2. Debate Competition
3. Marathon
4. Flash Mob
5. Lamp Lightning

1. Poster Making Competition

In association with the anti-drug campaign, a poster making competition was conducted on 26/10/2022. The competition was organized by Nijitha J N, Film and Photography Secretary. Many students enthusiastically participated in the competition. The tile of the poster making competition was **"Choose your Track wisely"**. The results were published after the competition. The First prize was bagged by Meenakshi S (2020 Batch), second prize by Sruthilaya Raj P (2021 Batch) and the third Prize by Sreelakshmi M (2019 Batch).



Students Participating in Poster Making Competition

2. Debate Competition

The students union conducted a debate competition on the Theme **"**Is legal drug prohibition good or bad" on 2th October, 2022 at College Auditorium. The debate was judged by Smt. Reshma, Fodder Extension Officer, Kerala Livestock Development Board, Kolahalamedu. The aim of the debate competition was to

raise awareness on the state run anti-drug campaign and to hone the public speaking skills of the students. Ms. Aleena Ann Joseph (2021 batch) and Ms. Chaitra Hari (2020 Batch) were selected as best speakers.

Students participating in the debate competition

3. **Marathon**

College of Dairy Science and Technology in association with Vagamon Police Station organised a student's run Marathon on 01/11/2022. The event was flagged off by Sri. Sudheer K., Station House Officer, Police Station, Vagamon. The aim of the event was raise awareness among the local population in the area. All the college students, teaching and non-teaching staffs actively participated in this marathon. The Marathon began at the college, passed through Orchid Garden via Adeventure Park, vagamon residential area and concluded at Vagamon Bus Stand.

4. **Flash Mob**

A flash mob was organized by the students at the Pine Valley Junction, Vagamon on 01/11/22. The students danced on the few songs to attract the tourist and passer-by. The event was organized with the support of SHO, Vagamon Police Station to prevent traffic congestion. The flash mob was organized to raise awareness against the drug use in the state.

Flash Mob by CDST, Kolahalamedu students

5.

6. **Lamp Lightning**

As part of the state government initiative of curbing drug menace in the state, the government urged citizens to light lamp and spread the message of anti-drug campaign. On the basis of the state initiative, the students of College of Dairy Science and Technology, Idukki lit the lamp in the hostel and the college premises. The lamp was lit alongside Deepawali celebration on 21/10/2022.

Lamp Lightning in the hostel premises

7. STUDENTS COUNSELLING AND PLACEMENT SERVICES

The Students Counselling Centre provides counselling to students during admission as well on monthly basis. A Counsellor is engaged for monthly counselling classes and students are getting assistance on the same from teachers and their advisors. The in-charge of Counselling Centre if Mr. Nandagopal. P., Assistant Professor.

8. STUDENTS' PERFORMANCE

III- DEPARTMENT PROFILES

DAIRY ENGINEERING

Dairy Engineering Department deals with instrumentation and process control required for automation of basic processes. It also deals with the instrumentation and process control required for automation of basic processes. It will cover wide areas dealing with Dairy and food Engineering, Dairy Machinery, Food Process Engineering, Electrical Engineering, Fluid Mechanics, and Refrigeration & Air Conditioning etc. We are on an initials stage of establishment of a Dairy Plant. Our courses are designed accordingly to get a practical exposure to the students and industrial visits are also there in each course plan.

DEPARTMENT OF DAIRY MICROBIOLOGY

The Department of Dairy Microbiology is engaged in various activities pertaining to teaching,research, training and technology transfer in the field of Dairy Microbiology. The department is also actively involved in investigating, characterizing, evaluating and documenting the microorganisms relevant to the Dairy industry.

Laboratory Activities

· The department lab houses all vital instruments and equipments for conducting practical sessions and research activities.

· Organizing training to students, entrepreneurs and researchers in the field of dairy

microbiology

· Facilities for the estimation of microbiological quality of milk and milk products are available in the laboratory.

DAIRY CHEMISTRY

Dairy Chemistry discipline deals with the components of milk and chemical aspects during processing of milk and milk products including quality assurance. It also deals with biochemical aspects and nutritional aspects of milk products to human body. The Department has exclusive laboratory for instrumentation, Dairy Chemistry, Food Chemistry, Quality control and Dairy and Food Analysis.

DAIRY BUSINESS MANAGEMENT

The objective of the department is to impart theoretical and practical knowledge of dairy business-related activities such as accounting, financial & marketing management, economic concepts, ICT tools and technology.

DEPARTMENT OF PHYSICAL EDUCATION

Department of Physical Education seeks to become a centre of excellence –moulding students into citizens of physically active, emotionally mature, intellectually analytical with moral values and social responsibility. It aims to inculcate healthy minds in the healthy bodies of students. It is responsible for the conduction of sports and games activities of the college.

a) Acquisition section

During the FY (2022-2023) year 83 new books and 1 journal were added to the collection.

Library Collections

Collection	Nos
Total Number of Books	1053
Reference Collections	60
CD ROM Collections	1
Newspaper (English)	1
Newspaper (Malayalam)	1
Magazines	3
Subject Journals	1
Question Papers	6 years

b) ***Library has strong base of users who visited and heavily utilized the services of library during the period.***

Number of Books issued during financial year

Sl. No.	Year	No. of Books Issued
1	2022-2023	140

c) ***Students/Faculties visited in Library***

Sl. No.	Academic Year	No. of students visited	No. of Faculty visited
1	2021-2022	607	Nil

I. Financial Vitality:

a) Nil

b) Nil

c) Nil

VII BIBLIOPHILE'S DELIGHT:

a).The library holdings in terms of books, journals, learning materials and technology-aided learning mechanisms are organized in such a way as to enable the students to acquire information, knowledge and skills required for their study programme. CDST library is primarily concerned with conservation and dissemination of right knowledge to its users. Library holds an exclusive collection of books for competitive examinations which provides variety learning environment. The library provides open access to its documents and any member can browse through the collections which are arranged according to Dewey Decimal Classification (DDC).The Library is automated with Koha Library Management software.

COLLEGE OF AVIAN SCIENCES AND MANAGEMENT (CASM) THIRUVAZHAMKUNNU, PALAKKAD

Academic Excellence

The College of Avian Sciences and Management is established at Thiruvazhamkunnu, Palakkad District with the aim of providing quality education in all aspects related to poultry science so as to meet the increasing demand of skilled personnel required in the industry. The college is offering B.Sc. (Poultry Production and Business Management), a three year graduate programme from 2014 Academic year onwards. The course is designed with the objectives of crafting human resource management professionals with technical knowledge in poultry production, developing entrepreneurial skills to unemployed youth and equipping youth with different facets of Poultry production and business management. The college also aims at conducting need based research in poultry farming for helping the farmers. An Avian Research station is also located in the campus which comprises of various poultry farms, feed mill, hatchery etc.

Admission Excellence

(Detailed information of admission procedure, courses) departments, staff strength, student, strength,)

B.Sc. PPBM (Poultry Production and Business Management):- The college is offering B.Sc. (Poultry Production and Business Management), a three year graduate programme from 2014 Academic year onwards. The timely modifications of the academic curriculum are done by the Board of Studies and the committee recommend the same to the Academic Council of university for approval.

Objectives of the course

- Craft Human Resource Management Professionals with technical knowledge in Poultry production
- Develop entrepreneurial skills to unemployed youth
- Equip youth with different facets of Poultry production and business management

Highlights of the course

- Production domain: Layer and breeder production, broiler production, poultry nutrition, feed mill technology, automation in poultry production, poultry processing, hatchery management, climate change adaptation of poultry, management of pet birds and diversified poultry species
- Management domain: Business communication, computer application for poultry business, Accounting and financial management, marketing strategies, human resource management, risk management and insurance
- Work experience: Hands on training in leading poultry farms for 12 weeks.

Significance of the course

Presently, poultry industry is lacking management professionals with adequate knowledge about poultry production. Acquaintance on management aspects of poultry business will help to manage the commercial poultry industry efficiently. With this vision, B.Sc. PPBM (Poultry Production and Business Management) course was launched by combining management aspects related to poultry business with basic poultry production. Hands on training in collaboration with leading industries of the country and exposure visit to various farms, hatcheries, processing plants and feed mills inside the country coupled with sound theoretical and practical approach to poultry production as well as management aspects related to poultry production will help to mold managerial experts fitted to poultry industry in India and abroad.

The curriculum of the course is developed and finalized through a brain storming workshop with scientists, researchers, academicians, entrepreneurs, and industrialists related to the sector. The list of participants is given as Annexure II. The duly recommended curriculum was placed in various Statutory bodies of the University including Board of Studies, Academic Council and finally in the Management Council for approval.

Employment potential

The graduates from this institution are currently employed in the firms mentioned below:

i. Kerala State Poultry Development Corporation (KSPDC)

ii. Brahmagiri Kerala Chicken Project-A joint venture by Kerala Govt and NGO (Brahmagiri development Society, Wayanad, Kerala)

iii. Suguna Institute of Poultry Management, Udumalpet, Tamilnadu

iv. Suguna Foods, Tamil Nadu

v. Sreenivasa poultry farms Ltd, Andhrapradesh,

vi. Farms India chicken, Pollachi

vii. Government Hatchery, Ollur, Kerala

viii. Poultry production units, Kerala Veterinary and Animal Sciences University

ix. VIRBAC Animal Health Pvt. Ltd.

x. Kudumbasree Kerala Chicken Project

xi. Poultry farms in United Arab Emirates

xii. Entrepreneurs in poultry industry

xiii. Poultry Farms in United States of America for One Year Poultry Work Experience Programme

xiv. Poultry Farms/Hatchery of Kerala State Animal Husbandry Department

xv. Swami Feeds, Hosur

Students are also pursing higher education in various fields such as MBA, MBA (Agribusiness Management), MSc. Animal Science and M. S. Wild Life.

Mode of selection	:	KVASU entrance examination
Duration	:	6 semesters
Eligibility Criteria	:	10+2/VHSE in any stream with at least 50% marks
Annual intake	:	40+4
Evaluation	:	Semester wise examinations, assignments and project work
Scope of the course	:	placements in various farms, hatcheries, processing plants and feed mills located inside and outside the country

Staff Position Department wise faculty profile

Total sanctioned posts : 9

Posts in position : 4

	Professor	Associate Professor	Assistant Professor
No. of posts sanctioned	2	2	5
No. of posts in position	-	-	4

Student Position as on March 2023

Batch	2019 Batch	2020 Batch	2021 Batch	2022 Batch	Total
Boys	33	20	10	14	**77**
Girls	13	20	13	11	**57**

Staff Position as on March 2023

Teaching Faculty - 8 (inluding Teaching Assistants)

Non Teaching Staff - 12

Department wise faculty Profile

Sl. No	Department	Faculty
1	Poultry Breeding and Genetics	Dr. Stella Cyriac
2	Avian Nutrition	Dr. Harikrishnan S
3	Poultry Production Management	Dr. Harikrishnan S
		Dr. Abhin Raj K.P.
4	Avian Disease Management	Dr. Stella Cyriac
5	Poultry Processing and Technology	Dr.Prasoon S
6	Poultry Business and Entrepreneurship	Dr. Stella Cyriac

Myriad of Learning Pathways: Diverse Courses and Departments

(Courses, departments, staff strength, students' profile)

Course	Departments	Name of Faculty	Number of Students
BSc. PPBM	Poultry Breeding and Genetics	Dr. Stella Cyriac	134
		Mrs. Anila P.	
	Avian Nutrition	Dr. Harikrishnan S	134
		Dr. Junaid N.	
	Poultry Production Management	Dr. Harikrishnan S	134
		Dr. Abhin Raj K.P.	
	Avian Disease Management	Dr. Stella Cyriac	134
	Poultry Processing and Technology	Dr.Prasoon S	134
	Poultry Business and Entrepreneurship	Dr. Stella Cyriac	134
		Mr. Muhammed Arsal T.K.	
		Mrs. Sheeja A.P.	

Tapestry of Expertise and Dedication: Empowering Faculty (Faculty details, Capacity building programs, Faculty achievements, outstanding faculty)

Name	Qualification
Dr. Harikrishnan S.	MVSc., PhD.
Dr. Stella Cyriac	MVSc., PhD.

Dr.Prasoon S.	MVSc., PhD.
Dr. Abhin Raj K. P.	MVSc.
Dr. Junaid N.	MVSc., PhD.
Muhammed Arsal T. K	MBA, M.Com., NET
Sheeja A. P.	M.Com, NET
Anila P.	M.Tech, NET

Prospering University Life: Vibrant Campus Experience (Sports, Games, Co-curricular activities, Union, travel, Performing Arts and Aesthetic development)

Playground and recreation facilities: The college has adequate sports and games facilities to support the physical development of students. There is an outdoor multipurpose playground (70m×70m) for sports like football, cricket and athletics activities. Courts for volley ball (18m×9m) and shuttle badminton (13.4m×5.18m) are established for the students. An indoor area offers facilities for table tennis, caroms and chess. Sports goods are also made available for students for the conduct of various sports activities like cricket, football, volley ball and athletics. A Physical Education Teacher guides the students in various sports activities. Students are actively participating in inter collegiate and inter-agri sports meets every year. A college yoga club was started with a one week yoga training programme and the students are practicing yoga regularly.

Fitness Centre for students and faculty: A fitness centre, equipped with various modern equipment like multi gym, treadmill and weight lifting equipment, has been established in the campus to help the students and faculty for improving their physical health.

Inter class games and sports: The college has been organizing annual inter class games and sports meet every year. The winners will be selected for participating in inter collegiate level meets.

Student's Union: As in every college, the Students' Union of CASM, Thiruvazhamkunnu is dedicated to social, organizational and co-curricular activities of students. Union encourages the spirit of comradeship, secularism and patriotism, and inculcate democratic values in students. There are various associations like Athletic Association, Social Service League, Arts Club, Planning Forum, Literary and Debating Club, Film and Photography etc. subordinate to the College Union to achieve the objectives of the Union. Different clubs work together to organize debates, seminars, work squads, tour parties and other important activities.

Exploring Library Trends (details from colleges administration)

Literary Activities:

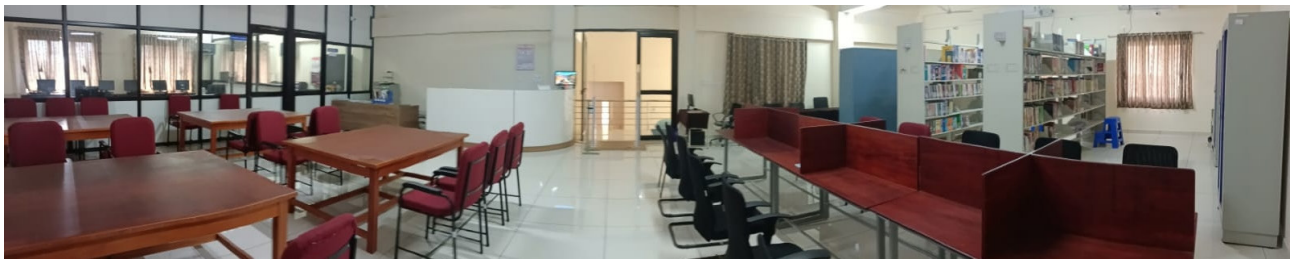
Reading Day Celebration, Quiz competitions, Award for Best Readers

New Arrivals and Information Systems:

No of New Arrivals: 109

Library Report:

CASM College Library is a stronghold of knowledge and academic excellence within our institution, serving as a vital hub for students and faculty, fostering learning, research, and intellectual exploration.



New Additions in the Financial Year 2022-23

Sl No	Items	Cost
1	Books	₹93,759
2	Magazines	₹6,900

These valuable additions further enhance our library's infrastructure and services, ensuring a more enriching experience for our users.

These modifications incorporate the financial year for the additions and provide a clear tabular representation of the items and their costs.

EDUCATION, STUDENTS WELLBEING, ENRICHMENT ACTIVITIES

Infrastructure created

Renovation of library and Smart Class room of College of Avian Sciences and Management

The construction work of the second floor of the academic block of CASM was completed with the assistance of `180 lakh received under the plan scheme of the State Government. College library, smart classroom and feed quality processing lab have been set up. With the help of the National Agricultural Higher Education Project- Innovation Grant of Indian Council of Agriculture and Research, the necessary equipment has been procured and fully made the floor fully operational. The floor and the facilities were inaugurated by by Smt. J. Chinchurani, Hon. State Minister for Animal Husbandry and Dairy Development and Pro-Chancellor, Kerala Veterinary and Animal Sciences University.

Scholarships

Merit Scholarship : No.of Students awarded scholarship: 8

Total scholarship amount : 24000(8 * 3000)

Merit Cum Means Scholarship : No. of Students awarded scholarship: 3

Total scholarship amount : 15000(3 * 5000)

E grants scholarships : SC/ST/OEC and OBC Students

Hostel and Housing

Ladies hostel

College of Avian Sciences and Management provide hostel facilities for girls within the campus itself. The lady students are being accommodated in one floor of the Farmers' Training Centre in the campus. A matron and a resident tutor are residing in hostel to take care of the students. The hostel is established with fully furnished rooms. The hostel has all the facilities like electricity and water connection, 24 hour security guard supervision, fencing, easy road access, water purifiers for each floor, first aid box, TV, newspaper and magazines, computer, refrigerator, induction cooker, napkin destroyer.

Men's hostel

The College of Avian Sciences and Management has a well-furnished men's hostel with ample space for accommodation along with recreational facilities. The hostel building has facility to house 48 inmates. There are 14 rooms of which 12 are double rooms and 2 are dormitories. There are sufficient toilet facilities attached to the hostel. The students are provided with a TV room, caroms board and Table tennis and floodlit badminton court for their recreation. A resident tutor is extending academic support to the students in the hostel.

Hostel Annex

This facility is used to accommodate first year students during anti-ragging period. It has the capacity to accommodate 20 students.

Outreach Program

The college has been undertaking various extension activities for benefitting the farmer community and to solve the problems faced by the farmers in nearby districts. Various training programmes are being conducted for the farmers. The faculty members have been undertaking various kinds of trainings and other workshops as a part of the extension programmes. The farmers have been visiting the campus for obtaining technical advises and other consultancy services for making their business more profitable.

Distribution of Ducklings to Farmers: As a part of DBT project of CASM, ducklings were distributed among the farmers in Thiruvazhamkunnu locality for the conduct of field study of the project. The programme was inaugurated by Prof. Dr. N Ashok, DAR, KVASU.

Christmas Celebration at Akashaparavakal Old Age Home

The students Union of CASM celebrated the Christmas 2022 at Akashaparavakal old age Home Vettathur with around 90 inhabitants on 2312.2022. The students spent almost half a day at the institution with songs, variety of entertainments and lunch thereafter

Palliative Day

In connection with the palliative care day, the NSS unit of CASM has organized a session on Palliative care and formation of Students Initiative for Palliative care (SIP) at CASM to collaborate with the initiatives of Edathanattukara Palliative care Society on 10.1.2023. The programme was inaugurated by Dr. Harikrishnan. S, Special Officer. Dr Prasoon S, NSS programme officer welcomed the gathering. The session was handled by Mr. Rahees, General Secretary and Mr. Rasheed Master, Vice- President, Palliative Care Society, Edathanaattukara. 80 students of CASM participated in the programme and CASM extended all support to the initiatives of Edathanattukara Palliative Care Society in future. Dr Abhin Raj KP, Associate Patron extended the vote of thanks.

Fund Raising Campaign for Palliative Care

A fund raising campaign was also organized by the NSS unit of CASM in association with Palliative Care Society, Edathanattukara. The students & faculty of CASM and volunteers of Edathanattukara Palliative Care Society actively participated in volunteering themselves to spread the awareness of Palliative Care in the society. The programme was conducted at Thiruvazhamkunnu centre and the collected amount was handed over to Edathanattukara Palliative Care society for its activities.

Sports, Physical Education and co-curricular activities

For the promotion of physical education and other co-curricular activities among the students, college has been organising various games and arts fest every year among the students. The events are organised at class level and the winners are being selected for the inter collegiate level competitions. The college organises football, cricket, volley ball, badminton, chess and other games and also athletics for the students.

Inter-class games: The inter-class games of 2022 was conducted on 13th, 14th and 15th May 2022. The programme was inaugurated by Dr. Harikrishnan S, Special Officer. Active participation from the students made the days colorful.

NSS/ NCC

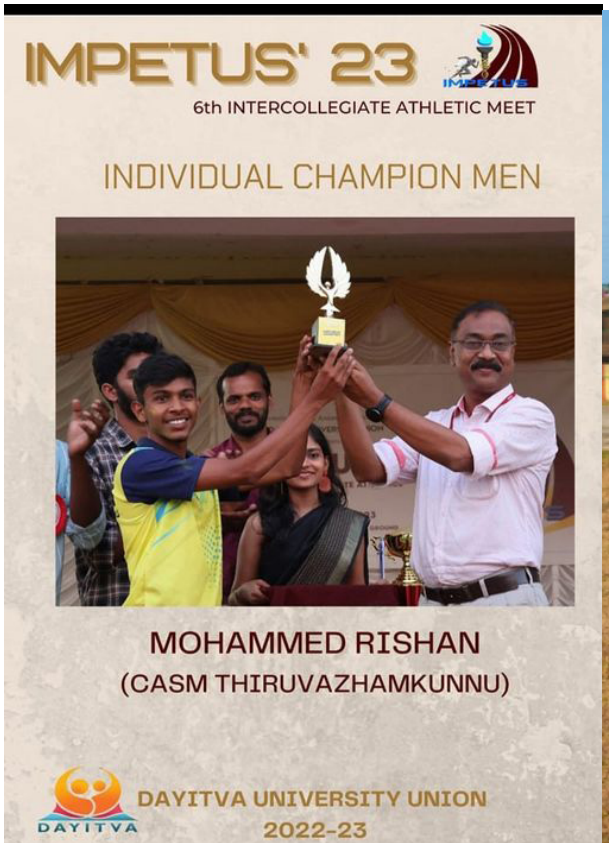
The NSS unit of CASM has organized the following events:

Gender Awareness Campaign: The students union and NSS unit of CASM in association with ICDS, Mannarkkad organized a gender awareness campaign on 03.02.2023. The campaign was inaugurated by Dr. Harikrishnan S, Special Officer of the college. Dr. Abhin Raj K.P, Associate Patron delivered the welcome speech and Mrs. Bindu M.R, Child development protection officer, Mannarkkad briefed about the programme. Mrs.Jayasree.K, ICDS supervisor, Pattambi Additional handled the session. Dr. Stella Cyriac, Academic Officer, students, teaching and non-teaching staff attended the programme.

- **Awards in curricular, extra-curricular activities /co-curricular**

Third position in 6th intercollegiate athletics: The students of CASM participated in the 6th Intercollegiate Athletics held at Mannuthy on 20 and 21 of March 2023. The college has bagged

third position in the programme among 7 colleges under KVASU. Mr. Muhammed Rishan P won the individual champion award of the meet by winning 3 gold medals. Mr. Sreenadh P.R. won gold medal in long jump and Mr. Sabu S won bronze medal in Javelin throw.



- **Students Union / Hostel/ Sports Day Celebrations**

Advaiya- Inter class Arts Fest: The inter-class arts fest was conducted from 05th to 07th July 2022. The programme was inaugurated by Mr. Narayanan, Thiruvazhamkunnu, famous folk song artist and permanent labourer of LRS, Thiruvazhamkunnu. Various competitions were organized for the

students. The active participation from the students and staff made the day a memorable one.

Anti- Drug Awareness Campaign: As per the directive of the state government, the one month Anti-Drug awareness campaign was started at CASM on 11.10.2022. As a part of the campaign anti-drug awareness class, e-poster making, marathon was conducted. The campaign was inaugurated by Dr. Stella Cyriac, Special officer (i/c). The awareness class was led by Mr. Fazalu Raheem A., Senior Civil Police Officer, District Special Branch, Palakkad. An anti-drug pledge was also taken by the students, faculty members and the staff as part of the programme.

The one month anti-drug awareness campaign at CASM ended on 01.11.2022. In order to create awareness on drug abuse among youth, a human chain was formed by the students and staff. Dr. Harikrishnan S, Special Officer has shared message to the staff and students to involve actively to prevent intoxication among youth in the society. The students also involved in destructing the pictures depicting the drugs and also an anti-drug pledge was taken by the staff and students at the end of the session.

Health Camp for students and staff: Consequent to the spread of viral fever at hostels, a health camp was organized on 02.11.2022 at CASM Thiruvazhamkunnu in collaboration with PHC Kottappadam. A total of 36 staff and students registered for the camp and were benefited.

Inauguration of Students union 2022-23: 'Vyuha' students union 2022-23 of CASM was inaugurated on 28.11.2022 by Dr. T.S Rajeev, Director of Entrepreneurship, KVASU. The official logo of the students union was unveiled by Dr.Sreeranjini. A.R, Director, Students Welfare, KVASU. On the same day, prizes were distributed to the winners of various events organized by the students union 2021-22. Dr. Justine Davis, Dr. Prasad, Teaching and non teaching staff and students were present in the programme. Followed by the inaugural session, various cultural programmes by the students and DJ night was conducted.

Film Fest: The students union of CASM has organized a film fest from 27 to 31 January 2023. Tumbaad, Perfume and Mathilukal were screened for the students and staff.

'Velicham'- Intensive Revision Camp for students; For improving the results of the students, the Students union of CASM came up with Intensive revision camp programme 'Velicham'. The programme was inaugurated by the Special Officer on 18.02.2023. Classes and discussions have been conducted under the guidance of students union.

Students Exchange program

- Students Counselling and Placement services

Conducted on Campus Placement Drive: Talent hunt,' an on campus placement drive was conducted at CASM on 23.08.22 with the collaboration of Venkateshwara Hatcheries Pvt. Ltd.. Sri. K. Mukund, Manager-HR, Sri. B. R. Nair, DGM- Hatchery services, Dr. H.G.Sreenivasa, Dy. General Manager-Operations, Sri. N. Krishnadas, Assistant manager, Accounts from Venkys participated in the event. Dr. Harikrishnan S, Special officer of the college inaugurated the programme and Dr. Vineetha P. G, Officer i/c Placement cell coordinated the event. 17 Alumni of the college registered for the programme and attended the interview and 8 of them were selected for various posts at Venketeswara Hatcheries Pvt. Ltd.

Internship Selection Drive: An internship selection drive was organized for the students of 2019 admission on 29.11.2022 by the placement cell of CASM. The drive was organized in collaboration with Venky's group. 24 students attended the drive and 18 of them got selected. The selected students will be doing their internship with Venky's group. The biggest advantage is that they are eligible for the honorarium during internship and the students who successfully complete the internship will get immediate placement.

- **Corporate relations**

The college is maintaining a strong linkage with various firms under poultry industry for ensuring better placement and internship facilities for the students of CASM. Placement drives were conducted in association with Venkateswara hatcheries Ltd. and Sreenivasa Hatcheries. Opportunities have provided for the students to attend internship at reputed organisations in poultry industry.

- **Alumni relation**

Inauguration of Alumni Association- NEST: The Alumni Association, NEST- Nurturing Embracing and Securing Togetherness- was inaugurated by Sri. Vazhoor Soman, Hon. MLA, Peerumed

constituency and Member, Board of Management, KVASU on 14.06.2022.

Alumni Connect: College has been organising alumni interaction programmes frequently. As abeginning, an alumni interaction programme was conducted on 28.02.2022. Students were given opportunity to interact with alumni members who were working at different aspects of the industry. Alumni members are frequently invited to interact with the students to share their career experiences.

- Students' intake details

Course : BSc. Poultry Production and Business Management

Annual intake : 27 students

DEPARTMENT PROFILES

3. Noteworthy attainments in Science and Technology (in 2-3 bullet points)

Genetic up-breeding of duck production to strengthen livelihood security in North East region of India by converging conventional and molecular techniques

- Phenotypic characterization and molecular characterization of the Kuttanad duck for breed specific SNP biomarkers and whole genome sequencing were carried out.
- The PCR- RFLP technique and sequencing methods were done to identify the genotypes in three duck population viz. Kuttanad ducks (UKD), improved meat line of Kuttanad ducks (IKD) and White Pekin ducks (WPD) and to study the association of polymorphism of intron 2 of Growth Hormone gene with economic traits.
- The development of an improved meat line of Kuttanad ducks has been done by selection and breeding programme and the improved meatline developed named "Chaithra" was made available to the duck farming community.
- Crosses between female of improved Kuttanad ducks and male of White Pekin ducks were produced and the performance was evaluated both in the farm and in the field conditions for identifying its performance and suitability of the crosses in these conditions. The growth performance and carcass characteristics of improved meat line of Kuttanadu ducks and its cross with White Pekin ducks were studied under backyard conditions.
- The study suggests that improved meat line of Kuttanad ducks may be used for cross breeding program with exotic meat type breeds to develop slow growing coloured meat type ducks which

are suitable to backyard rearing conditions.

4. **Academic Manuscripts, Investigative Pursuits, Widely-read articles, Literary Volumes and Technical Documents, Details of Research papers published.**

- Dr.Stella Cyriac and Dr.Leo Joseph:- Incubation and hatching of duck eggs In Duck Production and Management Strategies. Published by Springer Nature Singapore Pvt Ltd.
- Dr.Stella Cyriac , Dr.Junaid N , Dr.Vineetha P.G. , Dr.Nimmy P. and Dr.Pramod S:-Trouble shooting the extraction of DNA from avian blood Samples with a solid phase extraction kit. *J. Indian Vet. Assoc.* 20 (3): 135-139.
- Dr.Nimmi, P., Dr.Stella Cyriac S., Dr.Anitha, P., Dr.Vineetha, P.G. and Dr.Pramod, S :-Comparison of growth traits and carcass yield of Kuttanad and White Pekin ducks. *J. Vet. Anim. Sci.* 53(4): 578-582

5. Unveiling Human Resources: Unlocking Potential and Pursuits

- Seminars/ Workshops/ Summer Institutes/ Symposium/Winter School .

Yoga and Meditation Workshop: A three-day Yoga and meditation workshop was organised at CASM in association with Heartfulness Education Trust from 10th to 13th January 2023 with the goal of emphasising mental health of students alongside physical health. Dr. Abhin Raj K P, Officer in Charge of Sports and Games welcomed everyone to the event. The programme was officially inaugurated by Dr. Harikrishnan S, Special Officer of the college. Mr. Ravikumar and Mr. Mohandas, faculty of Heartfulness Education Trust led the theory and practical sessions. The official inauguration of the programme ended with a vote of thanks by Mr. Sameer T, Physical Education Teacher.

National Seminar on "Smart Broiler Production: The Way Forward": A two day national seminar on "Smart Broiler Production: The Way Forward" was organised at College of Avian Sciences and Management, Thiruvazhamkunnu on 27 and 28 February 2023. The programme was inaugurated by Prof. (Dr.) M.R. Saseendranath, Hon'ble Vice Chancellor, Kerala Veterinary and Animal Sciences University. Dr. C. Latha, Director of Academics and Research, KVASU presided over the meeting. Prof. (Dr.) P. Anitha, Director, CASPS, KVASU, Dr. Prasad A., Head, LRS, Thiruvazhamkunnu, Dr. Harikrishnan S, Special Officer, Dr. Stella Cyriac, Dr. Prasoon S., Dr. Abhin Raj K.P, teaching, non-teaching staff and students were present in the programme.

Various sessions were arranged on various aspects of poultry business. Sessions were handled by experts from the poultry industry. Dr. C. Jalaluddhin, Dr. B. Ajith Babu, Dr. Prabhu, Dr. Sudhir Muthalik Desai, Dr. Saneedh Anand, Dr. Akhil and Dr. Sajeev Kumar handled sessions on various topics from poultry science. An alumni student interaction was also arranged for the students. Alumni members shared their valuable professional experiences with the students.

Motivational Workshop for the students of CASM: A motivational workshop was organised for the students of CASM on 17.02.2023. The session was handled by Mr. Gireesh P., Certified Zone Trainer, JCI. 81 students and staff attended the programme.

Training Program / short courses/ Any other program organized (details from each department separately)

Obligatory Training for the Assistant Directors in the Department of Animal Husbandry, Government of Kerala: The Three months Obligatory Training for the Assistant Directors in the Department of Animal Husbandry, Government of Kerala started on 12.05.2022 at College of Avian Sciences and Management. The first session was handled by Dr. Harikrishnan S, Special

Officer of the college on the topic "Poultry Industry in India-Challenges and Opportunities". The session covered the major challenges and opportunities in Poultry sector and also the role of BSc PPBM graduates in poultry Industry. The session ended at 1 PM. The second session started at 02.00 PM was handled by Dr. Prasoon S, Assistant Professor, CASM on the topic "Scientific Poultry Management Practices". The session focused on various scientific practices followed in commercial poultry farming. After the two theory sessions, a visit was made to various farm units, hatchery and feed mill under Avian Research Station of Thiruvazhamkunnu campus.

Obligatory Training for Assistant Directors in the Department of Animal Husbandry: The Three months Obligatory Training for the Assistant Directors in the Department of Animal Husbandry, Government of Kerala started from 15.07.2022 at College of Avian Sciences and Management. The first session was handled by Dr. Harikrishnan S, Special Officer of the college on the topic "Poultry Industry in India-Challenges and Opportunities". The session covered the major challenges and opportunities in Poultry sector and also the role of BSc PPBM graduates in poultry Industry. The second session was handled by Dr. Prasoon S, Assistant Professor, CASM on the topic "Scientific Poultry Management Practices". The session focused on various scientific practices followed in commercial poultry farming. After the two theory sessions, a visit was made to various farm units, hatchery and feed mill under Avian Research Station of Thiruvazhamkunnu campus.

Refresher Training: A refresher training session on 'How to boost your performance on track' was

arranged for the students of CASM, Thiruvazhamkunnu on 25.7.22. Dr. Baby Shalini, Assistant Professor & Head, Department of Physical education, CVAS, Mannuthy was the resource person. Dr Harikrishnan S, Special officer of the college inaugurated the programme and Al Ameen rendered vote of thanks. Around 70 students attended the programme.

Training for Entrepreneurs: A group of 30 women entrepreneurs from Mannarmala visited the campus on 22.10.2022. A training was organized for the team. The programme was inaugurated by Dr. Harikrishnan. S, Special Officer. Dr. Vineetha. P.G, Assistant Professor handled the training session.

Training for Schools Students: 25 students, 4 teachers, 3 PTA members of A.U.P.S Ezhuvanthala North, Nellaya, Shornur along with 3 staff from milk society, Ottappalam and 4 staff from Dairy Department visited CASM on 09.01.2023 as part of the initiatives of the Students Dairy Club of the Dairy extension service unit. Students eagerly interacted with the faculty of CASM and earnest efforts were made to

spread the awareness on using egg and meat products in our day to day life.

A team of 55 students and five officials from the scouts and guides of HSS, Kundurkkunn visited the campus on 07.01.2023. Visits were arranged to college as well as various farm units of Avian Research Station and a brief description about the college and the course was given by Dr. Stella Cyriac, Academic Officer and farm units by Miss. Archana Venugopal, Technical assistant.

Awareness Class on Disaster Management: An awareness class on Disaster Management has been arranged for the students and staff of CASM, Thiruvazhamkunnu in association with the Kerala Fire and Rescue Services, Government of Kerala on 5th January. A total of around 80 students and 20 staff attended the programme.

Training for Kudumbasree Block Level Coordinators district programme managers: A team of 15 Kudumbasree block level coordinators and district programme managers visited the campus on 16.02.2023. Visits were arranged to college as well as various farm units of Avian Research Station and a brief description about the units were given.

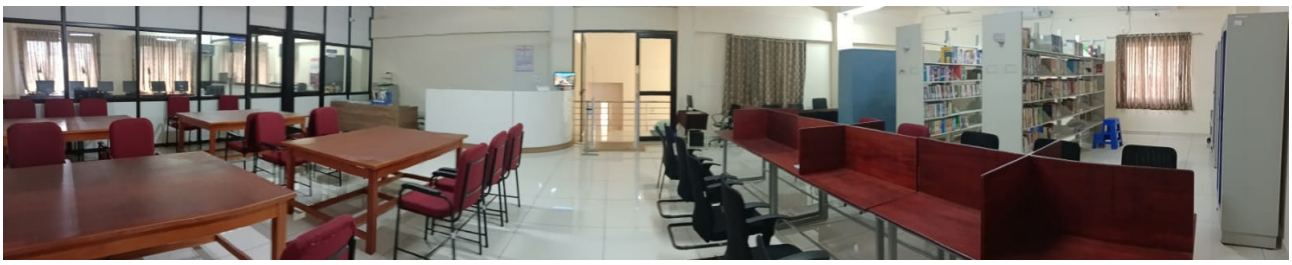
Training for the members of Pensioners Union, Ambalappara, Ottappalam: The members of Pensioners Union, Ambalappara, Ottappalam visited the campus on 08.02.2023. Visits were arranged to various farm units of Avian Research Station and a brief description on various poultry breeds and farm operations were given by Dr. Prasoon S, officer i/c of farms.

Training for farmers from Erode, Tamil Nadu: 20 farmers from Erode, Tamil Nadu visited the campus on 23.03.2023 as a part of Inter State Exposure Visit to Farmers organised by Agricultural Technology Management agency, Erode, Tamil Nadu. Visits were arranged to various farm units and various facilities offered in the campus.

LIBRARY AND INFORMATION SCIENCES (COLLEGE LIBRARY)

1. Center Overview: A Snapshot of Excellence

College Library stands as a bastion of knowledge and academic excellence within the institution. It serves as a vital hub for students and faculty, promoting learning, research, and intellectual exploration.



I - Books Anew

a) Host of New Arrivals

In the last year, Library has acquired an impressive array of new books and resources across various

disciplines, ensuring that collection remains fresh and up-to-date.

b) Subjects and Genres The collection is thoughtfully curated to encompass a broad spectrum of subjects and genres, ensuring it aligns with the diverse academic interests and needs of users. Primarily focused on Poultry Science and Management studies, library houses a comprehensive collection of resources in these fields. Additionally, library maintain a substantial assortment of materials in literature, history, biography and general sciences, enriching the academic experience for all patrons. This diverse collection caters to the varied intellectual pursuits of user community.

c) Latest Trending Collections

Library has carefully curated collections that align with current academic trends and research interests, ensuring users have access to the most relevant materials.

II - Novel Engagements

a) Reading Engagements

Promoting a culture of reading, Library has initiated reading engagement programs, encouraging both students and faculty to explore the literary world and observed the Reading Day celebrations, conducted quiz programs and honored the best readers within user community. Additionally, a well-known dramatist conducted a highly informative session on reading habits among the students.

b) Literary Fairs

library actively participates in literary fairs, fostering a sense of community and celebrating the written word.

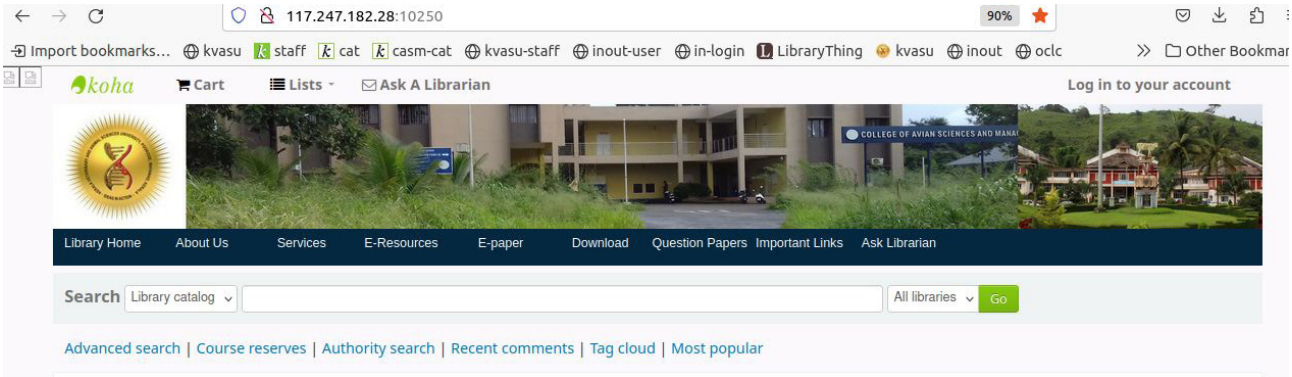
c) Training

Library offer training sessions to assist users in maximizing resources, promoting information literacy and research skills. Additionally, conducted user orientation programs for newly admitted students and provide personalized services to assist users in locating the documents they require

III - Technological Leap

a) Stepping into the Digital Age: Brief Profile

Library has embraced the digital age, providing online access to an extensive collection of e-books, journals, and databases. We utilize KOHA, an integrated Library Management System with RFID support, to offer all the necessary services to our user community. The Online Public Access Catalog (OPAC) is accessible to the entire user community 24/7 via the following web address: http://117.247.182.28:10250/



b) List of Upgraded Systems

Currently library systems have undergone significant upgrades, resulting in improved efficiency and an enhanced user experience by using Koha version 22.05 and Ubuntu Server version 22.04.

c) Improvement of Search Capabilities

Implemented advanced search capabilities, simplifying the process for users to locate and access the materials they require. Advanced search functionality is available in Koha, offering features such as 'and,' 'or,' and 'not' to refine search queries. Users can access their account by logging in with their credentials, allowing them to view their borrowed items, due dates, any fines incurred, as well as their previous search history. Additionally, users have the ability to search within the content pages of documents.

d) User Experiences and Feedback

Feedback from our users has been overwhelmingly positive, highlighting the improved access and user-friendly systems.

IV - Enriching Services

a) Research Services and Assistance

Dedicated research services and assistance team provides invaluable support to students, facilitating to their academic activities.

b) Reference Section

The reference section remains a cornerstone of library, offering a treasure trove of knowledge and expertise.

V - Library in Focus

a) Snapshot of the Library's Evolution

Over the years, library has evolved and expanded to meet the evolving needs of the academic community, commenced its journey in 2014 on the ground floor of the college building with limited space and features. Subsequently, it relocated to the first floor, providing more room but still within constrained space. In 2022, the library made a significant move to the second floor of the building, affording ample space and state-of-the-art infrastructure facilities

b) Services Offered

Persistently the library strive to broaden its services and ensuring that its stand at the forefront of providing academic support. The core services offered are as follows:

- Collection Development and Management
- Cataloging and Classification
- Reference and Information Services
- Circulation Services
- Interlibrary Loan (ILL)
- User Orientation and Training
- Reprographic Services.

c) Stock

The collection has experienced substantial growth, with a steadfast emphasis on quality and relevance. As an academic library specializing in Poultry Science and management studies, the majority of holdings consist of materials in these disciplines. Additionally, maintain a substantial collection of books in Literature, History, Biography, and general sciences. In total, the collection comprises over 2,300 books, 40 CDs, and IT equipment, including 20 computers and 3 printers. Library has also implemented RFID technology and well-equipped with various types of furniture, including tables, chairs, shelves, and air conditioning units.

d) Growth Projection

Anticipate continued intellectual exploration and academic growth, with plans to expand its collection further.

e) Number of Users/ Subscribers

Serves an expanding number of users and subscribers, underscoring its significance within the academic ecosystem. Currently, library has 155 users, including 133 students.

f) Quantifying Library Engagement

Actively track the time invested by students and faculty in utilizing library resources, demonstrating its vital role in academic life.

VI - Financial Vitality

a) Library's Financial Standing and Revenue

Library's financial stability is primarily dependent on state plan funds and non-plan funds. Thus far, the library has maintained a healthy financial position. To further enhance the collection, additional funding is required.

b) Resources Allocation

Funds are allocated strategically to ensure the continuous improvement oflibrary services and collections.

c) Operational Cost

Maintained cost-effectiveness in operations and optimizing resources for maximum impact.

VII - Bibliophile's Delight

a) A Glance at Our Extensive Collection

Library boasts an extensive and diverse collection, catering to all types of readers and students.

b) Classic Masterpieces

Treasure classic masterpieces, ensuring they remain accessible to all who seek their wisdom.

c) Scholarly Works

Commitment of Library is evident in the collection of scholarly works and supporting academic excellence.

VII - Infrastructure Elegance

Library's infrastructure is designed to facilitate learning and research, offering a comfortable and inspiring environment for all users.

EVENTS UNDER UNIVERSITY

1. University Celebrations

Foundation Day Celebration: The 9th foundation day of the CASM was celebrated on 05.04.2022. The programme was inaugurated by Dr. M R Saseendranath, Hon. Vice Chancellor, KVASU. On the same day the former Special officers and Dean of the college were honoured. The official launching of renovated laboratories, smart classroom, demonstration hall and video conferencing system were done by Dr. Hema Thripadhi, National Co-ordinator, NAHEP-IG Project.

Fresher's Day and Ifthar meet celebration: 'Neo fiesta', Fresher's day and Ifthar eve of CASM was organized on 28.04.2022. The programme was inaugurated by Dr. Harikrishnan S, Special officer. Sri. Hrishikesh M Nair welcomed the gathering, Student's Union Vice President Sri. Mohammed Shebin presided over the function and Dr. Suraj P T, Head, LRS was the chief guest. University football team members of the college were honoured in the function. Dr Prasoon S and Mr.. Muhammad Arsal TK offered felicitation and Miss. Anagha rendered vote of thanks. The official function will be followed by Ifthar meet and various cultural programmes by students.

World Bicycle Day Celebration: As per the directive of UGC, World bicycle day was celebrated at College of Avian Sciences and Management on 03.06.2022.The programme was inaugurated by Dr. Harikrishnan S, Special Officer of the college. In connection with the celebration, a cycle ride was arranged inside the campus to give awareness on the benefits of cycling among the students and faculty. Academic officer, students and other faculty were present for the programme.

World Environment Day Celebration: World Environment Day was celebrated at College of Avian Sciences and Management on 05.06.2022. Dr. Harikrishnan S, Special Offcier, CASM initiated sapling

plantation on the same day. An awareness talk was also given on the importance of environmental conservation by the Special Officer

International Yoga Day Celebration: International Yoga Day was celebrated at CASM, Thiruvazhamkunnu under the leadership of the Students Union, CASM. Special officer Dr. Harikrishnan S., inaugurated the programme and mentioned that Yoga is a holistic approach for health and well-being by balancing mind, body and soul. He also urged the necessity of yoga in day to day life to stay healthy and rejuvenated during the period of this pandemic. Followed by the inaugural function, separate Yoga sessions were arranged for the students, faculty and staff of CASM.

Independence Day Celebration: College of Avian Sciences and Management, Thiruvazhamkunnu celebrated the 76th Independence Day with great enthusiasm and respect. The ceremony started at 9.15 AM in the campus. To commemorate the sovereignty of our nation, Dr. Harikrishnan S, Special Officer of the college hoisted the tricolor flag and all sang the national anthem to pay homage to the nation. The Special Officer delivered a speech with patriotic zeal. He emphasized the relevance of upholding the dignity of our nation and remembered the contributions of the great leaders in our independence struggle. Independence Day messages were delivered by Mr. Roy. M.D, Senior Farm Supervisor, Ms. Honey George, Student representative, Mr. Ashraf, Casual Labourer and Mr. Narayanan, Security Officer. In connection with the conclusion of 75th Independence Day celebrations-Azadi ka Amrit Maholsav, a Jack fruit tree sapling was planted by the Special Officer. Faculty, staff, students and labourers of CASM & ARS were present for the programme. In connection with the Independence Day celebrations of CASM, the Students Union organized a quiz and painting competition for the students of CASM. The programme was inaugurated by Dr. Harikrishnan S, Special Officer of the college and coordinated by Dr. Stella Cyriac, Associate Patron. Anirudh Sunil and Aghilesh of 2020 admission won the first prize in the quiz

competition and Hasna of 2021 admission won the first prize in the painting competition

National Sports Day Celebration: College of Avian Sciences and Management, Thiruvazhamkunnu celebrated National Sports Day on 29.08.2022 in a most befitting manner. The programme was presided by Dr Vineetha P.G, Officer i/c Sports and games and inaugurated by Dr. Harikrishnan S, Special officer of the college. Dr. Prasoon S and Sri. Sameer offered felicitations. The official inaugural session was followed by a colourful display of various sports and games. Different Games were conducted for Staff and Students as part of the programme.

Onam Celebration: Onam 2022 was celebrated at CASM on 03.09.2022. The students union has organized various cultural programmes for the students and faculty members on the same day. The active presence and participation of the students and staff made the day a special one.

World Egg Day Celebration: World Egg Day was celebrated at College of Avian Sciences and Management. As a part of the celebration various programmes were organized at CASM. A visit was made to the anganwadi at Nalusseri, Thiruvazhamkunn on 13.10.2022 and eggs were distributed to the students. The egg distribution was inaugurated by Dr. Harikrishnan S, Special Officer. Apart from this, various activities were organized for the students and farmers under the sponsorship of Virbac Animal Health on 14.10.2022. The session was inaugurated by Dr. Prasoon. S, Special Officer (i/c). An awareness class on 'The Benefits of Egg' was given to the students of CASM by Mr. Chinnappa Reddy, Area Business Manager, Virbac Animal Health. The Farmer- Scientist Interaction programme was led by Mr. Chinnappa Reddy. 10 farmers attended the programme. A national level quiz competition was held for the

students and Lucky draw contests were organized for the students and farmers by Virbac Animal Health. All students and staff took active part in the programme. Boiled egg were distributed to the farmers, students and the staff.

Gandhi Jayanthi Celebration: Gandhi Jayanthi was celebrated at CASM. As a part of the celebration, the students union has cleaned the surroundings of the campus and hostels.

Keralappiravi celebration: The 66th Kerala piravi day was celebrated at College of Avian Sciences and Management on 1st November 2022. The programme was inaugurated by Dr. Harikrishnan S, Special Officer. Dr. Sunilkumar, Assistant Professor, CVAS, Mannuthy was the chief guest for the programme. Dr. Stella Cyriac, Dr. Prasoon, Mrs. Geetha, Mr. Aazhar and Mr. Muhammed Arsal felicitated the function. Various cultural programmes and traditional fashion show were organized for the students and staff on the same day.

Republic Day Celebration: The 74th Republic Day was celebrated with great pride and patriotism at College of Avian Sciences and Management, Thiruvazhamkunnu. The celebration started with unfurling of the National Flag by Dr. Harikrishnan S, Special Officer. It was followed by an inspiring speech by the Special Officer on the significance of the occasion. Dr. Abhin Raj, Assistant Professor, Mr. Binu Chandy, Senior Farm Supervisor, Students, Staff, labourers and other faculty members were present for the programme.After the formal session, a quiz competition, exhibition and Mock Parliament was organized by the students and prizes were distributed for the winners.

Mini world cup: In connection with the FIFA world cup 2022, a mini world cup was organized on 16.11.2022 at CASM. Teams were formed from the students and staff. The winners were honored and prizes were distributed.

Volleyball League: A volleyball league was conducted for the students. The students were divided into three groups and competitions were conducted. Prizes were distributed to the winners.

Major Events conducted by the University (Photographs may be included)

Celebrated 12th Foundation Day of KVASU: Kerala Veterinary and Animal Sciences University celebrated its 12th foundation day - 'Nirav@12' at College of Avian Sciences and Management, Thiruvazhamkunnu. The University celebrated its founding day by presenting 12 projects to the society for uplifting the farming community and those involved in animal husbandry. The presentation of the said projects and the inauguration of the University Foundation Day celebrations was performed by Smt. J. Chinchurani, Hon. State Minister for Animal Husbandry and Dairy Development and Pro-Chancellor, Kerala Veterinary and Animal Sciences University. The Minister lauded the various activities being carried out by the University for the upliftment of the farmers engaged in animal husbandry in agricultural sector and the achievements made in various fields by the university. The programme was presided over by Smt. Ummu Salma CK, Hon. President, Mannarkkad Block Panchayat.

Speak like a Superstar- Communication skill enhancement session: A Communication skill enhancement session for career excellence for the students of CASM- 'Speak like a super star' was jointly organised by Directorate of Entrepreneurship and Directorate of Students Welfare today at Seminar hall CASM on 23.08.2022. Dr Sreeranjini A. R., Director Students Welfare inaugurated the programme and Mr. Jayaprakash was the trainer for the session. Around 75 students attended the programme.

CENTRE FOR PIG PRODUCTION AND RESEARCH, MANNUTHY

<table>
<tr><th>Sl No</th><th>Details sought</th><th>Details for the year</th></tr>
<tr><td>1</td><td>Introduction</td><td>The Centre was established on 12th May 1965 under AHD and was taken up by KAU as the University Pig Breeding Farm in 1972. Later in 1995, it was upgraded to Centre for Pig Production and Research in recognition of the academic, research and extension activities undertaken. In 2011 the Centre was taken up by the Kerala Veterinary & Animal Sciences University</td></tr>
<tr><td>2</td><td>Present Stock category-wise as on 31/03/2023</td><td><table>
<tr><td>a. Large White Yorkshire</td><td>545</td></tr>
<tr><td>b. Landrace</td><td>122</td></tr>
<tr><td>c. Duroc</td><td>48</td></tr>
<tr><td>d. Desi</td><td>80</td></tr>
<tr><td>e. 50% cross</td><td>129</td></tr>
<tr><td>f. 75% cross</td><td>250</td></tr>
<tr><td>Total</td><td>1174</td></tr>
<tr><td></td><td></td></tr>
</table></td></tr>
<tr><td>3</td><td>Production details</td><td><table>
<tr><td>Animals sold/year (Young Stock)</td><td>Fattening -1273</td></tr>
<tr><td>Animals sold/year (Adult Stock)</td><td>Culled- 159
Breeding- 207</td></tr>
<tr><td>Others: Plastic bag</td><td>10067 nos (Rs 50335)</td></tr>
<tr><td>Firewood</td><td>88 Kg (Rs 9840)</td></tr>
<tr><td>Green grass</td><td>2100 Kg (Rs 2100)</td></tr>
<tr><td>Pig manure</td><td>12 tons (Rs 9000)</td></tr>
</table></td></tr>
<tr><td></td><td>Reproduction details</td><td>No of piglets born 1918
Weaned piglets 1673</td></tr>
<tr><td>4</td><td>Germplasm and Input supply</td><td>Started 10 breeder units</td></tr>
<tr><td>5</td><td>Breakthrough variants</td><td>-</td></tr>
<tr><td>6</td><td>Sales revenue from animals and products</td><td>95,73,943.00</td></tr>
</table>

7	Capturing innovations	 50% crossbred herd

8	Training endeavours	**Farmers' trainings** Hands-on training programme withheld due to the incidence of African Swine Fever in the State • Consultancy services have been provided to around 1350 farmers, through personal and telephonic interactions. • The Centre provided technical know-how to progressive farmers for establishing piggery units in respect to the construction of sheds, health care and management, waste disposal and other problems faced on a day-to-day basis. Scientists handled classes on scientific management practices through online mode **Technical Trainings** • The scientists of CPPR have undertaken regular theory and practical classes for students of BVSc&AH, MSc, MVSc and PhD programmes. • Also conducted practical farm training viz. Livestock farm practice, entrepreneurial training and internship training to the undergraduate students. Handled classes and training sessions for Assistant Directors of AHD, Kerala (2 batches)
9	Fodder development	Sufficient fodder required for the unit is produced using the recycled water from the treatment plant
10	Satellite units	10 new units
11	PG-PhD research projects undertaken	3 PhD, 3MVSc., 2MS

ULF &FRDS MANNUTHY

1. Introduction

University Livestock Farm (ULF) and Fodder Research Development Station (FRDS) has a rich and distinct lineage with regard to developed technologies and imparted knowledge in animal husbandry sector of Kerala. It has played a commendable role in enriching the practice of Veterinary Sciences as a profession not only in the state of Kerala but also in other parts of the country. The rich heritage and distinct legacy of ULF & FRDS dates back to 1917 when Thiru – Kochi Government of the Royal Cochin Dynasty established it as Ollukara Farm (OF) and has at present completed a century long existence in public domain of Kerala. Post national independence, ULF& FRDS was transferred to Department for Animal Husbandry, Government of Kerala (GoK) as State Livestock Farm – Mannuthy and concentrated primarily to satiate the ever increasing needs for milk of the emerging urban population of Thrissur. After the establishment of Government Veterinary College, Mannuthy in 1955 by GoK it has worked hand in hand with the College to enhance and ensure quality of veterinary education imparted and also to develop, validate and refine technologies that found profuse use with the dairy farmers in Kerala. Along with the college, farm also came under the purview of Kerala Agricultural University, Vellanikkara, Thrissur in 1972. State Livestock Farm – Mannuthy was then on redesignated as ULF&FRDS. In 2010, the farm became an official part of Kerala Veterinary and Animal Sciences University, Pookode , Wayanadu.

ULF & FRDS has 250 cattle and produces on an average 1000 Litres of milk daily. Cattle consist of a herd that is predominantly of Frieswal origin as it is a part of Progent Testing Sceme run nation wide by Project Directorate on Cattle, ICAR, Govt of India. Farm also has 80 Buffaloes that produces daily on an average 130 litres of milk. Herd consist predominantly of Murrah breeds that are systematically graded up. Fodder section has 40 acres of land and is cultivated occasionally with cereal purpose fodders namely Maize and Sorghum. Parennial cultivated grasses namely, guinea grass, para grass, congo signal and cross bred napier variants namely CO3, CO4 and CO5 are the main crops available. ULF & FRDS possesses a motivated team of teachers, non teaching staff and a labour force that caters to cattle farming, buffalo farming and fodder cultivation. True to the rich heritage and core objectives ULF & FRDS continues on the path of improving dairy farming scenario of Kerala.

2. Present Stock

Species/ Breed	Age Group										
	0-3		3 -6 months		6 months - 1 year		Heifers	Milch animals	Dry animals	Pregnant animals	Total
	M	F	M	F	M	F					
Cattle	4	8		18		30	61	84	11	34	**250**
Buffalo	6	4	1	3	7	6	7	27	6	12	**79**
Total	**10**	**12**	**1**	**21**	**7**	**36**	**68**	**111**	**17**	**46**	**329**

3. Production and Reproduction Data of the report year

Sl No.	Items	Cattle		Buffalo		Fodder
		M	F	M	F	
1.	Total No. of Calvings	69	61	16	14	
2.	Milk	320536 L		38415 L		
3.	Urine	2295 L				
4.	Manure(Fresh)	905844 Kg				
5.	Cow dung powder					53960 Kg
6.	Fodder Slips					CO3,CO5 – 87202 Nos Guinea – 16705 Nos
7.	Vermicompost					1465 Kg
8.	Fodder Grass					Cattle farm -800860 Kg Buffalo farm - 835460 Kg Other Units -126715 Kg

4. Germplasm and Input Supply: Farmers and Institutions

- Sale of elite crossbred calves and heifers to public
- Sale of high yielding quality Hybrid Napier fodder slips to public

5. Breakthrough Strain Variants: Unveiling New Species and Varieties : Nil

6. Sales Revenue from animals and Product Offerings

Sl No.	Items	Cattle	Buffalo	Fodder
1.	Culled Animals	Rs. 2307481/-		
2.	Animals sold	Rs. 1681800/-		
3.	Milk	Rs. 12521376/- (284558.94 L)	Rs. 1501904/- (32505.33 L)	
4.	Urine	Rs. 22268/-		
5.	Manure(Fresh)	Rs. 232930/- (186344 kg)		
6.	Cow dung powder			Rs. 789563/-
7.	Fodder Slips			Rs.130068/-
8.	Vermicompost			Rs. 23440/-

9.	Fodder Grass			Rs. **627239/-**
10.	Gunny Bags	Rs. **11180/-**		
11.	Other miscellaneous items			Rs. **371943/-**
TOTAL		**Rs. 2,02,21,192/-**		

7. Capturing Innovations: Photos of New Strains, Varieties, Synthetics and Farm Activities

Fodder Crop Development Army 2022 -23 batch Stipendiary Training programme

Modern Herringbone milking parlour

Construction of Assistant Professor's Office room, Buffalo farm

Construction of Fodder Labourer's waiting Room at hill top

Construction of fenced open paddocks at Cattle farm	Construction of irrigation canals in fodder plots

8. Training Endeavors: Insights into Conducted Programs (Details of training conducted)

One year Stipendiary Training programme for three Fodder Crop Development Army trainees on Fodder entrepreneurship during 2022-23

9. Fodder development

Quality fodder slips supplied to farmers during 2022-23 brought laurels to the section. Fodder slips supplied to farmers became a mainstay of FRDS and it recorded a revenue income of Rs. 130,068/- in 2022-23 that included 87,202 Hybrid Napier CO3, CO5 slips and 16,705 guinea grass slips. From around 25 acres of cultivable fodder area at ULF & FRDS, the annual green fodder production during 2022-23 was 1,763 Tons including high yielding Hybrid Napier varieties like CO3, CO4, CO5, Super Napier and Australian Red Napier. During 2022-23, 31 tons of Hybrid Napier green fodder was ensiled as part of training programme to produce 20 tons of quality silage for feeding dairy cattle. Steps were initiated to construct irrigation canals in cultivable fodder plots, labourer's waiting shed in hill top and deepening of irrigation ponds. By bringing an additional area of 25 acres of land in the hilly area of the campus under intensive fodder propagation using high yielding Hybrid Napier cultivars and Fodder maize, steps will be initiated to enhance the fodder production further.

UNIVERSITY POULTRY AND DUCK FARM

1. Introduction

The UPDF was established in 1950 under Erstwhile Cochin State. The mandate of the farm is to provide facilities for research and practical training to UG and PG students. At present, the farm maintains 28 breeds of poultry including chicken, duck, turkey, guinea fowl, Japanese quail and goose. The hatchery unit in the farm have 15,000 eggs hatching capacity per week. The farm supplies parent stocks chicks of Gramasree chicken to Regional Poultry Farms under Animal husbandry Department, Kerala. The farm also supplies day old chicks of various breeds of poultry to farmers in Kerala and neighbouring states. It also impart training and consultancy services to farmers and entrepreneurs

2. Present Stock

2022-23	
Birds	**Number**
Chicken	8021
Duck	800
Turkey	4
Goose	66
Guinea Fowl	24
Japanese Quail	1381

3. Production and Reproduction data of the report year

2022-23	
Birds	**Total Egg per year**
Chicken	279300
Duck	72664
Japanese Quail	31725
Others	180

4. Germplasm and Input Supply

2022-23	
Birds	**Number**
Chicks	314411
Chicken (Egg)	279300

5. Breakthrough Strain Variants : Unveiling New Species and Varieties.

6. Sales Revenue from Animals and Product Offerings.

2022-23	
Birds	**Number**

Chicks	31411
Adult	4619
Meat	13806 Kg.
Others (Mannure)	61080 Kg.

7. Capturing Innovations

BHRAMA

CHINESE WHITE GOOSE

8. Training Endeavours

2022-23

B.V.Sc. & A.H. Internship

B.Sc. Poultry Production & Business Management Internship

V.H.S.E. – On Job Training.

UNIVERSITY GOAT AND SHEEP FARM, MANNUTHY

1. Introduction

The University Goat and Sheep Farm was established in the 1965 with the total area of 4.10 acres. The objectives of the farm is to promote and undertake research on all aspects of goat production and health, operate as an instructional farm to students and conduct extension activities as model unit and supply breeding animals to farmers.

2. Present stock position as on March 2023

Species / Breed	2023	
Goat	Male	Female
Malabari	47	78
Attappady black	27	65
Crossbred	28	114
Sheep	16	61
Total	118	318
Total stock	436	

3. Production and Reproduction data

a. Total milk production (L)	2022-23
	7160.8

b. Number of kidding

Species / Breed	2022-23			
Goat	No. of kidding	Male	Female	Total
Malabari	33	20	22	42
Attappady black	34	28	24	52
Crossbred	86	59	71	130
Sheep	36	19	19	38
Total	189	126	136	262

4. Germplasm supply: Farmers and Institutions

Supply	2022-23		
	Male	Female	Total
Farmers	69	65	134
Institutions	-	-	-

Sales Revenue from animals and product offerings

	Amount (Rs) from sale of			
Year	Goats	Miscellaneous	Milk coupon	Total
2022-23	10,32,063/-	59,305/-	5,26,669/-	16,18,037

5. **Capturing innovations**

Milking machine

Milking machine in goats increases the efficiency of milking and reduces labour. The milking machine performs two basic functions. It takes 4-5 minutes to milk 2 goats at a time. It helps to reduce stress during the lactation process, which creates a good milking and hygienic routine.

The advantages of using milking machine are

1. Enables rearing of larger herd strength
2. 3-4 times faster than hand milking
3. Increase in quantity and quality of milk
4. Helps to save labour expenses
5. Less dependent on skilled workers.

Milking machine

Dipping tank

Dipping of goat and sheep facilitates the removal of ectoparasites like ticks, lice, mites and flies which is more effective and less labour intensive. Each animal is allowed to pass through the dipping tank.

Dipping tank

Mechanization in the farm

1. Feeding bottle stand for weaned kids improves the milk intake and body weight gain.

2. Using chaff cutter for fodder cutting increases the efficiency of fodder consumption and reduces wastage.

3. Mechanization brought in by means of pressure washer installation has increased the efficiency of cleaning with regard to the time spent and effort, reduces water usage and improves cleanliness.

4. Installation of CCTV enhanced effective monitoring of routine activities in the farm and thereby increased efficiency of work output.

6. **Training endeavours**

A Revolving Fund training was conducted on 'Capacity building programme in goat production and entrepreneurship' from 29.07.2022 to 30.07.2022. The training consisted of four lectures and two practical sessions and 12 participants attended the training with a fee of Rs. 1000 per head. The training focussed on scientific goat breeding, feeding, health and management of goats. It also briefed about the maintenance of records, economic goat farming and waste management. In the practical session, hands on training was provided on handling of goats, ear tagging, artificial insemination, pregnancy diagnosis using ultrasound scanning. Lectures on diagnosis of parasitic infestation, care and management of kids, does and buck were handled.

AICRP ON POULTRY FOR EGGS

No	Particulars		2022-23
1	Year of Establishment		1976
2	Total area of the farm		5 Acre
3	(Sanctioned strength/in position as x/y) with designation of each post		
	Scientific staff		2
	Professor		
	Associate Professor		
	Assistant Professor		2 (Senior Scientist (i/c) and Farm Manager)
	Administrative staff		3 (Section Officer Hr. Gr., Assistant Sr. Gr. and Computer Assistant Seln. Gr.)
	Farm Supervisors		Farm Supervisor GR I
	Class IV		1
	Labourers - permanent		8
	Labourers - casual		Nil
	Daily wage employees		5
4	Total number of permanent staff		15
	Contract staff		Nil
	Daily wage employees		5
5	Whether the farm land/part is occupied by any agency/govt. dept in last five years, if yes details with area		No
6	Details of Budget allocation and Expenditure		
	Fund released (Non Plan + Plan + EAP)		1,39,50,000
	Expenditure (Non Plan + Plan + EAP)		2,07,62,000
	Expenditure excluding salary		98,37,000
	Revenue Generated		47,13,584

	Cost benefit ratio (including salary)		0.23
	Cost benefit ratio (excluding		0.48
7	Objectives of running the farm		a) Genetic improvement of IWN & IWP strains. b) Conservation, improvement, characterization and application of native germplasm c) Development of a three-way cross suitable for backyard purpose using IWN strain of White Leghorn, Desi chicken and RIR
	Level of achievement of above objectives		a. Genetic improvement of S33 generation (upto 72 weeks), of IWN & IWP strains completed. b. Genetic improvement of native germplasm was completed up to S6 generation. Study on S7 generation progressed up to 28 weeks c. The second field trial on three-way cross is undergoing (studied up to 52 wks)
8	Status of maintenance of mandatory registers in the farm (up to date/pending)		Upto date
9	Suggestions/recommendation of the superior officers who have visited the farm		
10	Details of farm produce		
	Total Egg/Year		5,75,381
	Milk/Year		
	Birds sold/year (Chicks)		51598
	Birds sold/year (Adult)		2294
	Animals sold/year (Young Stock)		
	Animals sold/year (Adult Stock)		
	Others (specify)		
	Manure (kgs)		30230
11	Mechanism adopted for the sale of the farm produce		Directly from farm & Sales counter of KVASU

12	Method of purchase of feed		Direct purchase
	Source of purchase of feed		Revolving Fund Feed Mill
13	Additional facilities created during the year		
14	Mechanisms and methods adopted to improve the functioning of the farm (Ten points minimum)		
15	Student research during the year		One P.G. research on "Enrichment of chicken egg by dietary inclusion of flax-seed oil, fish oil and their combination" was completed and Dr. Archana S. has got her MVSc degree
16	Student training during the year		1. Internship training of BVSc 2017 students 2. Intership training of BSc PPBM 2019 batch students 3. LFP training of BVSc 2019 students
17	Farmers training during the year		Two numbers of training on "Backyard Poultry rearing" with the participation of 55 SC farmers each of Velinalloor and Alayamon panchayaths of Kollam district
18	No. of farmers visited the farm during the year		
19	Number and type of publications during the year		
20	Present stock position of animals/birds category wise		Published an abstract on "Comparative evaluation of production performance of six generations of Tellicherry chicken breed of Kerala" in the compendium of "National Conference on Native Chicken" held at Madras Veterinary College, Chennai from 22nd to 23rd, September, 2022
	IWN (Female)		703
	IWN (Male)		285
	IWP (Female)		648
	IWP (Male)		334
	CP (Female)		78
	ND (Male)		69

	Black desi (Female)		604
	Black desi (Male)		227
	Red desi (Female)		653
	Red desi (Male)		371
21	Other major activities		Implemented the ICAR SCSP scheme 2022-23 by supplying a wooden coop, 10 numbers of 1-2 months old chicks and 5 kgs of feed to 110 scheduled caste beneficiaries of Velinalloor and Alayamon panchayaths of Kollam district. Honorable Minister for Animal Husbandry Smt. J. Chinchurani has inaugurated the function.

Hon'ble Minister for Animal Husbandry Smt. J. Chinchurani distributes the Wooden coop and 10 chicks to a farmer at Velinalloor panchayath of Kollam district under ICAR SCSP scheme 2022-23

Hon'ble Vice-chancellor delivers the keynote address

കേരള വെറ്ററിനറി ആൻഡ് അനിമൽ സയൻസസ് സർവകലാശാലയുടെ നേതൃത്വത്തിൽ വെളിനല്ലൂർ ഗ്രാമ പഞ്ചായത്തിലെ പട്ടികജാതി വിഭാഗകാർക്ക് സൗജന്യ കോഴിവളർത്തൽ യൂണിറ്റുകളുടെ വിതരണോദ്ഘാടനം മന്ത്രി ജെ.ചിഞ്ചു റാണി നിർവഹിക്കുന്നു

കോഴിവളർത്തൽ യൂണിറ്റുകളുടെ വിതരണവും ബോധവത്കരണ സെമിനാറും

ഓയൂർ: കേരളവെറ്ററിനറിആൻഡ്അനിമൽസയൻസസ്സർവകലാശാലയുടെ നേതൃത്വത്തിൽ വെളിനല്ലൂർ ഗ്രാമ പഞ്ചായത്തിലെപട്ടികജാതി വിഭാഗകാർക്ക് സൗജന്യ കോഴിവളർത്തൽ യൂണിറ്റുകളുടെ വിതരണവും ബോധവത്കരണ സെമിനാറും സംഘടിപ്പിച്ചു.

കരിങ്ങന്നൂർ ഗവ. യു.പി എസിൽ നടന്ന സൗജന്യ കോഴിവളർത്തൽ യൂണിറ്റുകളുടെ വിതരണോദ്ഘാടനം മന്ത്രി ജെ. ചിഞ്ചു റാണി നിർവഹിച്ചു. വെളിനല്ലൂർ ഗ്രാമ പഞ്ചായത്ത് പ്രസിഡന്റ് എം. അൻസർ അദ്ധ്യക്ഷനായി. ഡോ. രാജീവ് സ്വാഗതം ആശംസിച്ചു. വെറ്ററിനറി യൂണിവേഴ്സിറ്റി വൈസ് ചാൻസലർ ഡോ. എം. ആർ. ശശീന്ദ്രനാഥ് മുഖ്യപ്രഭാഷണം നടത്തി. സെമിനാറിന്റെ ഉദ്ഘാടനം ജില്ലാ മൃഗസംരക്ഷണ ഓഫീസർ ഡോ. അജിലാസ്റ്റ് നിർവഹിച്ചു. വെളിനല്ലൂർ ഗ്രാമപഞ്ചായത്ത് വൈസ് പ്രസിഡന്റ് ജെ. നീന, വികസനകാര്യ സ്റ്റാൻഡിംഗ് കമ്മിറ്റി ചെയർമാൻ ബിജു, ഗ്രാമപഞ്ചായത്ത് അംഗങ്ങളായ കെ. വിശാഖ്, ഡി. രമേശൻ, ജെ. അമ്പിളി, കെ. ലിജി, ജസീന ജമീൽ, വട്ടപ്പാറ നിസാർ, മെഹറിൻസ, വെളിനല്ലൂർ സർവീസ് സഹകരണ ബാങ്ക് പ്രസിഡന്റ് പി. ആനന്ദൻ, സി. ഡി. എസ് ചെയർപേഴ്സൺ സാജിതാ ബൈജു, വെറ്ററിനറി സർജൻ ഡോ. മാലിനി എന്നിവർ സംസാരിച്ചു. ഡോ. എം. കെ. മുഹമ്മദ് അസ്ലം നന്ദി പറഞ്ഞു. വെളിനല്ലൂർ പഞ്ചായത്തിലെ പട്ടികജാതികുടുംബങ്ങൾക്ക് കോഴിയും കൂടും വിതരണം ചെയ്തു.

Hon'ble Minister for Animal Husbandry Smt. J. Chinchurani distributes 10 chicks to a farmer at Alayamon panchayath of Kollam under ICAR SCSP scheme 2022-23

REVOLVING FUND POULTRY PROJECT, CASPS, MANNUTHY

The Revolving Fund Poultry Project operating under CAS in Poultry Science was originally sanctioned by ICAR vide order No.F.7-15/95/ASR II Dt.17.07.96 in the name 'Establishment of a Commercial hatchery'. The project started functioning w.e.f. 03.03.1998 under Kerala Agricultural University with a capital investment of Rs. 25 lakhs as the corpus amount and one time grant. The corpus fund was fully repaid in five installments and the project was carried out successfully under Kerala Agricultural University and transferred to Kerala Veterinary and Animal Sciences University vide order no. KVASU/DAR/R2/2011 dated 11.07.2011 of Director, Academics & Research with name as 'Revolving Fund Poultry Project'.

The Revolving Fund Poultry Project (RFPP) is a prestigious project under the Kerala Veterinary and Animal Sciences University, functioning as an autonomous project without incurring Non- Plan expenditure. Presently it is being operated as per the new guidelines formulated by KVASU.

OBJECTIVES

- To produce balanced poultry feeds to cater the requirements of research stations under University and farms under AHD, Govt. of Kerala
- To facilitate advanced research in frontier areas of Poultry production and technology

ADMINISTRATION DETAILS

Principal Investigator

Dr. P. Anitha Director

Co- PIs

Dr. Binoj Chacko. Associate Professor & Head, UPDF

Name Of Supporting Staff	Position
Dr.Afsal.S	Feed mill Manager
Mrs. Hima.P.P	Accountant
Mrs. Raji.P.G	Accountant
Mr. Binto Benny	Feed mill Assistant
Mr. Nitjin Rajan	Feed mill Assistant
Mr.Joshine Joy	Feed Mill Technician/Fitter
Mr.Yadhukrishnan.K.M	Lab Assistant
Mr.Rajith C.P	Driver cum office attendant

Dr. Vimal Antony Muttathettu, Assistant Professor, Dept of Poultry Science, Mannuthy

Financial Details:-

Corpus Fund	:	50, 00,000/-
Total Income	:	10,68,77,340/-
Total Expenditure	:	9,87,93,780/-
Net Profit for the period 01.04.2022 to 31.03.2023	:	80,83,561/-
Closing Balance as on 31.03.2023		
SBI (A/C. No. 57036603289)	:	1,45,98,162/-
Interest from SB A/C	:	3,50,512/-

INSTRUCTIONAL LIVESTOCK FARM COMPLEX, KVASU, POOKODE

The farm was established in 2004 as instructional farm under the Kerala Agricultural University. In 2013 it was renamed as Instructional Livestock Farm complex, CVAS, Pookode under Kerala Veterinary & Animal Sciences University.

The farm acts as a center for practical training of UG students (BVSc & AH, BTech, Diploma) and for post graduate research in various disciplines. Many nutritional trials and other relevant research by the faculty and students have utilized the resources in the farm. It also forms the training center for the programmes like Dairy Diploma, Livestock Assistant, and Farmers Training etc. The farm also acts as a conservation unit of various indigenous breeds of cattle.

Present stock: (March, 2023)

Goat and Sheep Farm	
Malabari	115
Sheep	32
Cattle, Buffalo, Vechur and Indigenous units	
Cross Breed cattle	110
Buffalo	22
Vechur	61
Indigenous	11
Poultry unit	
Chicken - layer	1544
Duck - layer	43
Turkey	4
Emu	4
Guinea fowl	2
Ostrich	4
Pig farm	
Large White Yorkshire	159
Landrace	1
Duroc	28
Cross breed Pig	59
Rabbit farm	
Rabbits – NZW, WG, SC, GG, Angora	65

Production and Reproduction data:

Milk: 1,13,479.9 ltr

Eggs: 1,35,543 + 27 emu eggs

Calves born: 72

Rabbit birth: 17

Piglets weaned: 849

Goat births: 63

Sheep births: 13

Details of supply of germplasm and other inputs to the farmers and institutions	Young Cattle and Buffalo: 14 Young Rabbit: 15 Young Piglets: 634 Manure: 118926 kg wet and 646 kg dry Urine: 161 ltr Fodder slips: 375 Eggs: 1,35,543 + 27 emu eggs Chicks: 357 Adult birds: 374 Adult Pigs: 40 Adult Rabbit : 17 Adult Goat : 13 Adult Cattle and Buffalo: 48
Breakthrough Strain Variants: Unveiling New Species and Varieties (Details of new strains/ varieties / developed)	Nil
Sales Revenue from animals and Product Offerings	Rs 1,00,08,086/-
Capturing Innovations: Photos of New Strains, Varieties, Synthetics, and Farm Activities	 Training for the students

	 Thumburmuzhy model compost system Chaff cutter refurbrished
Training Endeavors: Insights into Conducted Programs (Details of training conducted)	50 organized farm visits 927 visitors 3 months obligatory training from AHD
Satellite units	Nil
Any other report of the year	

Additional facilities created during the year	• Slurry management system • Thumburmuzhy compost system at pig farm • New poultry sheds • Additional fodder plots • Automatic drinkers in pig farm • Access road to pig farm • Rabbit farm capacity extended • New cages installed • New rabbits • Lab animals purchased • Subabul plantation started • Digitalization – computer installed • Internet connection extended to farm
	• Solar streetlight installed in the farm • Arecanut planting extended • Exhibition unit of duck shed
Mechanisms and methods adopted to improve the functioning of the farm (Ten points minimum)	• Chaff cutter repaired for efficient functioning • Sprinkler facility extended • Dung pits cleared in all the farm units • Motors repaired • Painting and repair -goat farm • Concreting paddock area of goat farm • Calf shed minor repairs • Minor farm implements purchased • Fencing repairs done • Sex sorted semen usage started • Minor maintenance work at poultry farm
Student research during the year	MVSc: 13 PhD: 2
Student training during the year	Internship training, farm clinics, farm practice, entrepreneurship training for BVSc and AH students, Training for BSc and diploma dairy and poultry students, VHSE on the job training

LIVESTOCK RESEARCH STATION (LRS), THIRUVAZHAMKUNNU

1. Introduction

Livestock Research Station (LRS), Thiruvazhamkunnu started functioning as District Livestock Farm in 1950 and was functional even before the formation of the state of Kerala. It is located in Kottoppadam panchayath (Mannarkkad Taluk) of Palakkad District and has a campus of 159 hectares. The premise also has a natural forest of about 46 hectares, which is home to a variety of fauna including wild boars and langurs. The farm was handed over to Kerala Agricultural University in 1972 and was given its present name. LRS was attached as a station to Kerala Veterinary and Animal Sciences University upon its inception on May, 2011.

Broadly, the work in the station is divided into two sections viz. Dairy section and Agricultural section. Dairy section operates cattle farm, buffalo unit with Murrah animals and Vechur cattle conservation unit. Cattle farm has crossbred 265 cows while the buffalo and Vechur cattle units maintain about 30 animals each. The station also operates a Goat farm with Malabari and Attappady goats. Agricultural section manages fodder cultivation and plantations of coconut, arecanut and cashew nut in the campus. The station has a laboratory with the facilities to do basic work in microbiology, milk quality analysis etc. Advanced diagnostic equipments like hematology analyzer, serum biochemistry analyser, ELISA plate reader and large animal ultra sound scanner are also in the station.

2. Present Stock

The stock of crossbred cattle, Vechur cattle and Murrah buffaloes as on March 2022 is presented in Table 1 and that of Malabari and Attappady Black goats are presented in Table 2.

Table 1: Stock strength of cattle and buffaloes in LRS, Thiruvazhamkunnu

	Age Group										
Species/ Breed	0-3 months		3 -6 months		6 months – 1 year		Males> 1 year	Heif-ers	Milch animals	Dry animals	Total
	M	F	M	F	M	F					
Crossbred Cattle	2	9	-	15	3	20	-	55	86	75	265
Vechur	1	-	1	-	-	5	2	4	-	18	31
Buffalo	-	-	1	1	4	1	2	4	-	20	33
Total	3	9	2	16	7	26	4	63	86	55	329

Table 2: Stock strength of Malabari and Attappady Black goats in LRS, Thiruvazhamkunnu

Species / Breed	Age /Sex				Adult		Total	
	0-3 months		3-6 months					
Goat	M	F	M	F	M	F	M	F
Malabari	8	12	14	10	32	62	54	84
Attappady black	4	4	9	15	19	43	32	62
Total	12	16	23	25	51	105	86	146

3. Production and Reproduction Data of the report year

Milk production	2,87,699 Litres
No of Calvings	121

4. Germplasm and Input Supply: Farmers and Institutions

5. Breakthrough Strain Variants: Unveiling New Species and Varieties : Nil

(Details of new strains/ varieties / developed)

6. Sales Revenue from animals and Product Offerings

Sl No	Item	Revenue (Rs)		Sl No	Item	Revenue (Rs)
1	Cow milk coupon	647475		22	Green grass	82133
2	Buffalo milk coupon	22440		23	Firewood	31425
3	Milk cash sale	451518		24	Firewood mangium auction	118191
4	Milma	10081514		25	Fodder slips	64229
5	Calf below 3 months	68320		26	Guinea fodder	15235
6	Buffalo semen	65		27	Cashew scions	11500
7	Vechur	75000		28	Australian Napier	0
8	Culled animal	1376350		29	Hay	6300
9	Care charge	1500		30	Baled hay	6390
10	Cow dung	517725		31	Coconut	298758
11	Goat manure	16280		32	Arecanut	1935666
12	ICAR:cattle	949125		33	Mango	15600
13	Attappadi goat	14100		34	Cashewnut	30000
14	Malabari goat	57275		35	Tender jackfruit	425
15	Bus pass	46200		36	Jackfruit	32300
16	Rent	80180		37	Acacia/Mangium	558080
17	RTI	73		38	Timber	3358170
18	Parking fee	2200		39	Vermi compost	15158
19	Photocopy charge	157		40	Head load	5000
20	Photography charge	4000		41	Palm cudgel	9340
21	Others	10000		42	Plastic feed bag	16695

	Grand Total (Rs. 210.32 Lakh)					21032092

7. Capturing Innovations: Photos of New Strains, Varieties, Synthetics, and Farm Activities

Biogas plants (50 m^3 total capacity) were constructed under Suchitwa Mission Project and was connected to the University Canteen/Students Mess of CASM. Thiruvazhamkunnu. The gas plants were constructed and handed over by IRTC, Mundur. Efforts were made to prepare hay and supply to MRDF and other units of Kerala Veterinary & Animal Sciences University.

Fig 1: Biogas plant

Fig 2: Baled hay being stored

ASWASA units, a microprocessor based system for controlling themperature and humidity levels within shed was installed in shed no. 2 of the station. In order to purse the automation of the farm further, tractor mounted forage harvester was purchased. A shed based on loose housing scheme was prepared for Vechur cattle.

Fig 3: loose housing for Vechur cattle

Fig 4: ASWASA control unit

8. Training Endeavors: Insights into Conducted Programs

Practical training was given to farmers enrolled in Pasumithra course of Canara Bank Rural Self Employment Training Institute, Palakkad from 20/09/2022 to 24/09/2022. Sessions were arranged for health care, fodder production, care and management of calves and dairy animal nutrition.

A pavilion was set up in the dairy fair organized by Malabar Dairy Farmers Association on 05/11/2022 at Nilambur. The stall featured specimens of fodder varieties, disease lesions, display and sale of University publications.

Fig 5: University Pavillion at Dairy Fair organized by MDFA at Nilambur

A training programme was organized for members of dairy club from ENUP School, Ezhuvanthala, Palakkad on 09/01/2023.

Fig 5: Training for School Dairy Club members

9. Fodder development

Cultivation of COGG3 was intensified during the year. A revolving fund project was launched to promote integrated farming efforts in the farm and to supply fodder to other stations of KVASU and for public sale. A tractor mountable fodder harvester was purchased using plan fund to improve mechanization in fodder production.

Fig 6: COGG3 ready for harvest

10. Satellite units: Nil

11. Any other report of the year

The Directorate of Cashew nut & Cocoa development, Kochi, Government of India has approved the project 'Front line demonstration unit of High Density Cashew Plantation at Livestock Research Station, Thiruvazhamkunnu, Palakkad. A financial assistance of Rs. 2.40 lakh was granted under the project to develop 6 hectares of high density cashew plantation.

CENTRE FOR ADVANCED STUDIES IN POULTRY SCIENCE

PROFILE

Centre for Advanced Studies in Poultry Science was established in 1985 as recognition for its contribution in various fields of activities. The centre has successfully completed 12 External Aided Projects. Release of crossbred chicken for backyard - Gramasree & Gramalakshmi, release of high yielding ILM-90, Establishment of ICAR Revolving Fund Poultry Project, implementation of NATP on productivity enhancement of Ducks and successful conduct of IV World Water Fowl conference, IPSACON 2015, RKVY project etc. are the significant milestones of the Centre.

OBJECTIVES

- Academic programmes of the Poultry Science and Veterinary faculty.
- Research on advanced areas in Poultry Science
- Implementation of Externally aided projects.
- Transfer of Technology (ToT) programmes.

ADMINISTRATIVE DETAILS

ADMINISTRATIVE STAFF

Director- Dr P Anitha,Professor

Assistant –Smt Akhila

SUPPORTING STAFF

Office Attendant

ANNUAL FINANCIAL DETAILS

NON PLAN

Total financial outlay – Rs 52.15 Lakhs

STATE PLAN

Title of the Project	Name of the Principal Investigator	Funding Agency	Fund Allocated	Duration of the Project
Conservation,Characterization And Popularization of Native Varieties of Poultry in Kerala	Dr P Anitha	Govt . of Kerala	61 Lakhs	Continuing Since 2018
Advanced Mycotoxin Testing Facility for Poultry Feed	Dr Binoj Chacko & Dr P Anitha	Govt . of Kerala	27.5Lakhs	Continuing Since 2018

Hatchery Waste Disposal and its Effective Utilization	Dr Harikrishnan S & Dr Vimal Antony Muttathettu	Govt . of Kerala	11 Lakhs	Continuing Since 2018
Standardisation of In-Ovonutrition and Vaccination in Chicken and Development of Strategies for Enhancement of Poultry Welfare in Production Systems by Resource Integration in Selected Five Districts of Kerala	Dr Vimal Antony Muttathettu	Govt . of Kerala	28.5 Lakhs	2022-23

CATTLE BREEDING FARM, THUMBURMUZHY

1. Introduction

The Cattle Breeding Farm, Thumburmuzhy was started in the year 1957 under Animal Husbandry department as Cattle Breeding Research Station. In 1972 the farm was taken over by Kerala Agricultural University and converted to Dry Salvage Farm. In 1993 this farm was upgraded to a milch cattle breeding farm. From 2010 onwards, the farm has been functioning under Kerala Veterinary and Animal Sciences University. The research station has a total land holding of around 65 acres where in 75% of the total land area is used for the production of high quality fodder. It also acts as a centre for practical field training for students of B.V.Sc& A.H, B.Tech, VHSE and Dairy Diploma. The different products for sale and price list are given as annexure.

2. Present stock-

TOTAL STRENGTH OF ANIMALS: 259 as on 31.08.2023

Species/ Breed	Age Group Aug												
	0-3 months		3 -6 months		6 Month-1year	12-18 months	Heifers (> 18 months)		Milch animals		Dry animals		Total
	M	F	M	F	F	F	NP	P	NP	P	NP	P	
Frieswal	-	20	-	6	24	22	30	24	64	8	18	35	251
Vechur	1	-	-	-	-	2	2	-	1	-	1	1	8
Total	1	**20**	-	6	24	24	32	24	65	8	19	36	**259**

3. Production & Reproduction Data of the report year 2022-23

Data for the year 2022-23								
Sl. No.	Month& Yr	Production data		Reproduction data				
			Calves born during the month			Pregnant animal details		
		Monthly Milk yield (L)	Daily avg milk yield (L)	Male	Female	Total	PD + during the month	Total pregnant animals during the month
1	Apr-22	24096	803.2	2	2	4	15	55
2	May-22	23010	742.25	4	1	5	8	57
3	Jun-22	21763.5	725.4	4	4	8	5	52
4	Jul-22	21964	708.5	7	0	7	10	56
5	Aug-22	22998	741.87	9	4	13	9	51
6	Sep-22	23074.5	769.15	1	4	5	10	57
7	Oct-22	25538	759.29	7	10	17	5	46

8	Nov-22	23676.5	789.22	1	5	6	1	41
9	Dec-22	25090.5	809.37	7	3	10	6	32
10	Jan-23	25289.5	815.79	7	3	10	12	37
11	Feb-23	24598.5	878.5	3	5	8	16	44
12	Mar-23	28377.5	915.403	2	2	4	10	44
	TOTAL	**289476.5**	**9457.943**	**54**	**43**	**97**	**107**	

4. **Germ plasm and input supply: Farmers & Institutions**

Germplasm in the form of cattle semen were received from **4** following sources in CBFT

I.Semen doses received from CVAS, Mannuthy- KVASU, progeny testing scheme

2022-23		
Sl. No.	**Date of receipt of semen**	**Semen doses received**
1.	08.04.2022	20
2.	21.04.2022	30
3.	18.05.2022	30
4.	21.06.2022	30
5.	13.07.2022	30
6.	11.10.2022	30
7.	30.11.2022	30
8.	09.12.2022	30
9.	28.01.2023	30
10.	28.02.2023	30
11.	22.03.2023	30
TOTAL		***320 DOSES***

II.Vechur Semen doses received from CVAS, Mannuthy- KVASU, progeny testing scheme

2022-23		
Sl. No.	**Date of receipt of semen**	**Semen doses received**
1.	04.01.2023	5
2.	27.04.2023	5
3.	12.07.2023	5
TOTAL		***15 DOSES***

III. Frozen Semen doses received from KLDB – Nil

IV. Sex sorted Semen doses received from KLDB

Sl. No.	**Date of receipt of semen**	**Semen doses received**
1.	24.01.2023	50
TOTAL		***50 DOSES***

5. **Sales Revenue from animals & product offerings**

Sales/Internal Revenue detailed data for the year 2022-23

2022-23	
Month	**Total (FR+RF)**
Apr-22	1059150
May-22	992448
Jun-22	986395
Jul-22	932946
Aug-22	1215977
Sep-22	1119306
Oct-22	1604919
Nov-22	1078315
Dec-22	1029143
Jan-23	1181309
Feb-23	1240489
Mar-23	1424078
TOTAL- Rs.13864475	

6. **Capturing innovations:** Photos of New strains, Varieties, Synthetics & Farm activities

Farm activities

Renovation of sheds 17,18,19 (old no.s)

Vechur Conservation project

Construction of sick animal shed adjacent to shed no.3

Thumburmuzhy model aerobic composting

7. **Training Endeavors: Insights into conducted trainings**

Details of Trainings conducted

TRAINING PROGRAMMES 2022-23

April 2022

Twenty eight days internship training to four students of Diploma in Dairy Science,

CVAS, Mannuthy from April 1 st to 28 th , 2002.

May 2022

Fifteen days internship training to eight BVSc & AH students of CVAS, Pookode from April 23 rd to June 6 th , 2002.

June 2022

Fifteen days internship training to fourteen BVSc & AH students of CVAS,

Pookode in 2 batches of 7 students each from 08/06/2022 to 21/06/2022 and from

22/06/22 to 06/07/22.

• Training for Assistant Directors , Animal Husbandry Department Kerala

July 2022

Fifteen days internship training to fourteen BVSc & AH students of CVAS,

Pookode in 2 batches of 7 and 8 students each from 08/07/2022 to 21/07/2022 and

from 22/07/22 to 05/08/22.

ATMA exposure visit programme- 47 members from

Aug 2022

Fifteen days internship training to fifteen BVSc & AH students of CVAS, Pookode in 2 batches of 7 students and 8 students respectively from 07/08/22 to 20/08/22 and from 21/08/22 to 04/09/22.

Sep 2022

Internship training to fifteen BVSc & AH students of CVAS, Pookode in 2 batches of 8 students and 7 students respectively from 06/09/22 to 19/09/22 (14 days) and from 20/09/22 to 04/10/22 (15 days).

Jan 2023

Compensatory field experience for 7 B.V.Sc & AH students of CVAS, Mannuthy

February 2023

Compensatory Farm training for 7 B.V.sc & AH students and 4 weeks farm training for 3 Diploma in Dairy Science students

March 2023

Compensatory Farm training for 7 B.V.Sc & AH students and 2 weeks farm training for 5 Diploma in Dairy Science students of CVAS,Pookode

8. **Fodder Development**

Block	Item	Total Area	Cultivation Area	Kg/cent	Total (Prodn./50 days)
A	CO-3	100 cent	60 cent	125 kg	7500 kg
B	CO-3	204 cent	50 cent	210 kg	10500 kg
B	ASN(Red)	-	10 cent	150 kg	1500 kg
C	CO-3	251 cent	170 cent	140 kg	23800 kg
D	CO-3	390 cent	110 cent	200 kg	22000 kg
D	CO-5	-	100 cent	140 kg	14000 kg
D	ASN(Red)		70 cent	70 kg	4900 kg
E	CO-3	256 cent	175 cent	80 kg	14000 kg
E	ASN(Red)		25 cent	150 kg	3750 kg
F	CO-3	267 cent	250 cent	180 kg	45000 kg
G	CO-3	478 cent	350 cent	70 kg	24500 kg
H	CO-3	538 cent	70 cent	180 kg	12600 kg
H	Napier		25 cent	180 kg	4500 kg
H	GG-3		50 cent	100 kg	5000 kg
H	Guinea grass		100 cent	90 kg	9000 kg
H	ASP Red		25 cent	110 kg	2750 kg
I	Guinea grass	828 cent	100 cent	70 kg	7000 kg
I	CO-3		40 cent	200 kg	8000 kg
J	CO-3	1503 cent	400 cent	200 kg	80000 kg
	Guinea grass		600 cent	70 kg	42000 kg
K	Co-3 & Guinea grass	530 cent	200 cent	50 kg	10000 kg
L		581 cent	Nil	Nil	
					352300 kg

Varieties cultivated

CO-3, Supernapier, Australian napier, Australian red napier, TM-1, GG-3, Congosignal, CO-5

BASE FARM, KOLAHALAEDU

1. Introduction:

The Base Farm was established in the year 1962 under Indo-Swiss Project Extension Unit. In 1976, it was handed over to Kerala Livestock Department and Milk Marketing Board and later on to Kerala Livestock Development Board (KLDB) in 1984. It was taken over by Kerala Agricultural University (KAU) for establishing College of Dairy Science and Technology in 2000. In 2011, the farm was transferred to Kerala Veterinary and Animal Sciences University (KVASU) as Base Farm Complex by the Act 3/2011 of Kerala Legislative Assembly. At present the farm is functioning as an instructional dairy farm for imparting training to the students, professionals and farmers in modern animal husbandry practices.

2. Present Stock

- Crossbred cattle – 115 Nos
- Indigenous Cattle – 12 Nos.
- Total – 127 Nos.

3. Production and Reproduction Data of the report year

Production

- Milk – 99489 Litres
- Fodder – 470400 Kg

4. Germplasm and Input Supply: Farmers and Institutions

5. Breakthrough Strain Variants: Unveiling New Species and Varieties (Details of new strains/ varieties / developed)

6. Sales Revenue from animals and Product Offerings

- Milk – Rs. 3772402
- Fodder – Rs. 7140
- Cow Dung – Rs. 145905
- Live Animals – Rs. 632620
- Miscellaneous – Rs. 1085280

7. Capturing Innovations: Photos of New Strains, Varieties, Synthetics, and Farm Activities

8. Training Endeavours: Insights into Conducted Programs (Details of training conducted)

9. fodder development:

Improved fodder production through construction of check dams, installation of sprinkler irrigation system, and fencing of fodder plots.

10. Satellite units

11. Any other report of the year

- Infrastructure facilities were strengthened, with new office building, farm road, street lights, culverts etc.
- Improved water storage and irrigation facilities through constructing check dams and installing sprinkler irrigation system
- Land issue with KLD Board settled and demarcation done.
- Fencing of fodder fields and adoption of controlled grazing in fenced fodder plots.
- Improved care and management of animals
- Training to BVSc & AH/ BTech (DT) internees

UNIVERSITY DAIRY PLANT

No	Particulars		2022-23
1	Year of Establishment		1993
2	Total area of the dairy plant		
3	(Sanctioned strength/in position as x/y) with designation of each post		
	Scientific staff		
	Professor		1
	Associate Professor		2
	Assistant Professor		3
	Administrative staff		
	Farm Supervisors		1
	Class IV		1
	Labourers - permanent		2
	Labourers - casual		
	Others- Specify		Assistant Section Officer-1, Computer Assistant – 1, Technical Staff - 3
4	Total number of permanent staff		7
	Contract staff		
	Daily wage employees		4
5	Whether the farm land/part is occupied byany agency/govt. dept in last five years, if yes details with area		Nil
6	Details of Budget allocation and Expenditure		Allocation 190.9 lakhs, Expenditure -
	Fund released (Non Plan + Plan + EAP)		Non Plan – Rs.1,90,90,000/- Plan Fund – Rs.26,16,599/-
	Expenditure (Non Plan + Plan + EAP)		Non Plan – Rs.42,59,579/- Plan Fund – Rs.26,16,599/-
	Revenue Generated		Rs.1,71,30,475/- (Total Balance Rs.1,85,78,201.46/- including opening balance)
	RF Expenditure		Rs.1,80,78,916.1/-
	Cost benefit ratio		Rs.4,99,285.36/-

7	Objectives of running the dairy plant		• To impart practical training – as a student's Dairy unit- to the under graduate and postgraduate students of the various faculties viz. Dairy Science and Veterinary and AnimalSciences • To act as a major centre for Research and Development projects under taken by post graduate research scholars, research associates/fellows of various universities. • To provide consultancy to farmers, entrepreneurs etc. in areas of milk processing, product manufacture, quality control, design of processing equipments, packaging etc. • To conduct short term and long-term training programmes for entrepreneurs, students, unemployed youth and farmers for a period ranging from 1 day to 1 year.
	Level of achievement of above objectives		90 %
8	Status of maintenance of mandatory registers in the plant (up to date/pending)		Up to date
9	Suggestions/recommendation of the superior officers who have visited the Plant		• To improve the range of value-added products in the dairy plant
10	**Details Of PlantProduce**		
	Pasteurized Cow Milk (500ml)		542031
	Pasteurized Buffalo Milk (500 ml)		30038
	Cream (Kg)		1238.5
	Curd (500 ml)		21582
	Ghee - 500 ml		906
	Ghee - 250 ml		721
	Ice-Cream-50 ml		4006
	Ice-Cream-500 ml		1514
	Khoa – 25g		26532
	Paneer -250 g		7075
	Sambharam – 200 ml		2922
	Sip Up -packets		39228
	Gulabjamun– (10 pieces)		847
	Skim Milk (Litre)		11173.5
	Pumkin Halwa-100 G		40
	Pumkin Halwa-400 G		46

	Paneer Pickle-150 G		288
	Paneer Pickle-250 G		29
	Palada Payasam – 1 ltr		80
11	Mechanism adopted for the sale of the dairy plant produce		The products are sold through the sales counter at dairy plant, Technology Information and Sales Centre, Mannuthy andthrough selected supermarkets at Thrissur.
12	Method of purchase of feed		NA
	Source of purchase of feed		
13	Additional facilities created during the year		1. Construction of facility for segregated collection of waste materials 2. Hand Dryer, hand washing solution dispenser, Head cap and mask dispenser were installed to ensure the proper hygiene practices of employes.
14	Mechanisms and methods adopted to improve the functioning of the Dairy Plant (Ten points minimum)		1. Cleaning and levelling of dairy plant premises to reduce aerial contamination 2. Routine analysis of hand hygiene of personnels handling milk products was performed using ATP bioluminescence based hygienometers 3. Measures were implemented to improve handlers' hygiene by making them aware of the relevance of adhering to hygienic practices and hand hygiene in food industry 4. Ensured proper hand washing methods and use of gloves and head caps during direct handling of milk and milk products. 5. To ensure the quality and safety of products, milk and milk products were subjected to a variety of tests in the quality assurance lab of the dairy plant. 6. Standardized the procedure for sip up preparation based on sensory analysis and introduced new flavours like blue berry in sip up, mango in ice cream etc. 7. Provided consultancy services for entrepreneurs 8. Engaged part time sweeper to ensure proper cleanliness of dairy plant and premises

			9. Assured strict hygienic practices by visitors through instructing them to wear head caps 10. Restricted the entry of public without prior intimation and limited the accessibility 11. CCTV facility was installed as a part of total quality management
15	Student research during the year		• Dairy plant facilities were utilized for PG research work of M.Tech Students and MSc Students • Hand hygienometer of quality assurance laboratory of dairy plant were utilized by a student from IGNOU doing PG diploma
16	Student training during the year		• Internship training for BVSc Students of CVAS Mannuthy and CVAS Pookode (2016 Batch and 2017 Batch) • Internship training for Diploma in Dairy science students of Department of Dairy Science, CVAS Mannuthy for one month (5 students) • Training for 3 students from B. tech Dairy Technology and student from B. tech food technology of VKIDFT, Mannuthy • Training for 1 student from St. Treasa College, Ernakulam, 1 student from Padmasree Institute of Management and sciences, Bangalore
17	Farmers training during the year		-
18	No. of farmers visited the dairy plant during the year		236

19	Number and type of publications during the year		1. Anjaly, M. G., Prince, M. V., **Warrier, A. S**., Lal, A. N., Mahanti, N. K., Pandiselvam, R., ... & Kothakota, A. (2022). Design consideration and modelling studies of ultrasound and ultraviolet combined approach for shelf-life enhancement of pine apple juice. *Ultrasonics Sonochemistry*, *90*, 106166. 2. Vishnu, V., Harikrishnan, M. P., **Warrier, A. S.**, Mahanti, N. K., Basil, M., Venkatesh, T., ... & Kothakota, A. (2023). Design consideration and optimization of process parameters in fiber extraction unit via modelling studies. *Journal of Food Process Engineering*, *46*(4), e14298 Book Chapters: 1. Warrier, A. S. (2022). Three-Dimensional (3D) Printing of Foods. In *Food Processing and Preservation Technology* (pp. 101-112). Apple Academic Press.
20	Present stock position of animals/birds category wise		
21	Other major activities		

DEPARTMENT OF LIVESTOCK PRODUCTS TECHNOLOGY
MEAT TECHNOLOGY UNIT

Introduction

University had conceived the idea of developing a modern Meat Plant capable of undertaking the responsibilities of teaching, research and extension, almost two decades ago. However, the dream came true in 1992, when infrastructure facilities were created for a multi species abattoir, meat processing unit and necessary laboratories. The unit soon developed modern facilities, which were fully utilized for providing practical hands on training to veterinary students, unemployed youth, entrepreneurs and veterinary officers under Continuing Education Programme. Several externally aided projects were undertaken by the unit including the establishment of a Carcass Utilization Plant with financial support from Ministry of Agriculture, Government of India.

Regular production, processing and marketing of meat and meat products lead to interaction with the public, State Agricultural Universities, Veterinary Officers, Local body authorities and Animal Husbandry Department. The Meat Technology Unit, Mannuthy was later recognized as Department

of Livestock Products Technology in 1994. Several HRD training programmes were developed and implemented which attracted the attention of several universities, State Animal Husbandry Departments, NGO's and private agencies. Several important research activities are undertaken by the scientists of this centre, the results of which are extremely useful to the Indian Meat Industry. The facilities and manpower developed were the first of its kind under universities in India leading to the ICAR recognizing this unit as Centre of Excellence in Meat Science and Technology in 2001. Department of Livestock Products Technology and Meat Technology Unit started offering the MVSc programme in 2004 and PhD programme in 2011. MTU also achieved ISO 22000:2018 certification in beef processing, a first for a government university department in India. The vision is to become a global hub for training and knowledge in meat science and technology.

Mandate of Department of Livestock Products Technology and Meat Technology Unit

- Teaching
- Research
- Extension
- Training and entrepreneurship
- Meat and Meat products production
- By- products utilization

Major Activities

1. The regular mandate of the Meat Technology Unit and Department of Livestock Products Technology includes undergraduate and post-graduate teaching, research and extension on various aspects of meat production and processing
2. Development of quality management programmes in the area of hygienic animal slaughter and processing of meat
3. Evolving suitable methodologies for improving the organoleptic qualities of meat and meat products
4. Development of Eco-friendly slaughter house and meat processing unit waste utilization methods
5. Development of adaptable processing technologies and formulations for value addition of livestock products
6. Standardization of packaging technique for fresh and processed meat and poultry for medium scale entrepreneurial adoption
7. Identification, promotion and validation of indigenous knowledge of local butchers and workers in meat sector
8. Regular production, processing and marketing of meat and meat products and by-products and close interaction with State Agricultural Universities, Veterinary Officers, Local Self Government authorities, Industries Department, Suchitwa Mission, Health professionals, FSSAI, Animal Husbandry Departments etc.
9. Technical advice to entrepreneurs, Food Safety Commissionerate

10. Conducting classes to Nursing, Pharmacy, MBBS, BAMS and Food Technology students

11. Hands-on training on slaughter practices and meat inspection to Vet. Officers and on meat processing to Self Help Groups. The meat species identification laboratory developed at this centre is being utilized by judiciary, forest authorities, wild animal protection agencies, and consumer redressal forums, Government Departments, Veterinary Surgeons, entrepreneurs and the public

1. **Teaching staff (to be provided by departments/ units/ schools/ hospitals)**

Sl. No.	No.of professors	No.of Associate professors	No.of Assistant professors	No. of females	No. of males	Number of SC/ST
1	Nil	2	2	1	3	Nil
Total						

2. **Infrastructure**

a. **Common facilities (to be filled by concerned officers)**

i. Meat plant

Multispecies abattoir, well equipped quality control labs. Carcass utilization plant of European standards for the dry rendering of inedible by products to yield feed-grade meat-cum-bone meal/organic fertilizer. Gamma Chamber 5000 for gamma irradiation of meat and meat products.

Officer in charge

Dr. V.N Vasudevan , Associate Professor & Head, department of Livestock Products Technology & Meat Technology Unit, Mannuthy

1. Faculty members with recent passport size photos

1	Associate Professor and Head	Dr. V.N Vasudevan
2	Associate Professor	Dr. Sathu. T
3	Assistant Professor	Dr. Irshad. A
4	Assistant Professor	Dr. Silpa Sasi

ii. **Departments/Schools/Hospitals/SABS/CAADECCS/Library/CIL Details**

1. Name of the Department : Department of Livestock Products Technology

i. Courses offered by the Department (PhD/MVSc/BVSC/MSc)

Degree Programme	Course No.	Course Title	Credits
UG	LPT	Livestock Products Technology	2+1
PG	LPT 601	Abattoir practices and meat plant operations	2+1

	LPT 602	Fresh Meat Technology	1+1
	LPT 603	Processing and preservation of meat	2+1
	LPT 604	Processing of Milk and Milk Products	1+1
	LPT 605	Packaging and marketing of livestock products	1+1
	LPT 606	Microbiology and Quality Control of Livestock Products	1+1
	LPT 607	Slaughter house byproducts Technology	1+1
	LPT 608	Implant Training	0+2
	LPT 609	Egg and Egg Products Technology	1+1
	LPT 610	Market milk processing and dairy plant practises	2+1
	LPT 611	Processing and Marketing of Wool	1+1
	LPT 612	Biotechnology of Foods of Animal Origin	1+1
	LPT 613	Fish and Fish Products Technology	1+0
PhD	LPT 701	Modern Abattoir Practices and Animal Byproduct Technology	1+1
	LPT 702	Advances in meat production and fresh Meat Technology	1+1
	LPT 703	Developments in Processed Meat Technology	1+1
	LPT 704	Current Trends in Processed Milk and Milk Products Technology	1+1
	LPT 705	Biotechnological Techniques and Quality Control of Livestock Products	1+1
	LPT 706	Ethnic and organic meat and milk products	1+1
	LPT 707	Industrial and Entrepreneurial Training	0+2
	LPT 708	Current trends in disposal and utilisation of waste from meat and dairy industry	1+1
	LPT 709	Advances in Egg and Egg Products Technology	1+1

1. Number of Post graduate students (Course wise) (2022-2023)

a. **Ongoing**

Sl.No.	PhD (Name& Admn.No.)	MVSc (Name& Admn.No.)
1	Aaliya Tahseen (21-DVM-10)	Sahla Kannatti (21 MVM 26)
2	Priya Muktan (22-DVM-11)	Anandhu A Kumar (21 MVM 27)
3		Linda S Kumar (21 MVM 28)
4		Aisha T S (21 MVM 29)
5		MHS Abrar Basha (21 MVM 30)
6		Ameena Asharaf (22-MVM-22)
7		Harikrishnan R G (22-MVM-23)
8		Midhun Mohan (22-MVM-24)
9		Jophil Thomas (22-MVM-70)
10		Bhattu Naveen Kumar (22-MVM-76)
Total	**2**	**10**

b. **Completed- PhD, MVSc, MSc** (2022-2023)

Sl No	Name of the student	Title of thesis	Major advisor
1	Hridhya Vijay C	Effect of repeated freezing and thawing on the quality of spent cattle and buffalo meat	Dr. Irshad A
2	Anjitha Jose K	Effect of moringa (Moringa oleifera) leaf extract and nisin on quality and shelf life of Japanese quail meat	Dr. Irshad A
3	Akhila V.V	Development and evaluation of enrobed chicken nuggets incorporating millets and hydrocolloids	Dr. Sathu T
4	Manasa M	Development and quality evaluation of organic briquettes incorporating slaughterhouse waste and sewage sludge	Dr. V.N.Vasudevan

ii. Thrust areas of research (100 words)-

The Department of Products Technology and Meat Science focuses on several thrust areas within Livestock Products Technology. These include: slaughterhouse by-product utilization for value-added applications; fresh meat technology for quality preservation and food safety; biomaterial development from animal tissues for medical applications; pet food and fertilizer development using meat and by-products; meat product development for improved quality and consumer acceptance; meat packaging and preservation technologies for extended shelf life; and waste management for environmental sustainability in slaughterhouses and meat processing plants.

iii. **Details of Units/High end labs/Specialized labs in the Department**

State-of-the-Art Laboratories: The department boasts a range of state-of-the-art laboratories that cater to various aspects of livestock products technology and meat science. These laboratories are equipped with advanced instrumentation and cutting-edge technologies, enabling researchers, scholars, and students to undertake groundbreaking research and hands-on experimentation. Some notable high-end labs include:

- **Meat Processing Laboratory**: This specialized lab is designed to facilitate the processing and analysis of various meat and meat products. Equipped with modern meat processing equipments, it enables researchers and students to explore different processing techniques and assess the quality attributes of meat and meat products. The lab provides a platform for the development and optimization of new meat products, addressing consumer preferences and industry demands.
- **Microbiology and Food Safety Laboratory**: In this laboratory, researchers focus on the microbiological aspects of meat and meat products, emphasizing food safety and quality control. The lab is equipped with advanced microbial analysis systems and microbiological culturing equipment. It enables the identification and characterization of microorganisms, detection of foodborne pathogens, and evaluation of microbial spoilage, ultimately ensuring the safety and

hygienic standards of meat products.

- **Quality Analysis Laboratory**: This lab houses a wide range of analytical instruments used for the comprehensive analysis of meat and meat products. Researchers employ techniques such as gas chromatography, liquid chromatography, spectrophotometry, and texture analysis to determine chemical composition, nutritional value, sensory attributes, and textural properties. The lab plays a crucial role in understanding the physicochemical and sensory characteristics of meat products, aiding in product development and quality enhancement.
- **Sensory Evaluation Rooms** - The sensory evaluation rooms within the department are purposefully designed to ensure accurate and objective assessment of meat products. The rooms are equipped with controlled lighting, temperature, and ventilation to create a standardized testing environment. The design and layout of these rooms allow for efficient and comfortable sensory evaluations, ensuring reliable data collection and analysis.
- **Collaborative Research and Innovation**: These high-end laboratories foster an environment of collaborative research and innovation, attracting national and international collaborations, industry partnerships, and government initiatives. The advanced facilities encourage interdisciplinary research, enabling scientists and researchers to work together on complex problems and explore new frontiers in meat science and technology. This collaborative approach promotes knowledge exchange, enhances research outcomes, and drives advancements in the field.

iv. **International externship/internship/industrial collaboration in the Department**

The department offers comprehensive internship and inplant training programs, which provide students with valuable opportunities to gain practical experience and exposure in leading meat industry companies. Through these programs, students learn from industry experts, understand meat processing techniques, and gain insights into industry practices. This hands-on experience helps bridge the gap between theoretical knowledge and practical application, equipping students with valuable skills and industry-relevant expertise.

Industrial Collaborations:

The Department of Livestock Products Technology and Meat Technology Unit have established fruitful collaborations with notable industry players, which bring immense value to both academia and the industry. some of the prominent industrial collaborations:

- **Arjuna Naturals Private Limited**: The collaboration with Arjuna Naturals Private Limited, a leading manufacturer and exporter of botanical extracts and nutraceuticals, opens avenues for research and development in natural additives and functional ingredients for meat products. This collaboration enables the department to explore the potential of herbal extracts in enhancing meat quality, improving product shelf life, and developing healthier meat alternatives.
- **AVT Pvt Ltd**: The partnership with AVT Pvt Ltd, a renowned manufacturer of food and beverage ingredients, offers insights into the production of antioxidants used in meat processing. Collaborative research projects focus on optimizing meat formulations, evaluating the impact of additives on product characteristics, and developing innovative meat-based functional foods.

- **AOV Exports**: The collaboration with AOV Exports, a leading exporter of meat products, provides valuable insights into export-oriented meat processing, packaging, and compliance with international quality and safety standards. This collaboration facilitates joint research projects, technology transfer, and knowledge exchange, benefiting both academia and the industry.
- **Amrita Institute of Medical Sciences:** The collaboration with Amrita Institute of Medical Sciences, a premier healthcare institution, opens avenues for interdisciplinary research between medical and meat technology fields.
- **Allanasons Pvt Ltd**: Collaborations with Allanasons Pvt Ltd, leading meat processing company, offer insights into large-scale meat production, processing, and value-added product development. These collaborations facilitate internships, training programs, and research projects that focus on enhancing product quality, optimizing production processes, and improving overall operational efficiency.
- **Benefits and Impact**: The international externship, internship, and industrial collaboration programs bring numerous benefits and impacts to the Department of Livestock Products Technology and Meat Technology Unit:
- **Exposure to Industry Best Practices**: Students gain exposure to state-of-the-art technologies, industry best practices, and global trends in meat processing. This exposure helps them develop a practical understanding of industry challenges and equips them with the skills required to excel in their careers.
- **Industry-Relevant Education**: Collaborations with industry partners ensure that the department's curriculum and research align with industry needs and trends. Students receive practical training and exposure to the latest advancements, enhancing their employability and industry readiness.
- **Research Advancements**: Collaborative projects between the department and industry partners foster research advancements, leading to the development of new technologies, improved product quality, and innovative meat-based solutions. These projects address industry challenges and contribute to the growth and sustainability of the meat industry.
- **Global Perspective**: International collaborations provide students and researchers with a global perspective on meat processing, marketing, and consumer preferences.

Collaborative MoUs with Arjuna Natural Private Limited, Aluva, Kerala

Brief description of Extension and outreach activities for the farming community

The Meat Technology Unit and Department of Livestock Products Technology offer extension and outreach activities to the farming community. These initiatives include training programs for farmers and entrepreneurs, aimed at enhancing their knowledge and skills in meat production, processing, and marketing. Additionally, outreach programs on meat safety are conducted at residents' associations, educating the public about safe handling, storage, and consumption of meat products. These activities bridge the gap between academia and the farming community, promoting sustainable practices, improving meat quality and safety standards, and empowering individuals involved in the meat industry with the necessary tools and information for success.

v. Any other relevant data

iii. **Research (to be provided by concerned faculties at the department level)**

x. Consultancy projects/ Industry linked or funded projects

Sl. No.	Title	Funding agency	Total outlay	Name of faculty involved	Research highlights (four points only- please include relevant photos if any)
1	Effect of the natural ingredients on physico-chemical, microbiological and organoleptic quality of beef under chilled (4°C) storage	AVT naturals Pvt Ltd		Dr.V.N.Vasudevan	
2	Effect of supplementation of natural antioxidants and omega 3 in broiler feed on chicken meat quality	Arjuna Naturals Pvt Ltd		Dr. Sathu T	

i. **Faculty Development programmes (2022-2023) (to be provided by concerned faculties at the department level)**

1. Seminars/trainings/workshops/conferences

Conducted

Sl No.	Name of Faculty	Programme	Date and Venue
1	Dr.V.N Vasudevan, Dr. Sathu T ,Dr. Irshad A, Dr. Silpa Sasi	Hands-on training –Entrepreneurship development in fresh and processed meat	19-05-2022 to 20-05-2022

2	Dr.V.N Vasudevan, Dr. Sathu T ,Dr. Irshad A, Dr. Silpa Sasi	Departmental Obligatory Training at Meat Technology Unit, Mannuthy for assistant directors in the department of animal husbandry government of Kerala	6/06/2022, 7/06/2022
3	Dr.V.N Vasudevan	Outreach Programme on Food Safety	13-06-2022, Kalyan Opal flat, Nettiserry
4	Dr.V.N Vasudevan, Dr. Sathu T ,Dr. Irshad A, Dr. Silpa Sasi	Hands-on training –Entrepreneurship development in fresh and processed meat	15-06-2022 to 17-06-2022
5	Dr.V.N Vasudevan, Dr. Sathu T ,Dr. Irshad A, Dr. Silpa Sasi	Hands-on training - Entrepreneurship Development in fresh and processed meat	14-07-2022 to 16-07-2022
6	Dr. Silpa Sasi	Outreach Programme on Food Safety	26-07-2022, Axis Skyline flats, Kalathode
7	Dr.V.N Vasudevan, Dr. Sathu T ,Dr. Irshad A, Dr. Silpa Sasi	Training on primal subprimal and secondary cuts of buffalo carcasses	20/07/2022-22/07/2022
8	Dr. Irshad A	Trainer's training for veterinary surgeons on abattoir management and meat inspection	11/10/2022-13/10/2022
9	Dr.V.N Vasudevan, Dr. Sathu T ,Dr. Irshad A	Hands on training on skill development in slaughter and dressing of food animals	25/10/2022-26/10/2022
10	Dr. Sathu T	Butchery techniques and hygienic meat production	14/11/2022-25/11/2022
11	Dr. Silpa Sasi	Butchery techniques and hygienic meat production	5-9 Dec 2022, 16- 20 Jan2023
12	Dr. Irshad A	Orientation training on meat production and value addition for potential new entrepreneurs	12/1/2023
13	Dr. Sathu T	Rabbit Meat Processing	29/03/2023, 30/03/2023

2. **Publications (During the year 2022-2023)** (Please mention articles with KVASU faculty as first author/ corresponding author – In case of articles authored by faculty of KVASU from other institutions, these may be included)

Peer reviewed journals

Vandana Sasidharan, V. N. Vasudevan, B. Sunil, T. Sathu , V. Ramnath, K. J. Arun Sankar and R . Yazhini Devi. 2022 . "Evaluation of colour and bleeding efficiency of imperfectly bled, scientifically slaughtered and cold slaughtered beef carcasses," J. Vet. Ani. Sci. 53(3):385-391.

Ann Theres John, T. Sathu, B. Sunil ,V.N. Vasudevan and R. Uma. 2022. "Effect of different levels of mayonnaise on the physicochemical and sensory attributes of chicken meat spread," J. Vet. Ani. Sci. 53(3): 458-463.

Sule, P. Y., Sathu, T., Sunil, B., Vasudevan, V. N., Sankaralingam, S., & Sudheer, K. P. 2022. Effect of incorporation of various toppings in spent hen meat chips. J. Vet. Ani. Sci. 53(3) :385-391.

Jishnu, P., Vasudevan, V. N., Sunil, B., Jayakumar, C., Sathu, T., Safeer, M. S., Ann, T. J., and Pratik, S. Y. 2022. "Relationships between different live animal physical measurements and carcass parameters of crossbred pigs of three different weight groups." J. Vet. Ani. Sci. 53(3) : 485-491.

Joseph, R., Sathu, T., Sunil, B., Vasudevan, V.N., Mathew, D.D., Jishnu, P., John, A.T. and Yashodhan, S.P., 2022. Abattoir sludge and food waste combination as a feed source for black soldier fly larvae: Optimisation of level of larval incorporation in the substrate. J. Vet. Ani. Sci. 53(4):617-624.

Muthulakshmi, M; Chandirasekaran, V; Kalaikannan, A; Jagadeeswaran, A; Selvaraju, G; Muthukumar, M; Krupakaran, R Prakash; Vasanthi, C and Irshad, A. 2022. Influence of heat on protein degradation, histology and eating quality indicators of chicken meat. International Journal of Bio-resource and Stress Management, 2022: 13(3) 205-212.

Muthulakshmi, M; Chandirasekaran, V; Kalaikannan, A; Rajkumar, R. and Irshad, A, Impact of sous vide cooking and pressure cooking on micronutrients of chicken meat. 2022. The Pharma Innovation Journal 2022; SP-11(9): 2187-2190.

Anjitha Jose K, Irshad A., Sathu T., Suja C.S., V.N.Vasudevan, Hridhya Vijay C., Akhila V.V., Manasa M. and B. Sunil. Study on the antioxidant properties of Moringa oleifera leafaqueous extract and its effect on the sensory attributes ofraw and cooked Japanese quail meat. 2023. Journal of Veterinary and Animal Sciences (Accepted)

M.Manasa, V. N. Vasudevan, A. Latha, B. Sunil, A. Irshad,P.T. Suraj, V.V. Akhila, C. Hridhya and K. Anjitha. Chemical properties of aerobic compost from abattoir andpoultry slaughter waste. 2023. Journal of Veterinary and Animal Sciences (Accepted)

V.C. Hridhya, A. Irshad, A.R, Sreeranjini , V. N.Vasudevan, T. Sathu, J.K. Anjitha , V.V. Akhila, M.Manasa and B. Sunil. Effect of repeated freezing and thawing on the tenderness ofbeef. 2023. Journal of Veterinary and Animal Sciences (Accepted)

3. Technique dissemination through media **(to be provided by concerned faculties at the department level)**

Sl No	Date	Time	Title of the Webinar	platform	Name of the Faculty	Designation	No. of Participants

1	20/5/2022	6.10 pm – 6.40 pm	Maamsahaaram vishamaakumbol	Krishi-darshan (Doora-darshan)	Dr. V.N. Vasude-van	Associate Professor & Head	
2	11/05/2022	4.00pm	Aarogyamulla mrig-angalum samridhi-yulla karshakanum	Krishi-jaagaran	DR. Irshad A	Assistant Professor	

4. Academic Awards (2022-2023) **(to be provided by concerned faculties at the department level)**

- **1.** Best Young Scientist Award 2022 - awarded to Dr. Irshad A, Assistant Professor by Tamilnadu Association of intellectuals and Faculty (TAIF) and GRABS Educational Charitable Trust

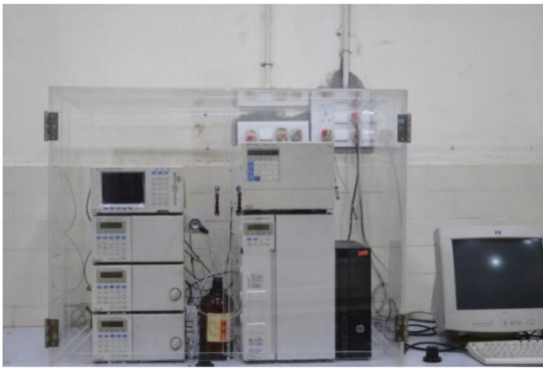
- 2. Indo Asian Research Excellence Award 2022- awarded to Dr. Irshad A, Assistant Professor by Ratna Prasad Multidisciplinary Research and Educational society

- 3. MTU received - ISO 22000:2018 Certification –for receiving live animals, processing (stunning, bleeding, de-hiding, evisceration), and dispatch of chilled and frozen beef and buffalo meat in retail and bulk packs.

PHOTOS OF RESEARCH FACILITIES

Multispecies abattoirs

Poultry Processing Lines



Quality Control Labs

Carcass utilization plant

Meat processing facility

Gamma Irradiation Chamber

Aerobic composting unit

Animal Carrier

Sensory Evaluation FacilitySales counter

Pet food and Dermal Substitutes as biomaterials

DIRECTORATE OF CLINICS, KVASU

The Directorate of Clinics of KVASU caters to the overall development and management of clinical facilities of the university. The directorate is actively engaged in ascertaining the field oriented needs of the state *Vis-a-vis* health related problems of livestock and pet animals and in offering practical approaches in the management of these problems. Constant improvement of the clinical amenities of the university is envisaged and implemented. The clinical wings of KVASU offer specialised service to the livestock owners and pet owners of the state and to districts of adjoining states. Planning and monitoring of research in clinical subjects and supporting clinical teaching and training is also a mandate of the Directorate. The directorate has the technical control of the veterinary hospitals and teaching veterinary clinical complex of the university.

Services at University Veterinary Hospitals at Mannuthy, Kokkala and the Teaching Veterinary Complex at Pookode were coordinated to provide the best possible tertiary level treatment and care to the patients presented to the hospitals of KVASU and in improving the clinical teaching standards. The Directorate provided the required support to the ambulatory clinics of the university at Kakkavayal (Wayanad) and Malamukku and Asarikadu (Thrissur).

Five trainings on techniques in small animal anaesthesia with Dr Sooryadas, Assoc Professor, Dept of Vet Surgery and Radiology as the Course Director was conducted under the revolving fund project, 'clinical training and allied activities' of the Directorate. The training was immensely helpful for the veterinarians who attended the programme from Kerala and other states of the country.

An online training programme on basics of critical care for Faculty and Clinical PG Students was conducted.

Equipment required for better diagnosis and treatment were made available to the hospitals, ambulatory units and clinical departments of KVASU. Equipment including serum Biochemical analyser, Fetal Doppler, 12 Channel ECG Machine, Horizontal Electrophoresis System, Brushless centrifuge and fetotomy wire saws were provided.

Lateral flow kit for diagnosis of Rabies, Leptospirosis, Brucellosis, Parvo Viral Disease, Canine Distemper, Newcastle Disease (Poultry) were given benefitting the livestock, pet and poultry owners. Medicines and hormones for cases presented to Ambulatory clinic of KVASU were provided.

Infectious disease unit –Teaching Veterinary Clinical Complex Pookode

Semi-Automatic Biochemical analyser for diagnosis –

Evening Clinic, UVH, Mannuthy

12 channel ECG Machine – University Veterinary Hospital, Kokkala

Fetal Doppler – University Veterinary Hospital, Kokkala

UNIVERSITY VETERINARY HOSPITAL, KOKKALAI

1. BACKGROUND INFORMATION OF THE DEPARTMENT

Initially known as Cochin State Veterinary Hospital and founded in 1904, University Veterinary Hospital, Kokkalai is presently a stand-alone station under Kerala Veterinary and Animal Sciences University since 2011. Erstwhile, when State of Kerala was formed, the hospital became a part of Animal Husbandry Department of Kerala and functioned as under Kerala Veterinary College from 1955. Later it was transferred to Kerala Agricultural University in 1972, on its formation. The hospital occupies an area of 1.19 acres. The outpatient clinic of the hospital (OP Clinic) works from 9.00A.M to 1.00 noon (OP registration up to 11.30 AM) and there after casualty service is being provided up to 4.00 P.M. on all working days and from 9 A.M to 12.00 noon on all holidays. Hospital handles about 120 to 130 cases daily with an annual increase of about 10%.

Major Mandates of the Station

1. Providing expert treatment, health checkup and preventive vaccinations and breeding management to animals, supported by modern diagnostic facilities
2. Clinical teaching of undergraduates, post graduates and doctoral students.
3. Facilitating postgraduate and doctoral research and under taking External Aided Research Projects
4. Referral services and emergency clinical cases referred by veterinarians and providing treatment
5. Providing training to VHSE (Dairying and Animal Husbandry) Certificate holders and farmers, conduct of continuing veterinary education programme
6. Consultancy services to govt. and private agencies

Major Facilities:

Ultrasonography, Computed Radiography with networking to units, Operation theatre with gas anaesthesia, digital monitoring, ventilator, oxygen administration, Ultrasound massager facility for soft tissue, orthopaedic, gynaecological, dental and ophthalmic surgeries. ECG, emergency and critical care with defibrillator, breeding advice with EVC, gynaecological operation theater, Laboratory with five-part Auto-haematology analyser, semi-automatic serum chemistry analyser, Arterial Blood gas analyser, Dark field microscope, Fluorescent antibody microscope, automated progesterone analyser, facilities for routine hematological and microscopical examination, blood transfusion, Vaccinations for pets and birds on discounted rates, pharmacy with common drugs, emergency medicines and i/v fluids and Karshakamithra medical store.

Details of Service Rendered

No. of cases attended – (species wise)

Canine	:	25961
Bovine	:	1662
Caprine	:	2870
Feline	:	6181
Avian	:	793
Others	:	185
TOTAL	**:**	**37652**

In-patient facilities : NIL

No. of cases admitted and quarantined : NIL

Vaccination :

- Multi component Vaccine in dogs : 2582
- Anti-rabies Vaccination : 2722
- Cat Vaccination : 398
- Ranikhet Disease Vaccine : 0
- Referral units (No. of cases attended) : 3422
- Operation Theatre services : Major: 674 Minor :487
- Emergency and critical care service : 326
- Mobile veterinary service : NA
- Veterinary Medical Record System : Manually maintained through a nominal register and case sheets.
- Case studies carried out / published : Nil (Researches and publications through concerned departments)
- Details of project works carried out by outside students : NIL
- Revenue generated (Only the amount remitted to Finance Officer's Account up to 31.3.2023)

: Non-Plan	:	Rs. 11,500.00
Revolving Fund	:	Rs. 18,00,000.00
Revolving Fund Karshakamitra	:	Rs. 14,00,000.00

2. EDUCATIONAL COURSES

Undergraduate/ Post graduate/PhD/Diploma/any other

- Supports clinical courses of B.V.Sc. & A.H. pertaining to Department of Surgery and Radiology, Animal Reproduction, Gynecology and Obstetrics, Clinical Medicine, Ethics and Jurisprudence and Epidemiology and Preventive Medicine and clinical practice of M.V.Sc and PhD courses pertaining to the above subjects are also being conducted here.
- Stipendiary training program on Veterinary Nursing, Pharmacy and Laboratory Techniques for students completed Vocational higher secondary course.

3. CONFERENCES/SEMINARS/TRAININGS/VISIT OF INTERNATIONAL FACULTY

B. Conference/Seminars/Trainings attended :

Name of the Incumbent	CONFERENCES/SEMINARS/TRAININGS ATTENDED
Dr. Syam K. Venugopal Professor and Head	**Conference/Seminars/Trainings/Workshops attended:** • **National Seminar on *Current Challenges in Veterinary Orthopaedics and Updates in Corrective Strategies,*** organized by Sri Venkateswara Veterinary University, Andhra Pradesh, held at College of Veterinary Science, Tirupati during 26th to 27th August, 2022. • National Congress on Canine Practice & XVIII Annual Convention and Symposium on ***Newer Concepts of and Approaches in Small Animal Practice and Welfare,*** organized by Indian Society for Advancement of Canine Practice (ISACP), held at College of Veterinary & Animal Science, Navania, Udaipur, Rajasthan, during 22nd to 24th , September, 2022.
Dr. Radhika, R Assistant Professor	**Papers presented at seminars:** Radhika R, Javed J A, Shyam K Venugopal,. Report of feather mite Megninia sp. in birds of Thrissur, Kerala. XXXI th National Congress of Veterinary Parasitology and National Symposium on"Green management of animal parasites to enhance livestock production, livelihood and one health" Odisha University of Agriculture & Technology, Bhubaneswar, 6-8 th December 2022.

Conference/Seminars/Trainings/Workshops attended

- Prathyusha, S., Radhika R., Bindu Lakshmanan, Javed Jameel A. and Justin Davis K. 2022. Molecular confirmation of Hepatozoon species infecting domestic cats in Kerala, India. XXXI th National Congress of Veterinary Parasitology and National Symposium on
- "Green management of animal parasites to enhance livestock production, livelihood and one health" Odisha University of Agriculture and Technology, Bhubaneswar, 6-8 th December pp: 100.
- Asha Rajagopal, Lucy Sabu, Radhika R., Devada K. and Gleeja V.L. 2022. Status of benzimidazole resistance in organized goat farms and small holder flocks in Kerala. 14th Kerala Veterinary Science Congress-2022, 12th and 13th November, CVAS, Mannuthy. pp 56.
- Prathyusha, S., Radhika R., Bindu Lakshmanan, Jain Jose, Javed Jamee,l A., Vinod kumar, K. and Syam K. Venugopal. 2022. Molecular detection of Babesia ovis by Semi-Nested Polymerase Chain Reaction in Kerala. 14th Kerala Veterinary Science Congress, 12th and 13th November, CVAS, Mannuthy. pp. 38.
- Dalbin, P.B., Radhika R., Asha Rajagopal, Shynu, M. and Devada, K. 2022. Development of multiplex copro pcr for detection of economically important strongyles in cattle. XXXIth National Congress of Veterinary Parasitology and National Symposium on "Green management of animal parasites to enhance livestock production, livelihood and one health" Odisha University of Agriculture and Technology, Bhubaneswar, 6-8 th December
- Amrutha Anand, Bindu Lakshmanan, Radhika Rajagopal and Sheelu Lakshmanan. 2022 Detection of brugia malayi in domestic cats by PCR OF ITS-2 and Hha-1 14th Kerala Veterinary Science Congress-2022, CVAS, Mannuthy 12th -13th November.

Dr Javed Jameel A Assistant Professor	• **Papers presented at seminars** • Oral Presentation on Successful therapeutic management of juvenile pyodemodecosis in a beagle pup in International conference of Contemperory Multidisciplinary Issues in Applied Scieences ,humanitiesAgriculture,animal health & production (ASHAA-2022) Banaras Hindu University 14th and 15th November2022 **Conference/Seminars/Trainings/Workshops attended** • Agmooc sixweeks training (Online) on Fluid therapy and management of Clinical syndrome in Cattle and small animals,TANUVAS,May 2022 • Agmooc six weeks training (Online) on management of Metabolic and production diseases in Cattle and,TANUVAS,July 2022

4. RESEARCH / INFRASTRUCTURE PROJECTS

a. Funded

Sl. No.	Name of the Project	Outlay (Lakh)	Amount Received (Lakh)	Amount Utilized (Lakh)	Source
1	Strengthening of Veterinary clinical laboratory at UVH Kokkalai	14.0	14.0	13.99428	State Plan Projects 2022-23
2.	Empowering Farm Animal Health Care Services for Enhancing production	9.0	9.0	8.99401	-do-

b. Departmental projects : NIL

5. PUBLICATIONS (mention publications in recent 3 years)

a. Journals

Name of the Incumbent	Details of Article Published
Dr. Syam K. Venugopal Professor and Head	• Laiju M. Philip, John Martin, K. D, Syam K. Venugopal, Anoop, S. Raji, K. and Shibu Simon. 2022. Effect of therapeutic hoof trimming on haematological parameters in dairy cows with sole lesions. *J. Vet. Anim. Sci.* **53** (3): 446 - 449. • Jayakrishnan, A., Syam K. Venugopal, Laiju M. Philip, Ajithkumar, S., Soumya Ramankutty, John Martin, K. D and Reji Varghese. 2022. Endoscopic evaluation of spirocerca lupi infection in a non-descript dog: A case report. *J. Vet. Anim. Sci.* **53** (3): 492 - 494. • Adarsh, S. L., Syam K. Venugopal, Laiju M. Philip, John Martin, K. D., Dileepkumar, K. M., Karthiayini, K., Ajithkumar, S and Devanand, C. B. 2022. Electrocardiographic evaluation of balanced anaesthesia in adult domestic cats (*Felis catus*). *Indian J. Canine Pract.* **14** (1): 22 - 24.

Radhika.R. Assistant professor, Clinical lab, UVH, Kokkalai	• Nikhat Reena Shaik, Bindu Lakshmanan, Radhika, R. and Divya, C. 2022. Incidence of feline lynxacarosis in Thrissur. *JIVA*. **20** (2):46-50. • Sethumadhavan, T.P., Balakrishnan Nair, M. N., Chethala, N. Vishnu Prasad and Radhika, R. 2022. Immunomodulation ability of curcumin based 'TOC'against infectious diseases in cattle including mastitis. *The Pharma Innov. J*. SP-11(12):675-678. • Asha Rajagopal, Lucy Sabu, R., Radhika, K., Devada, K., Jain Jose, Naicy Thomas, T.V. and Aravindakshan. 2023. Polymorphismsin isotype 1 β-tubulin gene of Trichostrongylus colubriformis. **Small Rum Res.:** 222 106954
Dr Javed Jameel A Assistant Professor	• Javed Jameel A., Mahesh Chandra Sharma and Pankaj Kumar. 2022. Calcium and phosphorus status in soil, fodder and blood serum of cattle reared in Kottayam and Pathanamthitta districts of Kerala, *Indian Vet. J.* **99**(09): 69 -73. • Javed Jameel, K., Justin Davis, Arun George, Sangeetha, S. G., Vinod Kumar, K. and Udayasree, V. J.2023. Pyothorax in cat due to *Acinetobacter* spp. infection: A case report, *J. Vet. Anim. Sci*. **54**(1): 229-233

b. Books :

Sl. No.	Title	Authors / Department	Language
1.	Practical manual for the Stipendiary Training on Veterinary Nursing, Pharmacy and Laboratory Techniques - 2021	Dr. Syam K. Venugopal Professor and Head, Dr. Laiju M Philip, Dr. Reji Varghese Dr. R. Radhika and Dr. Javed Jameel Assistant Professors	English

6. AWARDS/ HONOURS AND OTHER PERSONAL ACHIEVEMENTS

Dr. Syam K. Venugopal

- Functioned as chair for Large Animal Orthopaedic session of **National** Seminar on *Current Challenges in Veterinary Orthopaedics and Updates in Corrective Strategies***,** organized by Sri Venkateswara Veterinary University, Andhra Pradesh, held at College of Veterinary Science, Tirupati during 26th to 27th August, 2022.
- Functioned as chair for Theme session of National Congress on Canine Practice & XVIII Annual Convention and Symposium on *Newer Concepts of and Approaches in Small Animal Practice and Welfare,* organized by Indian Society for Advancement of Canine Practice (ISACP), held at College of Veterinary & Animal Science, Navania, Udaipur, Rajasthan, during 22nd to 24th , September, 2022.

Dr.Javed Jameel .A

Second prize in Oral Presentation on Successful therapeutic management of juvenile pyodemodecosis in abeagle pup in International conference of Contemperory Multidisciplinary Issues in Applied Sciences ,humanities Agriculture,animal health & production (ASHAA-2022 Banaras Hindu University 14th and 15th November2022.

7. EXTENSION ACTIVITIES

By the Institution

1. Free Anti rabies vaccination camp
2. Advice to public on animal husbandry and welfare issues.
3. Sales outlet of KVASU Products started from 02/05/2016 and is still continuing.
4. Karshakamitra Medical store started from 14.01.2022 and is still continuing

By Incumbents

Name of Incumbent	Extension activity
Dr. Radhika, R Asst. Professor	• Handled classes to farmers under NSS programme • Training class for the senior officers of Animal Husbandry Department.
Dr. Syam K. Venugopal Professor and Head	• Consultancy Service for the Thrissur Zoological Park • Consultancy Service for the Department of Forests and Wildlife Department. • Consultancy Service for the Department of Kerala Police Dog Squad. • Training class for the senior officers of Animal Husbandry Department.
Dr. Javed Jameel A. Assistant Professor	• Training class for the senior officers of Animal Husbandry Department • Resource person for Tele advise service to farmers (KALF) • Documentation Coordinator (Kerala) in National workshop on Comprehensive Management of working dogs –conducted by Kerala Police Academy and KVASU • Resource person in National workshop on Comprehensive Management of working dogs –conducted by Kerala Police Academy and KVASU • Resource person in PG Diploma in small animal medicine • Expert panel member for approving the notes for Livestock Inspector Trainees

8. ADMINISTRATIVE, EDUCATIONAL, RESEARCH AND OTHER ASSIGNMENTS

- Dr. Syam K. Venugopal, Professor and Head, Member in the Special Purpose Vehicle for the implementation of Thrissur Zoological Park.

9. SIGNIFICANT EVENTS IN THE DEPARTMENT

Hospital functioning following Covid – 19 protocol.

10. STAFF DETAILS:

Sl.no	Name	Designation
Head of station		
1	Dr. Syam K. Venugopal	Professor and head
Teaching faculty		
2.	Dr. Radhika, R.	Assistant Professor
3	Dr. Javed Jameel A.	Assistant Professor
Technical staff		
1.	Sri . Sivadasan P. B.	Farm Supervisor, Gr. I
2.	Mrs. Divya	Pharmacist (Daily Wage appointment)
3.	Smt. Preethimol M.	Radiographer (Daily Wage appointment)
Administrative Staff		
1.	Sri. Bijith Baby	Section Officer
2.	Sri. Mridul, M.	Assistant
3.	Sri. Joy, A. K.	Class IV

UVH & TVCC, MANNUTHY

1. Introduction

The Universiry Veterinary Hospital and Teaching Veterinary Clinical Complex (UVH & TVCC), Mannuthy congregates the services of all clinical departments viz. Veterinary Clinical Medicine, Ethics and Jurisprudence, Veterinary Epidemiology and Preventive Medicine, Veterinary Surgery and Radiology and Animal Reproduction, Gynaecology and Obstetrics under one umbrella providing integrated tertiary veterinary healthcare. disease investigation aid, ambulatory facility and consultancy services to the public.

2. Academic/internship/continuing veterinary education programmes

UVH & TVCC is the distinctive platform imparting quality training on clinical practice to the undergraduate, post graduate and doctoral students of the college along with conducting scientific research in the field of Veterinary clinical sciences. This unit also provides advanced trainings on the diagnostics to veterinarians and the disease control measures in profitable livestock farming to entrepreneurs and farmers. It is also offering a stipendiary training to VHSE pass outs in "Animal handling, veterinary laboratory techniques, pharmacy and nursing" which equips the selected candidates in all supportive para-veterinary duties enabling them to secure jobs in veterinary hospitals/ farms in public as well as private sector. Veterinary clinical Practices, tracking program, Veterinarian in Society etc are offered for UG students. Several PG and PhD courses are being offered by other departments and training is given at TVCC.

Trainings/webinars *were* conducted for field veterinarians & Additional Directors of AHD.

3. Clinical meetings, Hospital Services

Clinical investigations and therapy for all types of diseases. An average of 3600 cases is being handled per month. Summary of cases handled is given below:

Sl No.	Item	April 2022	May 2022	June 2022	July 2022	Aug 2022	Sept 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Total
1.	Bovine	193	81	118	125	119	143	160	164	124	158	86	90	1561
2.	Caprine	354	278	370	428	333	295	325	259	255	319	224	192	3632
3.	Small Animals (Canine & Feline)	2171	1869	1953	2195	1972	1905	1962	2016	2185	1963	2118	2313	24622

4.	Birds	56	25	44	45	38	41	36	38	50	47	48	36	504
5.	Others	38	9	22	31	30	28	17	29	15	37	18	20	294
Total		2812	2262	2507	2824	2492	2412	2500	2513	2632	2524	2494	2651	30623

4. Vaccination deails:

Around 800 vaccination per month.

5. Pharmacy

Hospital pharmacy dispenses common drugs and other emergency medicines free of cost. The revolving fund pharmacy attached to the hospital dispenses all medicines and disposables at a subsidized rate.

6. Referral units

Most of the cases will be referred to the various units like Clinical Medicine, Ethics and Jurisprudence, Veterinary Epidemiology and Preventive Medicine, Veterinary Surgery and Radiology and Animal Reproduction, Gynaecology and Obstetrics.

7. a. Theatre services

Month-wise list of minor & major surgeries conducted.

S1 No.	Item	April 2021	May 2021	June 2021	July 2021	Aug 2021	Sept 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022	Total
1	Minor Surgery (Rs. 300)	24	14	12	14	15	5	6	2	2	2	5	2	*103*
2	Minor Surgery (Rs.500)	5	5	3	0	12	2	6	4	6	8	7	3	61
3	Major Surgery (Rs. 1000)	2	6	7	8	4	2	4	6	2	3	3	3	*50*
4	Major Surgery (Rs. 1200)	0	0	0	0	0	0	0	0	0	0	0	1	1

5	Major Surgery (Rs. 1500)	5	9	8	0	7	7	4	8	5	9	7	9	*78*
	Total	***36***	***34***	***30***	***22***	***38***	**16**	***20***	***20***	***15***	***22***	***22***	***18***	**293**

b. Emergency and critical care:

Casualty and emergency services are provided in the critical care unit attached to the TVCC. Average 50-60 cases/day is being attended.

c. Mobile Veterinary Services:

Ambulatory clinic is functioning at selected rural milk societies (Cherumkuzhy and Malamukku) in the ambulatory vehicles engaged solely for this purpose. The experienced faculty extends their service to the farmers of Cherumkuzhy and Malamukku on routine basis, conducting infertility camps and awareness programmes. Average of 140 cases/month is attended. Field farm visits for special expert diagnostic aid is also provident on request from the Animal Husbandry Department.

8. Veterinary Medical Record System:

Monthly reports and disease reports are being submitted to the university on monthly basis. Around 140 clinical cases were studied and presented by the students and faculty at various and webinars.

9. Publications:

10. Other achievements:

11. Other services and activities:

1 Laboratory Services: A molecular biology lab and a veterinary diagnostic clinical laboratory are functioning in this TVCC. Following diagnostic services are routinely carried out in these labs.

1. Molecular diagnostics for hemoparasites
2. Routine faecal sample examination
3. Urinalysis
4. Complete blood count and hematological evaluation, Blood smear test
5. Skin scrapings and impression smear examination
6. Serum biochemistry (ALP, ALT, AST, Total protein, Albumin, Bilirubin, Blood, Urea Nitrogen, Creatinine, Calcium, Phosphorus, Magnesium)
7. Microbiology (Culture and sensitivity examination of bacterial pathogens)
8. Cytopathology of fine needle aspirate and biopsy samples.

iv. **Departments/Schools/Hospitals/SABS/CAADECCS/Library/CIL Details**

2. Name of the Department Teaching Veterinary Clinical Complex

vi. Department Profile (Maxi.250 words)

The Veterinary College Hospital, Mannuthy was established in 1961 as a part of the Kerala Veterinary College, Mannuthy and was renamed as University Veterinary Hospital, Mannuthy from 01-07-2011, with the inception of Kerala Veterinary and Animal Sciences University. Teaching Veterinary Clinical Complex (TVCC) started functioning in the same hospital from 2012 onwards along with the commencement of clinical training of 2009 batch of BVSc & AH students. As per the Veterinary Council of India (VCI) undergraduate curriculum (MSVE, 2008), a separate well-furnished Teaching Veterinary Clinical Complex consisting of the different clinical departments like Veterinary Clinical Medicine, Ethics and Jurisprudence, Veterinary Epidemiology and Preventive Medicine, Veterinary Surgery and Radiology and Animal Reproduction, Gynaecology and Obstetrics brought under one umbrella, to impart a cohesive veterinary health care service to the public. This integrated approach can impart an overall clinical academic teaching service to the undergraduate and postgraduate students; and advanced post-graduate research. Various specialized services like veterinary cardiology, dermatology, diagnosis of infectious diseases, advanced gynaecological and infertility treatments, ophthalmology, orthopaedics and soft tissue surgeries catering both small, large, laboratory and rescued wild animals are provided from this unit. It also acts as a referral center for veterinary patients from all districts of Kerala and the neighbouring states like Tamil Nadu and Karnataka for specialized diagnosis and treatment. Presently the TVCC is known as Dr. K.R. Narayanan, Teaching Veterinary Clinical Complex.

vii. Staff details (Department group photo with name of the department in background)

Sl. No.	Name & Qualification	Designation	Mobile Number	e-mail id	Area of interest
1.	Dr. Ajithkumar S. MVSc PhD	Professor and Head	9400322511	ajithkumar@kvasu.ac.in	Bovine Gastroenterology, Canine cardiology
2.	Dr. Nisha A. R.	Associate Professor *(Additional charge-Clinical lab)*	8606391936	nisha@kvasu.ac.in	Toxicology
3.	Dr Reji Varghese MVSc	Assistant Professor *(On PhD study leave)*	9745055033	reji@kvasu.ac.in	Soft tissue surgery, Physiotherapy
4.	Dr. Ajith Y., MVSc PhD	Assistant Professor	8891981301	ajithy@kvasu.ac.in	Vector and Vector Borne Diseases; Goat Medicine
5.	Dr. Preena P.	Assistant Professor	9400460153	preenap@kvasu.ac.in	Veterinary Clinical Laboratory Diagnosis

viii. Courses offered by the Department (PhD/MVSc/BVSC/MSc)

- Veterinary Clinical Practices – I, 0+1 credits (III Professional year BVSc & AH, Duration – 1 year) MSVE 2016
- Veterinary Clinical Practices – II, 0+6 credits (IV Professional year BVSc & AH-Duration-1.5 years) MSVE 2016
- Veterinary Clinical Practice (VCP 411) – 0+5=5
- TVC 421 Non credit course (1+0=1) Veterinarian in Society (Jointly with Department of Veterinary & Animal Husbandry Extension Education & Department of Veterinary Public Health and Epidemiology)
- Veterinary Clinical Practice (VCP 421) – 0+5=5
- Veterinary Clinical Practice (VCP 511) – 0+5=5
- Tracking Programme (TRP 421) – Hospital Administration and Biological Waste Management
- VLD 411 (0+1=1) Veterinary Clinical Biochemistry and Laboratory Diagnosis – I (Jointly with Department of Veterinary Biochemistry & Department of Veterinary Pathology)
- VLD 412 (0+1=1) Veterinary Clinical Biochemistry and Laboratory Diagnosis – II (Jointly with Department of Veterinary Biochemistry & Department of Veterinary Pathology)

2. Number of Post graduate students (Course wise) (2022-2023)

c. **<u>Completed- PhD, MVSc, MSc</u>**(2022-2023)

a. Name of the student &Admission Number

b. Title of the Thesis

c. Name of major advisor

3. Diploma/certificate courses

a. About

b. Number of students

ix. Thrust areas of research (100 words)

- Providing clinical training to veterinary students
- Clinical and extension services to the public
- Facilitation of clinical research

x. Details of Units/High end labs/Specialized labs in the Department

Facilities available in Dr. K.R. Narayanan, Teaching Veterinary Clinical Complex

a) ***Clinical Veterinary Medicine, Ethics and Jurisprudence***

Large and small animal medicine out-patient units

Large and small animal in-patient unit

Haemodialysis unit

Dermatology unit

Blood transfusion unit

Emergency and critical care unit*

Advanced cardiology unit

Advanced ultrasonography including doppler echocardiography

Large animal downer lift

Centralized oxygen supply

b) ***Veterinary Epidemiology & Preventive Medicine***

Large and small animal medicine out-patient units

Disease investigation unit

Vaccination unit

Infectious disease ward

Isolation ward

c) ***Veterinary Surgery & Radiology***

Surgical out-patient units

Small animal surgical operation theatres with gas anaesthesia work station

Large animal surgical operation theatre with gas anaesthesia machine

Ophthalmology unit with separate theatre

Orthopaedic surgery unit with separate theatre

Endoscopy

Radiology

d) ***Animal Reproduction, Gynaecology and Obstetrics***

Gynaecological out-patient units

Small animal gynecological operation theatre with gas anaesthesia work station

Large animal gynecological operation theatres with gas anaesthesia machine

Small and large animal infertility clinic

Laparoscopy, Neonatal care unit

e) ***Veterinary Diagnostic Laboratory***

Clinical Laboratory with advanced molecular diagnostics**

f) ***Karshakamitra medical store***

g) ***Registration counter and pharmacy***

h) Ambulatory Services

** The critical care unit is equipped with advanced lifesaving equipment such as defibrillator, ventilator, oxygen concentrator, CRI machine (Syringe pump and drip counter), blood pressure monitor and multi parameter monitor.*

***The clinical laboratory is equipped with haematological auto analyzer and semi auto biochemical analyzer. The PCR machine, gel-doc and chemiluminescent immunoassay add to the advanced molecular diagnostics.*

xi. International externship/internship/industrial collaboration in the Department

1. Internship training of two weeks duration to BVSc & AH students from KVASU [CVAS Pookot – 120 (2016 batch) +100 (2017 batch) & CVAS Mannuthy – 140 (2016 batch) + 121 (2017 batch)]
2. Externship training of fifteen days duration to eighty eight students from

Tamilnadu University of Veterinary and Animal Sciences- TANUVAS (MVC, Chennai, VCRI Orathanadu, VCRI, Thirunelveli, VCRI, Namakkal)

3. Externship training of one month duration to thirty students from (Rajiv Gandhi Institute of Veterinary Education and Research) RIVER, Puducherry
4. Internship training to Diploma in Laboratory techniques students of CVAS Mannuthy.
5. Field internship training of Mr Sreekanth KS, a 3rd semester MSW student of the Sree Sankaracharya University of Sanskrit.
6. Six month intensive hospital training to fourteen VHSE passed students registered for Stipendiary Training Programme on Veterinary Nursing , Pharmacy and Laboratory Techniques in University Veterinary Hospital, Mannuthy.

xii. Brief description of Extension and outreach activities for the farming community (100 words- Provide photos)

Right from its inception, the mandate of TVCC included teaching, research and extension. Apart from treating 100-120 cases from various parts Kerala state and bordering districts of Tamilnadu daily, the hospital also cater the needs of Police department, Army, Navy, NCC and Forest and wildlife departments. The TVCC, Mannuthy has become one of the state's premier veterinary hospital handling more than fifty thousand cases annually offering cutting-edge diagnostic and therapeutic services relative to large and small animal clinical services. In order to give rural exposure to the students, veterinary services are being provided to the farmers of Cherumkuzhy and Malamukku area in ambulatory vehicle in co-operation with the APCOS. A state-of-the-art ambulance equipped with all necessary facilities visits the rural hospital set-up every day and provide veterinary care to the animals free of cost. On request basis, farm visits are also conducted for screening of various infectious diseases and providing expert diagnostic facility. The ambulatory jeep purchased under the RKVY scheme is utilized for the purpose.

Malamukku rural ambulatory clinic

BVSc internship trainees from KVASU

Industry interface with Veta Genomics laboratory

Indian Society for Veterinary Medicine, Kerala chapter inaugural convention

Visit by the Principal Secretary to Govt. of Kerala and the Director Animal Husbandry Department

v. Research (to be provided by concerned faculties at the department level)

3. Projects (2022-2023)

xi. EAPs

c. Ongoing

Sl.No.	Title	Funding agency	Total outlay	Name of PI, Co PIs	Research highlights (four points only- please include relevant photos if any)
	Corroborating host-vector-pathogen interplay in subclinical forms of arthropod- borne hemoparasitic diseases in goats.	**DST-SERB** Startup Research Grant	Rs. 29.40 lakhs	**PI:** Dr. Ajith Y.	• Mapping ectoparasitic arthropods identified from goats and probe the shreds of evidence on their emerging vector potential in hemoparasitic diseases. Characterizing genetic variability of pathogenic species/strains in subclinical forms of vector-borne hemoparasitic diseases in goats.

xii. Stateplan projects

Sl.No.	Title	Department allocation	Name of faculty involved	Research highlights (four points only- please include relevant photos if any)
	Universal Veterinary Health Coverage for Optimizing productivity of Livestock	14 lakhs	Dr. Preena P.	A) Diagnosis and treatment of production diseases in cattle and goats like post partum metabolic and infectious diseases b) Timely maintenance of diagnostic equipments c) Availability of rare medicines and advanced diagnostic services to farmers d) Suitable cleaning systems and bio safety measures will be established to avoid transmission of diseases from animal to animal and to human beings

	Comprehensive health care management of animals and birds under field condition	10 lakhs	Dr. Divya C. Dr. Nisha A. R.	• Maintenance of Veterinary ambulatory clinical service to rural farmers • Extending technical help to Animal Husbandry Department for conducting camps for tackling difficult clinical cases. • Veterinary health care services to the marginal farmers at their door step • Maintaining clinical and molecular laboratory for the identification of haemoparasites and haemorickettsiales in infected animals.
	Investigation on the impacts of vector-borne haemoparasitic diseases in goats	10 lakhs	Dr. Ajith Y.	• Studying the occurrence of common vector-borne haemoparasitic diseases in goats • Investigating different clinical manifestations and metabolic impacts of such vector-borne haemoparasites in affected goats. Identifying prognostic metabolic biomarkers for early prediction of treatment outcomes in clinical cases of vector-borne diseases.

5. Academic Awards (2022-2023) **(to be provided by concerned faculties at the department level)**

   i. Faculty

      a. Name of faculty : Dr. Ajith Y.

      b. Instituted by Dr. C. M. Singh Endowment Trust, Izatnagar

      c. National/International; National

      d. Position: First (Dr. C. M. Singh Award for best PhD student of ICAR-Indian Veterinary Research Institute)

X. Celebrations (Important days Celebrated)- provide details by the organized Departments (Independence day, Republic day etc.)

Onam celebrations 2022

Republic day 2023

KVASU CENTRE FOR WILDLIFE STUDIES (KVASU-CWS), POOKODE

1. Introduction

We live in times when the importance of biodiversity and ecosystem health in sustainable development, health and survival has been realized by humanity more than ever before since our species evolved and diverged from other animals more than three lakh years ago. Whether it is conservation action, wild animal welfare, mitigation of problems associated with human-wildlife interactions, or zoonotic diseases of wildlife origin, global interest in the interface between humans, animals and natural ecosystems has increased tremendously in recent decades. Kerala Veterinary and Animal Sciences University took a pioneering step in this sector by establishing KVASU-CWS as one of its new centres at the time of commencement of functioning of the University in 2011. The Centre has evolved over the years as a transdisciplinary platform connecting post graduate students from various bioscience backgrounds, multidisciplinary scientists, and the general public living at the interface with forests and wildlife.

2. Objectives

i. Academic and research training of Master of Science (Wildlife Studies) students

ii. Research on biodiversity, ecosystems and emerging issues at the wildlife-human interface

iii. Social outreach aimed at mitigating problems faced by people living at the interface with forests and wildlife, especially those from tribal and other socio-economically diverse communities and farmers suffering from human-wildlife conflict

3. Details of Administration activities

The Centre continued its efforts to make itself sustainable by pursuing the establishment of 'Western Ghats Regional Institute for Wildlife Research and Tribal Welfare' with the motto of "*Proactive interdisciplinary One Health Action at the wildlife-human interface by a Conservation Medicine approach*", which was inaugurated by Shri. V. Raju, Minister of Animal Husbandry, Government of Kerala, on 20th February, 2021. In June 2022, the proposal for this institute was selected under the Centres of Excellence project of Government of Kerala under the title 'Centre of Excellence in One Health: Western Ghats Biodiversity, Wildlife-Human Interface, and Zoonotic Diseases'. The Centre had 22 students during the FY 2022-23. The employees of the Centre consisted of three teaching faculty and four supporting staff during this period. In addition, the Centre implemented the Gothra Mission project, a tribal welfare project of KVASU, and launched the outreach programme for farmers suffering from human-wildlife conflict titled "Karshakar Bhoomiyude Bhishagwarar".

4. Major Achievements

The Centre routinely conducted training programmes for MS (Wildlife Studies) students which included workshops and field visits. Programmes for the empowerment of tribal youth were also undertaken during this period.

Field training at Gurukula Botanical Sanctuary, Wayanad

Field Training at Periyar Tiger Reserve

Field Training at Idukki Wildlife Sanctuary

Field training at Puthur Zoo

Field training at Sea Turtle Rescue Center, Chavakkad

Bird survey at Asurankundu Dam Reserve Forest, Thrissur

Training at Parassinikadavu Snake Park, Kannur

Field training at Great Rann of Kutch, Gujarat

Field training at Paithalmala, Kannur

Field Training at Mumbai Zoo

Inauguration of Karshakar Bhoomiyude Bhishagwarar programme by Dr. M. K. Narayanan, Dean, CVAS, Pookode

Training of tribal youth in ornamental fish rearing

Training for tribal youth in plant nursery management at Gothra Mission

Handing over of Registration Certificate of Wayanad Gothra Tribal Vividhodyeshya Yuva Sahakarana Sanghom to Chief Promoter by official from the Registrar of Co-operatives Office, Kalpeta

BIOSCIENCE RESEARCH AND TRAINING CENTRE, THONNAKKAL, THIRUVANANTHAPURAM

I. Major activities

- Implemented the State Plan projects 'Enhancement of animal health and productivity through development of rapid accurate disease control measures for infectious diseases of viral aetiology' and 'Strengthening of Bioscience Research and Training Centre Thiruvananthapuram'.
- Implementation of external funded project entitled 'Evaluation of maternal antibody transfer against Infectious bronchitis and Infectious Bursal Disease in chicken' funded by Department of Animal Husbandry, Government of Kerala

II. Staff Details

Sl. No.	Designation	Number of positions
1	Co-ordinator (i/c) (Assistant Professor on working arrangement)	01
2	Assistant Professor	01
3	Research Assistant (Contract/ Daily wages)	03
4	Assistant Section officer	01
5	Security (Contract)	02
5	Office Attendant (Daily wages)	01
6	Daily Wage Labourer (Daily wages)	01

CENTER FOR ONE HEALTH EDUCATION, ADVOCACY, RESEARCH AND TRAINING (COHEART)

1. Introduction of the Center

The Kerala Veterinary & Animal Sciences University (KVASU) has established "Center for One Health Education, Advocacy, Research and Training (COHEART)" in the year 2014 to serve as a base for the rapidly expanding concept of "One Health" in India as well as to act as a hub for encouraging One Health activities over the globe. The One Health Initiative is a global movement dedicated to improving the life of all species – human and animal - through the integration of human medicine, veterinary medicine and environmental science. COHEART is the first of its kind in the country and aims at capacity building of various professionals for a holistic, multifaceted solution of zoonoses threats and global health challenges through collaboration, cooperation and partnership between different disciplines.

The centre is located in scenic hilly terrain of Pookode in Wayanad district of Kerala, India. Wayanad district stands in the southern tip of the Deccan Plateau, north eastern part of Kerala and its chief glory is the majestic Western Ghats with lofty ridges interspersed with dense forest, tangled jungles and deep valleys along the human habitations- a place ideal for co-existence of man and animal with nature, which will make the centre shine as a beacon of excellence.

2. Objectives

1. EDUCATION of a new cadre of health professionals about One Health- the linkages between animal, human and environmental health. We do this by offering 3 courses- PG Diploma in One Health, PG Certificate courses in One Health Surveillance and PG Certificate in Community Based Disaster Management. All the courses are suitable for health-related professionals interested in integrating the knowledge and application of human medicine, veterinary medicine and public health. The exploration of interconnectedness helps us to realize various factors and conditions of healthy co-existence.
2. ADVOCACY for collaboration as an encouragement for professionals to work together in order to attain "Optimal health for people, animals and the environment". Advocacy is through our online technology-oriented portals and most importantly through our YouTube channel named as Dr. Coheart where a virtual 2D character educates general public, farmers and professional on emerging health threats and control measures.
3. RESEARCH to understand the health threats and disease processes that occur at the interface of human and animal activities and their effects on the environment. We conduct research to improve health outcomes of human and animal populations and their surrounding environment. The major research focusses on Animal Health Hazards, Antimicrobial Resistance, Human Animal Conflict, Environmental Health Hazards, Food Safety, Infectious and Zoonotic Diseases, Occupational Health Hazards, Public Health Hazards and Wildlife Research

4. TRAINING AND CAPACITY BUILDING to improve our community's preparedness and response to hazards affecting man, animal and the environment. As a part of capacity building activities, the Centre organizes series of awareness programmes, camps, interface meets, important day commemorations, seminars, workshop, student event etc. on cross-cutting topic areas.

3. **Details of Administration activities**

Faculty

Dr. Prejit : Officer-In-Charge, COHEART

Dr. Jess Vergis : Co-ordinator, COHEART

Courses

Sl. No	Name of course
1	PG Diploma in One Health
2	PG Certificate in One Health Surveillance
3	PG Certificate in Community Based Disaster Management

4. **Significant School Accomplishments**

External-Aided projects:

1. ***Green Recovery Pathway for India: Transitioning towards a green and resilient COVID-19 recovery*** under Rapid Financing Facility (Principal Investigator: Dr. Prejit; Funding Agency: UNDP India; Project Outlay: Rs. 36,43,200/-)

State-plan funded projects:

1. Addressing One Health priority areas through research, capacity building and development of knowledge products (RSP/22-23/XVIII-2)

5. **Major Achievements**

Training Programmes:

1. Workshop and panel discussion on theme "One Health, Zero Deaths" was held on 28/09/2022 at Pookode.

2. Experts from the COHEART were actively involved in one health activities within the state (State One Health Committee; Standing committee on Zoonoses; Centre for One Health-Kerala).

3. One Health initiatives for addressing zoonotic disease threats in Himalayan regions of Uttarkashi and West Sikkim funded by United Nations Development Programme (UNDP), India One Health initiative under the Green Recovery project.

Awareness session

1. World Zoonoses Day awareness was commemorated on 06/07/2022 at MRS School, Pookode with awareness drive on zoonotic diseases and the ways to prevent the spread.
2. Awareness videos on KFD, Dengue, Japanese encephalitis, leptospirosis, rabies was prepared and aired through the YouTube channel of COHEART.

DIROCTORATE OF ENTREPRENEURSHIP
KERALA VETERINARY AND ANIMAL SCIENCES UNIVERSITY
POOKODE, LAKKIDI P.O., WAYANAD - 673 576
www.kvasu.ac.in