

**KERALA VETERINARY AND ANIMAL
SCIENCES UNIVERSITY, POOKODE**

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ANNUAL REPORT 2016-17

Patron**Vice Chancellor**

Kerala Veterinary & Animal Sciences University
Pookode, Wayanad

Editorial board

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

August 2017

Message from the Vice Chancellor



It is a matter of great pleasure for Kerala Veterinary and Animal Sciences University to publish the Annual report for the year 2016-17. This clearly depicts the academic, research, entrepreneurship and extension activities held during the year 2016-17

Across the globe, livestock sector plays an important role in rural livelihood, employment and income generation. Major livestock products like milk and milk products, meat and eggs contribute around one-sixth of the calories and one-third of the proteins in the per capita food supplies of the world. Animal husbandry is the second largest economic activity of rural India. It is a growth engine and annual growth rate in dairying is 5 % and in poultry it is 10% and will alleviate rural poverty and uplift the rural farmer. If the country has to sustain economically, livestock sector has to be strengthened.

As far as Kerala State is concerned, the State has shown spectacular growth in milk production. The State has been envisaged to meet sustainability in production of milk, meat, egg and other livestock products which will correct the protein requirement. In order to attain sustainability all the stake holder departments, Universities and other public sector undertakings should work together under a mission mode. Immediate challenge is to increase production, productivity and reduce cost of production. University has to play a key role in attaining the above objectives. Technology transfer and productivity enhancement measures need to be given due emphasis to support the livestock farmers of the State. I am sure the scientists need to take up need based and field oriented research works so as to facilitate sustainability in livestock sector in the coming years.

Pookode
16th August 2017

Faithfully Yours

Anil X. IAS
Vice Chancellor
Kerala Veterinary and Animal Sciences University
Pookode, Wayanad

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ABOUT THE UNIVERSITY

Kerala Veterinary and Animal Sciences University established by law of the Kerala state (Act 3 of 2011) is a public funded University with headquarters in Pookode, Wayanad. 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 the newly formed Faculty of Poultry Science. The landed assets of KVASU after bifurcation with the Kerala Agricultural University come to about 960 acres in four campuses.

The University has wide network of instructional and research farms spread throughout the state. 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 several schools and centres, an emerging academic feature of importance. Regional Training Centre and Academic Staff College under KVASU offer orientation trainings, refresher trainings and other in-service trainings depending on the needs to the staff including outside institutions. The University offers its services through Teaching Veterinary Clinical Complex at College of Veterinary and Animal Sciences, Pookode, Peripheral Veterinary Clinic and Entrepreneurship Centre, Meenangadi, Veterinary Hospital at Kokkalai, Thrissur, Teaching Veterinary Clinical Complex at Mannuthy and its Ambulatory clinical service at selected milk societies. E-Vet connect for 24x7 veterinary services under Directorate of Entrepreneurship assure the full time service to the farmers. Products from University Meat Plant and Dairy Plant at Mannuthy offers quality assured livestock products to public. Services provided through various NABL accredited laboratories under prestigious departments of the University.

Our mandate:

A reading of the Act and Statutes bestows us the responsibility of leading the State with innovative research and education in Animal agriculture and Veterinary sciences including all supporting and allied subjects. An added aspect is the responsibility to train up farmers to enhance productivity and profits 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 in the KVASU. By any means, it is an ambitious mandate, apart from the educational role the University is expected to discharge in its subjects of interest.

Academic activity:

The University has introduced a score plus academic programmes resulting in its enrollment jumping to 1695 from a mere 687 in 2011 when it was formed. In fact today, the enrollment is almost as much as total student strength in 2011. By smartly designing programmes high in employment and hence

demand the University has expanded education opportunity in its short innings. By coupling it with a campus induction programme which in its last run employed about 90 graduates, the University has spared public finances in this respect. The BVSc and AH programme providing a much in need shortage set of professionals in India has been enhanced from mere 120 seats to 270 by increasing faculty strength and augmenting facilities by utilizing Rs. 5crores in 2014-15. The B .Tech programme in dairy science and technology is under enhancement from 25 to 40 seats and also commencement of a 50 seated course in Pookode Campus. A third major undergraduate programme has been commenced in poultry production and management in Palakkad campus.

Functioning of the University

The powers of the University are vested in its authorities –the managing council Chaired by the Chancellor, the Board of Management (Board) and Academic Council chaired by the Vice Chancellor and its officers, Chancellor, Vice Chancellor, Registrar, Finance Officer, Directors and Deans. The Director of infrastructure heads the physical plant and academic staff comprise of professors, associate professors and Assistant professors apart from research fellows and scholars at various phases of instruction or research.

The functions and powers of these officers are defined in the University Act.

From the Office of Vice Chancellor

The functions and duties of the Vice Chancellor are defined in Section 13 of the Act 2010. The Vice Chancellor shall exercise general control over the affairs of the University and shall be responsible for the due maintenance of discipline in the University.

Sri. Subratha Biswas I.A.S

- ❖ Additional Chief Secretary, Government of Kerala as Vice Chancellor (i/c) (from 03-01-2016 till 03-10-2016)

Sri. Anil Xavier I.A.S

- ❖ Secretary Department of Animal Husbandry, Government of Kerala as Vice Chancellor (i/c)(From 04/10/2016 onwards)

He shall be Ex-officio chairman of Management Council, Board of Management, and Academic Council. He shall ensure that all the provisions of the Act, the statutes, and the Regulations are observed and shall have all the powers necessary for that purpose.

He shall correspond on policy matters with Governments in the Centre and state, offices of His Excellency the Chancellor, Hon'ble Vice-Chancellor of other Universities, High Government officials and other dignitaries.

The office of the Vice-Chancellor also plans for the development of various University units and aids advice to the Faculty Deans and construction wing to carry out expansion and modification plans, University physical structure, identify areas of academic development such as identify new courses and academic programmes and implementing them in various faculties.

In addition to the statutory functions, the office of the Vice-Chancellor shall also function as a facilitator or arbitrator for grievances and redressed by registering and preferring complaints to the Grievance Redressed Committee and also the University Appellate Tribunal.

Vice Chancellor has in exercise of duties attended several conclaves, meetings and programmes representing the University with Hon'ble Chancellor, Hon'ble Pro Chancellor, Agricultural Production

Commissioner and with UGC, ICAR, Indian Veterinary Council and AIU and several funding agencies like NABARD, RIDF etc.,

Vice Chancellor was keen and resolute for continued collaboration with International Universities like University of Calgary Canada, University of Edinburgh UK, University of Connecticut US, Universities of Bristol and Leeds, England and Western Australian University in several fields of Academics and Research.

Vice-Chancellor has exercised his Statutory powers in restructuring of Non-teaching staff positions and re appropriating various cadre sanctioned posts to constituent colleges and stations of the University.

Vice Chancellor was so instrumental in gaining continued accreditation to the University, CoVAS Mannuthy and CoVAS Pookode from ICAR.

Vice Chancellor is taking steps to continue ventures in collaboration with several Organizations like KSIDC limited, National Dairy Development Board, MILMA and Kottakkal Arya Vidyasala etc. He has been spear heading and instrumental in collaboration of activities with the said organizations in respective fields during this period.

Vice-Chancellor was keen and perseverant in maintaining number of seats in various courses in existing as well as the new colleges like College of Avian Sciences and Management at Thiruvazamkunnu, Dairy Science College Cettachal, Thiruvananthapuram and College of Food Technology, Thumboormuzhi

OFFICE OF THE VICE CHANCELLOR

The office of the Vice-Chancellor consists of the Private Secretary to Vice-Chancellor, usually in the cadre of Assistant Registrar, Officer on Special Duty to the Vice-Chancellor (normally Assistant/ Associate Professor) other staff supporting them such as Assistant, Personal Assistant, Class IV, etc.,

From Registrar's Office

The Kerala Veterinary and Animal Sciences University came into existence in 14th June 2010 as per the Act (3 of 2011) of State Legislature of Kerala. The Headquarters of the University is at Pookode, Lakkidi P.O., Wayanad District. The University award degrees (F-9-13/2011 (CPPP1/PU) dated 12-08-2011) as per the UGC Act 1956. The Indian Council of Agricultural Research and the Veterinary Council of India have also recognised UG/PG education, research and extension programme of the University.

The function and duties of the Registrar is defined in the section 14 of the Act 3, 210. Registrar is the Chief Administrator and Vigilance Officer of the University, Custodian of records, common seal and such other property of the University as the Management Council and Board of Management entrust him. The administrative hierarchy of the Registry is as follows:

Registrar>Joint Registrar>Deputy Registrar>Assistant Registrar – Labour Officer>Section Officers>Assistants.

The vacant positions in Administrative Staff have been reported to PSC and out of this office Assistants and Computer Assistants have been posted by PSC and the process of appointment of other categories of staff is in progress. Periodic motivation trainings for all categories of Officers, Staff and Labourers have been arranged. Heterocategory working groups formed with Scientists, Administrative & Technical Staff and Labourers for formulation and implementation of Revolving Fund Project for revenue generations are functioning. In the adopted tribal colony -Narangakandi, Wayand programmes for their empowerment are continuing. A model small holder integrated farming system for self-sufficiency of families is under propagation. The Integrated University Management System for e-governance of University is continuing its implementation. Villas from Games Village installed at University campus are utilised by students.

Details of the meeting of the various authorities of the University held during the reporting year 2016-17

Meetings of the Management Council held during the period 2016-17			Meetings of the Board of Management held during the period 2016-17		
Sl. No	No. of the Meeting	Date	Sl. No	No. of the Meeting	Date
1	20 th meeting	17/08/2016	1	47 th meeting	17/08/2016
2	21 st meeting	17/11/2016	2	48 th meeting	16/11/2016
3	22 nd meeting	21/02/2017	3	49 th meeting	22/12/2016
4	23 rd meeting	29/03/2017	4	50 th meeting	20/02/2017
Management Council : 4 Nos Board of Management : 5 Nos			5	51 st meeting	28/03/2017

Meetings of the Academic Council held during the period 2016-17			Meetings of the Faculty Research Committee held during the period 2016-17		
Sl. No	No. of the Meeting	Date	Sl. No	No. of the Meeting	Date
1	18 th meeting	19/04/2016	1	9 th meeting	23/08/2016
2	19 th meeting	29/09/2016	2	10 th meeting	21/03/2017
3	20 th meeting	22/12/2016	Academic Council : 4 Nos Faculty Research Committee : 2 Nos		
4	21 st meeting	27/03/2017			

Finance Wing

KVASU received an amount of Rs 64.06 crores and Rs 20 crores against the sanctioned allotment of Rs 67.06 crores and 42 crores under Non plan and Plan funds respectively for the year 2016-17.

National Pension System for a total of 36 employees have been implemented. Measures are being implemented for enrolling the newly appointed assistants and computer assistants into the national pension system.

Workers Provident Fund scheme has been instituted for the casual labourers employed in KVASU.

The major constraints being faced is that all financial commitments of the Teachers, employees & labourers who opted and transferred to KVASU by virtue of the ACT 3 of 2011, amounting to Rs 37 crores in terms of GPF, WPF, FBS, WFBS, WFS, WWFS credit card balance and interest as well as the wage revision and pay revision and UGC arrears, have not been settled by the Parent University viz:- K A U, even after six years of time span as detailed in table furnished below. KVASU is compelled to pay interest on WPF/GPF Closure amounts of the retired persons, which is only an imaginary amount in the ledgers. This results in pending payment of pensionary claims which are mandatory to be settled within a stipulated time limit. All these may lead to an irreversible, disastrous situation in the near future itself.

The assets of KVASU under land is given below

	Name of Station	Area	Village/Taluk	Remarks
1	Pookode campus	100.00 Acres	Vythiri	
2	Mannuthy Campus	300.85 Acres	Ollukkara/ Thrissur	Land tax paid in the name of Registrar KVASU 150 Acres hilly area with forest cover
3	Kokkalai Hospital	01.10 Acres	Thrissur Corporation	
4	CBF Thumburmuzhi	63.00 Acres	Pariyaram/	Land tax paid in the name of Registrar KVASU
5	LRS Thiruvazham Kunnu	393.00 Acres	Kottopadam/ Mannarkad	Land tax paid in the name of Registrar KVASU 34 acres Agroforestry Vested forest 113.75 acre
6	Base farm Kolahalamedu	14.89 Acres	4.89 Acre Koottickal village (Kanjirappally) and 10 Acre Vagamon village (Peerumade)	As per the Act by which KVASU was formed total land available with farm is 210 Acres. Out of which Aproxm.120 acres in our possession and rest with KLDB
7.	Bioscience park	2.00 Acres	Thonnackal/ Tvm dist	
	Total	874.84 Acres		

Human assets

Year	Teaching	Non-Teaching
2012-13	224	210
2013-14	237	210
2014-15	254	210
2015-16	262	201
2016-17	256	323

LabourersPermanent – 500 nos.

Casual labourers – 7 nos.

Major Thrust areas of the Budget are as follows

1. A most modern referral Veterinary Hospital in the name “K.R. Narayanan Memorial Teaching Veterinary Clinical Complex” will be opened to the Public and State
2. As a major breakthrough in the milk and food processing sector in Kerala the institute named “Varghese Kurien Memorial Institute of Dairy and Food Technology” will be inaugurated and opened to the State
3. A food park will be constructed at College of Food Technology, Thumburmuzhy, Chalakudy

4. A most modern pellet feed mill with capacity of 50 tonnes per day where in cattle and pig feed will be manufactured will be inaugurated at Mannuthy, Trichur
5. As part of improving distribution of layer poultry and self sufficiency in the layer poultry sector in Malabar region, a hatchery and associated layer poultry farms established at Avian Research Station will be inaugurated and opened to Public.
6. KVASU will implement “SUMEDHA” – a programme intended for creating awareness in higher education and Entrepreneurship at School levels in Idukki, Palakkad and Wayanad Districts
7. Precision farming, promotion of safe to eat products, One health, Technology enable learning, start up village, popularisation of area specific mineral mixture and productivity enhancement programmes will be the focus areas during 2017 under Director of Entrepreneurship
8. Strengthening of collaboration with national and international reputed institutes in the fields of academics, research and extension
9. Rendering all campus of KVASU plastic free, encouraging organic farming, making use of bioenergy resources and establishing green campus drive so as to make the campus safe, secure and clean.
10. New courses in the emerging areas like Livestock Business Management, Biosecurity and Bioinformatics will be started.
11. Educational museum and infotainment for students on animal disease conditions and other related areas will be established
12. Post graduate programmes will be started in dairy science and technology to bridge the gap in teaching and research manpower.

**DETAILS OF EXPENDITURE FOR THE FINANCIAL YEARS
2015-16 AND 2016-17 (UNAUDITED)
(in lakhs)**

DETAILS	Unaudited Accounts 2015-16	Unaudited Accounts 2016-17
01 1 Salaries	4176.60	4603.10
4 Medical Reimbursement	13.27	15.92
02 Wages	1237.53	1612.00
04 Travel Expenses	24.52	34.56
05 Office Expenses	185.75	198.80
06 Rent, Rates & Taxes	18.39	28.92
07 Publication	1.47	0.62
08 Advertisement and Publicity	11.40	0.94
12 Scholarships, Internships	15.73	16.38
13 Hospitality	1.21	1.51
16 Major works		
17 Minor works	3.85	10.86
18 Maintenance	25.05	25.71
19 Machinery & Equipments	8.77	13.49

20 Tools & Plants	0.26	
21 Motor Vehicles	44.61	19.27
22 Payment Of Professional	33.01	9.46
34 Other Charges	677.49	597.29
39 Rewards	0.00	0.00
45 Petrol, Oil & Lubricant	37.63	38.74
47 Stores and Equipments	1.71	1.52
54 Expense of Conducted Tours	2.97	15.13
59 Prizes & Awards	0.16	0.04
60 TA/DA to Non-Official Members	3.53	0.49
95 Students/uty Union	0.01	2.47
96 Grant for Games/Athletics	1.81	6.01
99 Information Technology	9.67	11.56
NSS- NSS Activities	0.98	0.29
Pension & Retirement benefits	802.48	1252.58
TOTAL	7339.86	8517.66

**DETAILS OF INTERNAL RECEIPTS OF KVASU OTHER THAN
GOVERNMENT GRANTS
(in lakhs)**

Details of Receipts		2015-16	2016-17
Farm Produce		920.00	1370.60
Fees		255.00	353.24
Training		42.12	50.68
Sale of Tender Forms		21.10	24.60
Miscellaneous		53.45	66.25
TOTAL		1291.67	1865.37

Directorate of Academics and Research

The Directorate of Academics and Research is headed by the Director (Academic and Research) and is assisted by a Joint Registrar, one Assistant Registrar, three Section Officers, two Computer Assistants and ten Section Assistants. A separate wing under the Controller of Examinations has been established supported by the staff of the Academic section. The Directorate looks into all the academic activities of the University as well as research programmes. A Monitoring and Evaluation Cell is constituted under the Directorate for the monitoring and evaluation of the projects undertaken by the faculty in the University.

ACADEMIC PROGRAMMES (2016-17)

KVASU offers Doctoral, Postgraduate, Undergraduate, Diploma, PG Diploma and Certificate programmes in Veterinary and Animal Science, Dairy Science and Technology and Poultry Science subjects, in addition to various Technology Enabled Distance Learning Programmes. Altogether there are 40 courses offered by the University including the conventional courses.

1. Academic Programmes in various colleges

a. College of Veterinary& Animal Sciences, Mannuthy

1. Ph.D Programme in Veterinary Science and Animal Agriculture & Climate change.
2. M.V.Sc Programme in Veterinary Science.
3. B.V.Sc & AH Programme
4. M.Sc. in Biostatistics
5. M.Sc. in Quality Systems in Dairy Processing
6. M.Sc. in Bio-Chemistry and Molecular Biology
7. M.Sc.in Applied Microbiology
8. M.Sc. in Animal Biotechnology
9. M.Sc. in Animal Science
10. Post Graduate Diploma in Climate services in Agriculture
11. Post Graduate Diploma in Climate services
12. Post Graduate Diploma in Meat Processing Technology
13. Diploma in Laboratory Techniques
14. Diploma in Poultry Production
15. Diploma in Dairy Science
16. Diploma in Feed Technology

b. College of Veterinary& Animal Sciences, Pookode

1. Ph.D Programme in Veterinary Science and Biosciences
2. M.V.Sc Programme in Veterinary Science
3. B.V.Sc & AH Programme
4. BSc.Poultry Production and Business Management
5. M S Wildlife Studies
6. Diploma in Dairy Science

c. College of Dairy Sceince & Technology, Pookode

1. B.Tech (Dairy Technology)

d. College of Dairy Science& Technology, Chettacahal, Thiruvananthapuram

1. B.Tech (Dairy Technology)

e. College of Dairy Science& Technology, Mannuthy, Thrissur

1. M. Tech (Dairy Technology, Dairy Microbiology and Dairy Chemistry)
2. B.Tech (Dairy Technology)

f. College of Avian Sciences & Management Thiruvazhamkunnu, Palakkad

1. B.Sc Poultry Production & Business Management

g. Sarathi Institute of Veterinary & Animal Sciences, Thaliparamba, Kannur (Affiliated college)

1. Diploma in Dairy Science

**Technology enabled distant learning programmes
(Offered by the University faculty)**

1. Post Graduate Diploma in Livestock Agri Entrepreneurship and Food Safety and Security Management
2. Post Graduate Diploma in One health
3. Post Graduate Diploma in Informatics and Management
4. Post Graduate Diploma in Ethnopharmacology
5. Post Graduate Certificate Programme in Farm Journalism
6. Post Graduate Certificate in One Health
7. Post Graduate Diploma in Toxicologic Pathology
8. Post Graduate Diploma in Food Safety and Quality Assurance
9. Post Graduate Diploma in Therapeutic Management of Infectious Diseases of Pet Animals and Pet Birds
10. Post Graduate Certificate Course in Veterinary Homeopathy
11. Post Graduate Certificate in Community based disaster Management
12. Diploma in Integrated Farming Systems

Certificate Programmes

1. Certificate course in Animal Handling
2. Certificate course in Livestock Production
3. Certificate programme in Histologic and Anatomy Musuem techniques

2.Total Seats, student enrolment and student strength (16-17)

Sl. No	Course Name	Total Admitted
1	M.V.Sc	69 including ICAR
2	MS Wild Life Studies	3
3	M.Sc. Animal Biotechnology	3
4	M.Sc. Animal Science	2
5	M.Sc Applied Microbiology	10
6	M.Sc.Quality control in Dairy Industry	8
7	B.Sc (PP & PM)	68

8	Diploma Dairy Science	45
9	Diploma Laboratory Techniques	14
10	Diploma Poultry Production	10
11	Diploma Feed Technology	1

Supernumerary seats

1	B.V.Sc & AH (VHSE quota)	5
2	B.V.Sc & AH (Diploma quota)	5
3	B.Tech (DSc & Tech)	2

Number of Academic Council Meetings held: - 4

1. 18th Academic Council on 19.04.2016
2. 19th Academic Council on 29.09.2016
3. 20th Academic Council on 22.12.2016
4. 21st Academic Council on 27.03.2017

Results Published (2016-17)

Ph.D. Programme	- 13
Post Graduate Programme	- 92
Under Graduate Programme	- 151
Post Graduate Diploma Programme	- 65
Diploma Programme	- 44
Certificate Programme	- 78

Technology enabled distant courses for the academic year 2016-17

Sl.No	Course name	Total Admitted
1.	Post Graduate Certificate Course in Veterinary Homoeopathy	98
2.	Post Graduate Diploma in One health	26
3.	Post Graduate Diploma in Therapeutic Management of Infectious Diseases of Pet Animals and Pet Birds	29
4.	Post Graduate Diploma in Ethno pharmacology	6
5.	Post Graduate Diploma in Food Safety and Quality Assurance	14
6.	Post Graduate Diploma in Poultry Entrepreneurship	1
7.	Post Graduate Diploma in Dairy Entrepreneurship	1

8.	Post Graduate Diploma in Livestock Agri Entrepreneurship and Food safety and security Management	1
9.	Diploma in Integrated farming systems	1
10.	Diploma in Dairy Entrepreneurship	5

PhD Programme for the Academic year 2016-17

Sl. No	Name of Ph.D Programme	No. of Candidates admitted
1.	Veterinary Science	12
2.	Bioscience	1
3.	Climate change in Animal Agriculture	1

Spot admission to vacant B.Tech (DT) & B.Tech (FT)

Sl. No	Name of course	No. of Candidates admitted
	B. Tech (DT)	6
	B. Tech (FT)	1

- Commenced two specialized Post Graduate Diploma Programme in Clinical Sciences- Post Graduate Diploma in Veterinary Cardiology and Post Graduate Diploma in Veterinary Anesthesiology.
- Instituted the Best Ph.D thesis award under the name “Changaram Kumarath Seetha and Sankunny Memorial Best thesis Award”
- Upgraded the disciplines of Livestock Products Technology and Veterinary Epidemiology & Preventive Medicine at College of Veterinary and Animal Sciences, Pookode to offer Doctoral Programmes.
- Participated in the Chancellor’s Award for the Best University in Kerala.
- Participated in the National Institutional Ranking Framework and positioned in the 100-150 roll band.

RESEARCH ACTIVITIES

1. Research Policy

The university has its own a research policy. The research priorities include increasing productivity of livestock, Enhancing poultry productivity, Improvement of animal genetic resources, Improving nutritional base, Molecular diagnostic and vaccine development, Biotechnology, Improving reproductive efficiency, Disease monitoring and surveillance, Companion animals, zoonoses, wild life, value addition of products and livestock entrepreneurship. It promotes multidisciplinary research and instill quality in research through competition among faculty. It focuses on research that promotes sustainable and profitable animal production systems, quality veterinary services, assures food safety and security, animal welfare and ethics and disseminates modern scientific knowledge and skill.

2. Research projects and funding

Institutions/Organizations like ICAR, KSCSTE, DBT, DRDO and AHD funds various projects of the faculty. The research projects undergoing in the University are

Sl. No	Funding agency	Number
1	ICAR	Nine (including outreach programmes and AICRPs)
2	KSCSTE	Sixteen
3	DBT	One
4	RKVY	Three
5	AHD& ATMA	Seven
6	DRDO	One
7	NABARD-FSPF	One
8	STDD	One

Also, there are 34 ongoing revolving fund projects in the University. The total outlay for ongoing External Aided Projects comes to **Rs.2842.44 lakhs**(Rupees two thousand seven hundred ninety lakhs and sixteenthousand only) and that of revolving fund projects comes to **Rs.118.94 lakhs** (Rupees one hundred eighteen lakhs and ninety-four thousand only).

State plan funding

An amount of Rs.42 crores was sanctioned for the University towards state plan projects for 2016-17 under the following broad areas and an amount of Rs.38 crores has been released so far.

Sl No.	Source	2016-17 (amount in Lakhs)
1	Research	1522
2	Education	700
3	Farm development	545
4	Infrastructure development	1058
4	Administration	160
5	Entrepreneurship	215
	Total	4200

ICAR Funding

a) ICAR Development Grant (2016-17)

Year	Instalment	Amount (in lakh)
2016-17	First Instalment	153.83
	Second release of First Instalment	46.20
	Second Instalment	225.96
Total		425.99

New majorequipment worth Rs.161.07 lakhs for Central Instrumentation Laboratory and new minor equipment worth Rs.1.99 lakhs have been purchased by utilizing ICAR Development Grant (2016-17). Major share of ICAR Development Grant (2016-17) has been allotted for the colleges under the University for carrying out various development programmes.

b) ICAR Development Grant (2016-17) - Library Strengthening.

Year	Instalment	Amount (in lakh)
2016-17	First Instalment	20.5
	Second Instalment	20.5
Total		41.00

Out of Rs.41 lakhs received under ICAR development grant (2016-17) under the component “Strengthening of Libraries”, Rs.20.69 lakhs has been utilized for purchasing Printed Text Books and Rs.3.054 lakhs for purchasing Print Journals for both libraries under College of Veterinary and Animal Sciences, Pookode and Mannuthy. An amount of Rs.8.44 lakhs has also been utilized for the subscription of various e-journals in the colleges under the University.

RKVY Funding

The Government havegranted sanction for the implementation ofthe second phase of the project entitled “*Establishing a poultry breeding farm for backyard chicken production at Thiruvazhamkunnu*” with a total cost of Rs.973 lakhs and released an amount of Rs.100 lakhs as first instalment and sanctioned another 100 lakhs as second instalment.The project entitled “*Establishment of state of art large animal surgical teaching facility in the department of Veterinary Surgery and Radiology, CVAS, Mannuthy*” sanctioned for the year 2015-16 has been revalidated for the year 2016-17 and the project cost of Rs.50 lakhs has been released.The project entitled“*Improvement on rural livelihood security by establishment of satellite piggery unit in Wayanad District*” was also sanctioned and revalidated. Another project entitled “*Establishment of elite Malabari goat breeding unit for dissemination of superior germplasm*” with budget outlay of Rs.60.65 lakhs has been sanctioned during the year.

3. Organizational Support extended to conduct of Seminars and conferences from the Office of DAR

1. 13th Annual convention of Indian society for the Advancement of Canine Practice and National symposium on Canine Practice held at CVAS, Pookode from 27th to 29th of April 2016.
2. ICAR Annual review meet on “AICRP on Goat improvement” held at CVAS, Mannuthy, from 10th to 11th of May, 2016.
3. Special NSS camp programme held at Thumburmuzhy campus of KVASU from 18th to 24th of February 2017.
4. Annual review meet-2016 of the ICAR Outreach programme on Ethno-veterinaryMedicine held at College of Veterinary and Animal Sciences,Mannuthy on 17/09/2016.
5. National symposium “Biodynamic Animal Farming for Management of Livestock Diversity under the Changing Global Scenario” held at CVAS, Mannuthyduring the month of February 2017.
6. One day seminar on “preamble of Indian Constitution” held at CVAS, Pookode.

4. Publications

1. Research Report -2015

2. Research Digest
3. MSVE-2016 regulations and syllabi.
4. Annual Report/5-year Impact Assessment Report/Library Strengthening Report etc. furnished to ICAR.

GRADUATION DAY 2016

The graduation day of Kerala veterinary and Animal Sciences University was held on 22nd November 2016 (Monday) at 9:00 AM at the University Headquarters, Pookode, Wayanad. Advocate Sri V. S. Sunil Kumar, Hon'ble Minister for Agriculture has was the the Guest of Honour and conferred degrees to meritorious students of the University. The Hon'ble Vice Chancellor of the University, Registrar, Director (Academics and Research), Director of Entrepreneurship, Faculty Deans shared the dais with the members of Academic council, manangement council and other officers f the University. Officers from civil and police fore, ivited dignitaries, staff and students f the Universityattended the function. Distribution of various awards/recognitions, inauguration of Sumedha project (Social educational entrepreneurship for school children), and release of newsletter and inauguration of sale of value added products from KVASU Meat technology unit was also held during the programme.





കേരള വെറ്ററിനറി ആന്റ് അനിമൽ സയൻസ് യൂണിവേഴ്സിറ്റി
ഇൻഫ്രാസ്ട്രക്ചർ ഡെവലപ്മെന്റ് വിംഗ്, പൂക്കോട്, വയനാട്
 ഇ-മെയിൽ: ee@kvasu.ac.in

വാർഷിക റിപ്പോർട്ട് 2016-2017

കേരള വെറ്ററിനറി സർവകലാശാലയുടെ പൂക്കോട് കാമ്പസിൽ സ്ഥിതിചെയ്യുന്ന ഇൻഫ്രാസ്ട്രക്ചർ ഡെവലപ്മെന്റ് വിംഗ് സർവകലാശാലയുടെ അടിസ്ഥാന സൗകര്യങ്ങളുടെ നിർമ്മാണം, പരിപാലനം, വിഭാവനം, വികസനം എന്നീ കർത്തവ്യങ്ങൾ നിർവ്വഹിച്ചുവരുന്നു. എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ നേതൃത്വം വഹിക്കുന്ന പ്രസ്തുത ഓഫീസ് സാങ്കേതിക ഭരണവിഭാഗങ്ങളിൽപ്പെട്ട ജീവനക്കാർ ഉൾപ്പെടുന്നു. മണ്ണുത്തി കാമ്പസിൽ സ്ഥിതിചെയ്യുന്ന ഇൻഫ്രാസ്ട്രക്ചർ ഡെവലപ്മെന്റ് വിംഗ് പൂക്കോട് കാമ്പസിൽ സ്ഥിതിചെയ്യുന്ന ഇൻഫ്രാസ്ട്രക്ചർ ഡെവലപ്മെന്റ് വിംഗിന്റെ ഒരു ഭാഗമായി നിലകൊള്ളുന്നു.

സർവകലാശാലയുടെ പ്രധാന പ്രവൃത്തികൾ കേന്ദ്ര പൊതുമരാമത്തു വകുപ്പ്, ഭാരത് സഞ്ചാർ നിഗം ലിമിറ്റഡിന്റെ സിവിൽ വിഭാഗം എന്നിവരെ ഏൽപ്പിച്ചിട്ടുണ്ട്. അവർ പ്രവൃത്തികൾ നടത്തിക്കൊണ്ടിരിക്കുന്നു. സർവകലാശാലയുടെ എഞ്ചിനീയറിംഗ് വിംഗും പി.ഡബ്ല്യു.ഡി. മാനദണ്ഡങ്ങൾക്ക് വിധേയമാക്കിക്കൊണ്ട് പ്രവൃത്തികൾ നടത്തിക്കൊണ്ടിരിക്കുന്നു. ഈ വർഷത്തിൽ താഴെപ്പറയുന്നവരുടെ പ്രവൃത്തികൾ പൂർത്തീകരിച്ചിട്ടുള്ളതാണ്.

പൂക്കോട്, മണ്ണുത്തി കാമ്പസിലെ വിവിധ വകുപ്പുകളിലെ കെട്ടിടങ്ങളുടെ പുനരുദ്ധാരണവും അറ്റകുറ്റ പ്രവൃത്തികളും പൂക്കോട്, മണ്ണുത്തി, തിരുവാഴാംകുന്ന്, തുമ്പൂർമുഴി, തിരുവനന്തപുരം എന്നീ സ്റ്റേഷനുകളിൽ വിദ്യാർത്ഥികൾക്ക് താമസസൗകര്യമൊരുക്കുന്നതിനു പൂർവനിർമ്മിത വീടുകളുടെ പുനഃസ്ഥാപനം, മണ്ണുത്തി സി.പി.പി.ആർ-ൽ പെൻഹൗസിന്റെ നിർമ്മാണം, പൂക്കോട് ക്ലിനിക്കൽ കോംപ്ലക്സിൽ ചെറു വാഹനങ്ങളുടെയും ഇരുചക്രവാഹനങ്ങളുടെയും പാർക്കിംഗ് സൗകര്യങ്ങൾ ഒരുക്കൽ, പൂക്കോട് ആസ്ഥാന മന്ദിരത്തിൽ ഇന്റർനെറ്റ് കേബിളിംഗം ചെയ്യൽ, പൂക്കോട് കാമ്പസിൽ ഡയറി സയൻസ് കോളേജിന്റെ ക്ലാസ് റൂം നിർമ്മിക്കൽ, തിരുവാഴാംകുന്ന് കാമ്പസിൽ അക്കാദമിക് ബ്ലോക്കിന്റെ രണ്ടാം നിലയുടെ നിർമ്മാണം, ടോയ്ലറ്റ് ബ്ലോക്ക്, ഡ്രെയിയിംഗ് യാർഡ് നിർമ്മാണം, ഫാം റോഡ് നിർമ്മാണം, പൂക്കോട് കാമ്പസിൽ സൗരോർജ്ജ വേലി സ്ഥാപിക്കൽ, മണ്ണുത്തി കാമ്പസിൽ മീറ്റ് ടെക്നോളജി കെട്ടിടത്തിന്റെ പുനരുദ്ധാരണ പ്രവൃത്തികൾ, പൂക്കോട് കാമ്പസിൽ കുടിവെള്ള ശുദ്ധീകരണത്തിനുള്ള ഫിൽറ്റർ നിർമ്മാണം, മണ്ണുത്തി കാമ്പസിൽ 200 കെ.വി.എ. ഡീസൽ ജനറേറ്റർ സ്ഥാപിക്കൽ, മണ്ണുത്തി, പൂക്കോട് കാമ്പസുകളിലെ അത്യാവശ്യ സർവ്വീസായ ജലവിതരണം, ഇലക്ട്രിസിറ്റി തുടങ്ങിയവയുടെ നടത്തിപ്പ്, കോലാഹലമേട് ബേസ്ഫാമിൽ വിവിധ റിനോ വേഷൻ പ്രവൃത്തികൾ, കൂടാതെ സർവകലാശാലയുടെ പൊതുവിലുള്ള കാര്യങ്ങളിൽ വിദ്യാർത്ഥികളുടെ പഠനസംബന്ധമായ വിഷയങ്ങളും താമസസൗകര്യവുമായി ബന്ധപ്പെട്ട വിഷയങ്ങളിലും സൗകര്യങ്ങളേർപ്പെടുത്തിയിട്ടുണ്ട്. ഈ കാലയളവിൽ മണ്ണുത്തിയിലെ ഉത്പന്നങ്ങളുടെ വിപണനകേന്ദ്ര കെട്ടിടം ഉദ്ഘാടനം ചെയ്ത് പ്രവർത്തിച്ചുവരുന്നു.

മണ്ണുത്തി കാമ്പസിലെ വി.കെ.ഐ.ഡി.എഫ്.റ്റി. കോളേജ് കെട്ടിടം, ടി.വി.സി.സി. (GF) കെട്ടിടം എന്നിവയുടെ പൂർത്തീകരണം അവസാനഘട്ടത്തിലാണ്. തിരുവനന്തപുരത്തെ ബയോ സയൻസ് പാർക്കിലെ സർവകലാശാല കെട്ടിടം, വിവിധ കാമ്പസുകളിലെ ഡിപ്പാർട്ടുമെന്റിന്റെ നവീകരണം തുടങ്ങിയവ നടന്നുകൊണ്ടിരിക്കുന്നു. തിരുവാഴാംകുന്ന് കാമ്പസിൽ ഹാച്ചറി കെട്ടിടം, എക്സ്പിരിമെന്റൽ ചിക്കൻ ഷെഡ്ഡിന്റെ കെട്ടിടം, മാനുവർ ഷെഡ്ഡിന്റെ നിർമ്മാണം, ട്രെയിനീസ് ഹോസ്റ്റലിന്റെ നിർമ്മാണം, എലിവേറ്റഡ് ചിക്കൻ ബ്രീഡിംഗ് ഷെഡ്ഡിന്റെ നിർമ്മാണം തുടങ്ങിയവ നടന്നുവരുന്നു. കൂടാതെ കോലാഹലമേട്ടിൽ പുതിയതായി ആരംഭിച്ച സി.ഡി.എസ്. ടി. കോളേജിന് വേണ്ടതായ സൗകര്യങ്ങൾ ഒരുക്കിവരുന്നു.

പ്രസ്തുത വർഷത്തിൽ ഏകദേശം 515.20 ലക്ഷം രൂപയുടെ വികസന നിർമ്മാണപ്രവൃത്തികൾ നടത്തിയിട്ടുണ്ട്. വിവിധ സ്രോതസ്സിൽ നിന്നുള്ള ഫണ്ടുപയോഗിച്ച് സർവകലാശാലയുടെ വിവിധ കാമ്പസുകളിൽ പുതിയ നിർമ്മാണവും പുനരുദ്ധാരണവും നടത്തുവാൻ പദ്ധതി രൂപകല്പന ചെയ്തുവരുന്നു.

31/03/2017

ഡയറക്ടർ ഇൻ ചാർജ് ആൻഡ്
 എക്സിക്യൂട്ടീവ് എഞ്ചിനീയർ

Infrastructure Development Wing - 2016-2017



VKIDFT building at Mannuthy Campus



TVCC building at Mannuthy Campus



CASM Thiruvazhamkunnu Campus



Poultry sheds at Thiruvazhamkunnu



Training centre Thiruvazhamkunnu



Duck sheds Thiruvazhamkunnu



Feed Mill at Thiruvazhamkunnu



Hatchery at Thiruvazhamkunnu



Hostel building at Thiruvazhamkunnu



Aris cell at COVAS, Pookode

Data Bank on nutrient profile of plants in Wayanad



Sales Centre at UVH, Kokkalai



Farmers facilitation centre and Laboratory Services

- Fully furnished seminar hall to serve farmers, rural youth & extension functionaries who frequent farm for training
- Fully furnished laboratory equipped with modern diagnostic and investigatory services



Farmers facilitation centre

- Fully furnished canteen to serve farmers, rural youth & extension functionaries who frequent farm for trainings and technological consultancies.



**Water self sufficiency campaign -
Construction of temporary check dams**



**Integrated farming- Arecanut -
500 arecanut seedling planted**



Brucella Crisis Management



Directorate of Entrepreneurship

The Directorate of Entrepreneurship headed by the Director (Entrepreneurship) has Publications, Training, Entrepreneurship, Capacity building and knowledge transfer, Media and Informatics, Technology Enabled Learning as major divisions. One Assistant Professor, one Assistant Registrar, one section officer, two University Assistants, one typist and one Class IV employees constitute the rest of the faculty. The Course coordinator takes care of the technology enabled distance learning courses of the Directorate.

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 at Mannuthy, Thrissur coordinate the Technology enabled Distance Learning Centre, School of New Media and Research, 24X7 Veterinary Services e- Vet connect, Central Hub for Video Conferencing and the university publications. The Centre for Livestock Policy Development and Research at Thiruvananthapuram act as an intermediary between the headquarters of University and the Government focusing on the policy issues and the training centre associated focus on capacity building. The academic staff college associated with directorate focus on career advancement programmes of the faculty and other advanced training programmes. The directorate also plans to develop technology business incubation division in the Mannuthy campus.

The Directorate plays a vital role in commercializing new ideas and raising productivity and employment in all the sectors, specially benefitting the farming community. The University student-focused activities include the Student Entrepreneurship Scheme, educating students in cultivating a startup business idea, teaching them basic strategies like estimating costs and writing a project proposal/ business plan etc. 20 per cent attendance relaxation and 4 per cent grace marks are provided for students who pursue entrepreneurship and innovation during their studies. The Entrepreneurship division gives major emphasis to entrepreneurship development, extension, knowledge dissemination, distance learning and awareness programmes.

Key Achievements

- Initiated the pilot project of Startup village at Kole area of Pullazhi, Thrissur to promote Safe to eat products
- Developed models of Precision farming in Self-help groups among different smallholder Livestock farming systems , supporting the development of Producer Company among commodity interest groups
- Innovation Incubation process and boot camps at campuses in association with NAARM
- Productivity enhancement based knowledge transfer system for livestock farmers across the State
- Socio educational model for students, teachers and parents across the State
- Knowledge transfer System for Women Self Help Groups
- ICT deliverables in livestock System
- 15 documentaries on innovative entrepreneurship in livestock sector and farmer models were documented and is available at www.kvasuleap.org
- 24x7 Veterinary Services and Advisory Services through e Vet connect
- Knowledge Management System e vetconnect.org and Vetipedia
- Linkages with National and international institutions such as NDDDB, University of Bristol, BBSRC and other universities under Global Farm Platform

- Technology enabled learning with introduction of two degree and diploma courses in Dairy and Poultry Entrepreneurship
- Farm news service for All India Radio, Television and Press
- Campus recruitment and educational fares
- Supporting entrepreneurship development programmes of the university and other stakeholders
- Stipendiary and Vocational Training
- Skill development training programmes
- Industry interface projects
- Banker-Scientist-Entrepreneur-industry summit
- Development of farmer based publication for a sustainable knowledge management system
- Developed advisory call centres for knowledge transfer
- Developed and implemented a comprehensive tribal development programme for Wayanad as part for Wayanad 2030
- Documented the new issue of Package practices recommendations
- Established across the campuses video conferencing system
- Mobile exhibition unit for knowledge transfer
- Collaborating with ATMA for farmer based extension activities
- Established informatics division with farm portal www.kasavu.in and web channel for video streaming veturing into a highly interactive Livestock Entrepreneurship Advisory Portal www.kvasuleap.in
- Launched Connect-2016 the interface between KVASU Scientists and Officers of Animal Husbandry, Dairy Development Departments and Public Sector Undertakings
- University is in the Process of establishing Technology Business Incubation Centre at Mannuthy Campus
- Released 6 Mobile Apps for Farmers and Entrepreneurs
- Submitted 13th Plan proposals to the State Planning Board

Academic Staff College

Academic Staff College launched at Mannuthy:-Kerala Veterinary and Animal Sciences University launched Academic Staff College (ASC) at Mannuthy, Thrissur campus on 29th December 2015 with the financial support of Rs 98 lakhs from NABARD under Rural Infrastructure Development Fund. Academic Staff College is functioning under Directorate of Entrepreneurship of University. The functions of the Academic Staff College will be to plan, organize, implement, monitor and evaluate orientation/ other courses for newly appointed college/university/ in service faculty. The ASC will also organize National level refresher courses for serving teachers, and orientation programmes for senior administrators and heads of department, Deans and other Officers.

KVASU Academic Staff College received UGC and Govt sanctions): As per G.o.No230/2016/HEdn dated 15.11.2016, sanction has been accorded the Academic staff college to organise the prorammes for academic excellence and career advancement and has been recognised by UGC and Higher education department.

ASC conducted three months obligatory training programme for the Assistant Directors of Animal Husbandry Department from 4th July 2016 at Kerala Veterinary and Animal Sciences University.

Released PACKAGE OF PRACTICES-2016:The package of practices for the Entrepreneurs and officers working in this sector was released by the Hon'ble Minister Shri Adv.V.S Sunilkumar. This is the

first edition after the inception of Kerala Veterinary and Animal Sciences University since 2011. Sri. Anil Xavier IAS, Hon. Vice chancellor of Kerala Veterinary and Animal Sciences University delivered the keynote address. Dr. K. Devada, Director, Academics and Research, Dr. Sisilamma George, Dean, CV&AS Mannuthy and the Board of Management members of KVASU offered felicitations.

Startup village project of KVASU

1. Sales center of Startup village project the joint venture of Kerala Veterinary and Animal Sciences University, Pullazhi Kole Sahakarana Sangham and Thrissur Urban Development Authority was inaugurated on 24th March 2017 by Agriculture Minister. Adv. V. S. Sunilkumar at Olari, Thrissur. The sales Centre provides Safe to eat milk, meat, egg, chicken, vegetables, rice and other products from 30 Entrepreneurs of the project. The pesticide and antibiotic residues will be periodically tested and certified at the instrumentation laboratory of KVASU at Mannuthy. Minister released the Kissan rice (Massouri rice) of Pullazhi Kole Sahakarana Sangham. Mayor, Thrissur Corporation Smt. Ajitha Jayarajan presided over the function. District Panchayat President Smt. Sheela Vijayakumar launched the sale of Startup village products. Director of Entrepreneurship Dr. T. P. Sethumadhavan delivered the introductory note. Registrar, KVASU Dr. Joseph Mathew, Opposition leader Thrissur Corporation M. K. Mukundan, Former Chairman TDA K. Radhakrishnan, Councilor Smt. Rajani Viju and Dean, College of Veterinary and Animal Sciences Dr. Sisilamma George offered felicitations.
2. As a part of plan project on “Start up village in live stock production”, Directorate of Entrepreneurship, KVASU in association with Pullazhy Kole organized a seminar on “Monsoon care of Livestock” for the selected farmers on 12.07.2016 at Pullazhy Library Hall, Thrissur district.
3. As a part of plan project on “Startup village in livestock production”, Directorate of Entrepreneurship, Kerala Veterinary and Animal Sciences University in association with Pullazhy Kole Society organized a seminar on “Waste Management and Rain water harvesting” for the selected farmers on 23.07.2016 at Pullazhy Library Hall, Thrissur district.
4. The product developed as part of startup village project, implemented at Pullazhi Kole by Directorate of Entrepreneurship, KVASU in association with Pullazhi Kole land society and Thrissur Urban Development Authority KASAVU was launched under the brand “Safe to eat rice” at KVASU sales counter at Mannuthy on 9th May 2016.
5. Kerala Veterinary and Animal Sciences University in association with Pullazi Kole Sahakarana Sangham organized a Seminar on Poultry production as part of Startup village on 20th September 2016 at Pullazhi Library Hall, Thrissur. In order to promote Safe to eat products, Directorate of Entrepreneurship is implementing this project in Pullazhi Kole through integrating Agri, Livestock and Fisheries Sectors. University distributed Crossbred layer birds developed by All India Co-ordinated research Project of Indian Council of Agriculture Research, Mannuthy and Poultry feed from Revolving Fund hatchery. Crossbred color layers which can yield up to 250 eggs per annum were distributed.

Entrepreneurship Development Programmes

1. Directorate organized meat entrepreneur meet 2016 “Meet 4 meat, 2016”. Meat entrepreneurs, scientists and other stake holders participated in the programme. The programme was organized as part of plan project of the Directorate of Entrepreneurship “Developing specialized software for the livestock entrepreneurs of the state.”
2. A farmer scientist interaction was organised on 19th April 2016 at Padinjarathara Community Hall. Director of Entrepreneurship handled the class on ‘Profitable dairy farming- Recent trends’ in which more than 150 dairy farmers participated. Smt. Jisha Sivaraman (MD, Bacco Producer Co.) welcomed the gathering and Smt. Jincy (Member, Bacco Producer Co.) expressed vote of thanks.

3. One day Workshop on Productivity enhancement in Dairying for Dairy based Self Help Groups was organized by the Directorate of Entrepreneurship at Thottilpalam, Kozhikkode District on 3rd May 2016 as part of Plan project 2015-16. Director of Entrepreneurship handled a class on Profitable Dairying and Technologies along with summer management. Around 250 women SHG members attended the workshop
4. Entrepreneurship seminars were organized at Kadayiruppu, Perumbavoor, Ernakulam District and Udaympoor, Ernakulan District on 21st May 2016.
5. Kerala Veterinary and Animal Sciences University in association with Konnathadi Service Co-operative Bank, Konnathadi, Adimali organised Entrepreneurship seminar on Agriculture and allied sectors at Konnathadi Service Co-operative Bank, Adimali on 25th June 2016.
6. One day seminar on Profitable Dairying was held at PHC Hall, Changaramkulam, Malappuram on 29th June 2016. Directorate of Entrepreneurship in association with District Kudumbasree Mission organised this programme.
7. Seminar presentation ‘പശുപരിപാലനം’ dated 6th July 2016 at Irinjalakuda Municipal Town Hall as part of “Njattuvela Mahotsavam” scheduled from 1st July to 8th July 2016 at Municipal Town Hall, Irinjalakuda.
8. Session on economic dairy production at Nagalassery for the dairy farmers seminar organized by Nagalassery dairy cooperative bank and DoE on 26th July 2016
9. Seminar on Productivity enhancement was held at Mullankolly Grama Panchayat as part of Entrepreneurship fortnight programme of KVASU on Wayanad on 3rd August 2016 . 100 women dairy farmers of CDS Mullankolly participated in the seminar.
10. As part of productivity enhancement in Dairying, a seminar on Profitable Dairying was held at Pulpally Grama Panchayat Community hall, Pulpally on 22nd August 2016. It was organized by Directorate of Entrepreneurship of Kerala Veterinary and Animal Sciences University in association with district Kudumbasree mission and Pulpally Grama Panchayat. 100 women SHG members of the Dairy based commodity interest group attended the Seminar.
11. Participated in “Bio-entrepreneurship Meet” at Trivandrum on 6th September 2016 organised by Kerala State Industrial Development Corporation (KSIDC) as part of initiatives in promoting biotech industry
12. One day seminars organized for Commodity interest group on dairying at Cihitoor on 16th September, Meenakshipuram on 20th September, 1st October at Nelloppilly on precision farming with special emphasis on strategic mineral supplementation
13. One day seminar held at Idukki on 25th organized for kudumbasree Idukki.
14. Sadgamaya Foundation, Cherpu in association with Directorate of Entrepreneurship, KVASU organised an Agri Entrepreneurs meet-2016 at VMA Hall, Cherpu on 26th September 2016. Ward member of Cherpu Grama Panchayat Sri, Ummer presided over the function. Block Panchayat member Smt. Ranjini inaugurated the meet and Farmer Scientist interaction. Dr.T.P.Sethumadhavan, Directorate of Entrepreneurship delivered the keynote address.
15. Two days orientation trainings for cluster leaders of Kannur goat producer’s company from 26th-27th September, 2016. The intensive soft skill development programme intended for team building and entrepreneurship development.
16. Scientists from Indian Veterinary Research Institute (IVRI) gave insight on latest research and entrepreneurial opportunities in veterinary science during the interface meet jointly organized by COHEART and IVRI, at Pookode on September 27-28, 2016. A total of 150 delegates comprising of faculties, students and veterinary surgeons from Kerala interacted with Scientists from IVRI, The

interface was on various emerging and recent technologies developed in Veterinary field as well as on entrepreneurship and agri-business incubation opportunities.

17. Sadgamaya Foundation, Cherpu in association with Directorate of Entrepreneurship, KVASU organised an Agri Entrepreneurs meet-2016 at VMA Hall, Cherpu on 26th September 2016. 100 Entrepreneurs and farmers attended the programme.
18. Parasitic screening of Kodakara Panchayat held: As part of the research project, the parasitic screening among goat associated with the goat producers society, spread over 14 wards of the Kodakara Panchayat were held in the month of September. The initiatives were taken as part of the plan project on Commodity interest group and Kodakara panchayat and the veterinary hospital, Kodakara. The results will be published in 29th Kerala science congress.
19. Organised CONNECT- 2016 at Mascot Hotel, Thiruvananthapuram on 30th of November 2016 which provided an interface between Scientists and field level officers.
20. Kerala Veterinary and Animal Sciences University in association with Lakshadweep administration, Kavaratti organised five day Poultry Entrepreneurship training programme on 23rd January 2017 at Mannuthy. 25 Entrepreneurs from five islands of Lakshadweep are attended the training programme.
21. Kerala Veterinary and Animal Sciences University organised State level Livestock Entrepreneurship meet at Peerumade, Idukki District on 19th February 2017. The programme was organized by Directorate of Entrepreneurship in association with SPICES Developmental initiative of Peerumade assembly constituency and Base farm, Kolahalamedu. The programme was inaugurated by Adv. E.S Bijimol.MLA, Peerumadu. Dr. T.P Sethumadhavan, Director of Entrepreneurship, Kerala Veterinary and Animal Sciences University delivered keynote address. 200 entrepreneurs participated in the programme.
22. Dairy Seminar on Productivity enhancement was held at Kottuvally Grama Panchayat Hall, North Paravur on 14th March 2016. The programme was organized by Directorate of Entrepreneurship of Kerala Veterinary and Animal Sciences University with the support of Kudumbasree mission. 120 women dairy entrepreneurs attended the seminar.
23. Five days training programme on Poultry Entrepreneurship for Lakshadweep was held at Centre for advanced studies in Poultry Science of Kerala Veterinary and Animal Sciences University, Mannuthy. Directorate of Entrepreneurship, Animal Husbandry Dept of Lakshadweep and Centre for advanced studies in Poultry science organized the programme. 16 Entrepreneurs attended the programme. They were given training in areas of Broiler and layer production, housing management, brooding management, food safety, entrepreneurship and marketing. Valedictory function was held on 25th November 2016. Dr.P.Anitha, Director, Centre for Advanced Studies in Poultry Science inaugurated the five day training programme on 21st November 2016. Dr.T.P.Sethumadhavan, Director of Entrepreneurship of KVASU presided over the function. Dr.Sisilamma George, Dean, College of Veterinary and Animal Sciences, Mannuthy, Dr.M.I.Koya, Veterinary officer, Animal Husbandry Department, Kavaratty offered felicitations.

Launched comprehensive entrepreneurship portal 'www.kvasuleap.in': Hon. MLA Smt. Bijimol E.S. launched the web portal 'www.kvasuleap.in' for the State on 30th November 2016 at Mascot Hotel Thiruvananthapuram while Hon. MLA Sri. K. Muraleedharan presided the function. KVASU Leap is a highly interactive web portal supporting entrepreneurship through streamlining various activities, projects and training programmes offered by different departments. The portal provide information on entrepreneurship, legal advisories, scientific information, success stories, export and import, startups and an interactive platform for various stake holders to exchange their ideas, practices and experiences. Six mobile applications associated with web portal were officially launched by Hon. MLA Sri. C.K Saseendran, Dr. N.N Sasi, Director, Animal Husbandry, Sri. Biju Prabhakar IAS and Sri.

Georgekutty Jacob, Director, Dairy Development Department. The mobile applications are precision farming, Food Safety, Fodder Cultivation, Hoof Care and dentition applications. They are available for public by either logging on to www.kvasuleap.in or from google-app store.

Trainings

1. Faculty attended training on policy research “Science for Policy and Policy for Science” organized by University College London at IISER, Pune from 29th -2nd April.
2. Three Months Refresher Training Programme for Assistant Directors was held at KVASU and twenty Assistant Directors are attended the training programme across the university campuses from 4th July to 4th September,2016
3. Directorate co-ordinated the stipendiary training on Meat Technology and Livestock management organised by UVH from 01.09.2016 to 28.02.2017 and 01.03.2016 to 31.08.2017 .

Campus placements & Job fairs

Campus recruitment were held during 23rd May 2016 to recruit Veterinary, dairy graduates and diploma holders. Salsabeel, Milma, ubio participated in the fare.25 candidates were shortlisted by Salsabeel.

Workshops, seminars and conferences

1. DESK-2016: Young dairy entrepreneurship summit Kerala DESK-2016 was organized by the Directorate of Entrepreneurship and college of Dairy Sciences Mannuthy at Hotel Pearl regency Thrissur on 6th August 2016 in the context that more youngsters and NRIs who wishing to start dairy business. The summit was inaugurated by the Hon minister Sr.V.S,Sunil Kumar. During the inaugural address he urged the need to promote multidisciplinary research on local cattle breeds suitable for state and promote the market for A2 milk in the global context. Currently 72 per cent of the state’s requirement is met internally . To make the state self sustained in milk production, the youngsters need to come forward and improve the productivity and develop a sustainable model for the sector. Minister released the compendium of DESK-2016. The commercial launch of safe to eat products of startup village was also held. Various experts presented papers on Dairy entrepreneurship, prospects, precision farming, disease control, marketing, waste management, product development, vale addition, changing trends and importance of mechanization in dairying. The major recommendations included appropriate interventions in breeding, feeding, management; housing and marketing will facilitate sustainability in this sector. A book on dairying under Wayanad context “Wayanadinte ksheera gadhakal” a compilation of students experience at Wayanad dairy was also released during the session. The final year 20 students participated in the workshop.
2. Business Plan Competition cum Sensitization Workshop on Entrepreneurship Development for students of South Indian Universities held at KVASU:Kerala Veterinary and Animal Sciences University hosted sensitization workshop on Entrepreneurship Development under Startup India Campaign for University Students at College of Veterinary and Animal Sciences under the aegis of the ‘Centre for Agri- Innovation’, ICAR-National Academy of Agricultural Research Management, Hyderabad on 26 August 2016. The programme was been organized under the Startup India Campaign in collaboration with Kerala Veterinary and Animal Science University (KVASU) and Kerala Agricultural University (KAU) and will be supported by DST supported Technology Business Incubator (TBI) and ICAR funded Agri-Business Incubator (ABI) at NAARM, Hyderabad.17 Students from State Agricultural Universities in South India participated in the programme.
3. KVASU students at NAARM, HYDERABAD: Twenty aspiring students from Kerala Veterinary and Animal Sciences University, Pookode, Wayanad, participated in a workshop on Technology

Business Incubation conducted by National Academy of Agricultural Research Management (NAARM) at Hyderabad recently. The five day workshop was conceptualised by the Directorate of Entrepreneurship of KVASU with NAARM as the partnering institute. The workshop included sessions on overview of entrepreneurship in India, technology valuation, nuances of marketing, business model canvass and formulation of business plans. A problem based approach was adopted in which the student groups were asked to formulate an idea and work through it to generate a business model that culminated in a pitch presentation contest between the groups. Dr. Kalpana Shastry, Director, NAARM, gave away prizes to the winner of the contest in the valedictory function.

4. A Seminar on Wayanad development was held at Municipal Town hall, Kalpetta on 24th September 2016. Hon'ble Minister Sri.A.K..Saseendran inaugurated the function. Department of Information and Public relations organized the programme. While delivering the keynote address in the seminar on Wayanad-Achievements and aspirations Dr.T.P.Sethumadhavan, Director of Entrepreneurship suggested that development of the district need to consider population, technology, demand and ecosystem. Planning should be based on increasing population, demand and emergence of technology in the forthcoming 10 years. Agribusiness, post-harvest technology, entrepreneurship, innovation and food processing are the key areas for development. There is huge potential for Information and Communication technology based deliverables. Responsible tourism, sustainable tribal development and agri processing, Being an Agri based district organic farming and production of safe to eat products can be promoted in a big way in the district.
5. As a part of plan project on "Startup village in livestock production", the Directorate in association with Pullazhy Koleppadavu Society, organized a seminar on "Dairy Cattle comfort and Welfare – current concepts" for the selected farmers on 18th October 2016 at Pullazhy , Thrissur district. Smt. Rajani Viju, Councillor, Pullazhi inaugurated the programme by distributing rubber mats to the farmers. Sri. Kolangattu Gopinathan, President, Pullazhy Kole Society chaired the session. Dr. Suraj Joseph Bunglavan, Assistant Professor, KVASU handled the technical session.
6. Regional Research and Training Centre, Thiruvananthapuram conducted two day "Capacity Development Training Programme for the faculty of KVASU" on 25th and 26th October 2016 at Institute of Management in Government, Thiruvananthapuram. The sessions included administrative skills for academicians, RTI / RTS as an administrator's tool, office procedures, store purchase rules and modern teaching skills. Twenty six officers from various stations of the University attended the programme.
7. Two day international workshop 'Canine Veterinary Workshop-2016' was held at Thrissur as part of joint collaboration between Kerala Veterinary and Animal Sciences University and University of Edinburgh, UK collaboration on 28th November 2016. Dr.Heather Bacon, Veterinary Welfare Education and Outreach Manager at University of Edinburgh's Jeanne Marchig International Centre for Animal Welfare Education, UK. Heather delivered the keynote address during the inaugural function. Veterinarians from KVASU and Animal Husbandry Department attended the programme. Dr.Joseph Mathew, Registrar, KVASU inaugurated the programme and Director (Academics Research) Dr.K.Devada presided over the function. Director of Entrepreneurship Dr.T.P.Sethumadhavan released the workshop manual. Board of Management members Dr.Sisilamma George, Dr.Sabin George and Dr.M.K.Narayanan and Finance Officer Dr.K.M.Syam Mohan offered felicitations. Director of International Co-operation Dr.K.P.Sreekumar welcomed the delegates and Co-ordinator Dr.Syam K Venugopal expressed vote of thanks. 60 Veterinarians are participated in the workshop. Dr.Heather Bacon, Dr.Jack Reece, Hayley Walters and Dr.Philippa Welsh, Scientists and experts from University of Edinburgh, UK handled various sessions.
8. The international workshop on applying welfare measures to improve sustainability of small holder dairy production in Kerala held at the Flora Airport Hotel, Nedumbassery, Kochi on 16th December 2016. Sri.Anil.X, Vice Chancellor of Kerala Veterinary and Animal Sciences University

inaugurated the workshop and released the Compendium. It was organized as part of the research project between KVASU and University of Bristol funded by Biotechnology and Biological Sciences Research Council, UK. Registrar Dr. Joseph Mathew presided over the function. Professor John Tarlton of Bristol University, UK delivered the keynote address. Biju Prabhakar IAS, Director of Agriculture, Govt of Kerala, addressed the gathering. 60 delegates from across the world including United States, Australia, UK attended the two day workshop.

Education

1. As a part of 'Empowering Youth in Agriculture and allied sciences' and on the request of AIASA Kerala a guest lecture and interactive session on "Career opportunities and techno administrative reforms in agriculture and role of AIASA" was organized for the students and faculty of CV&AS Pookode. Dr. Sahadeva Singh, Chief Policy Advisor, AIASA interacted with the students and faculty on 22 April 2016.
2. Participated in educational seminars on KVASU courses at Thiruvananthapuram on 24th and 30th May, Kozhikkode-27th May, Kochi-31st May 2016 and Kottayam on 26th May 2016.
3. Educational project for Wayanad district 'Sumedha', was launched at Kerala Veterinary and Animal Sciences University on 21st November 2016 by Adv. V.S. Sunilkumar, Hon'ble Minister for Agriculture and Farmers welfare, Govt of Kerala. Minister suggested that it will facilitate students to take appropriate decisions on higher education, career and career development. Minister released five ready to eat meat products developed by Meat Technology Unit and Windows the newsletter of KVASU.
4. LAUNCHED UL-Guru education Platform at Cyberpark, Kozhikkode: Sri. T.P. Ramakrishnan, Hon'ble Minister of Labour and Excise, Government of Kerala launched the UL-Guru education Platform at Cyberpark, Kozhikkode which was powered by ULCCS Foundation, UL Technology solutions and Directorate of Entrepreneurship of KVASU on 10th July 2016 at Cyberpark, Kozhikkode. Sr. M.K. Muneer MLA presided over the function. Sri. A. Pradeepkumar MLA, Calicut University Pro-vice Chancellor Dr. P. Mohanan and Dean of Bennet University Sr. Saji Gopinath offered felicitations. Director of Entrepreneurship of Kerala Veterinary and Animal Sciences University delivered a talk on Science, education and Career. Around 500 students from Kozhikkode attended the programme namely Converge 2016.
5. Kerala Veterinary and Animal Sciences University organized sensitization workshop on Entrepreneurship Development under Startup India Campaign for University Students at College of Veterinary and Animal Sciences under the aegis of the 'Centre for Agri- Innovation', ICAR-National Academy of Agricultural Research Management, Hyderabad. As part of this a Business Plan Competition cum Sensitization Workshop on Entrepreneurship Development for students of South Indian Universities was conducted at Thrissur (Kerala) on 26 August 2016 from 8.30 AM onwards. The programme has been organized under the Startup India Campaign in collaboration with Kerala Veterinary and Animal Science University (KVASU) and Kerala Agricultural University (KAU) and will be supported by DST supported Technology Business Incubator (TBI) and ICAR funded Agri-Business Incubator (ABI) at NAARM, Hyderabad. Students of State Agricultural Universities in South India can register online for participating in the completion for attending the workshop.
6. 'Sumedha' the Socio Educational Entrepreneurship programme of Kerala Veterinary and Animal Sciences University was held at Peerumedu, Idukki District on 26th January 2017. Orientation programme for Teachers under advanced and Participatory learning programme was organised in association with the SPICES, the educational initiative of Peerumade. Awareness Seminar on higher education for Plus two students and parents was held at Peerumade and Kumily Grama Panchayats on 27th January 2017.

National International collaborations

1. The project review meeting of the research project between KVASU and University of Bristol funded by Biotechnology and Biological Sciences Research Council, UK was held on 18th December 2016. Dr. John Tarlton, Professor of Regenerative medicine at the University of Bristol, and Principle Investigator of the BBSRC grant funding the workshop, described the future potential of the collaboration between the KVASU and the University of Bristol. Studies proposed included a data analysis project using information collected from dairy co-operatives in Kerala to form the basis of detailed studies to ascertain best practice in smallholder dairy production in optimizing production and welfare. The lessons learned would be extended to countries in sub-Saharan Africa. Director of International Co-operation Dr.K.P.Sreekumar chaired the session.
2. *Collaborations with NDDDB:* Kerala Veterinary and Animal Sciences University initiated collaboration with National Dairy Development Board in the areas of entrepreneurship, extension, veterinary services, knowledge transfer and productivity enhancement programmes. The Director of entrepreneurship and team visited NDDDB to discuss the meaningful collaboration in the areas of mutual interest and made presentations of the various projects already implemented. NDDDB officers visited Mannuthy campus of the University during 06/06/2016 to 07/06/2016 and discussions held with University officers. The Chairman, NDDDB Sri.Nandakumar IAS along with senior officials of NDDDB visited and signed MOU at KVASU Campus on 25th July 2016. As per proposed collaboration NDDDB and KVASU agree to promote and facilitate scientific cooperation, among others, on conducting joint research and extension of scientific animal husbandry practices in the field of animal husbandry and dairying through studying impact of various interventions on productivity of cattle and buffaloes in India, Developing Joint Research proposals to carry out applied research in the areas of dairying and animal husbandry, Identifying animal husbandry & dairying related innovations and developing strategies for their field application, Develop areas of collaboration and networking with dairy cooperatives of the region, Human resource development through training and exposure in the area of Animal Husbandry and dairying, Providing platform for students and researchers for practical/field orientation and carrying out research relevant to field issues in animal husbandry and dairying and approaches which enhances productivity of cattle and buffaloes in India
3. Signed MOU with National Skill Development Council and Additional Skill acquisition programme. Director of Entrepreneurship is the Chairman of Agriculture Skill Council of ASAP.

Exhibitions and Outreach

1. KVASU participated in the 39th Thrissur Flower Show organised by Agri Horti Society in association with Thrissur Corporation, Kerala Agricultural University and Kerala Veterinary and Animal Sciences University at Thrissur on 20th January 2017. Hon'ble Minister for Agriculture, Govt of Kerala Adv.V.S.Sunilkumar inaugurated the programme. Cochin Dewaswom Board President Dr.Sudarsanan presided over the function. KVASU's pavilion showcased the academic, research and entrepreneurial activities of the University.
2. KVASU participated in Mathrubhoomi karshikamela from 1st April to 5th April 2017 at New Bus stand ground, Payyannur. University stall showcasing the activities and innovations was arranged as part of the fair.
3. KVASU set up an exhibition stall showcasing its activities, services, products and sale of University publications in the Agricultural expo - Mathrubhumi KARSHIKAMELA, 2016 at Marine Ground, Kozhikode. The 5-day expo organized by the Directorate extending from 13th April to 17th April showcased the continuous upgrade of technology and interrelated development in the agriculture industry.

4. KVASU participated in the “International Flori Fest (Pooppoli 2017)” at the Regional Agricultural Research Station, Ambalalay in Wayanad from 27th January 2017 to 9th February 2017. The exhibition stall highlighted the activities and achievements of the University. Hon’ble Minister for Agriculture, Adv. V. S. Sunilkumar inaugurated the fest

Third Extension Council meeting

The third Extension Council meeting of Kerala Veterinary and Animal Sciences University was held at Trivandrum on 28th December 2016. Vice Chancellor Anil.X IAS chaired the meeting.

Technology, Information and Sales Centre of KVASU inaugurated

Technology, Information and Sales Centre of Kerala Veterinary and Animal Sciences University was inaugurated by Ollur M.L.A, Shri Adv. Rajan at Mannuthy on 13th January 2017. The certificate course in Animal handling in zoo and Forests was launched in the event. Worshipful Mayor of Thrissur Smt. Ajitha Jayarajan presided over the function.

Tribal development

1. Organised three days residential programme for tribal youth: The three days residential training programme for the tribal youth of Wayanad district was held at KIRTADS, Kozhikode under the aegis of Directorate of Entrepreneurship. The programme inaugurated by Dr. Joseph Mathew, Registrar, Kerala Veterinary and Animal Sciences University, was presided by Dr. Bindhu. S, Director KIRTADS. 50 tribal youth (fifty percent share of girls and boys) of various colonies (Chembatty tribal colony (Vythiri panchayath), Narangakandy colony (Kalpetta municipality), Priyadarsini colony (Vythiri)) of Wayanad participated in the three days educational and social awareness programme.
2. Organized health camp at Piyadarsini tribal colony, Pookode: The Directorate of Entrepreneurship organized health camp at Priyadarsni tribal colony, Pookode on 28th March 2017 as part of the plan project 2016-17 on tribal development. The camp was arranged associating the tribal mobile unit of Sugandagiri.

Distance Learning Centre and New media Research:

Courses offered in 2016-17

PG Diploma in Livestock-Agri Entrvepreneurship and Food Safety and SecurityManagement
 Post Graduate Diploma in Dairy Entrepreneurship
 Post Graduate Diploma in Poultry Entrepreneurship
 Diploma in Integrated Farming System
 Diploma in Dairy Entrepreneurship

Staff supporting functions

	Name	Office
1.	Dr. T.P. Sethumadhavan	Director, Directorate of Entrepreneurship Publications, media & website
2.	Dr. Deepa Ananth	Publication & Entrepreneurship, Training, Informatics Mannuthy Division
3.	Dr. Sumena. K. B	Distant Learning & New media research Mannuthy Division
4.	Dr. Vidya P	Tribal Development, Training and Entrepreneurship Pookode Division
5.	Dr. Shibu K Jacob	Coordinator, RRTC, Thiruvananthapuram Division
6.	Dr. Anu George	Coordinator, CLPR, Thiruvananthapuram Division

College of Veterinary and Animal Sciences, Mannuthy



ABOUT THE COLLEGE

The College of Veterinary and Animal Sciences, Mannuthy came into existence in 1955 as the Government Veterinary College. The college was inaugurated by the then Chief Minister Sri E M S Namboodiripad. At the inception of the Institution a two storied building of the District Agricultural Farm, Mannuthy served as the College building. As the State Live Stock and Poultry Farms were at Mannuthy with an area of 175 hectors of Land, the functioning units for the College was ready at the beginning itself. The staffs for the initial phase were deputed from among the senior members in the State Animal Husbandry Department. The new College Building with all the classrooms and laboratory facilities came into being in 1958. The College was renamed as Kerala Veterinary College and Research Institute in 1961 and later as College of Veterinary and Animal Sciences in 1972 when it formed a constituent College of Kerala Agricultural University.

The Kerala Veterinary and Animal Sciences University (KVASU) came into existence on 14th June, 2010. Subsequent to the formation of Kerala Veterinary and Animal Sciences University (KVASU), College of Veterinary and Animal Sciences, Mannuthy became a constituent college of the new University. The college is located about 7 Km. east of Thrissur Town on the Thrissur-Palakkad stretch of NH 47. The college has Administrative and Academic wing, Animal Science block, Institutional farms, Teaching Veterinary Clinical Complex, Veterinary hospitals (Mannuthy and Kokkalai), Meat technology Unit, Dairy Plant, Various project offices, Remount and Veterinary Corps (NCC equestrian centre), Faculty club, Hostels, Staff quarters, Play grounds, Golden Jubilee Auditorium and Sports pavilion. The college had celebrated its Golden Jubilee in 2005 and has crossed the Diamond Jubilee in 2015. The college now undertakes academic, research, extension and entrepreneurship activities in animal production and dairy sector.

Initially the college had 9 departments, viz. Department of Animal Husbandry, Anatomy, Physiology and Biochemistry, Pathology and Bacteriology, Extension, Pharmacology and Clinical Medicine, Parasitology and Medicine, Surgery and Obstetrics and Gynecology. Later, the departments of Animal Husbandry Economics and Statistics, Dairy Science, Animal Nutrition, Preventive Medicine, Bacteriology, Clinical Medicine, Genetics, Poultry Science and Veterinary Public Health were created during the period from 1964 to 1975. With the introduction of VCI standard of education two more departments, Veterinary Biochemistry and Live Stock Products Technology, were added making the total into 20 departments. In the recent past TVCC and ILFC were added making the total to 22.

The KVASU has started new courses like Ph D in Biosciences, Master of Science (MSc/ MS), Post graduate diploma, diploma and certificate programmes and opened up the facilities and expertise to students of general stream. New programmes were started with the intention of developing human

resource to augment more appropriate livestock production systems and processing technologies suited to the state and national conditions that will be cost effective and profitable to farming community. These courses are also intended to attract educated youth into livestock production sectors.

ANNUAL BUDGET 2016-17

	ALLOTMENT (In Lakh)	EXPENDITURE (In Lakh)	Remarks
I. STATE PLAN 2016-2017			
1.	921.21	622.11	Extended up to 30.09.2017
II. ICAR 2016-2017			
2.	126.00	112.69	
III. NON PLAN 2016-2017			
3.	2329.25	1342.20	

DEPARTMENTS

1. Department of Veterinary Anatomy and Histology

The Department of Veterinary Anatomy and Histology 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, Dr. Lucy Paily, Dr. K. R. Harshan and Dr. Jose John Chungath served as the Heads of Departments. 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 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. The department handles three major aspects viz. Gross Anatomy, Microscopic Anatomy and Developmental Anatomy.

2. Department of Veterinary Physiology

The composite Department of Physiology and Biochemistry was started functioning as a constituent unit of College ever since its inception in 1955. At the time of the inception of the college in 1955, Physiology and Pharmacology was established as composite department. Later, in 1958 a separate department of Physiology and Biochemistry was formed. In 2000, the department was bifurcated as department of Veterinary Physiology and Department of Veterinary Biochemistry. Post graduate (MSc & MVSc) and doctoral (PhD) programmes were started in 1964. Department of Veterinary Physiology in College of Veterinary Sciences, Mannuthy span around 2500 sq. feet area having 2 UG labs and 1 PG Lab including cell culture and molecular biology facilities with un-interrupted power supply. Staff members of the department have published articles in popular journals and conducted radio talks on related topics. Apart from acting as resource personal in other institutions the faculty also handles several classes/ sessions for different training programmes conducted for veterinary and para-veterinary staff of AHD. 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

3. Department of Veterinary Biochemistry

Department of Veterinary Biochemistry was established as a fully-fledged Department in 2000 by bifurcating the existing Department of Physiology and Biochemistry with an objective to promote education and research in the area of biochemistry and molecular biology. The department is boosted by highly qualified young talented faculties and are involved extensively in research activities related to basic, clinical and molecular biology research. Currently the department houses an undergraduate laboratory, molecular biology laboratory, cell culture laboratory and a M.Sc. laboratory equipped with instruments such as gradient PCR machine, gel doc system, UV-Vis spectrophotometer, auto analyser, deep freezer, biosafety cabinet, CO₂ incubator, hybridisation oven, gel dryer, manual sequencing system, refrigerated high speed centrifuge, high precision digital balance, horizontal and vertical gel electrophoresis equipment etc.

4. Department of Animal Nutrition

Department of Animal Nutrition started functioning from the year 1966 as a Regional Nutrition laboratory under Kerala Veterinary College and Research Institute. The aim was “To advance and apply nutritional sciences for the welfare of human race”. A Small Animal Breeding Station was started as an integral part of nutrition laboratory from the year 1966 with the objective of meeting the increased demand for good quality laboratory animals for biomedical research. A feed processing and technology unit is also functioning with the objective of undertaking investigations on feed processing and preservation techniques. An NABL accredited feed analytical laboratory functions as a center for regular and routine analysis of various feeds and fodders received from the farmers and governmental agencies all over the State. Major activities are under graduate, post graduate and doctoral teaching, research, extension and imparting technical assistance to farmers and feed manufacturers on formulating balanced and economic rations.

5. Department of Livestock Production and Management

During the period from 1964 to 1975 the department of Animal Husbandry was created which was later renamed as Livestock Production Management.

6. Department of Veterinary Microbiology

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. and 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, 74 M.V.Sc. and 11 doctorate degrees were awarded in Veterinary Microbiology and 8 students are in the different stages of completion. Twenty individuals have successfully undertaken a postgraduate diploma from this Department. Of late, in 2012 M.Sc. in Applied Microbiology was started in a self financing mode and till date 14 students have completed the course and 18 are pursuing. 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. Till date, 16 projects funded from different external funding agencies were completed successfully. In addition, 15 and 12 projects by funded by KAU and KVASU,

respectively were also completed fruitfully. Apart from the teaching and research activities, the staff members are also associated with various extension activities like imparting technical knowledge to the officers of AHD and farmers through trainings, seminars, discussions and radio talks. The major services offered from the department include the investigations during disease outbreak to know the causative agent, antibiogram studies to adopt appropriate antibiotic regimen and diagnosis of leptospirosis in animal and humans. The Department also offers training classes for graduate and Post Graduates students from other universities of Kerala. We also impart technical advice to IAH & VB, Palode for Veterinary Microbiology related Research/ Ventures.

7. Department of Veterinary Parasitology

The Department of Veterinary Parasitology is one of the oldest departments of the College of Veterinary and Animal Sciences, Mannuthy formed during the initial years of shaping of the Kerala Veterinary College & Research Institute (1955-1958) as the Department of Medicine and Parasitology. It was then combined with the disciplines of Bacteriology, Pathology and Pharmacology & Therapeutics. The Department of Medicine and Parasitology later became an independent department in 1959, starting Postgraduate courses in 1964. Parasitology started functioning as an independent department since 1974 after being separated from Medicine. It has teaching, research and extension as its major activities in the field of Veterinary Parasitology. 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.

8. Department of Pharmacology and Toxicology

The Department commenced as the composite Department of Pharmacology and Therapeutics in 1956 in the Veterinary College. In 1971 this composite department was bifurcated into Department of Pharmacology & Toxicology and Department of Therapeutics (Clinical Medicine). Ever since its inception the department is active in teaching, research and extension activities. Post graduation programme (MVSc) was started in 1967 and PhD in 1993. The courses offered include UG, PG, PhD and technology enabled distance education courses. The thesis submitted as part of the PG and PhD programme under the Department amounts to 55 numbers and covers areas like Toxicology, ethnopharmacology, anaesthetics and their reversing agents. The research areas on Toxicology includes effects of insecticides, OP compounds and dicofol in birds and mammals; effect of different drugs in cobra venom intoxication; study on effect of fluorine, mercury, cadmium, DDT and endosulfan in cattle of Eloor industrial area and toxicity of *Mimosa invisa* in rabbits with identification of toxic fractions. Ethnopharmacology studies include anti inflammatory, anticancer, immunomodulatory, antioxidant, nephroprotective, hepatoprotective, hypolipidaemic properties of various plants.

9. Department of Poultry Science

The Department of Poultry Science of College of Veterinary & Animal Sciences was established in 1972. The department has successfully completed, 11 PhD projects and 92 MVSc. Projects.

10. Department of Dairy Science

Dept. of Dairy Science is organizing Diploma in Dairy science and M.Sc. (quality control in Dairy industry) for 30 and 10 students respectively. These courses have good demand among +2/VHSE students as well as graduates of science. Many of the diploma/M.Sc. holders are placed in different firms. M.Sc. students carry out many useful research works as a part of their programme and publish their findings in journals. This Dept. is testing milk samples for composition / adulteration and members of public utilize this facility.

11. Department of Veterinary and Animal Husbandry Extension

The Department of Veterinary and Animal Husbandry Extension, CVAS Mannuthy offers 3 undergraduate courses for the BVSc and AH degree besides post graduate and doctoral level courses in the field of Veterinary Extension. The department also conducts routine field level extension work among various sections of society in the participatory mode as well as others. The department also undertakes research projects that focus on developing initiatives for improvement in the knowledge as well as business skills of farmers and other stakeholders in this sector.

12. Department of Veterinary Public Health

The Government of Kerala sanctioned the new Department of Veterinary Public Health 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 School of Zoonoses Public Health and Pathobiology was established in 2014. The Department of Veterinary Public Health has seven laboratories: NABL accredited Quality control lab for Water Testing, Zoonoses lab, Molecular biology lab, Undergraduate lab, Post graduate lab, Environmental Hygiene lab and Leptospira lab. The Department is equipped with many sophisticated equipments *viz.*, Electronic Balance, Thermal Cycler, Gel-doc System, Monocular and Binocular medical microscope with camera, pH meter, Spectroquant Photometer Nova60, ELISA reader, Elisa plate washer, Biosafety Cabinet Class II and class III, Multi-parameter water analyser, Carbon dioxide incubator, Spectrophotometer UV-VIS, Fluorescent microscope, Dark Field microscope, Air sampler, BOD incubator, Millipore water purification system, Cooling centrifuge and Residue testing system. Facilities for practical and research work for all the UG and PG students are made available through these laboratories and equipments. A departmental library is maintained for easy and quick reference. The routine water and food quality testing programme under revolving fund project contributes to revenue generation of the college. The tests for microbiological quality of water is accredited by the NABL. This quality control laboratory is one among the three laboratories in the university to get the accreditation. The Department of Veterinary Public Health is privileged to implement the School of Zoonoses Public Health and Pathobiology (SZPHPB) in collaboration with Departments of Veterinary Microbiology, Parasitology, Pathology and Preventive medicine in the College of Veterinary and Animal Sciences, Mannuthy. SZPHPB was sanctioned under the Expenditure Finance Committee of ICAR with a view to carry out collaborative research projects for the monitoring, surveillance and control of zoonotic diseases. The school also ensures the provision of awareness and training programmes for the public in relation to zoonotic diseases.

13. Department of Livestock Products Technology

Meat Technology Unit and Department of Livestock Products Technology have adequate infrastructure and expertise in demonstration and transfer of technology for meat production and processing of various animal derived products. ICAR recognized this unit as Centre of Excellence in Meat Science and Technology in 2001 and Department of LPT started offering the MVSc programme in 2004 and so far, 22 MVSc theses have been submitted. The PhD programme was started in 2011 and two PhD theses have been so far submitted. The facilities available include 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; and gamma Chamber 5000 for gamma irradiation of meat and meat products.

14. Department of Clinical Veterinary Medicine, Ethics and Jurisprudence

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. Apart from undergraduate teaching, expertise is provided to the Medical unit of College Veterinary Hospital, Mannuthy and University Veterinary Hospital, Kozhikode, Thrissur. In Medical units of these hospitals, modern diagnostic facilities like Electrocardiography, Echocardiography, Ultrasonography, Endoscopy etc. are available. Critically ill animals are given special attention and medical care is provided in the Emergency and Critical Care Unit.

15. Department of Veterinary Epidemiology and Preventive Medicine

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 department became independent during 1976. The department has started functioning under Kerala Veterinary and Animal Sciences University from 2010. Masters degree programme (M.V.Sc.) was started in the same year. Ph.D programme was started since 1998. The name of the department was changed as the Department of Veterinary Epidemiology and Preventive Medicine during 1994 when the Veterinary Council of India (VCI) syllabus was introduced for undergraduate programme.

16. Department of Veterinary Surgery and Radiology

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 1973 and Doctoral Programme in Veterinary Surgery and Radiology in 1993. So far the Department of Surgery has come out with 71 M.V.Sc. thesis and 8 Ph.D. thesis and published a total number of 387 research articles in national and international journals. At present the Department is having an intake capacity of five post graduate students and two doctoral scholars in 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 neighboring states. The Department is equipped with surgical facility for small and large animals provides speciality care through Orthopaedic, Ophthalmology, Diagnostic imaging, Soft tissue surgeries, Surgical Oncology, Avian Surgeries and Exotic and Wild Animal Surgeries. The Operation Theatre attached to the department is having Boyles apparatus with isoflurane and sevoflurane vapourizers, ventilator and monitoring equipments for anaesthesia, C arm Image Intensifier for orthopaedic surgery, surgical microscope for ophthalmic surgery, surgical diathermy, cryosurgery unit, ultrasonic dental scaler and suction apparatus. A 200 mA High Frequency X-ray machine for small animals and a 100 mA High Frequency Mobile X ray unit for large animal radiography and a computerized radiography system with networking to Outpatient units of Veterinary Hospital, Mannuthy has also been established for realtime viewing of X ray images for clinical diagnosis. The physiotherapy unit is equipped with therapeutic diathermy, therapeutic ultrasound and diagnostic therapeutic electric muscle stimulator and TENS unit. Video-endoscopy, bronchoscopy and laparoscopy units at the University Veterinary Hospital, Mannuthy are handled by the faculty of the Department. The ophthalmic unit is equipped with ophthalmic microscope, direct and indirect ophthalmoscope, Slit lamp biomicroscope, Tonopen and Kits for a battery of routine diagnostic tests for ophthalmic disorders.

A practical class room with audiovisual aids, collection of variety of surgical instruments and equipments, digital and visual documents on various surgical procedures and disease conditions and an exhaustive archive of radiographs to give undergraduate and postgraduate students adequate

exposure to the subject of surgery. Practical manuals for the undergraduate courses are also prepared and distributed to the students. A small departmental library is maintained for an easy and quick reference. The department is provided with computer with hi-speed broad band facility and access to around 2500 scientific journals are made available through the Aris Cell in the college. The faculty members always keep abreast with the latest developments in the field of surgery by closely following the latest literature and attending to trainings, summer schools and international symposia and seminars. The Department is financially contributing to the university through the charges for radiographs and the fees levied on small animal surgical procedures.

Currently the research is focused towards biomaterial application for ophthalmic, orthopaedic and soft tissue surgeries, Orthopaedic surgery, ophthalmic surgery, Canine dentistry, Small animal anaesthesia and Small ruminant surgery. Research, training and consultancy services are provided for the Animal Birth Control (ABC) programme through the Early Neutering in Dogs (END) developed by the department. The Department is extending technical support for the training and implementation of Animal Birth Control (ABC) programme in Thrissur Corporation. Faculty members, postgraduate scholars and under graduate students are participating for the successful conduct of the programme in addition to their regular clinical, academic and research activities in the college.

17. Department of Animal Reproduction, Gynaecology and Obstetrics

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. The department endeavors to perform the following activities: to impart undergraduate, post graduate and doctoral programmes in the concerned subject, to carry out research and extension activities beneficial to livestock holders and to encourage companion pet animal reproductive management. The department offers Regular UG, PG and PhD courses as prescribed by the curriculum and Animal Biotechnology course for M.Sc students.

18. Department of Animal Genetics, Breeding and Biostatistics

The Department of Animal Breeding and Genetics of the College of Veterinary and Animal Sciences was involved primarily in under graduate teaching. This department was elevated to the status of a postgraduate department in 1977. Now the department offers under graduate, post graduate and doctoral courses in the discipline of Animal Genetics and Breeding. Two well equipped under graduate laboratories including a computer laboratory are available in the department.

19. Veterinary Pathology

The Department of Pathology and Meat Science, College of Veterinary & Animal Sciences, Mannuthy was initially established as a composite department in 1959. Post graduate programmes leading to M.Sc. (Path) later changed to M.V.Sc. and Ph.D. were started in 1966 and 1976 respectively. Till date 14 Ph.D. and 79 M.V.Sc. theses have been submitted. Outstanding contributions made by the department on ethmoid carcinoma, mycotoxicosis, thyroid disorders, immunopathology, avian disease 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. Organization of summer institutes was another important activity. The center has so far organized 5 summer institutes and 2 short courses sponsored by ICAR. Though the department is routinely involved in systematic disease investigation, special mention needs to be made on the aspect of Rabies diagnosis utilizing the advanced diagnostic tools. The farmers and other interested persons visit the department for advice. There is an excellent museum which serves as an educational and informative center for the farmers and veterinarians.

20. Statistics

This Department has been established as a Statutory Department of Kerala Agricultural University in 1972. M.Sc. programme in Agricultural Statistics started in 1979 and shifted to College of Horticulture, Vellanikkara in the year 1991. Master of Science in Biostatistics has been started in the year 2011 to cater the growing demands for statisticians all over the world.

21. Physical Education

Physical Education today is endeavoring to produce individuals who can keep pace with the changing demands of a complex society. Through the Physical Education department students will understand wellness, health and fitness with the end result being a lifestyle embracing physical, mental, emotional and social well being. Physical Education department students will develop attitudes, skills and knowledge of human movement that will result in lifetime participation in physical activity and students should learn efficient movement and sport skills acquire knowledge and strategy of sports and games and learn positive nutritional and exercise habits. Major activities include preparing and arranging student's athletes for intra and extramural activities. Improve participation for tournaments and develop the physical fitness, Health is the quality of one's lifestyle, which has physical, mental, emotional and social aspects.

III. RESEARCH

I. PROJECTS COMPLETED

A. STATE PLAN PROJECTS

PROJECT No.1

Name of the Department :	Veterinary Physiology
1. Name of the project :	Influence of antioxidants in alleviating pregnancy stress in transition dairy cattle
2. Name of the funding agency :	State Plan
3. Date of start and closure :	18-12-2015, 30-09-2016
4. Budget :	Rs. 1.6 Lakh
5. Research highlights :	<ol style="list-style-type: none">1. To assess the intensity of transition stress in pregnant dairy cattle2. To evaluate the relative influence of vitamin E and selenium in alleviating transition stress in pregnant dairy crossbred cattle
6. Scientific utility of the findings :	<ol style="list-style-type: none">1. Gives background information on transition stress in pregnant dairy crossbred cattle for further research to alleviate the impacts2. Technical advice can be given to the farmers

PROJECT No.2

Name of the Department :	Veterinary Physiology
1. Name of the project :	Comparative study on the expression of fertility genes in developing follicles of malabari and attapady black breeds of goat by immunohistochemical method
2. Name of the funding agency :	State Plan

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| 3. | Date of start and closure : | 18-12-2015, 30-09-2016 |
| 4. | Budget : | Rs. 1.10 Lakh |
| 5. | Research highlights : | Immunolocalization of GDF9, BMP15 and BMP1B was done in primary secondary and Tertiary/ antral follicles |
| 6. | Scientific utility of the findings : | <ol style="list-style-type: none"> 1. This study throws light on the pattern of expression of these growth factors GDF9, BMP15 and BMP1B in all stages of developing follicle 2. The growth factors GDF9, BMP15 and BMP1B are believed to play a role in the prolificacy of goat breeds |

PROJECT No. 3

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| Name of the Department : | | Animal Nutrition |
| 1. | Name of the project : | Identification and assessment of nutritive value of fodder and herbal byproducts for feeding of livestock |
| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | 14/1/16 --30/9/16 |
| 4. | Budget : | Rs. 6.0 Lakh |
| 5. | Research highlights : | <ol style="list-style-type: none"> 1. Establish the data bank on nutrient profile of various Ayurvedic medicinal residues 2. Assess the nutritional value of Ayurvedic medicinal residues in ruminant feeding by <i>in vitro</i> and <i>in vivo</i> feeding trials. 3. Investigate the effect of addition of Ayurvedic medicinal residues on fibre utilization, microbial protein production and methane emission in ruminants 4. 15 samples of fodder and herbal byproducts were collected and analysed for their proximate composition 5. Based on these data samples identified for their potential use as feed ingredients |
| 6. | Scientific utility of the findings : | <ol style="list-style-type: none"> 1. Utilization of otherwise wasted unconventional feeds as feed ingredients 2. Reducing cost of feed by the incorporation of these feeds 3. Feeding trials in heifers are going on |

PROJECT No. 4

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| Name of the Department : | | Animal Nutrition |
| 1. | Name of the project : | Feeding strategies to manipulate rumen fermentation in crossbred cattle of Kerala |
| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | 14/1/16 --30/9/16 |
| 4. | Budget : | Rs. 5.0 Lakh |
| 5. | Research highlights : | <ol style="list-style-type: none"> 1. <i>In vitro</i> rumen fermentation parameters (pH, TVFA, rumen ammonia) of different TMR prepared was estimated 2. The TMR s were ranked based on the rumen fermentation parameters |

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| 6. Scientific utility of the findings : | 1. The data base can be used for TMR preparation in future
2. Production efficiency can improved by selecting the most beneficial TMR |
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PROJECT No. 5

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| Name of the Department : | Livestock Production Management |
| 1. Name of the project : | Identification, nutritional significance and feeding value of indigenous fodder grass |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 2015-16 |
| 4. Budget : | Rs. 5.0 lakhs |
| 5. Research highlights : | 1. Identified 20 indigenous fodder
2. Classified the collected varieties
3. Proximate principles were analysed |
| 6. Scientific utility of the findings : | 1. Indigenous fodder forms the main source of roughage for rural livestock.
2. Identification and classification of these helps in their better utilisation |

PROJECT No. 6

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| Name of the Department : | Livestock Production Management |
| 1. Name of the project : | Development of a comprehensive interactive electronic knowledge system in pet animal management (dog and cat) for the benefit of pet owners |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 2015-16 |
| 4. Budget : | Rs. 3.0 lakhs |
| 5. Research highlights : | 1. An interactive CD prepared on pet animals |

PROJECT No. 7

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| Name of the Department : | Livestock Production Management |
| 1. Name of the project : | Preparation of model for organic fodder production using cattle and pig slurry |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 2015-16 |
| 4. Budget : | Rs. 7.0 lakhs |

PROJECT No. 8

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| Name of the Department : | Livestock Production Management |
| 1. Name of the project : | Investigation and documentation of present status of cage and aviary bird units in kerala for evolving research and extension |
| 2. Name of the funding agency : | State Plan |

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| 3. | Date of start and closure : | 2015-16 |
| 4. | Budget : | Rs. 4.0 lakhs |
| 5. | Research highlights : | 1. An interactive CD prepared on pet birds |
| 6. | Scientific utility of the findings : | 2. Useful for students and pet lovers |

PROJECT No. 8

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| Name of the Department : | Livestock Production Management |
| 1. Name of the project : | Investigation and documentation of present status of cage and aviary bird units in kerala for evolving research and extension |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 2015-16 |
| 4. Budget : | Rs. 4.0 lakhs |
| 5. Research highlights : | 1. An interactive CD prepared on pet birds |
| 6. Scientific utility of the findings : | 2. Useful for students and pet lovers |

PROJECT No. 9

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| Name of the Department : | Veterinary Microbiology |
| 1. Name of the project : | Development of live vaccine against new duck disease in Kerala |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 14/1/2016-30/9/2016 |
| 4. Budget : | Rs.5 lakhs |
| 5. Research highlights : | 1. <i>Riemerella anatipestifer</i> isolates selected for oil adjuvant vaccine preparation was attenuated to an extend, to prepare live vaccine candidate
2. Live vaccine was developed; laboratory trials were conducted on a small scale |
| 6. Scientific utility of the findings : | 1. The live vaccine developed could be employed to control the <i>Riemerella anatipestifer</i> infection as it was needleless and easy to administer
2. It avoids cumbersome procedure of at least two inoculations in case of oil adjuvant vaccines |
| 7. Significant achievements made in science and technology : | Developed live vaccine controls the disease. Requires large scale field trials in terms of comparing efficacy of oil adjuvant & live vaccine before implementing in field |

PROJECT No. 10

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| Name of the Department : | Veterinary Microbiology |
| 1. Name of the project : | Screening of bovine repeat breeders for leptospirosis |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 14/1/2016-30/9/2016 |
| 4. Budget : | Rs.10 lakhs |

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| 5. | Research highlights : | 1. 150 serum samples collected from bovine repeat breeders were screened for leptospirosis by ELISA and 10% were found to be positive for antibodies against <i>Leptospira</i> .
2. Uterine discharges from 50 repeat breeders/ aborted cows did not reveal amplicons specific to <i>Lip I 32</i> gene of pathogenic <i>Leptospira</i> . |
| 6. | Scientific utility of the findings : | 1. The results could help in the diagnosis of the condition. |
| 7. | Significant achievements made in science and technology: | 1. Established the role of <i>Leptospira</i> in repeat breeding condition. |

PROJECT No. 11

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| Name of the Department : | | Veterinary Microbiology |
| 1. | Name of the project : | Augmentation of Biotechnology |
| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | 14/1/2016-30/9/2016 |
| 4. | Budget : | Rs. 4.6 Lakhs |
| 5. | Research highlights : | 1. Detected many major pathogens (<i>Mycoplasma gallisepticum</i> , Infectious laryngotracheitis virus, Infectious Bursal disease virus, Classical Swine fever virus and Porcine circovirus) affecting domestic animal and poultry population in Kerala by PCR. |
| 6. | Scientific utility of the findings : | 1. Offers a rapid and sensitive method for the detection of many major pathogens affecting animals, so that appropriate strategies can be developed for the control of the diseases |
| 7. | Significant achievements made in science and technology: | 1. Involvement of the above mentioned agents in causing disease conditions in animals and birds of Kerala was identified which could aid in the confirmatory diagnosis and thereby effective control of the diseases |

PROJECT No. 12

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| Name of the Department : | | Veterinary Parasitology |
| 1. | Name of the project : | Development of multiplex PCR for simultaneous detection of canine haemoparasites |
| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | 09.02.16 – 30.09.2016 |
| 4. | Budget : | Rs. 8.0 lakhs |
| 5. | Research highlights : | 1. Developed a multiplex PCR for simultaneous detection of highly pathogenic vector borne diseases in dogs which was more sensitive than microscopic detection
2. Recorded an alarmingly rising prevalence of small <i>Babesia</i> species in dogs
3. Identified the subclinical/ carrier status of infection in 40 per cent dogs studied and the presence of significant haematological alterations in PCR positive dogs |
| 6. | Scientific utility of the findings : | 1. A highly sensitive multiplex PCR protocol for use in any laboratories |

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| | 2. Evaluation of true prevalence in dogs and tick vectors would be useful for assessing the efficacy of treatment protocols |
| 7. Significant achievements made in science and technology: | 1. A highly sensitive PCR protocol for use in any laboratories
2. Phylogenetic evaluation of <i>Babesia gibsoni</i> , <i>B canis</i> , <i>E canis</i> isolates of Kerala
3. Recorded the molecular evidence of these pathogens in tick vectors
4. Updated the nucleotide database of parasites useful for accession by researchers world wide
5. Provided employment to a research associate during the period. |

PROJECT No. 13

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| Name of the Department : | Veterinary Parasitology |
| 1. Name of the project : | Development of an <i>in vitro</i> diagnostic test for detection of anthelmintic resistance |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 09.02.16 – 30.09.2016 |
| 4. Budget : | Rs. 6.8 lakhs |
| 5. Research highlights : | 1. Standardized larval development assay for <i>invitro</i> detection of anthelmintic resistance in GI nematodes of goats
2. Compared the results of larval development assay with that of Egg hatch assay for detecton of anthelmintic resistance
3. Screened the resistance status of organized goat farms by larval development assay |
| 6. Scientific utility of the findings : | 1. Larval development assay was found to be a suitable test for the <i>invitro</i> detection of anthelmintic resistance in GI nematodes of goats
2. Assessed the benzimidazole resistance status in organized goat farms in Kerala by larval development assay |
| 7. Significant achievements made in science and technology: | 1. Standardized and evaluated Larval development assay for routine <i>invitro</i> detection of anthelmintic resistance in GI nematodes of goats
2. Assessed the benzimidazole resistance status in organized goat farms in Kerala by larval development assay
3. Provided employment to a research associate |

PROJECT No. 14

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|---------------------------------|--|
| Name of the Department : | Veterinary Parasitology |
| 1. Name of the project : | Molecular characterization of <i>Haemonchus</i> sp. in cattle |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 09.02.16 – 30.09.2016 |
| 4. Budget : | Rs. 5.0 lakhs |

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| 5. Research highlights : | 1. Molecularly characterized <i>Haemonchus</i> sp. at the ITS 1 and ITS-2 regions cattle
2. Molecular characterization of the economically important strongyle |
| 6. Scientific utility of the findings : | 1. Molecular characterization of the prevalent economically important strongyle in Kerala which form the basis for further diagnosis from other strongyles in Kerala. |
| 7. Significant achievements made in science and technology: | 1. Provided employment to a research associate during the period |

PROJECT No. 15

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| Name of the Department : | Veterinary Parasitology |
| 1. Name of the project : | Augmenting biotechnology and molecular biology research in KVASU |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 09.02.16 – 30.09.2016 |
| 4. Budget : | Rs. 5.0 lakhs |
| 5. Research highlights : | 1. Augmentation of biotechnology research in the laboratory by purchase of Gel documentation system |
| 6. Scientific utility of the findings : | 1. All the molecular research works in lab including masters and doctoral work are highly dependent on the equipment |

PROJECT No. 16

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| Name of the Department : | Veterinary Parasitology |
| 1. Name of the project : | Occurrence of <i>Toxoplasma gondii</i> in human, animals and environmental samples –A One Health Approach |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 09.02.16 – 30.09.2016 |
| 4. Budget : | Rs. 4.0 lakhs |
| 5. Research highlights : | 1. Identified the presence of <i>Toxoplasma gondii</i> oocyst in both clinically ill as well as apparently normal house hold kitten faces
2. High seroprevalence of <i>Toxoplasma gondii</i> in goats and pigs. |
| 6. Scientific utility of the findings : | 1. High incidence of <i>Toxoplasma gondii</i> in household kitten indicate the need for public health awareness on risk of <i>Toxoplasma gondii</i> from cats as human beings get the infection from oocyst.
An increased seroprevalence detected in a span of 20 years in the two Govt. Goats farms in Kerala |

PROJECT No. 17

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| Name of the Department : | Pharmacology and Toxicology |
| 1. Name of the project : | Screening and evaluation of medicinal plants for anticancer activity |
| 2. Name of the funding agency : | State Plan |

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| 3. | Date of start and closure : | 18/1/2016 and 30/9/2016 |
| 4. | Budget : | Rs. 10.0 lakhs |
| 5. | Research highlights : | 1. Establishment of Molecular Pharmacology Laboratory in the Department of Veterinary Pharmacology & Toxicology |
| 6. | Scientific utility of the findings : | 1. Establishment of Molecular Pharmacology Laboratory in the Department of Veterinary Pharmacology & Toxicology for elucidation mechanism of action of drugs
2. Elucidation mechanism of action of drugs will be done for the drugs studied |

PROJECT No. 18

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| Name of the Department : | | Pharmacology and Toxicology |
| 1. | Name of the project : | Strengthening of molecular Pharmacology Laboratory |
| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | 18/1/2016 and 30/9/2016 |
| 4. | Budget : | Rs. 5.0 lakhs |
| 5. | Research highlights : | 1. Establishment of Molecular Pharmacology Laboratory in the Department of Veterinary Pharmacology & Toxicology |
| 6. | Scientific utility of the findings : | 1. Establishment of Molecular Pharmacology Laboratory in the Department of Veterinary Pharmacology & Toxicology for elucidation mechanism of action of drugs
2. Elucidation mechanism of action of drugs will be done for the drugs studied |

PROJECT No. 19

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| Name of the Department : | | Dairy science |
| 1. | Name of the project : | An <i>in-vivo</i> study on efficacy of Antibacterial Teat Dip from Lactic acid bacteria against subclinical mastitis in dairy cows and validation of the product |
| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | February 2015 to September 2016 |
| 4. | Budget : | Rs. 8. 0 lakhs |
| 5. | Research highlights : | 1. An antibacterial teat dip was developed using Lactic acid bacterial fermentate containing antibacterial peptides and was found to be effective against subclinical mastitis in dairy cows. |

PROJECT No. 20

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|--------------------------|------------------------------|---|
| Name of the Department : | | Dairy science |
| 1. | Name of the project : | Identification and scaling up of dairy starter bacterial strains suitable for preparing dairy products from natural environment |
| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | February 2015 to September 2016 |
| 4. | Budget : | Rs. 7. 0 lakhs |

5. Research highlights :
 1. Starter bacterial strains suitable for preparing dairy products were isolated from natural sources and fermented dairy products were prepared using these isolates. Products were found to be acceptable by the taste panel.

PROJECT No. 21

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| Name of the Department : | Dairy science |
| 1. Name of the project : | Augmentation of folate content in Goat milk fermented products by employing Lactic acid bacteria |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 2015-16 |
| 4. Budget : | Rs. 10. 0 lakhs |
| 5. Research highlights : | 1. Folate enrichment could be done by using selected lactic acid bacteria |
| 6. Scientific utility of the findings | 1. Folate enriched yoghurt and shrikhand were developed |
| 7. Significant achievements made in science and technology | 1. Technology was developed for the conversion of Goat milk in to value added fermented products with enhanced folic acid content. |

PROJECT No. 22

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|---------------------------------|---|
| Name of the Department : | Veterinary and AH Extension |
| 1. Name of the project : | Capacity building of the scientists and students of KVASU and selected veterinary officials of the Dept. of Animal Husbandry, Govt. of Kerala on ICT oriented Interactive technology transfer methodologies |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | 2015-16 |
| 4. Budget : | Rs. 10. 0 lakhs |

PROJECT No. 23

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| Name of the Department : | Veterinary and AH Extension |
| 1. Name of the project : | Improving nutritional and food security through need oriented behavioural modification programmes based on the scientific training curriculum designed and developed for the meat production sector in Kerala |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | February 2015-September 2016 |
| 4. Budget : | Rs. 5. 0 lakhs |
| 5. Research highlights : | 1. Training needs of meat workers identified and appropriate trainings conducted |
| 6. Scientific utility of the findings | 1. Improvement in the hygienic production of meat in the state |
| 7. Significant achievements made in science and technology | 1. Training needs of meat workers identified |

PROJECT No. 24

Name of the Department :	Veterinary and AH Extension
1. Name of the project :	Establishment of ICT oriented communication laboratory at CVAS, Mannuthy for facilitating improved livestock technology delivery with technology networking and facilitation hubs at various centres of the Kerala Veterinary and Animal Husbandry University and other livestock production and management institutions
2. Name of the funding agency :	State Plan
3. Date of start and closure :	February 2015-September 2016
4. Budget :	Rs. 10. 0 lakhs

PROJECT No. 25

Name of the Department :	Veterinary and AH Extension
1. Name of the project :	Social analysis of small holder dairy farming systems and strengthening of milk security in Kerala
2. Name of the funding agency :	State Plan
3. Date of start and closure :	February 2015-September 2016
4. Budget :	Rs. 5. 0 lakhs
5. Research highlights :	1. Knowledge gaps of dairy farmers identified and appropriate trainings conducted
6. Scientific utility of the findings	1. Improvement in the production of milk in the state and strengthening of livelihoods
7. Significant achievements made in science and technology	1. Knowledge gaps of dairy farmers identified

PROJECT No. 26

Name of the Department :	Veterinary Public Health
1. Name of the project :	Epidemiological Surveillance of Enterohaemorrhagic <i>E.coli</i> in Kerala
2. Name of the funding agency :	State Plan
3. Date of start and closure :	18/12/2015 to 30/9/16
4. Budget :	Rs. 6. 0 lakhs
5. Research highlights :	1. The high occurrences of EHEC harboring virulent genes were detected in raw milk samples. 2. Fruits and vegetable samples collected from central Kerala, were found to be contaminated with EHEC 3. Environmental samples such as soil and water has contributed to the occurrence of the pathogen
6. Scientific utility of the findings	1. The considerably high occurrence of EHEC in the study confirms the importance of raw milk as a vehicle of infection to human.

2. Improper washing of fruits add bacteria to extracts leading to contamination. The use of unhygienic water, ice and absence of refrigeration harbours the bacterial pathogens notably *E. coli*.
 1. The results showed that there is an urgent need to provide training to dairy farmers to increase their awareness on milk hygiene, milk borne zoonoses and their control method so as to reduce public health risk. Education of food handlers and dairy farm workers on the principles and application of food hygiene is essential in reducing the incidence and economic consequences of foodborne diseases.
7. Significant achievements made in science and technology

PROJECT No. 26

- Name of the Department : Veterinary Public Health
1. Name of the project : Prevalence of *Leptospira* species in dogs and environment
 2. Name of the funding agency : State Plan
 3. Date of start and closure : 18/12/2015 to 30/9/16
 4. Budget : Rs. 5.0 lakhs
 5. Research highlights :
 1. The occurrence of leptospires in dogs were studied.
 2. PCR was standardised for leptospires in sewage samples.
 3. The detection range of leptospires in sewage and pond water samples were standardised
 6. Scientific utility of the findings
 1. The detection of *Leptospira* in dogs and identification of serovars will help to formulate prevention strategies and further spread of the disease in humans
 2. The detection of the organism in environmental water sources will help to understand the endemicity of the pathogen in Kerala
 7. Significant achievements made in science and technology
 1. The dogs can be the carrier of infection which can spread infection to humans
 2. The presence of organisms in water sources can be the reason for the persistence in the environment.

PROJECT No. 27

- Name of the Department : Livestock Products Technology
1. Name of the project : Establishment of an ISO 22000:2005 FSMS certified facility for production of wholesome meat and meat products at meat technology unit-outlay
 2. Name of the funding agency : State Plan
 3. Date of start and closure : 1/4/2016 to 31/9/2016
 4. Budget : Rs.30.0 lakhs
 5. Research highlights :
 1. Developed some PRP facilities for the ISO Certification.
 6. Scientific utility of the findings
 1. infrastructure developed

PROJECT No. 28

Name of the Department :	Livestock Products Technology
1. Name of the project :	Name of the scheme / project : Technology development for mechanized manufacturing of Indian meat products for adaptation by micro, small, medium entrepreneurs
2. Name of the funding agency :	State Plan
3. Date of start and closure :	1/4/2016 to 31/9/2016
4. Budget :	Rs. 10.0 lakhs
5. Research highlights :	1. Standardized and commercialized 4 ready to heat and eat chicken products 2. Standardized the packaging system for the developed products
6. Scientific utility of the findings	1. Transferred the technology for adaptation by Small entrepreneurs through trainings

PROJECT No. 29

Name of the Department :	Livestock Products Technology
1. Name of the project :	Effect of processing methods on the collagen characteristics of buffalo meat
2. Name of the funding agency :	State Plan
3. Date of start and closure :	1/4/2016 to 31/9/2016
4. Budget :	Rs.7.0 lakhs
5. Research highlights :	1. Marination with ginger extract for 60 minutes at $4\pm 1^{\circ}\text{C}$ and marination followed by tumbling for 30 minutes can substantially influence the collagen characteristics and textural properties of beef and buffalo meat samples. In case of buffalo meat, marination and storage at $4\pm 1^{\circ}\text{C}$ for 60 minutes caused significant increase in collagen solubility and tenderness.
6. Scientific utility of the findings	1. Potential technologies for quality enhancement of buffalo meat developed

PROJECT No. 30

Name of the Department :	Livestock Products Technology
1. Name of the project :	Preparation and physico-chemical characterization of acellular bovine omental matrices
2. Name of the funding agency :	State Plan
3. Date of start and closure :	1/4/2016 to 31/9/2016
4. Budget :	Rs. 10.0 lakhs
5. Research highlights :	1. Acellular bovine omental scaffolds developed from bovine omentum using natural biological detergents The physico-chemical characteristics of the developed matrices were evaluated
6. Scientific utility of the findings	1. Omental scaffolds were developed which gives a potential raw material for developing biomaterials for regenerative medicine and tissue engineering

PROJECT No. 31

Name of the Department :	Preventive Medicine
1. Name of the project :	Surveillance of infectious diseases, their management and seromonitoring of vaccination in University farm animals
2. Name of the funding agency :	State Plan
3. Date of start and closure :	Jan 2016 to September 2016
4. Budget :	Rs. 10.0 lakhs
5. Research highlights :	<ol style="list-style-type: none">1. Seroprevalence of Brucellosis was assessed among animals of university farms and other organized farms and measures were taken to control brucellosis2. Prophylactic vaccinations were carried out in University farms against FMD, HS, PPR and enterotoxaemia3. Conducted free antirabies vaccination camps for dogs and cats at UVH mannuthy and Kokkalai4. Conducted disease investigation programmes in farms and advised recommendations for treatment and control
6. Scientific utility of the findings	Better diagnosis and control of diseases of animals in various University farms
7. Significant achievements made in science and technology	<ol style="list-style-type: none">1. Better health care management of animals in various University farms

PROJECT No. 32

Name of the Department :	Preventive Medicine
1. Name of the project :	Detection of foot and mouth disease carrier status among vaccinated cattle and goats and evaluation of postvaccinal seroconversion in carrier animals
2. Name of the funding agency :	State Plan
3. Date of start and closure :	Jan 2016 to September 2016
4. Budget :	Rs.10.0 lakhs
5. Research highlights :	<ol style="list-style-type: none">1. Carrier status was detected among cattle, buffaloes, goats and elephants by using NSP ELISA2. Protective titre of antibodies to FMDV was detected up to a period of 6 months in regularly vaccinated cattle3. The need for booster vaccination in primi-vaccinated calves after one month of first vaccination was established for optimum protection against FMD
6. Scientific utility of the findings	<ol style="list-style-type: none">1. The findings will help in better control against FMD
7. Significant achievements made in science and technology	<ol style="list-style-type: none">1. Knowledge on carrier status of FMD and Prompt and Timely vaccination for better control of FMD

PROJECT No. 33

Name of the Department :	Preventive Medicine
1. Name of the project :	Surveillance and Therapeutic management of Blood parasitic infections in dogs and cats

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| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | Jan 2016 to September 2016 |
| 4. | Budget : | Rs.10.0 lakhs |
| 5. | Research highlights : | <ol style="list-style-type: none"> 1. Prevalence of canine babesiosis was assessed among anaemic dogs and molecular confirmation of <i>Babesia canis vogeli</i> and <i>B.gibsoni</i> was done and a better therapeutic protocol was advised. 2. Occurrence of haemotropic mycoplasmosis was confirmed among felines and canines and their molecular confirmation was done for the first time in India. 3. Prevalence of canine ehrlichiosis was estimated and molecular confirmation of <i>Ehrlichia canis</i> and <i>E.ewingii</i> was done. |
| 6. | Scientific utility of the findings | 1. Rapid and accurate diagnosis of haemoparasites in dogs and better therapeutic management of such diseases. |
| 7. | Significant achievements made in science and technology | 1. Better diagnosis and treatment of haemoparasites in dogs |

PROJECT No. 34

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| Name of the Department : | | Preventive Medicine |
| 1. | Name of the project : | Development of multiplex PCR for bovine mastitis and molecular characterization of isolates |
| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | Jan 2016 to September 2016 |
| 4. | Budget : | Rs.10.0 lakhs |
| 5. | Research highlights : | <ol style="list-style-type: none"> 1. Standardised the simplex and multiplex PCR for detection of major mastitis pathogens such as <i>Staphylococcus aureus</i>, <i>E.coli</i> and <i>Streptococcus agalactiae</i> 2. Screening of subclinical mastitis was done with the multiplex PCR which was found to be rapid, accurate and specific for detection of etiological agents. |
| 6. | Scientific utility of the findings | 1. Rapid and accurate detection of mastitis pathogens which will aid in early treatment and control |
| 7. | Significant achievements made in science and technology | 1. Control of subclinical mastitis for improved quality and quantity of milk production |

PROJECT No. 35

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| Name of the Department : | | Preventive Medicine |
| 1. | Name of the project : | Investigation and management of infectious skin disorders in dogs and cats |
| 2. | Name of the funding agency : | State Plan |
| 3. | Date of start and closure : | Jan 2016 to September 2016 |
| 4. | Budget : | Rs.8.0 lakhs |
| 5. | Research highlights : | 1. Prevalence of various infectious skin disorders were assessed |

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| | | 2. Molecular confirmation of <i>Malassezia</i> spp. and identification of species by REA |
| 6. | Scientific utility of the findings | 1. Rapid and accurate diagnosis of pathogens associated with dermatitis which will aid in early treatment and control |
| 7. | Significant achievements made in science and technology | 1. Identification of different <i>Malassezia</i> spp. associated with canine dermatitis. |

PROJECT No. 36

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| Name of the Department : | Preventive Medicine |
| 1. Name of the project : | Study of pre and post vaccinal seroconversion and etiological profile of rabies among domestic animals |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | Jan 2016 to September 2016 |
| 4. Budget : | Rs.10.0 lakhs |
| 5. Research highlights : | <p>1. Established a laboratory with negative pressure facility.</p> <p>2. Standardised techniques for collection, processing and examination of suspected rabies samples.</p> <p>3. Vaccinated 76 dogs against rabies under the project, with collection of serum sample on 0, 15 and 30 day post vaccination.</p> <p>Conducted FAT of 81 corneal impression smears and brain stem impression samples.</p> <p>The scientists and post graduate student involved were trained in FAT and DRIT</p> <p>Facility for antigen detection established.</p> <p>Cell lines procured and are being maintained</p> |
| 6. Scientific utility of the findings | 1. Standardised techniques for collection, processing and examination of suspected rabies samples |
| 7. Significant achievements made in science and technology | 1. Better diagnosis and control of Rabies |

PROJECT No. 37

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| Name of the Department : | Animal Reproduction, Gynaecology and Obstetrics |
| 1. Name of the project : | Management of infertility in crossbred cattle by <i>in vitro</i> production of embryos |
| 2. Name of the funding agency : | State Plan |
| 3. Date of start and closure : | April 2016- March 2017 |
| 4. Budget : | Rs.5.0 lakhs |
| 5. Research highlights : | 1. Standardized OPU procedure in bovines, Established IVF lab and produced embryos up to early blastocyst stage |
| 6. Scientific utility of the findings | 1. Studied oocyte quality of normal and repeat breeding(RB) cattle and found that yield and quality of oocytes were significantly lower in RB cattle. |

PROJECT No. 38

Name of the Department :	Animal Reproduction, Gynaecology and Obstetrics
1. Name of the project :	Monitoring and improving the reproductive efficiency of cross bred cattle.
2. Name of the funding agency :	State Plan
3. Date of start and closure :	April 2016- March 2017
4. Budget :	Rs.5.0 lakhs
5. Research highlights :	1. Oestrous cycle in crossbred cattle showed either 2 wave or three wave pattern. Regression rate of Corpus luteum in repeat breeder cattle is less and showed increased level of progesterone at the time of estrus. The size of CL and level of progesterone were less in luteal phase in repeat breeder cattle
6. Scientific utility of the findings	1. In repeat breeder cattle, the conception rate can be enhanced using ultrasound monitoring of dominant follicle, administration of GnRH and fixed time AI.

PROJECT No. 39

Name of the Department :	Statistics
1. Name of the project :	Forecasting the lifetime milk production of Cattle
2. Name of the funding agency :	State Plan
3. Date of start and closure :	2015-2016
4. Budget :	Rs.6 lakhs
5. Research highlights :	1. Lactation milk yield and lactation length are positively associated to lifetime milk yield whereas the relationship was negative with age at first calving and dry periods. 2. Recommends the use of ANN for prediction of lifetime milk yield from early lactation traits.
6. Scientific utility of the findings	1. Validated the strategy of selecting the high producing animals and culling the low producers based on their early lactation milk yields for ensuring the economic viability of the farm.

PROJECT No. 40

Name of the Department :	Statistics
1. Name of the project :	Analysis of repeated measures data from animal experiments
2. Name of the funding agency :	State Plan
3. Date of start and closure :	2015-2016
4. Budget :	Rs. 5 lakhs
5. Research highlights :	1. Review on the use of mixed models in repeated measures data 2. Illustration of the application of this method with different data sets using SPSS and SAS.
6. Scientific utility of the findings	1. The most appropriate method for most of the experiments carried out in KVASU
7. Significant achievements made in science and technology:	1. Manual for the application of the method using SPSS

PROJECT No. 41

Name of the Department :	Clinical Veterinary Medicine
1. Name of the project :	Establishment of transfusion medicine unit for field adoption
2. Name of the funding agency :	State Plan
3. Date of start and closure :	2015-2016
4. Budget :	Rs. 9 lakhs

PROJECT No. 42

Name of the Department :	Clinical Veterinary Medicine
1. Name of the project :	Establishment of small animal dermatology unit
2. Name of the funding agency :	State Plan
3. Date of start and closure :	2015-2016
4. Budget :	Rs. 4 lakhs

PROJECT No. 43

Name of the Department :	Clinical Veterinary Medicine
1. Name of the project :	Clinical investigations on chlamydiosis in pet birds of Thrissur District
2. Name of the funding agency :	State Plan
3. Date of start and closure :	2015-2016
4. Budget :	Rs. 5 lakhs

PROJECT No. 44

Name of the Department :	Clinical Veterinary Medicine
1. Name of the project :	Augmenting Biotechnology in KVASU
2. Name of the funding agency :	State Plan
3. Date of start and closure :	2015-2016
4. Budget :	Rs. 5 lakhs

B. EXTERNAL AIDED PROJECTS**PROJECT No. 1**

Name of the Department :	Veterinary Microbiology
1. Name of the project :	Laboratory and field trials on oil adjuvant inactivated vaccine for the control of new duck disease in Kerala
2. Name of the funding agency :	AHD
3. Date of start and closure :	28/5/2014 to 27/5/2016
4. Budget :	Rs.15.38 lakhs
5. Principal Investigator & Co-PIs	PI: Dr. Priya PM CO-PI's: Dr. Binu K. Mani, Dr. Siju Joseph, Dr. Sreeja R. Nair, Dr. M .Mini, Dr. M.R Saseendranath, Dr. S. Sankaralingam, Dr. Sissy Philip

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| 6. | Research highlights : | <ol style="list-style-type: none"> 1. <i>Riemerella anatipestifer</i> isolates obtained from different parts of Kerala were serotyped by slide and tube agglutination tests 2. Oil adjuvant vaccine was developed employing the predominant isolates 3. Both laboratory and field trials for vaccination were conducted, which yielded good immune response, for a minimum period of 6 months |
| 7. | Scientific utility of the findings : | <ol style="list-style-type: none"> 1. The developed vaccine could control the <i>Riemerella anatipestifer</i> infection (Riemerellosis) in the state. |
| 8. | Significant achievements made in science and technology: | <ol style="list-style-type: none"> 2. Developed an oil adjuvant vaccine against Riemerellosis, one of the major bacterial infections which cripple the duck industry of the state from 2008 onwards. The technology transfer to the State Govt. is awaiting |

PROJECT No. 2

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| Name of the Department : | Livestock Products Technology |
| 1. Name of the project : | Development of affordable biodegradable dermal substitutes and further utilization of these as dermal scaffolds in creating tissue engineered skin |
| 2. Name of the funding agency : | DRDO. New Delhi |
| 3. Date of start and closure : | March 2012 to March 2016 |
| 4. Budget : | Rs.151.73 lakhs |
| 5. Principal Investigator & Co-PIs : | Dr. P.Kuttinarayanan, Dre.Vasudevan V N and Dr. Prashanth Varkey |
| 6. Research highlights : | <ol style="list-style-type: none"> 1. Bovine omental ECM scaffolds have been developed. 2. Efficacy of bovine gall bladder bile as a decellularizing agent for development of acellular human amniotic membrane and bovine omentum has been verified and documented. 3. The biochemical and mechanical properties of bovine omental ECM have been determined. 4. The bioburden of human amniotic membrane collected from JMMC and bovine omentum harvested at Department of Livestock Products Technology Mannuthy was estimated in the raw state and pre-sterilization stage. 5. The sterilization dose of 25 kGy was validated for sterilization of human amniotic membrane and bovine omental scaffolds. 6. Effects of the radiation sterilization dose on the amniotic membrane and bovine omentum were characterized. 7. The technique for primary culture of human keratinocyte from skin biopsies was standardized. 8. The cultured primary keratinocytes were seeded onto omental scaffolds and the cell scaffold attachment was documented. 9. The omental scaffolds were evaluated for <i>in vivo</i> biocompatibility by implanting in experimental animals. |

10. The developed bovine omental ECM scaffolds were handed over to the co-investigator at JMMC Thrissur for clinical application to assess the response to the biomaterial in human patients.
7. Scientific utility of the findings
 1. Sterilized ready-to-apply bovine omental scaffolds having adequate mechanical and biological properties were developed using the cost-effective process of decellularization with bovine gall bladder bile

PROJECT No. 3

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| Name of the Department : | Veterinary Surgery and Radiology |
| 1. Name of the project : | Establishment of “State of the art large animal surgical teaching facility in the department of Surgery and Radiology, Mannuthy |
| 2. Name of the funding agency : | RKVY (Rashtriya Krishi Vikas Yojana) |
| 3. Budget : | Rs. 50.00 lakhs |
| 4. Principal Investigator& Co-PIs | Dr.S.Anoop, Assistant Professor,
Co-Investigators: Dr.C.B.Devanand, Dr. M. K. Narayanan &
Dr.Laiju M.Philip |
| 5. Research highlights : | <ol style="list-style-type: none"> 1. To establish a large animal surgical facility for veterinary UG and PG students. 2. To impart high quality surgical procedures to the cases referred to the TVCC from different parts of the state. 3. To establish a facility to demonstrate surgeries to students using Closed Circuit Television System and to make a record for future reference. |
| 6. Scientific utility of the findings : | <p>Delivery of quality surgical treatment in large animals</p> <p>Improvement of teaching and training of undergradautes on clinical surgical conditions in large animals abreast with national standards</p> <p>Better surgical care to the cattle and horses in Thrissur and near districts.</p> <p>Training facility to Veterinarians all over the state.</p> |

Large Animal Operation TableLarge animal Anaesthesia Machine with Ventilator



Shadowless Lamp



PROJECT No. 4

Name of the Department :	Veterinary Surgery and Radiology
1. Name of the project :	Development of field based protocol for management of congenital and early musculoskeletal disorders in ruminants
2. Name of the funding agency :	Department of Animal Husbandry
3. Date of Start and closure:	From 26. 04. 2016; Ended on 31. 03. 2017
4. Budget :	Rs. 2.892 lakhs
5. Principal Investigator& Co-PIs	PI: Dr .Sudheesh S Nair
Co- Investigators	Dr.C B Devanand, Dr.K.D.John Martin, Dr. M. K. Narayanan, Dr. S Anoop, Dr. Soumya Ramankutty, Dr. Dhanush Krishna B
Research highlights :	<ol style="list-style-type: none"> 1. Congenital and early joint affections of ruminants were thoroughly assessed and diagnostic and therapeutic protocols were standardised for its management 2. Formulated a field based protocol for management of Congenital and Musculoskeletal disorders in ruminant 3. Trained 40 Veterinary Officers of Department of Animal Husbandry, Thrissur district on methods field based diagnostic and therapeutic protocol for management of Congenital and Musculoskeletal disorders in ruminants
6.	
Scientific utility of the findings :	<p>Joint affections in ruminants are largely neglected by the farmers under field conditions. The project could give a new perspective for addressing the problem by formulating a field based protocol which could be adopted by field veterinarians for effectively addressing the issue which in turn help in productive performance and economic security of small scale farmers. The most salient achievement of the project was preparing a training material for field veterinarians .The findings of the project was well summarised in the form of an instructional DVD prepared with 6 videos</p> <p>Part 1 –Field based protocol for Joint ill in calves Part 2 –Knuckling in Calves and Field level Surgical Management Part 3 –Knuckling in Goats and Field level surgical management Part 4–Surgical Management of Phalangeal Fractures in Cow using External Coaptation methods Part 5- Surgical Management of Metacarpal fractures in Cow using External Coaptation methods Part 6- Fiberglass Cast Application in field</p>



PROJECTS CONTINUING THROUGH THE YEAR

Sl. No.	Title of the scheme	Name of the funding agency	Name of the PIs and Co-PIs	Outlay
A. EXTERNAL AIDED PROJECTS				
1	Investigation of therapeutic and bio-preservative potentials of lactoferrin of Vechur cow milk	Animal Husbandry Dept, Govt. of Kerala	PI Dr. Uma R.,	Rs15.29 lakhs
2	Outreach programme of Zoonotic diseases	ICAR	PI: Dr. B. Sunil	70.63 Lakhs
3	Early life care of calves and its implication in future milk production.	Dept.of Animal Husbandry	PI: Dr.M.K. Narayanan	13.5 lakh
4	Maintainance of healthy hoof in dairy cattle for production benefit and welfare in ruminants	KSCSTE	PI: Dr. Laiju M.Philip	2.00 lakh
5	Evaluation and prophylactic management of laminitis for enhancing production in dairy cattle	Dept of Animal Husbandry	PI: Dr.LaijuM.Philip	3.64 lakh
6	Field studies on hoof disorders in goats to develop a protocol for its clinical management	Agricultural Technology Management Agency(ATMA)	PI: Dr. Laiju M.Philip	5.80 lakh
7	Teaching Veterinary Clinical Complex,Mannuthy	ICAR EFC Special Grant	Implementing Officer: Dr.C.B.Devanand	11.60 Cr.
8	Outreach programme on Ethnoveterinary medicine –	ICAR	Dr.Usha Narayana Pillai (PI)	
9	Clinical Investigations on anaemia in cross bred cattle of Kerala	AHD	Dr Ambily.V.R (PI)	
10	Field level metabolic profile during transition period using glycated Hb, Serum fructosamine and blood gas analysis in cattle	AHD	Dr Sindhu.K.Rajan (PI)	
B. STATE PLAN PROJECTS				
11	Comparative Histological and immunohistochemical studies on the pancreas of Malabari and Attappadi Black breeds of goats			2.5 lakhs
12	Comparative studies on Gut Associated Lymphoid Tissue (GALT) in domestic fowl and duck at different ages			3 lakhs
13	Molecular characterization of HIF-1 alpha gene of indigenous and crossbred cattle of Kerala			6 lakh
14	Isolation , culture and characterization of goat mammary gland stem/ progenitor cells			9 lakh
15	Microsatellite markers for assessing genetic diversity and disease resistance among native goat breeds of Kerala			9 Lakhs
16	Genomic Screening for structural variants associated with fertility in dairy cattle			9 Lakhs
17	Heat tolerance studies of Vechur cattle at different agro-climatic zones of the state			10 Lakhs
18	Analysis of milk quality of native cattle varieties of Kerala and its impact on the milk pricing policy of the state			10 Lakhs
19	Effect of Essential oils on rumen metabolism and methane production assessed in vitro			4

20	Developing Milk Urea nitrogen standards for cross bred cows in the state	3
21	Improving Livestock productivity by increasing compounded concentrate feed production –SANFT	25
22	Strengthening of new schools and centers of research- CSLAP	10
23	Revamping of SABS	20
24	Establishment of pet food manufacturing unit under KVASU	10
25	Prevalence of Aflatoxin in Cattle Feed in Thrissur district	3.0 lakhs
26	Immunogenicity and safety of oil adjuvant and live vaccine against New duck disease in Kerala-A comparative study	5 lakhs (receipt-2.5 lakhs)
27	Comparison of rapid antibody detection kit and ELISA for the detection of bovine leptospirosis	5 lakhs (receipt-2.5 lakhs)
28	Development and evaluation of multiplex polymerase chain reaction assay for the detection of major avian respiratory pathogens	7.5 lakhs (receipt-3 lakhs)
29	Molecular detection of piroplasms and rickettsiales in goats of Kerala	5.00
30	Study on economic impact of anthelmintics in enhancing milk production in dairy cattle in three agro-ecological zones of South, Central and North Kerala	8.00
31	Development of a multiplex PCR assay for simultaneous detection of <i>Theileria orientalis</i> and <i>Anaplasma marginale</i> in cattle	2.5
32	Occurrence of <i>Toxoplasma gondii</i> in human, animals and environmental samples –A One Health Approach	7.00
33	Analysis and application of measures for improvement of quality of raw milk at production level	5.0 lakhs
34	Development of base level software of virtual farming and farms to ensure attitudinal change of stakeholders towards livestock farms and farming	5 lakhs
35	Anti-microbial effect of plant derived essential oils and antibiofilm effect of chitosan on Enterohaemorrhagic <i>E.coli</i> on beef carcasses	5.0 Lakhs
36	Occurrence of <i>Toxoplasma gondii</i> in feline, caprine, human and environment samples- A One Health Approach	6.0 Lakhs
37	Occurrence of thermo tolerant <i>Campylobacter</i> in dogs and cats in Thrissur, Kerala	4.0 Lakhs
38	Surveillance of infectious diseases,their management and seromonitoring of vaccination in University farm animals	20,00,000
39	Clinicopathologic studies on avian colibacillosis in Kerala	4,00,000
40	Centre for rehabilitation of stray puppies under end programme	2.00 lakh
41	eVetconnect for providing 24x7 Veterinary Services	25.00 lakh
42	Revolving Fund project on"Comprehensive Surgical Care"	2.00 lakh
43	Viral etio-pathological studies in porcine necropsy cases with special reference to Porcine circo virus -2	12,75,000/
44	Strengthening of immune histo chemistry facility as a diagnostic tool in clinical veterinary practice	6,00,000/
45	Study of diseases of street dogs in connection with ABC-AR Programme	
46	Screening of medicinal plants for anticancer activity	
47	Augmenting of biotechnology and molecular biology in KVASU	
48	Investigations to control metabolic disorders and infertility in cross bred cattle	

THESIS ABSTRACT

I. Ph D THESIS

Abstract No. 1

Name of the Department :	Veterinary Biochemistry
1. Title of the thesis:	Comparison of innate immunity related genes in Vechur and crossbred cattle and their expression profile in clinical and subclinical mastitisw
2. Name and ID No. of the student :	Lakshmi.R 13-DVM-001
3. Name of the Chairman of the Advisory Committee :	Dr. Jayavardhanan K. K.
4. Degree for which thesis was submitted :	Ph.D.
5. Abstract of the thesis	<p>To investigate the role of innate immune system of Vechur cattle in resisting mastitis, study was carried out by assessing the expression of TLR2, TLR4, andTLR9 in in crossbred and Vechur cattle using RT-qPCR, and also characterized the promoter and mRNA sequence of TLR genes in Vechur cattle.</p> <p>Relative expression of all three TLRs was found to be significantly high in sub-clinical mastitis than the clinical mastitis</p> <p>Theexpression of mRNA of all three TLR genes was higher in Vechur cattle than the crossbred cattle</p> <p>Significant variants observed for TATA and CAAT boxes and multiple putative binding sites in the promoter region of TLR2 and TLR9 genes in Vechur cattle breed, may potentially link the influence the innate immunity response against mastitis diseases.</p> <p>The presence of unique structural features and substantial variation for TLR genes in Vechur cattle, may change the confirmation of TLR proteins, which may influence the binding affinity and interaction with pathogen to boost the innate host disease resistance in Vechur cattle.</p> <p>Significant achievements made in science and technology : The findings suggest that one of the reasons for the development of resistance to mastitis in Vechur cattle is associated with the level of expression of TLRs in response to infection</p>

Abstract No. 2

Name of the Department :	Livestock Production Management
1. Title of the thesis :	Economics of dairy farming systems of Kerala
2. Name and ID No. of the student :	Dr. Sabin George
3. Name of the Chairman of the Advisory Committee :	Dr.PC Saseendran
4. Degree for which thesis was submitted :	Ph.D
5. Abstract of the thesis :	The economics,resource and technical efficiency of milk production in different systems of production Evaluation of present milk pricing policy and recommendations for modification
6. Significant achievements made in science and technology :	Suggested a new formula for milk pricing in Kerala

Abstract No. 3

Name of the Department :	Livestock Production Management
1. Title of the thesis :	Mineral profile of Livestock farm waste and its bio-accumulation effects in crossbred cattle
2. Name and ID No. of the student :	Dr. Justin Davis 13-DVM- 005
3. Name of the Chairman of the Advisory Committee :	Dr. Anil K.S.
4. Degree for which thesis was submitted :	Ph.D
5. Abstract of the thesis	The mineral profile of dung, slurry, feed, soil, fodder were analysed in three seasons. Fodder yield was studied under slurry irrigation. Growth and carcass characters of male crossbred calves were studied.
6. Significant achievements made in science and technology	The slurry from livestock farms can be utilised for irrigation of fodder. The results show that slurry from livestock farms can improve the yield and mineral quality of fodder.

Abstract No. 4

Name of the Department :	Pharmacology and Toxicology
1. Title of the thesis :	Antitumour properties of <i>Annona muricata</i> and <i>Curculigo orchioides</i> on induced mammary tumours in mice
2. Name and ID No. of the student :	Bibu John Kariyil and 2010-23-109
3. Name of the Chairman of the Advisory Committee :	Dr Usha P.T.A.
4. Degree for which thesis was submitted :	PhD
5. Abstract of the thesis :	The present study evaluated the antitumour potential of methanolic extract and its fractions of seeds of <i>Annona muricata</i> and rhizomes of <i>Curculigo orchioides</i> The study revealed that chloroform fraction of methanolic extract of seeds of <i>A. muricata</i> exerted cytotoxicity through lysis of cell membrane, ROS dependent caspase-activated mitochondria mediated apoptosis and arresting the S phase of the cell cycle Acute toxicity study revealed that chloroform fraction of <i>A. muricata</i> was moderately toxic <i>In vivo</i> study revealed that chloroform fraction of <i>A. muricata</i> possessed significant antitumour property The study also revealed that methanolic extract and fractions of <i>Curculigo orchioides</i> does not possess cytotoxicity or anticancer potential.
6. Significant achievements made in science and technology	Antitumour potential of methanolic extract and its fractions of seeds of <i>Annona muricata</i> The mechanism of action for the effect is through lysis of cell membrane, ROS dependent caspase activated mitochondria mediated apoptosis and arresting the S phase of the cell cycle

Chloroform fraction of *A. muricata* was moderately toxic

Curculigo orchioidea does not possess cytotoxicity or anticancer potential.

Abstract No. 5

Name of the Department :	Veterinary and AH Extension
1. Title of the thesis:	SWOT analysis of duck farming system towards its sustainability in the Kuttanad region of Alapuzha district
2. Name and ID No. of the student :	Nija George (13 DVM 003)
3. Name of the Chairman of the Advisory Committee :	Dr. P.J. Raj Kamal
4. Degree for which thesis was submitted :	Ph.D
5. Abstract of the thesis :	Identified the strengths weaknesses opportunities and threats of the duck farming system of Kuttanad Problem tree analysis done to identify potential problems in the systems Remedial measures suggested to ensure sustainability of the system
6. Significant achievements made in science and technology	Identified the strengths weaknesses opportunities and threats of the duck farming system of Kuttanad Problem tree analysis done to identify potential problems in the systems Remedial measures suggested to ensure sustainability of the system

Abstract No. 6

Name of the Department :	Veterinary Public Health
1. Title of the thesis:	Epidemiological surveillance of Enterohaemorrhagic Escherichia coli (EHEC)
2. Name and ID No. of the student :	Sethulekshmi C, 13-BVM-09
3. Name of the Chairman of the Advisory Committee :	Dr. C. Latha
4. Degree for which thesis was submitted :	Ph.D
5. Abstract of the thesis :	The occurrence of EHEC in different samples viz., raw and pasteurized milk, meat, fruits vegetables, cattle dung and human stool were assessed. The positive isolates were screened for the presence of virulent genes. Quantification of organisms in positive samples were done using Real- Time PCR assay Occurrence of EHEC in positive samples were correlated with that of environmental samples.
6. Significant achievements made in science and technology	The results of the study revealed the ubiquitous nature of EHEC and its widespread presence in the foods of animal origin An effective intervention at farm, processing plants and environment is essential for the prevention and control of the pathogen.

Abstract No. 7

Name of the Department :

Animal Reproduction, Gynaecology and Obstetrics

1. Title of the thesis:
2. Name and ID No. of the student :
3. Name of the Chairman of the Advisory Committee :
4. Degree for which thesis was submitted :

Evaluation of semen preservation protocols and artificial insemination techniques to augment fertility in malabari goats

Mayur Pawshe Dayanand (12 – DVM – 10)

Dr. Hiron M. Harshan

Ph.D.

Tris – egg yolk based extender was found optimum based on analysis of semen quality parameters after 24, 48 and 72 h of preservation.

Triladyl extender was found to be the best suited for Malabari buck semen cryopreservation after analysis of pre freeze and post thaw semen characteristics.

For chilled semen the depth of insemination had a minor effect on fertility

For frozen semen better conception rates were obtained when the AI was carried out intra uterine and when two doses of semen were used for insemination.

5. Abstract of the thesis :

Abstract No. 8

Name of the Department :

Animal Reproduction, Gynaecology and Obstetrics

1. Title of the thesis:
2. Name and ID No. of the student :
3. Name of the Chairman of the Advisory Committee :
4. Degree for which thesis was submitted :

Characterization of malabari buck seminal plasma proteins in relation to semen freezability and fertility

Ambili John(12-DVM-009)

Dr. Hiron M. Harshan

Ph.D.

Seminal plasma ALP and LDH were found to be significantly lower in high semen freezability bucks compared with low semen freezability bucks at post thaw stage.

The total protein content and average number of protein bands in seminal plasma of high and low semen freezability bucks did not differ significantly (75.82 ± 4.62 mg/ml vs 67.07 ± 6.07 mg/ml; 20.83 ± 0.53 vs 22.09 ± 0.49).

The seminal plasma proteins with 24 kDa, 79 kDa, 84 kDa and 134 kDa were found to have significantly higher occurrence in seminal plasma of bucks with high semen freezability whereas the occurrence of 15 kDa, 19.9 kDa, 21.5 kDa, 70kDa and 89 kDa proteins were found significantly higher in seminal plasma of bucks with low semen freezability.

On western blot analysis, osteopontin, a protein fertility marker, was found to be present in seminal plasma of all the bucks studied.

For fertility studies 134 does were inseminated with semen preserved by chilling and 91 with cryopreserved semen. The conception rate (CR) with cryopreserved semen was significantly higher in bucks with high semen freezability than with low semen freezability.

In the semen preserved by chilling, no significant difference was noticed between low and high semen freezability animals in the spermatozoa progressive motility, viability, acrosome integrity, HOS response or seminal plasma ALP and LDH levels after dilution or after 24 h of storage at refrigeration. But when chilled semen was used, the CR was significantly higher for bucks with low semen freezability than for bucks with high semen freezability

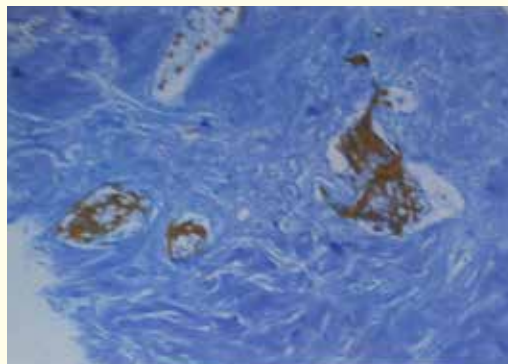
5. Abstract of the thesis :

Abstract No. 9

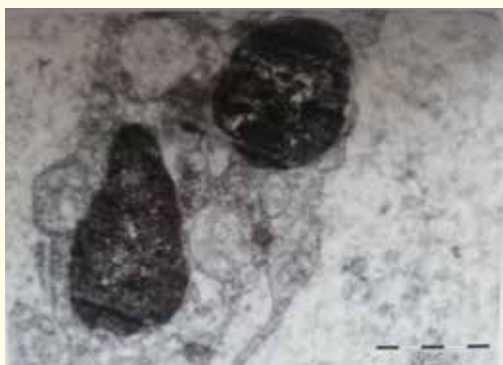
Name of the Department :	Animal Reproduction, Gynaecology and Obstetrics
1. Title of the thesis:	Augmenting reproductive efficiency in postparturient does with intravaginal progesterone sponges, PGF2alpha, and gonadotropin releasing hormone
2. Name and ID No. of the student :	Upasana Ratnakaran (13 – DVM – 11)
3. Name of the Chairman of the Advisory Committee :	Dr. Aravinda Ghosh
4. Degree for which thesis was submitted :	Ph.D
5. Abstract of the thesis :	<p>Abstract of the thesis A single GnRH analogue administration was useful for better induction of fertile oestrus in the postpartum period (day 31) compared to other oestrus synchronization protocols in does.</p> <p>Ultrasonographic imaging of ovaries and uterus was valuable in assessing the response to treatment and for confirming pregnancy. On ultrasonography, does exhibiting a dominant follicle of >0.7 cm size had better chance of conception. In addition, assessment of twinning/triplet during pregnancy helped in better feeding management of does.</p> <p>Study of exfoliative vaginal cytology and P4 profile was useful to monitor various stages of induction trials and during early pregnancy. P4 level of more than 1ng/mL during induced oestrus had a lower chance to become pregnant</p> <p>The best protocol for fixed timed artificial insemination (FTAI) was identified as Modified Cosynch, with timed AI at 44.88 ± 1.02 h after the last PG administration.</p> <p>Buck exposure to does was found to be beneficial to enhance fertility rate. Hence, it could be recommended that rearing of bucks along with does is essential to obtain optimum reproductive efficiency under goat husbandry practices.</p>

Abstract No. 10

Name of the Department :	Veterinary Pathology
1. Title of the thesis:	Molecular and immunohistochemical studies on tumours of the nasal sinuses in domestic animals
2. Name and ID No. of the student :	Pramod S (11-DVM-17)
3. Name of the Chairman of the Advisory Committee :	Dr. N.Vijayan
4. Degree for which thesis was submitted :	Ph.D
5. Abstract of the thesis :	<p>The study was undertaken to evaluate the expression of specific markers and role of tumour associated macrophages in sinus tumours of domestic animals through immunohistochemical techniques.</p> <p>Tumour ultrastructure was studied employing electron microscopy and etiological investigations were done using PCR.</p> <p>Detection of specific proteins like cyokeratin and vimentin, enzymes like COX-2 and cytokines like IL-1<i>Beta</i> and TNF- <i>alpha</i> can be used as early tumour markers</p> <p>Though viral etiologies were suspected in carcinogenesis of sinus tumours, no viral agents could be detected</p> <p>- Sinus carcinomas in Angamali pigs were reported for the first time in Kerala. Though these desi pigs were considered resistant to various diseases, sinus tumors occurred as an outbreak among a population of these animals in the University farm</p>
6. Significant achievements made in science and technology	
7. Relevant Photographs	



Sinus tumour in Desi pig
Squamous cell carcinoma – Keratin pearls
(Cytokeratin IHC X 100)



Binucleate tumour cell in undifferentiated carcinoma of cow (TEM X 3200)

II. MVSc THESIS

Abstract No. 1

Name of the Department :

Animal Breeding and Genetics

1. Title of the thesis:

Tissue expression, characterisation and SNP analysis of myogenin (MYOG) gene in Native goat breeds of Kerala

2. Name and ID No. of the student :

Joan Jose, 14-MVM-52

3. Name of the Chairman of the Advisory Committee :

Dr Aravindakshan T V

4. Degree for which thesis was submitted :

MVSc

5. Abstract of the thesis :

Myogenin (MYOG) gene plays a significant role in myogenesis by synthesizing myofibrillar protein and regulates the number of skeletal muscle fibres.

MYOG gene also plays a crucial role in maintenance of growth in adult.

The results of present study revealed the conserved nature of MYOG gene in evolution among different species

It also suggested that the expression of MYOG gene in goats increased significantly between three and six months ($p \leq 0.05$) and three and nine months ($p \leq 0.01$) displaying higher expression at three months of age indicating a definite role of MYOG gene in growth

Abstract No. 2

Name of the Department :	Veterinary Physiology
1. Title of the thesis:	Assessment and alleviation of transition stress from pregnancy to lactation in crossbred dairy cattle
2. Name and ID No. of the student :	Ambili T.R.15-MVM 008
3. Name of the Chairman of the Advisory Committee :	Dr. V. Beena
4. Degree for which thesis was submitted :	MVSc

Abstract No. 3

Name of the Department :	Livestock Production Management
1. Title of the thesis:	Effect of feeding system and floor types on growth performance of Malabari kids effects in crossbred cattle
2. Name and ID No. of the student :	Dr. Smitha. S
3. Name of the Chairman of the Advisory Committee :	Dr. Joseph Mathew
4. Degree for which thesis was submitted :	: MVSc

Abstract No. 4

Name of the Department :	Pharmacology and and Toxicology
1. Title of the thesis:	Hypoglycaemic effect and toxicological evaluation of <i>Costus speciosus</i> in diabetic rats
2. Name and ID No. of the student :	Choudante Snehal Deepak and 14-MVM-55
3. Name of the Chairman of the Advisory Committee :	Dr Usha P.T.A.
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	The study validates that the ethanolic extract of <i>Costus speciosus</i> possess hypoglycaemic effect
6. Significant achievements made in science and technology	<i>Costus speciosus</i> possess hypoglycaemic effect <i>Costus speciosus</i> exhibited toxic effects on liver and kidney in a dose dependent manner

Abstract No. 5

Name of the Department :	Pharmacology and and Toxicology
1. Title of the thesis:	Hypolipidemic and antioxidant effects if <i>Averrhoa bilimbi</i> (Irumban puli) fruits in rats fed with high fat diet
2. Name and ID No. of the student :	Lisha V.and 14-MVM-21
3. Name of the Chairman of the Advisory Committee :	Dr Preethy John
4. Degree for which thesis was submitted :	MVSc

5. Abstract of the thesis :
- The present study demonstrated that *A. bilimbi* fruit powder at different doses of 125, 250 and 500 mg/kg body weight orally has hypolipidemic and antioxidant potential in hyperlipidemic rats in a dose dependant manner.
- Administration of *A. bilimbi* fruit powder resulted in significant lowering of serum lipid parameters namely total cholesterol, triglycerides, LDL-C, VLDL-C, A.I. and a rise in HDL-C in rats receiving fat rich diet.
- Antioxidant parameters namely SOD and GSH were significantly increased along with a decrease in lipid peroxidation.
- Histopathological examination showed marked reduction in lipid droplets both in liver and kidney.
- The level of expression of *HMGCR* gene in liver was significantly down regulated compared to normal control group and might be the mechanism for the hypolipidemic activity of *A. bilimbi*.
6. Significant achievements made in science and technology
- A. bilimbi* passed hypolipidemic potential
- A. bilimbi* passed antioxidant potential

Abstract No. 6

- Name of the Department : Poultry Science
1. Title of the thesis: Identification of SNPs of ovocalyxin-32 gene and its association with production traits in IWN strain of white leghorn
2. Name and ID No. of the student : Greeshma Girijan, 2014-MVM-11
3. Name of the Chairman of the Advisory Committee : Dr.S.Sankaralingam
4. Degree for which thesis was submitted : MVSc
5. Abstract of the thesis :
- Selection based on markers can make it accurate and efficient at earlier age to enable the genetic improvement quicker. The present study was carried out using 150 IWN strain of White Leghorn birds, maintained in the AICRP on Poultry Improvement, Mannuthy, to identify the SNPs in the exon 2, 3 and 4 of *ovocalyxin-32* (*OCX-32*) gene and their association with the production traits.
- The genomic DNA was isolated from the blood of randomly selected birds using DNA isolation kit. PCR-RFLP analysis was done to identify the SNPs c.267T>G, c.381G>C and 494A>C in exon 2, 3 and 4, respectively. In each exon, three genotypes were obtained based on the polymorphism analysis.
- The genotypes obtained are TT, TG and GG in exon 2, GG, GC and CC in exon 3 and AA, AC and CC in exon 4, respectively. As significant numbers of SNPs were not found in exon 2, it was not taken for further analysis.
- From the analysis of the result, it is revealed that there is significant association between SNP c.381G>C with body weight and shell thickness and no association was found with egg weight, egg number and age at sexual maturity.
- Whereas the SNP c.494A>C was significantly associated with egg number, age at sexual maturity and egg weight at later stage and no association with body weight and shell thickness. From these results, it can be concluded that, the SNPs of the candidate gene *OCX-32* is associated with the economic traits of poultry. So they can be used as markers for future selection.
6. Significant achievements made in science and technology

Abstract No. 7

Name of the Department :	Poultry Science
1. Title of the thesis:	Evaluation of dietary protein level for growth in Kuttanad ducks.
2. Name and ID No. of the student :	Dr. Jeny George, 2014-MVM-18
3. Name of the Chairman of the Advisory Committee :	Dr. Leo Joseph
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<p>An experiment was conducted to determine the influence of dietary protein level for growth in Kuttanad ducklings at the Department of Poultry Science, College of Veterinary and Animal Sciences, Mannuthy.</p> <p>Data on body weight, body weight gain, feed consumption were recorded at weekly interval from day old to 12 weeks of age. The processing yields and losses were studied at the end of 8 and 12 weeks of age. Fatty acid composition of meat was analyzed at 12 weeks of age.</p> <p>The cumulative body weight gain of T₁, T₂, T₃ and T₄ was 1176.48, 1270.93, 1322.23 and 1219.07 g, respectively, at eighth week. The cumulative FCR of T₁, T₂, T₃ and T₄ was 4.20, 3.95, 3.70 and 3.97, respectively, at eighth week.</p> <p>One ninety two ducklings were divided randomly into four dietary treatments each with four replicates of 12 ducklings each. The dietary treatment consisted of T₁ containing 16 per cent CP (Crude Protein), T₂ (18 per cent CP), T₃ (20 per cent CP) and T₄ (22 per cent CP). The energy level was 2800 kcal/ kg Metabolizable Energy (ME) in all treatments.</p> <p>The results of the study indicated that the ducklings under dietary treatment containing 20 per cent showed improved growth performance with regards to 8th week body weight, body weight gain, feed consumption and FCR than treatment groups with 16, 18 and 22 percent protein levels.</p> <p>It was concluded that rearing Kuttanad ducklings upto eight weeks of age with 20 per cent CP and 2800 kcal/ kg ME was comparatively economical for rearing for meat production.</p>
6. Significant achievements made in science and technology	

Abstract No. 8

Name of the Department :	Veterinary Public Health
1. Title of the thesis:	Identification of Critical Control points in Beef production chain with special reference to <i>Listeria</i> species
2. Name and ID No. of the student :	Dhanusha. C.S., 14-MVM-23
3. Name of the Chairman of the Advisory Committee :	Dr. C.Latha
4. Degree for which thesis was submitted :	M.V.Sc
5. Abstract of the thesis :	<p>Out of a total of 1140 samples consisting of dung from cattle before slaughter, knife swabs, carcass swabs before and after evisceration, cutting table surface swabs, operator hand wash, beef, air, water and effluent samples were collected from beef slaughter chain, 3.77 per cent samples were positive for <i>Listeria</i> spp including <i>L. monocytogenes</i>, <i>L. innocua</i>, <i>L. welshmeri</i> and <i>L. ivanovii</i></p>

- Two samples were positive for *L. monocytogenes*
- The important points of contamination were found to be dehiding and evisceration
- The critical control points identified in the present study paves way for critical control measures to be applied for the safe production of beef.
- The antilisterial action of aqueous extract of *Moringa olifera* seeds were assessed at MIC of 200mg/ml.
6. Significant achievements made in science and technology

Abstract No. 9

Name of the Department :

Veterinary Public Health

1. Title of the thesis: **Occurrence of *Campylobacter* spp in chicken egg production chain**
2. Name and ID No. of the student : Joby Elizebeth John., 14-MVM-26
3. Name of the Chairman of the Advisory Committee : Dr. C. Sethulekshmi
4. Degree for which thesis was submitted : M.V.Sc
5. Abstract of the thesis : Critical Control Points of *Campylobacter* spp in chicken egg production chain and the presence of the organism in retail eggs were determined.
- Isolates of *Campylobacter* were confirmed by PCR using genus specific *16s r RNA* gene, *C. jejuni* specific *mapA* gene, *C. coli* specific *ceu E* gene and virulence gene *cadF*.
- Antibiotic sensitivity pattern of the isolates were also determined
6. Significant achievements made in science and technology Poultry is the source of contamination of *Campylobacter* spp and eggs in retail market are potential sources of contamination
- The hygienic practices followed in the production of eggs at the farm and retail market needs improvement for reducing the microbial load.

Abstract No. 10

Name of the Department :

Livestock Products Technology

1. Title of the thesis: Profiling of Selected Bovine and Buffalo Muscles for Palatability Related Attributes
2. Name and ID No. of the student : Prajwal S (14-MVM-49)
3. Name of the Chairman of the Advisory Committee : Dr. V N Vasudevan
4. Degree for which thesis was submitted : MVSc
5. Abstract of the thesis : This study has identified five tender buffalo muscles which could be marketed at premium price and has provided data for better utilization of other muscles by further processing.
- The current study has revealed that the physico-chemical and sensory attributes of different buffalo and bovine muscles vary substantially. There are significant variations between the buffalo and bovine muscles with respect to some of the attributes. The information generated in the study will help optimization and value enhancement of buffalo meat and beef.

Abstract No. 11

Name of the Department :	Livestock Products Technology
1. Title of the thesis:	Development Of Spent Chicken Meat Spread Incorporating Edible Poultry Offal
2. Name and ID No. of the student :	P Poobal (14-MVM-41)
3. Name of the Chairman of the Advisory Committee :	Dr.V N Vasudevan
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	Chicken meat spread incorporated with 5 per cent liver had better spreadability and overall acceptability scores. The physico-chemical and microbiological quality evaluation of the standardized meat spread (SMS) product revealed acceptable organoleptic quality till 15 th day of storage. Thus, a value-added convenience ready-to-use chicken meat product which can be stored at 4±1°C up to 15 days with acceptable quality was developed and evaluated

Abstract No. 12

Name of the Department :	Livestock Products Technology
1. Title of the thesis:	Hurdle Technology for the Development of Shelf Stable Barbecued Chicken.
2. Name and ID No. of the student :	P. Gunasekaran (14-MVM-42)
3. Name of the Chairman of the Advisory Committee :	Dr.Sathu T
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<p>The barbecued chicken was standardized with 2 per cent glycerol desorption solution and blends of 0.2 per cent LA and 0.2 per cent GDL. The addition of HG and AL significantly ($p < 0.05$) reduced the product a_w, pH, moisture:protein ratio and significantly ($p < 0.05$) increased the protein and calorie content of the SBC compared to control. The standardized product had significantly ($p < 0.05$) higher scores for appearance and colour, sourness and overall acceptability than that of control product.</p> <ul style="list-style-type: none">• Desorption of HG at 2 per cent level in the barbecued chicken significantly reduced the water activity and it improved the juiciness, texture and overall acceptability.• The addition of AL showed significant reduction in pH value and did not affect the sensory attributes like flavour, juiciness, texture, spiciness and overall acceptability of the barbecued chicken.• Standardized barbecued chicken showed higher protein percentage and less hardness compared to control.• Off-odour was detected in irradiated shelf stable barbecued chicken from day of processing and intensity increased with storage period, however irradiation significantly reduced the Total Viable Count and Yeast and mold counts.

Abstract No. 13

Name of the Department :	Livestock Products Technology
1. Title of the thesis :	Development of pet kibbles using processed animal byproducts
2. Name and ID No. of the student :	Kuleswan Pame (14-MVM-48)
3. Name of the Chairman of the Advisory Committee :	Dr.Sathu T
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<p>Shelf stable pet kibbles (SSPK) for adult dogs was standardized by incorporating cereal flour mix (33%), buffalo meat (25%), meat-cum-bone meal (MCBM) (20%), offal (20%), rendered fat (RF) (5%), dietary fiber (8%) and bovine collagen peptide (1%) by baking at 150° C for 50 minutes. The pet kibbles were packed in PE/Al/PA laminated pouches stored at ambient temperature up to 60 days. The addition of MCBM and RF improved the overall nutrient quality, cooking yield, and palatability compared to control. Palatability and preference was evaluated based on score card and intake ratio. Palatability attributes and preferences were prominently higher for SSPK compare to control. Textural profile like hardness, fracturability and gumminess of SSPK was significantly ($p<0.05$) lower compared to control. The hunter colour redness (a^*) values in SSPK was significantly ($p<0.05$) less than control throughout the storage period. Thio Barbituric acid reacting substances (TBARS), Tyrosine values (TV), Total Viable Count (TVC) and Yeast and Mold count significantly increased with advancement of storage period in both control and SSPK. However the increase in TBARS, TV and microbial load did not adversely affect the palatability attributes. From the above study, it can be inferred that pet kibbles with good nutritive value, palatability and stability can be prepared by incorporating processed animal byproducts. A lower cost of production compared to commercially available pet foods is an inductive of its good market potential.</p>

Abstract No. 14

Name of the Department :	Preventive Medicine
1. Title of the thesis:	Screening and therapeutic management of parasitic infections in captive Asian elephants (<i>Elephas maximus indicus</i>)
2. Name and ID No. of the student :	Amulya V.R (2014-MVM-14)
3. Name of the Chairman of the Advisory Committee :	Dr. P.V. Tresamol
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<ul style="list-style-type: none"> • Captive Asian elephants were screened for the presence of parasites • Ova of <i>Strongyle</i> spp. (5/54) <i>Bivitellobilharzia</i> spp. (2/54), and the protozoan, <i>Buxtonella</i> spp. (1/54) were detected during faecal sample examination • Additionally, gross specimens of <i>Anaplocephala</i> spp. and stomach bots were recovered from the faeces of two elephants.

- Examination of Giemsa stained blood smears revealed the presence of unsheathed microfilariae in one elephant. *Trypanosoma evansi* was detected in 1 out of 89 animals via conventional PCR.
 - Indirect ELISA for antibodies against *Toxoplasma gondii* revealed 17.98% seroprevalence.
 - Screening of captive elephants revealed presence of parasites like *Strongyle* spp *Bivitellobilharzia* spp, *Buxtonella* spp and *Anaplocephala* spp from feces. Trypanosoma and *Toxoplasma gondii* were also identified from the captive animals.
6. Significant achievements made in science and technology

Abstract No. 15

Name of the Department :	Preventive Medicine
1. Title of the thesis:	Foot and Mouth disease Vaccination-Post vaccinal seroconversion in captive sian elephants(<i>E.Maximus indicus</i>)
2. Name and ID No. of the student :	Mary Vijaya (14-MVM-16)
3. Name of the Chairman of the Advisory Committee :	Dr. Vinodkumar K
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<p>Three vaccination protocols against FMD were tried on three groups of ten Asiatic elephants each</p> <p>The group given 6ml of trivalent FMD vaccine was found to develop protective immunity by 30 post vaccination</p> <p>The protective immunity was not found to be sustained on 180 post vaccination</p> <p>Vaccination protocol with 6ml of trivalent inactivated FMD vaccine was recommended for Asiatic elephant with booster after 6 months</p>
6. Significant achievements made in science and technology	Vaccination protocol was developed against FMD in Asiatic elephants.

Abstract No. 16

Name of the Department :	Veterinary Surgery and Radiology
1. Title of the thesis:	Comparative evaluation of porcine cholecyst derived collagen and bovine dermal origin collagen for the treatment of wounds in dogs
2. Name and ID No. of the student :	K Karthika (14-MVM-01)
3. Name of the Chairman of the Advisory Committee :	Dr.S Anoop
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<ul style="list-style-type: none"> • Porcine cholecyst derived collagen as a biomaterial augmented wound healing better than bovine dermal origin collagen • Application material in clinical conditions to cover and enhance healing of large skin defects that are difficult to heal by first intention.

Abstract No. 17

Name of the Department :	Veterinary Surgery and Radiology
1. Title of the thesis:	Comparative efficacy of cyanoacrylate tissue adhesive and contact lens in management of corneal ulcers in dogs
2. Name and ID No. of the student :	Adarsh.A.M(14-MVM-50)
3. Name of the Chairman of the Advisory Committee :	Dr K.D John Martin
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	N-Butyl Cyanoacrylate tissue adhesive glue proved to be effective as a shield in promoting healing of corneal ulcer in dogs

Abstract No. 18

Name of the Department :	Veterinary Surgery and Radiology
1. Title of the thesis:	Comparative evaluation of isoflurane, sevoflurane and ketamine anaesthesia in cats
2. Name and ID No. of the student :	Tapamoy Bhowmik (13-MVM-53)
3. Name of the Chairman of the Advisory Committee :	Dr. M. K. Narayanan
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<ul style="list-style-type: none"> • Both Isoflurane and sevoflurane anaesthesia with low dose of ketamine proved to be a safe anaesthetic protocol in cats • Evolved protocols for inhalational anaesthesia in cats

Abstract No. 19

Name of the Department :	Animal Reproduction, Gynaecology and Obstetrics
1. Title of the thesis:	Fertility management in cross bred cattle during heat stress by fortifying luteal function
2. Name and ID No. of the student :	Basil Paul (14-MVM-19)
3. Name of the Chairman of the Advisory Committee :	Dr. Unnikrishnan. M.P
4. Degree for which thesis was submitted :	MVSc.
5. Abstract of the thesis :	Objective was to assess effect of heat stress on fertility and also to evaluate effect of fortifying luteal function by using hCG (Human Chorionic Gonadotropin). Although administration of 1500 IU hcG on day 6 post -AI had no significant effect on subsequent luteal function, better conception was recorded among treated animals. Also better conception was recorded during low THI phase (Comfortable period)

Abstract No. 20

Name of the Department :	Animal Reproduction, Gynaecology and Obstetrics
1. Title of the thesis:	Uterine involution and fertility in crossbred cows treated with ecobolics during puerperium
2. Name and ID No. of the student :	Praveen. S. (14-MVM-20)
3. Name of the Chairman of the Advisory Committee :	Dr. Unnikrishnan. M.P

4. Degree for which thesis was submitted : MVSc.
5. Abstract of the thesis : Objective was to assess the efficacy of ecobolic agents on uterine involution, resumption of ovarian cyclicity and fertility in post-partum crossbred cows. Administration of ecobolics significantly reduced occurrence of RFM and mean number of days required for complete uterine involution as compared with untreated group. Although statistically non significant, PGF₂ administration during early puerperium hastened uterine involution, resumption of ovarian cyclicity and improved conception rate.

Abstract No. 21

- Name of the Department : Animal Reproduction, Gynaecology and Obstetrics
1. Title of the thesis: Survival rate of immature and invitro matured bovine oocytes vitrified using cryo;oop method
2. Name and ID No. of the student : Aliciah Marie Kuriakose (14-MVM-22)
3. Name of the Chairman of the Advisory Committee : Dr. Metilda Joseph
4. Degree for which thesis was submitted : MVSc.
5. Abstract of the thesis : Meiotic stage at which cryloop vitrification was carried had no significant influence on survival rate, viability cumulus cell expansion, polar body extrusion and nuclear maturation of bovine oocytes. Immature bovine oocytes can be successfully preserved using cryoloop vitrification technique where facilities are not available for in vitro maturation. Compared to morphological evaluation, trypan blue staining technique was found to be more reliable for evaluation of oocyte viability

Abstract No. 22

- Name of the Department : Animal Reproduction, Gynaecology and Obstetrics
1. Title of the thesis: ***In vitro* fertility assessment of frozen bovine spermatozoa as influenced by breed and season**
2. Name and ID No. of the student : Alanteena Jacob (14-MVM-13)
3. Name of the Chairman of the Advisory Committee : Dr. Metilda Joseph
4. Degree for which thesis was submitted : MVSc.
5. Abstract of the thesis : A study conducted in Vechur Kasargod dwarf CBHF (HF×Gir) CBJ (Jersey × Red Sindhi) bulls belongs to KRDB Dhoni revealed that season has significant effect on post thaw motility sperm abnormality response to HOST and induced acrosome reaction of frozen bull semen reaction of frozen h\bull semen breed had significant effect on post thaw motility and bovine cervical mucus penetration distance of frozen bull semen.

Abstract No. 23

- Name of the Department : Animal Reproduction, Gynaecology and Obstetrics
1. Title of the thesis: Endometrial cytology in post partum cross bred dairy cows and its correlation with fertility
2. Name and ID No. of the student : Arokia Robert M. (14-MVM-33)

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|----|--|---|
| 3. | Name of the Chairman of the Advisory Committee : | Dr. Shibu Simon |
| 4. | Degree for which thesis was submitted : | MVSc. |
| 5. | Abstract of the thesis : | Characterized endometrial cytology in cross bred dairy cattle during postpartum period. Prevalence of subclinical endometritis and to evaluate its effect in subsequent fertility. The study concluded that endometrial cytology could be used for a presumption diagnosis of subclinical endometritis. Metricheck and disposable vaginal speculum are recommended for routine diagnosis of endometritis. <i>E.coli</i> LPS has a reasonable therapeutic effect in the management of SCE. |

Abstract No. 24

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|--------------------------|--|---|
| Name of the Department : | | Animal Reproduction, Gynaecology and Obstetrics |
| 1. | Title of the thesis: | Efficacy of medical management of surgical trans-cervical catheterization for canine cystic endometrial hyperplasia |
| 2. | Name and ID No. of the student : | Chinnu P Vijayan (14-MVM-30) |
| 3. | Name of the Chairman of the Advisory Committee : | Dr. Shibu Simon |
| 4. | Degree for which thesis was submitted : | MVSc. |
| 5. | Abstract of the thesis : | Studied the occurrence of Canine CEH. Compared that efficacy of mifepriston –cabergoline –progestaglandin combination and trans-cervical catheterization in treating canine CEH. Both surgical and medical management provided reasonably good clinical cure. |

Abstract No. 25

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|--------------------------|--|--|
| Name of the Department : | | Animal Reproduction, Gynaecology and Obstetrics |
| 1. | Title of the thesis: | Modulation of post thaw attributes of buck semen using choline chloride as chelating agent |
| 2. | Name and ID No. of the student : | Keerthy G. Krishnan (14-MVM-29) |
| 3. | Name of the Chairman of the Advisory Committee : | Dr. Hiron M. Harshan |
| 4. | Degree for which thesis was submitted : | MVSc. |
| 5. | Abstract of the thesis : | Fn2 type proteins were characterized in the semen ejaculates of the six bucks. Four protein bands of molecular weight 14kDa, 15kDa, 20kDa and 22 kDa could be detected as GBP fraction of seminal plasma. Treatment with choline chloride resulted in improved sperm post thaw characters in case of semen with good freezability while no such changes were observed in semen with poor freezability. |

Abstract No. 26

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|--------------------------|----------------------------------|---|
| Name of the Department : | | Veterinary Pathology |
| 1. | Title of the thesis: | Evaluation of mast cell response in cecal coccidiosis of broiler chicken in sub-lethal ochratoxicosis |
| 2. | Name and ID No. of the student : | Purnima.C (14 MVM-09) |

3.	Name of the Chairman of the Advisory Committee :	Dr. Ajith Jacob George
4.	Degree for which thesis was submitted :	M.V.Sc
5.	Abstract of the thesis :	<ul style="list-style-type: none"> • The study was aimed to demonstrate mast cell response to coccidiosis in broiler chicken under sublethal ochratoxicosis. • A reduced mast cell response to coccidiosis was observed in broiler chicken under sublethal ochratoxicosis • The study concluded that even sub-lethal doses of ochratoxicosis increases the susceptibility of broiler birds to coccidiosis
6.	Significant achievements made in science and technology	The study proved that even minor doses of ochratoxin can make the broiler birds immune suppressed due to reduced mast cell response and thus susceptible to several infectious diseases, causing heavy mortality and lowered weight gain.

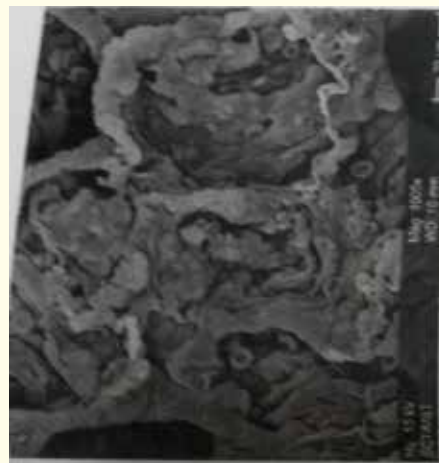
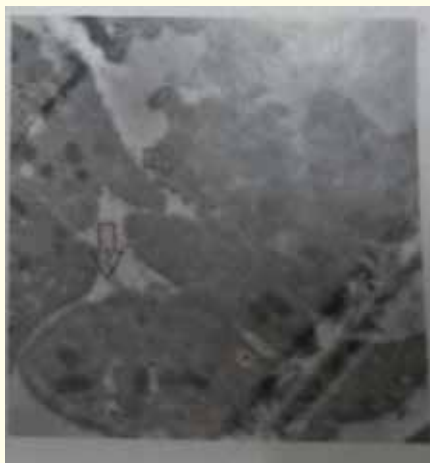
Abstract No. 27

Name of the Department :	Veterinary Pathology
1. Title of the thesis:	Evaluation of mast cell response in cecal coccidiosis of broiler chicken in sub-lethal aflatoxicosis
2. Name and ID No. of the student :	Nithya Chacko (14 MVM-01)
3. Name of the Chairman of the Advisory Committee :	Dr. Ajith Jacob George
4. Degree for which thesis was submitted :	M.V.Sc
5. Abstract of the thesis :	<ul style="list-style-type: none"> • The study was aimed to demonstrate mast cell response to coccidiosis in broiler chicken under sublethal aflatoxicosis. • A reduced mast cell response to coccidiosis was observed in broiler chicken under sublethal aflatoxicosis • The study concluded that even sub-lethal doses of aflatoxicosis increases the susceptibility of broiler birds to coccidiosis
6. Significant achievements made in science and technology	The study proved that even minor doses of aflatoxin can make the broiler birds immune suppressed due to reduced mast cell response and thus susceptible to several infectious diseases, causing heavy mortality and lowered weight gain.

Abstract No. 28

Name of the Department :	Veterinary Pathology
1. Title of the thesis:	Pathological effects of intra tracheal installation of doped cerium oxide nanoparticles in rats
2. Name and ID No. of the student :	Sovan Roy (14-MVM-51)
3. Name of the Chairman of the Advisory Committee :	Dr. N. Vijayan
4. Degree for which thesis was submitted :	M.V.Sc
5. Abstract of the thesis :	<ul style="list-style-type: none"> • Cerium oxide is a nano particle which is recently being used as fuel additives in automobiles to reduce carbon emission • A study was devised to explore the detailed pathological effects of these particles in rat models

- 6. Significant achievements made in science and technology
 - The study concluded that the pathological effects of the particle depend on the exposure rate and particle size.
 - The study showed that tracheal instillation of the particles produced only less pathological effects and hence may be used in fuels as additive
- 7. Relevant Photographs :



Bronchiolar epithelium – Necrotic changes Thickened inter alveolar septa with in Clara cells (TEM 3000X)
fibrous tissue proliferation (SEM 1000X)

Abstract No. 29

Name of the Department :

Veterinary Pathology

1. Title of the thesis:

Protective effect of *Piper longum* (Thippali) and Vitamin C in chlorpyrifos toxicity of rats

2. Name and ID No. of the student :

Nisha Natarajan (14- MVM-10)

3. Name of the Chairman of the Advisory Committee :

Dr. Mammen.J.Abraham

4. Degree for which thesis was submitted :

M.V.Sc

5. Abstract of the thesis :

- A study was devised to demonstrate the protective effect of *Piper longum* (Thippali) and Vitamin C in chlorpyrifos toxicity of rats.
- The study had shown that chlorpyrifos produced serious hematological and biochemical alterations along with histopathological changes in various visceral organs like lungs, liver and kidneys.
- Both *Piper longum* (Thippali) and Vitamin C were tested for their protective effects against the above alterations induced by Chlorpyrifos

6. Significant achievements made in science and technology

- The study concluded that chlorpyrifos has got serious effects on hematological, biochemical and functional aspects in rat models
- The study also proved that both Vitamin C as well as Thippali can ameliorate the effects of chlorpyrifos toxicity in rat models
- It was also proved that Thippali has got a dose dependant effect

Abstract No. 30

Name of the Department :	Clinical Veterinary Medicine
1. Title of the thesis:	clinicopathological investigations on snake envenomation
2. Name and ID No. of the student :	Nayankumar S. R. (14-MVM-56)
4. Degree for which thesis was submitted :	M.V.Sc
5. Abstract of the thesis :	Based on the findings of the study 20 minutes whole blood clotting test could be considered as an easy and reliable field level method to differentiate neurotoxic and haemotoxic bites along with clinical signs

Abstract No. 31

Name of the Department :	Clinical Veterinary Medicine
1. Title of the thesis:	clinical investigations on oedema of limbs in dogs
2. Name and ID No. of the student :	Jomy Thomas (14-MVM-12)
4. Degree for which thesis was submitted :	M.V.Sc
5. Abstract of the thesis :	Based on the study infectious diseases are predominant in causing oedema in dogs (ehrlichiosis, babesiosis, microfilariosis)

Abstract No. 32

Name of the Department :	Clinical Veterinary Medicine
1. Title of the thesis:	clinical investigations on immune mediated haemolytic anemia in dogs
2. Name and ID No. of the student :	Ashwini M. (14-MVM-07)
4. Degree for which thesis was submitted :	M.V.Sc
5. Abstract of the thesis :	Based on the study it is concluded that all the dogs positive for haemoparasitic infection should be screened for IMHA and incorporate immunosuppressive therapy in positive cases along with specific therapy

Abstract No. 33

Name of the Department :	Clinical Veterinary Medicine
1. Title of the thesis:	clinicopathological evaluation of metabolic syndrome in obese dogs
2. Name and ID No. of the student :	Siji S. Raj (14-MVM-04)
4. Degree for which thesis was submitted :	M.V.Sc
5. Abstract of the thesis :	Based on the study Ezetimibe was considered as a better choice than Rosuvastatin in treating metabolic syndrome in dogs

III. DISSERTATIONS

Dissertation No. 1

Name of the Department :

Statistics

1. Title of the Dissertation :

Sample size determination for animal experiments

2. Name and ID No. of the student :

Ashmy Kishore (14-MSVM-01)

3. Name of the Chairman of the Advisory Committee :

Dr. Gleeja V. L.

4. Degree for which thesis was submitted :

Master of Science in Biostatistics

5. Abstract of the thesis :

- Formula for determining the sample size using Power analysis method and Resource equation method
- Illustration of the sample size calculation for different statistical tests such as one-sample t-test, paired t-test, two-sample t-test, one-sample test for proportion, two independent proportions, linear regression, multiple linear regression, one-way and two-way ANOVA design with examples from veterinary and animal sciences
- Illustration of resource equation method

6. Significant achievements made in science and technology :

- Addressed methods to determine the suitable sample size for different experiments.

Dissertation No. 2

Name of the Department :

Statistics

1. Title of the Dissertation :

Mixed model repeated measures analysis of variance in animal experiments

2. Name and ID No. of the student :

Ammu J.V. (14-MSVM-02)

3. Name of the Chairman of the Advisory Committee :

Dr. Gleeja V. L.

4. Degree for which thesis was submitted :

Master of Science in Biostatistics

5. Abstract of the thesis :

Studied the use of mixed models in repeated measures data and illustrated the same with data sets
The methods for determination of the most appropriate covariance structure in mixed model were given and illustrated.

6. Significant achievements made in science and technology :

Recommended the use of mixed model for analysis of repeated measures designs in animal studies

Dissertation No. 3

Name of the Department :

Statistics

1. Title of the Dissertation :

Forecasting the lifetime milkproduction of cattle

2. Name and ID No. of the student :

Fathima Beevi B.(14-MSVM-03)

3. Name of the Chairman of the Advisory Committee :

Dr. Mercey K.A.

4. Degree for which thesis was submitted :

Master of Science in Biostatistics

Dissertation No. 4

Name of the Department :	Statistics
1. Title of the Dissertation :	Artificial neural networks for weather forecasting
2. Name and ID No. of the student :	Greeshma Joy (14-MSVM-04)
3. Name of the Chairman of the Advisory Committee :	Dr. Gleeja V. L.
4. Degree for which thesis was submitted :	Master of Science in Biostatistics
5. Abstract of the thesis :	Studied Artificial neural networks for weather forecasting. Predicted the average temperature for Thrissur for the year 2017.
6. Significant achievements made in science and technology :	Prediction of the average temperature of different months in 2017 for Thrissur

Dissertation No. 5

Name of the Department :	Dairy science
1. Title of the Dissertation :	Quality characteristics of low fat set yoghurt with incorporated solids from Elephant-foot yam (<i>Amorphophallus paeoniifolius</i>).
2. Name of the student :	Anu A

Dissertation No. 6

Name of the Department :	Dairy science
1. Title of the Dissertation :	A study on evaluating the efficiency of methylene blue Reduction test in assessing microbial quality of milk
2. Name of the student :	Amala Joseph

Dissertation No. 7

Name of the Department :	Dairy science
1. Title of the Dissertation :	Development and quality evaluation of synbiotic yoghurt prepared with oat flour and probiotic <i>Bifidobacterium bifidum</i>
2. Name of the student :	Reshma

Dissertation No. 8

Name of the Department :	Dairy science
1. Title of the Dissertation :	Isolation of lactic acid bacteria with exopolysaccharide production potential and its suitability in fermented dairy products
2. Name of the student :	Nibimol Babu

Dissertation No. 9

Name of the Department :	Dairy science
1. Title of the Dissertation :	Preparation of folate enriched yoghurt by employing lactic acid bacteria
2. Name of the student :	Sreerekha R

Dissertation No. 10

Name of the Department :	Dairy science
1. Title of the Dissertation :	Preparation of low fat Shrikhand from goat milk
2. Name of the student :	Nima Shaji

STUDENT PROJECTS

PROJECT No.1

Name of the Department :	Animal Nutrition
1. Title of the thesis:	Effect of incorporation of spent rosemary leaf meal as an ingredient in kid starter
2. Name and ID No. of the student :	S. Minu Sarrah Jasmine, 15- MVM- 028
3. Name of the Chairman of the Advisory Committee :	Dr Shyama. K
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<p>a. An experiment in kids was conducted by incorporating 10 and 20 per cent spent rosemary leaf meal in kid starter</p> <p>b. From the results it could be concluded that spent rosemary leaf meal at 10 and 20 per cent levels can be included in kid starter ration without any adverse effects.</p>
6. Significant achievements made in science and technology	<p>From the results obtained in the present study it can be inferred that kids in T2 and T3 had similar growth rate as that of control (T1) group. Feed cost per kg gain in T3 was better than T2 though not significant. Therefore it can be concluded that spent rosemary leaf meal at 10 and 20 per cent levels can be included in kid starter ration without any adverse effects.</p>

PROJECT No.2

Name of the Department :	Animal Nutrition
1. Title of the thesis:	Effect of incorporation of spent cumin seeds (Cumin cyminum) on growth performance of broiler chicken
2. Name and ID No. of the student :	A Rama Devi, 15-MVM-002
3. Name of the Chairman of the Advisory Committee :	Dr P. Gangadevi
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<p>One hundred and fifty, vaccinated day- old, broiler chicks were used for the experiment. The chicks were randomly allotted to three dietary treatment (T1, T2 and T3) with five replicates per treatment and ten chicks per replicate in completely randomized design to assess the effect of dietary incorporation of spent cumin (<i>Cuminum cyminum</i>) seeds on growth performance of broiler chicken. On summarizing the results, it can be concluded that incorporation of spent cumin seeds as unconventional feed up to 10 per cent level can be recommended on growth performance of broiler chicken.</p>

PROJECT No. 3

Name of the Department :	Animal Nutrition
1. Title of the thesis:	Nutritional management of early weaned Large White Yorkshirepigs by functional amino acid supplementation
2. Name and ID No. of the student :	Rishikesh Jagzap15-MVM-020
3. Name of the Chairman of the Advisory Committee :	Dr Ally. K
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<p>a. A study was conducted to evaluate the effect of functional amino acid supplementation in piglets weaned at 21 days of age</p> <p>b. Piglets can be weaned at 21 days of age without compromising on growth rate</p> <p>c. Supplementation of functional amino acids like arginine and glutamine are beneficial</p>
6. Significant achievements made in science and technology	<p>a. Pre starter containing whey protein supports growth in piglets weaned at 21 days</p> <p>b. Functional amino acids like arginine at 0.18 per cent and glutamine at 0.25 per cent is better economically</p>

PROJECT No. 4

Name of the Department :	Animal Nutrition
1. Title of the thesis:	Effect of <i>Polyalthia longifolia</i> and piper betle on feed additive in broiler chicken
2. Name and ID No. of the student :	Srinivasan. C, 15-MVM-050
3. Name of the Chairman of the Advisory Committee :	Dr Gangadevi P
4. Degree for which thesis was submitted :	MVSc
5. Abstract of the thesis :	<p>An experiment was conducted for a period of 42 days using two hundred numbers of day-old straight run commercial broiler chicks (Ven Cobb) to study the effect of dietary supplementation of <i>Polyalthia longifolia</i> (Aranamaram) and <i>Piper betle</i> (Vettila) leaf meal on growth performance, nutrient utilization and technoeconomics of production. On summarizing the results, it could be inferred that <i>Polyalthia longifolia</i> or <i>Piper betle</i> leaf meal at 0.2 per cent can be effectively used as feed additive</p>

PROJECT No. 5

Name of the Department :	Animal Nutrition
1. Title of the thesis:	Evaluation of rumen fermentation pattern and nutrient utilization in Murrah buffalo, Vechur and crossbred cattle on different feeding regimen
2. Name and ID No. of the student :	Sajith Purushothaman (15- DVM- 02)
3. Name of the Chairman of the Advisory Committee :	Dr Shyama. K
4. Degree for which thesis was submitted :	PhD

5. Abstract of the thesis :
 - a. Evaluation of total mixed rations containing various unconventional feed ingredients by *in vitro* gas production
 - b. To evaluate rumen fermentation pattern of Murrah buffalo, Vechur and crossbred cattle maintained on standard and selected total mixed rations containing unconventional feeds by *in vitro* and *in vivo* studies
 - c. To suggest suitable total mixed ration for Murrah buffalo, Vechur and crossbred cattle for efficient nutrient utilization.

PROJECT No. 6

Name of the Department : Veterinary Microbiology

1. Title of the thesis: **Molecular detection of Rotavirus in poultry of Kerala.**
2. Name and ID No. of the student : Rinsha Balan 14-MVM-25
3. Name of the Chairman of the Advisory Committee : Dr. M. Mini
4. Degree for which thesis was submitted : M.V.Sc.
5. Abstract of the thesis :
 - a. 143 fecal samples were collected from diarrhoeic poultry and screened for the presence of avian rota virus by RT-PCR and RNA- PAGE.
 - b. 5 samples were found to be positive in RNA- PAGE revealing Group A rotavirus electropherotype.
 - c. 11 samples were detected positive for Group A rotavirus in RT-PCR.
6. Significant achievements made in science and technology

RT-PCR was found to be rapid, sensitive and specific technique for the routine diagnosis of avian rota virus infection in poultry.

PROJECT No. 7

Name of the Department : Veterinary Microbiology

1. Title of the thesis: **Diagnosis of leptospires in canine blood and urine using Real time-PCR**
2. Name and ID No. of the student : Subi T.K 14-MVM-35
3. Name of the Chairman of the Advisory Committee : Dr. Siju Joseph
4. Degree for which thesis was submitted : M.V.Sc.
5. Abstract of the thesis :
 - a. 75 samples (sera, whole blood and urine) were collected from canine leptospirosis cases and were tested using MAT, PCR and real time PCR, respectively
 - b. The sensitivity, specificity and accuracy of PCR and real time PCR with MAT were compared.
 - c. The real time PCR assay standardized in the study was found to be more sensitive than the conventional PCR.
6. Significant achievements made in science and technology

The diagnosis of leptospirosis can be made quicker and quantification of the organisms in the sample is possible, which would aid in more efficient management of leptospirosis.

PROJECT No. 8

Name of the Department :	Veterinary Microbiology
1. Title of the thesis:	Identification and protein profiling of the bacterial isolates from corneal diseases in dogs
2. Name and ID No. of the student :	Aruna V. Murali14-MVM-37
3. Name of the Chairman of the Advisory Committee :	Dr. Binu K. Mani
4. Degree for which thesis was submitted :	M.V.Sc.
5. Abstract of the thesis :	<p>a. <i>Staphylococcus aureus</i>, <i>Corynebacterium xerosis</i> and <i>Klebsiella pneumoniae</i> were isolated from corneal diseases in dogs.</p> <p>b. A duplex PCR was developed separately for simultaneous detection of <i>Staphylococcus</i> and <i>Klebsiella</i> and for <i>Corynebacterium</i> and <i>Klebsiella</i>.</p>
6. Significant achievements made in science and technology	Duplex PCR offers a rapid method for the simultaneous detection of the pathogens associated with corneal disease which in turn will help to select a suitable strategy for the treatment and control of the condition.

PROJECT No. 9

Name of the Department :	Veterinary Parasitology
1. Title of the thesis:	Development of ELISA based diagnostics for early detection of coproantigens in bovine amphistomosis
2. Name and ID No. of the student :	H. Shameem (13-DVM-08)
3. Name of the Chairman of the Advisory Committee :	Dr. K.Devada
4. Degree for which thesis was submitted :	PhD
5. Abstract of the thesis :	<p>a. A coproantigen sandwich ELISA was standardized using guineapig and rabbit hyperimmune serum which could detect minimum b. 3ng/μl of excretory antigen of amphistome in dung.</p> <p>b. A Dot ELISA was standardized as a rapid test for coproantigen detection in amphistomosis.</p> <p>c. Molecular characterization of prevalent species of amphistomes was done by PCR targeting ITS2+r DNA sequences.</p>
6. Significant achievements made in science and technology	<p>a. Sensitive method using coproantigen sandwich ELISA is the first of its kind standardised for early detection of amphistomosis which will help in timely treatment of the disease thus preventing economic loss to farmers.</p> <p>b. Nucleotide sequences of four species of amphistomes in the present study forms the first report which provides primary sequence data of the rDNA ITS2+region of the amphistome flukes.</p>

PROJECT No.10

Name of the Department :	Veterinary Public Health
1. Title of the thesis:	Occurrence of <i>Toxoplasma gondii</i> in feline, caprine, human and environment samples
2. Name and ID No. of the student :	Swathi Hareendran 14-MVM-40
3. Name of the Chairman of the Advisory Committee :	Dr. C. Latha
4. Degree for which thesis was submitted :	M.V.Sc
5. Abstract of the thesis :	<ul style="list-style-type: none">a. Occurrence of <i>T. gondii</i> in feline faecal sample was 4.47 per cent.b. Caprines in the area revealed an overall seroprevalence of 41.30 per cent.c. Seropositivity of 52.46 per cent was recorded in the human serum samples.
6. Significant achievements made in science and technology	<ul style="list-style-type: none">a. High occurrence of parasite in animals, human and environment is a clear indication of the wide spread presence of the parasite in the area.b. A one health approach is necessary for the effective prevention and control of this parasitic disease.

PROJECT No.11

Name of the Department :	Veterinary Public Health
1. Title of the thesis:	Title of the project: Occurrence of Campylobacter and Salmonella in backyard poultry of Pudukkad area in Thrissur district
2. Name of the student :	Reshma Jacob; St. Joseph's college Irinjalakuda
3. Name of the Chairman of the Advisory Committee :	Dr. Binsy Mathew
4. Degree for which thesis was submitted :	MSc.
5. Abstract of the thesis :	<ul style="list-style-type: none">a. A total of 100 cloacal swab samples were collected from backyard poultry in Pudukkad area of Thrissur districtb. Fifty samples each were subjected to isolation of Salmonella and Campylobacter respectivelyc. Twenty eight per cent of the samples were positive for campylobacter and five per cent of the samples were positive for Salmonella.
6. Significant achievements made in science and technology	Data base on the occurrence of Campylobacter and Salmonella in Pudukkad area

PROJECT No.12

Name of the Department :	Livestock Products Technology
1. Title of the thesis:	Quality characteristics of acellular bovine pericardium developed using bile as a biological detergent.
2. Name of the student :	Vidya Sadanandan A, St. Joseph's College, Irinjalakuda
3. Name of the Chairman of the Advisory Committee :	Dr. V N Vasudevan

4.	Degree for which thesis was submitted :	MSc Zoology
5.	Abstract of the thesis :	A protocol for decellularizing bovine pericardium using bovine and porcine gall bladder bile was standardized. PGB may be a better decellularizing
6.	Significant achievements made in science and technology	agent for developing a more stable bovine pericardial extra cellular matrix
7.	Revenue generated	Rs.5000/-

PROJECT No.13

Name of the Department :	Livestock Products Technology
1. Title of the thesis:	Effects of tumbling, marination and gamma irradiation on the collagen characteristics of buffalo beef.
2. Name of the student :	Sudha Sugunan, St. Joseph's College, Irinjalakuda
3. Name of the Chairman of the Advisory Committee :	Dr. V N Vasudevan
4. Degree for which thesis was submitted :	MSc Zoology
5. Abstract of the thesis :	Marination with ginger extract for 60 minutes and marination and tumbling for 30 minutes can substantially influence the collagen characteristics and textural properties of beef and buffalo meat. Marination with 60 minutes and marination and tumbling for 30 minutes had markedly reduced the WBSF of beef samples. In case of buffalo meat, marination and storage at 60 minutes caused increase in collagen solubility and decrease in WBSF.
6. Revenue generated :	Rs. 5000/-

TECHNOLOGY DEVELOPED AND TRANSFERRED

A. Technology

Details of technology developed	Whether the technology developed is transferred to public utility through Directorate of Extension Education or any other means and particulars thereof	Whether the technology transferred is adopted by farmers / commercialised and particulars thereof	Impact of the new technology developed
Department of Animal Nutrition			
Development of ration balancing software	Yes	Yes	Least cost ration formulation made easier
Department of VPH			
Multiplex PCR for the detection of various virulence genes of Enterohaemorrhagic <i>E.coli</i> Multiplex PCR for the detection of <i>Campylobacter</i> spp			

B. Value added products : Nil

C. Consultancy

Type of consultancy	Client details	Revenue generated
Department of Livestock Production Management		
1. Discussion of faculty with new prospective livestock entrepreneurs – 78 no's		
2. Discussion on problem solving at existing dairy, goat and pig farms – 54 no's		
3. Consultancy for Dairy farm with 25 cows and established and started, purchase of cows, design of shed, disease prevention- technical support given		
Department of Dairy Science		
Small scale milk processing units	Mr. Sudheer, Kadalassery	Nil
Department of VPH		
Disinfection methods for water Waste management Food hygiene and Quality control of various foods of animal origin		Revenue generated from the RF project on water testing – 1,46,839/-
Department of Pathology		
Post mortem examination	Farmers and University Farm officers	Rs.78,190/-

D. Patents

Name of the product / process for which patent has been filed	Details of the product / process	Authors	Filing status of patent application	Patent No. Reference(s)	Revenue generated
Extracellular matrix from bovine omentum	A novel animal-derived extracellular matrix from bovine omentum developed using bovine bile as a novel decellularising agent	1. Dr. V N Vasudevan 2. Dr. Prashanth Varkey 3. Dr. P Kuttinarayanan	Patent search completed. Provisional application being prepared	NA	NA

E. Commercialization of Technology

Name of the Technology commercialized	Details of technology	Charges fixed	No. of beneficiaries	Revenue generated
1. Mineral mixture for cattle (Ksheeramin)	Developed	80.00	300	437974.00
2. Feed Supplement for pigs-Vitmin-LM		60.00	400	
3. Laboratory Animal Feed		50.00	150.00	47078.00

IV SUPPORT SERVICES

1. MEAT PLANT

	Meat Technology Unit have adequate infrastructure and expertise in demonstration and transfer of technology for meat production and processing of various animal derived products. ICAR recognized this unit as Centre of Excellence in Meat Science and Technology in 2001 and Department of LPT started offering the MVSc programme in 2004 and so far, 22 MVSc theses have been submitted. The PhD programme was started in 2011 and two PhD theses have been so far submitted. Mandate (MTU): Training and entrepreneurship, Meat and Meat products production and By-products utilization
Revenue generated	Rs.1,85,46,092/-
Exclusive Facilities available	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.
Trainings	Stipendiary Training

	Name of the Training Programme	No. of Students
1.	Meat Processing cum plant operation	4
2.	Wholesome meat production & meat processing	8
3.	Meat Plant Operation & Maintenance	4

NEWLY RELEASED PRODUCTS FROM MEAT PLANT



2. LIBRARY

1 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 total plinth area allotted to the library comes to about 250m² with adequate furniture and equipments and is functioning in the College, 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/journals , thesis, reports etc. 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, poems, autobiography, critics etc. It has been striving relentlessly to enhance the quality of it's services to maximize user satisfaction.

2 Collection and resources

The documents presently available in the library are as shown below:

Documents available in the library

Books (Text Books, Reference Books, Books for general reading etc.)	24862
Thesis (MVSc /PhD)	1414
Bounded Back volumes of Journals.	5914
Wiley online journals- 18	1997-2014
E-books	1294
On-line Journals/e-contents through CeRA	3952
CABI Vet CD	1971-2013

3 Library Budget (Rs in laks)

Sl. No	Particulars	2016-17
1	Plan	4,00,000.00

4 Library Timings and Usage

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

5 Photocopying Facilities

Reprographic facilities are being provided to the beneficiaries at nominal rate through an outsourcing agency functioning in the campus.

6 Availability of Computers and Access to Internet

Wireless internet facilities are available in the library free of cost. Five computers with internet access are provided for browsing. LIC Digital Catalogue (WEB OPAC) is available in the Library Website (<http://www.cvaslibrary.com>) and the OPAC client is available at all workstations in the LAN.

7 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 4000 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 3952 e-journals through ICAR e-journal consortium (CeRA.jccc.in).

Eighteen e-journals and their back volumes (1997 onwards) are accessible through Wiley online library (onlinelibrary.wiley.com)

8 e-books

Altogether 1294 veterinary medicine and animal husbandry e-books are accessible through Wiley online library (onlinelibrary.wiley.com)

9 CAB Abstracts

An elaborate database, CAB 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.

10 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.

11 Other facilities and services

- Book bank scheme for SC/ST students
- Book bank lending scheme for UG,PG and Ph.D Students
- Orientation Programme to freshers
- Over-night reference loan
- CCTV based Security Surveillance System

FACULTY IMPROVEMENT PROGRAMMES

Seminar / Workshop / Summer Institute / Symposium / WinterSchool / Training Programme / Short Courses / Any other programme organized

Sl. No.	Title of the Programme	Place	Duration	Name of the sponsoring agency	No. of Participants	No. of Papers presented
1	Organized a Biotechnology Training and Workshop on “Newer trends in the Laboratory Diagnosis of Leptospirosis in Animals and Humans”	Department of Veterinary Microbiology, CVAS, Mannuthy.	16 th 25 th August, 2016	Kerala State Council for Science, Technology and Environment, School of Zoonoses, Public Health and Pathobiology	15	-
2	National Workshop on Veterinary Homoeopathy	College of Veterinary and Animal Sciences	25/4/2016	Fund from Post graduate certificate in Veterinary Homoeopathy course	100	Nil
3	Training on Laboratory Animal Models and Biomethodology	College of Veterinary and Animal Sciences	21/7/2016 to 23/7/2016	Paid training		
4	Food Safety	CVAS, Mannuthy	27-05-16 To 27-05-16	KVASU	200	3
5	Know Zoonoses to No Zoonoses	Choondal (Njattuvella Chantha)	24-06-16 to 28-06-16	SZPHPB & NSS	1000	

6	Zoonoses day	Vidya Mandir, Paramekavu	08-07-16	SZPHPB & NSS	100	1
7	Culture of responsibility Leptospirosis	CV&AS, Mannuthy		American Society for Microbiology		
8	Training programmes on meat processing and value addition for the entrepreneurs	Meat Technology unit, Mannuthy	6-7 th sep 2016	Govt of Kerala under plan project	12	-
9	Training programmes on meat processing and value addition for the entrepreneurs	Meat Technology unit, Mannuthy	23-24 th sep 2016	Govt of Kerala under plan project	13	
10	Training programmes on meat processing and value addition for the entrepreneurs	Meat Technology unit, Mannuthy	28-29 th sep 2016	Govt of Kerala under plan project	15	
11	ICAR- Outreach programme on Ethnoveterinary medicine- National level review meeting	Mannuthy	17-9-2016	ICAR & KVASU	20	-
12	Animal Health cum infertility camp from 24-	Milk Society, Cherumkuzhy	25-3-17 to 28-3-2017	KVASU Plan fund	100 farmers	NA
13	Postgraduate diploma in therapeutic management of infectious diseases of pet animal and petbirds	Mannuthy	30/10/2015 to 8/10/2016		36	
14	Hands on Training on Basic Ophthalmic Diagnostic Procedures in Veterinary Practice	Dept of Surgery and Radiology	from 11.07.16 to 13.07.16 and 24.11.2016 to 26.11.2016	Dr. S. Anoop	18	NA
15	Training and Workshop on Management of Congenital and Musculo-skeletal disorders in ruminants	Dept of Surgery and Radiology	6 th to 9 th February 2017.	Dr. Sudheesh. S. Nair	40	NA
16	Seminar and demonstration on Hoof Health Management in Dairy Cattle as part of Science Popularisation programme co sponsored by Kerala State Council for Science Technology and Environment	University Livestock Farm 'Mannuthy Villadom Apcos, Cherumkuzhy Apcos, Livestock Research Station, Thiruvizhamkunnu	31.7.16, 2.08.16 and 11.08.16	Dr. Laiju M Philip	100	NA
17	Data Analytics with SAS, MATLAB & R	Dept of Statistics, CVAS, Mannuthy	11/05/2016 to 10/06/2016	Nil	4	-
18	National Symposium on Biodynamic Animal Farming for Management of Livestock Diversity under changing Global Scenario	CVAS, Mannuthy	8-10 February 2017	KVASU, ICAR, SOCDAB, NDAGR, NBI	202	48

B. Persons deputed for Training / Workshop / Summer Institute / Seminar / Study Tour / Higher Studies / any other programme both in India and Abroad

Sl. No.	Name and designation of the Scientist	Title of the Programme	Duration		Place	Approx. cost involved
			From	To		
1	Dr Indu V Raj and Dr A R Sreeranjini (Assistant Professors)	Hands on workshop on formalin free biological specimen preparation for teaching and museum	15-10-2016 to 16-10-2016		Sapthagiri institute of Medical sciences and research Centre, Bangalore	Rs. 3456 Rs. 3456
2	Dr. N. Ashok, Dr. Lucy K.M. (Professors) Dr. Indu V. Raj, Dr. Sreeranjini A.R., Dr N.S.Sunilkumar and Dr. K. B.Sumena (Assistant Professors)	8 th Kerala Veterinary Science congress	12-11-2016 to 13-11-2016		Hotel Dream city, Pattikkad	Nil
3	Dr. N. Ashok (Professor and Head), Dr. Indu V. Raj and Dr. Sreeranjini A.R (Assistant Professors)	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	21-12-2016 to 23-12-2016		Department of Veterinary Anatomy, College of Veterinary Science, Rajendranagar, Hyderabad	Rs. 13128 Rs. 10654 Rs. 10654
4	Dr K.M. Lucy, Professor	Need analysis and content development to design training curriculum for capacity building of veterinary professionals in ICT.	9.8.2016		Dept of Veterinary Extension, CVAS, Mannuthy.	Nil
5	Dr K.M. Lucy, Professor	National Workshop on Veterinary Homoeopathy	25.08.2016		DE, KVASU	Nil
6	Dr. Shynu M. Asst. Professor	Application of ICT in Animal Husbandry Teaching, Research and Extension	19.10.2016 to 21.10.2016		CVAS, Mannuthy	
7	Dr Radhika G and Dr. Bindya Liz Abraham Assistant Profesor, Dept. of AGB, CVSc, Mannuthy	Application of ICT in Animal Husbandry Teaching, Research and Extension	6-8 th September, 2016		KVASU, Mannuthy	-
8	Dr Radhika G Assistant Profesor, Dept. of AGB, CVSc, Mannuthy	ICAR sponsored training on "Recent models and methods for analysis of farm animal data for devising suitable breeding and management strategy	11-20 July, 2016		CSWRI, Avikanagar, Rajasthan	--
9	Dr. Bindya Liz Abraham	Challenges in Quantitative Genetics for Improvement of Indigenous Animal Genetic Resources (AnGR)	19-20 th January, 2017		IVRI, Izatnagar	--
10	Dr Bimal C B Assistant Profesor, Dept. of AGB, CVSc, Mannuthy	South India Study Tour 2014 & earlier admission	23/1/2016 to 2/11/2016			14000

11	Dr. Manoj M Assistant Profesor, Dept. of AGB, CVSc, Mannuthy	National symposium AGMET 2016 on Climate-driven food production systems, agro-meteorological interventions	20-22 December 2016	Coimbatore	
12	Dr. Radhika G., Dr. Bindya Liz Abraham and Dr. Manoj M	8 th KERALA VETERINARY SCIENCE CONGRESS	12-13 November 2016	Pattikkad, Thrissur	
13	Dr.T.V. Aravindakshan Dr. Radhika G., Dr. Bindya Liz Abraham, Dr. Manoj M., Dr. Bimal C.B and Dr. Lali F Anand	National Symposium on “Biodynamic Animal Farming for Management of Livestock Diversity under the Changing Global Scenario	8 th to 10 th February 2017	CVAS, Mannuthy	
14	Dr. K Anilkumar, Dr. Radhika G., Dr. Bindya Liz Abraham, Dr. Manoj M. and Dr. Bimal C.B.	National Seminar on “Green Economics and Desi cow” organized by Kapila Fest-2016 and Centre for Innovation in Science and Social Action (CISSA),	26 th to 28 th May, 2016	CMS College, Kottayam	
15	Dr Shyama K	LASACON-2016	14-10-2016-16- 10-2016	Bangalore	NIL
16	Dr Jasmine Rani K	LASACON-2016	14-10-2016-16- 10-2016	Bangalore	NIL
17	Dr. Priya P. M, & Dr. Binu K. Mani, Assistant Professors Dept. of Veterinary Microbiology CVAS, Mannuthy	Training programme on “Application of ICT in Animal Husbandry Teaching Research and Extension “	6-8 th September, 2016	Dept. of Veterinary and AH extension, CVAS, Mannuthy	
18	Dr. M. Mini Professor & Head Dept. of Veterinary Microbiology CVAS, Mannuthy	The capacity development programme for the faculty of KVASU	25-26 th October, 2016	Institute of Management in Govt. TVM	
19	Dr. M. Mini Professor & Head, Dept. of Veterinary Microbiology, CVAS, Mannuthy	8 th Kerala Veterinary Science Congress	November 12- 13 th , 2016	IVA, Kerala at Pattikkad	
20	Dr. Binu K. Mani Assistant Professor Dept. of Veterinary Microbiology CVAS, Mannuthy	Winter school on “Recent advances in development of recombinant vaccines for Veterinary use”	8-28 th November, 2016	IVRI, Izatnagar, UP	
21	Dr. M. Mini Professor & Head, Dept. of Veterinary Microbiology, CVAS, Mannuthy	The International workshop on “Applying welfare measures to improve sustainability of small holder dairy production in Kerala “	Dec 16 th , 2016	University of Bristol and KVASU at Cochin	

22	Dr. M. Mini Professor & Head, Dept. of Veterinary Microbiology, CVAS, Mannuthy	One day workshop on “Avian Influenza: preparedness, surveillance and contingency procedures “	23 rd , March 2017	College of Veterinary and Animal Sciences, Udgir & AHD	
23	Dr. M .Mini	Two day meeting to identify research priorities in Veterinary Sector for Antimicrobial resistance	March 27-28, 2017	CIFT, Cochin, organized by FAO- ICAR	
24	Dr Lucy Sabu	Applying welfare measures to improve sustainability of small-holder dairy production in Kerala	16 th Dec. 2016	Flora Airport hotel, Kochi on	Not funded by university/ ICAR
25	Dr Lucy Sabu	National Workshop on Veterinary Homeopathy	25 th April 2016	Thrissur	-do-
26	Dr. Lucy Sabu Dr. Bindu Lakshmanan	Workshop on Need analysis and content development to design training curriculum for capacity building of veterinary professionals in ICT	Aug19 th ,2016	Thrissur	-do-
27	Dr.Bindu Lakshmanan Dr. H. Shameem	Application of ICT in Teaching, Research and Extension	Sept 6-8,	Thrissur	-do-
28	Dr. R Radhika, Dr. Asha Rajagopal Dr. Priya M.N	Application of ICT in Teaching, Research and Extension	Sept 19-21,2016	Thrissur	-do-
29	Dr. K. Syamala	Application of ICT in Teaching, Research and Extension	Sept 22-24,2016	Thrissur	-do-
30	Dr Bindu Lakshmanan	One day workshop on “ Business plan competition cum sensitization workshop on entrepreneurship development	26.8.2016	College of Veterinary and Animal Sciences,Mannuthy	-do-
31	Dr. H. Shameem, Dr. Asha Rajagopal, Dr. K. Syamala	Kerala Veterinary Science Congress, Thrissur	Nov12-13	Thrissur	
32	Dr Radhika R,Dr H Shameem, Dr K Syamala	Kerala Science Congress	28-30 th Jan 2017	Thiruvalla	
33	Dr Lucy sabu	International Workshop on applying welfare measures to improve sustainability of small holder dairy production of Kerala	Dec16th	Thrissur	-do-
34	Dr. H. Shameem, Dr. Asha Rajagopal	26 th NCVF- International Symposium on Current concepts in diagnosis and control of parasitic diseases to combat climate change	15 th -17 th Feb	Shimoga	Rs. 12,000/- each

35	K Syamala	14 th National Symposium on Biodynamic Animal Farming for the Management of Livestock Diversity under changing global scenario organized by SOCDAB	8/2/17-10/2/17	Mannuthy	
36	Dr Usha P.T.A., Professor and Head	XVI Annual Conference of Indian Society of Veterinary Pharmacology & Toxicology	23/11/2016 to 25/11./2016	Navsari, Gujarat	Rs; 14172/-
37	Dr Bibu John Kariyil, Assistant Professor	XVI Annual Conference of Indian Society of Veterinary Pharmacology & Toxicology	23/11/2016 to 25/11./2016	Navsari, Gujarat	Rs; 13000/-
38	Dr Preethy john	International conference on agriculture, veterinary & life sciences	2/2/2017 to 4/2/2017	Nuvem, goa	Rs.2262/-
39	Dr Preethy John	International conference sustainable utilization of tropical plant biomass-bioproducs, biocatalysts and biorefinery(SutB4),	17/11/2016 to 18/11/2016	TAU,Coimbatore	Rs.8456/-
40	Dr Usha P.T.A., Professor and Head	International conference in Veterinary Ayurveda	30/11/2016 to 2/12/2016	Kolkatta	Rs; 11,500/-
41	Dr.C.T.Sathian & Dr.K.Radha	National symposium on Biodynamic animal farming for the management of livestock diversity under changing global scenario	8 th to 10 th February 2017	CV&AS Mannuthy	
42	Dr.Harikrishnan S	National workshop on Veterinary Homeopathy	25 th April 2016	CVAS,Mannuthy	Nil
43	Dr.Harikrishnan S	Application of ICT in AH teaching , Research & Extension	6-8 th Sep 2016	CVAS,Mannuthy	Nil
44	Dr.Harikrishnan S	XXXIII Annual conference of Indian Poultry Science Association – IPSACON	3-5 th Nov 2016	Guwahati	Nil
45	Dr.Jiji.R.S.	Indian Veterinary Science Congress	12th and 13th of November, 2016	Pattikad	
46	Dr. R. Senthilkumar	Indian Veterinary Science Congress	12th and 13th of November, 2016	Pattikad	
47	Dr.T.S.Rajeev	Indian Veterinary Science Congress	12th and 13th of November, 2016	Pattikad	
48	Dr. C. Latha Dr. Deepthi Vijay	IUMS Training	16-4-2016	CVAS, Mannuthy	

49	Dr. Deepthi Vijay	National Seminar on “Newer Approaches in Cow Comfort Systems for Better Productivity”	25-06-2016	Pearl Regency, Thrissur	
	Dr. C. Latha	Food Safety	27-05-2016	CVAS, Mannuthy	
50	Dr. C. Latha Dr. Deepthi Vijay	HRD Training	06-06-2016	CVAS, Mannuthy	
51	Dr. C. Latha	Zoonotic Diseases	14-06-16	Idukki	
52	Dr. C. Latha	Role of Vets in Zoonotic disease control	06-07-16	Chalakudy	
53	Dr. C. Sethulekshmi	ICAR sponsored short course on “Advances in Livestock Disease Surveillance: Integration of Molecular Biology and Statistical Methods in Veterinary Epidemiology	01-09-16 to 10- 09-16	ICAR-NIVEDI, Bangalore	
54	Dr. Binsy Mathew	Entrepreneur meet for meat producers	28/9/16	Hotel GB Palace, Ankamaly	
55	Dr. Binsy Mathew	Training on meat processing and value addition	26/9/16	Meat Technology Unit, Mannuthy	
56	Dr. C. Latha	NSS Orientation course	01-13-16 to 07- 12-16	Rajagiri College of Social Sciences, Kalamassery	
57	Dr. C. Latha	IMG Training	25-10-16	Trivandrum	
58	Dr. C. Latha	14 th IAVPHS Conference	21-11-16 to 22- 11-16	Udaipur	
59	Dr. C. Latha Dr. B. Sunil	International Workshop	16-12-16 to 17- 12-16	Hotel Flora International, Angamaly	
60	Dr Sindhu K Rajan	NSS camp organised by CVAS Mannuthy at Varantherapilly Panchayath	29-1-2017	Varantherapilly Grama Panchayath	
61	Dr. Ambily V. R.	Three animal health camps conducted by NSS unit, CVAS Mannuthy one at Athirappilly Panchayath and other two at Pariyaram Panchayath	22-2-2017	Athirappilly Grama Panchayath	
62	Dr Madhavan Unny Dr Deepa Chirayath Dr Sindhu K rajan Dr Usha Narayana Pillai	Three day training “Application of ICT in Animal husbandry teaching research and extension”	19-09-2016 to 21-06-2016	Mannuthy	
63	Dr Usha Narayana Pillai	World Veterinary Ayurveda Congress 2017	30-04-2017 to 1-05-2017	Kolkata	
64	Dr Deepa Chirayath and Dr Sindhu K. Rajan	Swadeshi science congress 2016	7-11-2016 to 8-11 2016	CMFRI, Ernakulam	

65	Dr Deepa Chirayath	Kerala Science Congress 2017	28-1-2017 to 30-1-2017	Thiruvalla	
66	Dr P V Tresamol	8th Kerala Veterinary Science congress at Pattikkad,Thrissur	12-13 November 2016	Thrissur	1500/-
67	Dr P V Tresamol	National Symposium on biodynamic animal farming for the management of livestock diversity under changing global scenario	8-10 February 2017	Mannuthy	4000/-
68	Dr P V Tresamol	35th Annual convention and National symposium of ISVM at VCRI Thirunelveli	22-24 february2017	Thirunelveli	8000/-
69	Dr. Vinodkumar, K	National congress on Canine Practice and Symposium on Newer approaches in Management of Canine health and rewarding clinical practice as well as trade at GB Pant University,Pantnagar	09-11 February2017	Pantnagar	11118/-
70	Dr. Vinodkumar, K	State level workshop on need analysis and content development to design training curriculam for capacity building of veterinary	09/07/16	Covas, Mannuthy	-
71	Dr. Vinodkumar, K	8th Kerala Veterinary Science congress at Pattikkad,Thrissur	12-13 November 2016	Thrissur	
72	Dr.Justin Davis, K	National congress on Canine Practice and Symposium on Newer approaches in Management of Canine health and rewarding clinical practice as well as trade at GB Pant University,Pantnagar	09-11 February2017	Pantnagar	11118/-
73	Dr.Justin Davis, K	State level workshop on need analysis and content development to design training curriculam for capacity building of veterinary	09/07/16	Covas, Mannuthy	
74	Dr. S Sulficar	National congress on Canine Practice and Symposium on Newer approaches in Management of Canine health and rewarding clinical practice as well as trade at GB Pant University,Pantnagar	09-11 February2017	Pantnagar	11118/-
75	Tresamol P V Vinodkumar, K., Justin Davis,K, and Sulficar S	Seminar on Human-animal conflicts in Kerala-from status to solutions at CVAS,Mannuthy	14-16 June, 2007	Mannuthy	

	Dr Shyma VH	35th Annual convention and National symposium of ISVM at VCRI Thirunelveli	22-24 february2017	Thirunelveli	
76	Dr Shyma VH	National Symposium on biodynamic animal farming for the management of livestock diversity under changing global scenario	8-10 February 2017	Mannuthy	
77	Dr.Anoop.S Dr Laiju M Philip	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on “Concepts of One Health in Canine Health Care Management”	27-29 April 2016.	College of Veterinary and Animal Sciences, Pookode, KVASU	–
78	Dr.S Anoop	8 th Global Ophthalmology Summit	17 th to 19 th July 2016	Chicago USA	–
79	Dr.C.B.Devanand Dr.M.K.Narayanan Dr. S. Anoop Dr.K.M. Dileepkumar Dr. Laiju M Philip Dr. Sudheesh S. Nair Dr.Soumya Ramankutty	International Workshop in collaboration with The Jeanne Marchig International Centre for Animal Welfare Education of The Royal(Dick) School of Veterinary Studies, University of Edinburgh, Easter Bush, Scotland, UK, University of Edinburgh Napier and The College of Animal Welfare, Edinburgh,UK, entitled “Dog medicine, behavior and population management workshop ,	28 th -29 th of November, 2016.	University Veterinary Hospital Kakkala, Thrissur	–
80	Dr.C.B.Devanand Dr.K.M.Dileepkumar Dr.Soumya Ramankutty	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016	Madras Veterinary College, TANUVAS Chennai	–
81	Dr. Laiju M Philip	One day international work shop on “Applying welfare measures to improve sustainability of small holder Dairy production in Kerala”	16.12.2016	Flora Air Port Hotel, Cochin	–
82	Dr. S.Anoop Dr.Laiju M Philip	XIV Annual Convention of Indian Society for Advancement of Canine Practice and National Congress on Canine Practice and symposium on Challenges in Diagnosis and Management of Emerging Diseases of Canine	9 th to 11 th February 2017	GBPUAT, Panthnagar, Utharakhand	–

83	Dr.M.K.Narayanan	15th International Elephant and Rhino Conservation and Research Symposium	14th-18th November, 2016	Singapore Zoo, Singapore	–
84	Dr.C.B.Devanand	XIV Annual Convention of Society for Conservation of Domestic Animal Biodiversity and National Symposium on “Biodynamic Animal Farming for the management of Livestock Diversity under Global Changing Scenario”	8 th to 10 th February 2017	College of Veterinary and Animal Sciences, Mannuthy, KVASU	–
85	Dr. C. Jayakumar	21 day training programme on “ The cutting edge technologies to enhance fertility in farm animals” and organized	from November 4 th to 24 th 2016 sponsored by ICAR	GADVASU, Ludhiana	
86	Dr. C. Jayakumar	2 day workshop on “Dog medicine, behavior and population management workshop”	28 th and 29 th Novemeber 2016	organized by KVASU and Uni. Of Edinburgh at UVH, Kakkalai, Thrissur.	
87	Dr. R. S. Abhilash	10 day hands on training on <i>in vitro</i> fertilization technology	from 15 th to 24 th November	National Dairy Institute	
88	Dr. M.P. Unnikrishnan	3 day training on ‘Training Programme on Artificial Insemination in Pigs’	4 to 6 March 2017	ICAR Central Costal Agricultural Research Institute, Goa	
89	Dr. Unnikrishnan, Dr. Abhilash. R.S and Dr. Amritha Aravind	one day training on ‘Human resourse development’	18 th April 2017	KVASU at Mannuthy	
90	Dr.Sathu.T Dr Irshad A	Newer Approaches in cow comfort systems for better productivity,Thrissur,	25 th June 2016	Thrissur, kerala	
91	Dr.Sathu.T Dr V N Vasudevan Dr Irshad A	Developing the technical database of scientific training curriculum for the meat workers and consumers to ensure nutritional and food security,Thrissur,	6 th Aug 2016	Thrissur, Kerala	
92	Dr.Sathu.T Dr Irshad A	8 th Kerala Veterinary Science Congress KVSC 2016 ,Pattikad,	12-13 Nov-2016	Thrissur, kerala	
93	Dr.Sathu.T	5 th International conference on sustainable Utilisation of Tropical plant biomass: bioproducts, Biocatalysts and Biorefinery (SutB4),TNAU,Coimbatore	17-18 th Nov 2016	Coimbatore, Tamil Nadu	
94	Dr.Sathu T Dr V N Vasudevan Dr Irshad A	Training programme on Application of ICT in animal husbandry Teaching Research and Extension organized	From 22-9-2016 to 24-9-2016	Dept of veterinary & Animal Husbandry extension, KVASU.	

95	Dr.Sathu T Dr V N Vasudevan Dr Irshad A	Meat Entrepreneurship meet “Meat 4 meet-2016”	28-09-2016	DE, KVASU	
96	Dr V N Vasudevan	International Symposium and 7 th conference of Indian Meat Science Association	From 10/11/2016 to 12/11/2016	Indian Meat Science Association	
97	Dr V N Vasudevan	National symposium on concepts of one-health in canine health care management	27-29 April, 2016	Indian society for Canine Practice	
98	Dr V N Vasudevan	Entrepreneurship development and business incubation: scope and practical models	24-28 October, 2016	ICAR- NAARM, Hyderabad	
99	Dr V N Vasudevan	Tour officer of South India Study tour of 2014 Batch BVSc &AH students	24-11-2016 to 4-12-2016	South India study tour	
100	Dr. Gleeja V.L.	Need Analysis and content development to design training curriculum for capacity building of veterinary professionals in ICT	9/08/2016	CVAS, Mannuthy	-
101	Dr. Gleeja V.L.	Refresher course in Computer Science (Interdisciplinary)	10/08/2016 to 30/08/2016	UGC-HRDC, University of Calicut	-
102	Dr. Gleeja V.L.	Application of ICT in Animal husbandry teaching research and extension	6/9/16 to 8/9/16	CVAS, Mannuthy	-
103	Dr. Krithiga. K.	APCRICON conference	8 th -10 th July 2016	Bengaluru	7000
104	Dr. Krithiga. K.	29 th Kerala Science Congress	28 th to 30 th Jan 2017	Tiruvalla	4000
105	Dr.DhanushKrishna .B	29 th Kerala Science Congress Symposium on ‘ Biodynamic Animal farming for the management of livestock diversity under changing global scenario	28 th to 30 th Jan 2017 8 th to 10 th Feb 2017	Tiruvalla Mannuthy	4000 3000
106	Dr. Devi.S.S	Symposium on ‘ Biodynamic Animal farming for the management of livestock diversity under changing global scenario	8 th to 10 th Feb 2017	Mannuty	3000
107	Dr. Devi.S.S	All India Study tour	4 th to 28 th march 2017	All India Study tour	50,000
108	Dr. Divya.C	OIE International workshop on canine rabies diagnosis	21 st to 23 rd February 2017	CVAS, Hebbal, Bangalore	7000

109	Dr. B. Sunil	Entrepreneur meet for meat producers	28/9/16	Hotel GB Palace, Ankamaly	
110	Dr. B. Sunil	Training on meat processing and value addition	26/9/16	Meat Technology Unit, Mannuthy	
111	Dr. B. Sunil	AHD Workshop -'Connect-16'	29/11/16-1/12/16	Thiruvananthapuram	
112	Dr. B. Sunil	Welfare Conference	16/12/16-17/12/16	Kochi	
113	Dr. B. Sunil	Sumedha Seminar	25/1/17-27/1/17	Idukki	
114	Dr .Joe Joseph, Assisstant Professor	Athletic Coaches Clinic	12/7/16 to 15/7/216	thrissur	

REVENUE GENERATED FROM LABORATORY FACILITIES

I. Department of Parasitology: Student Projects

1. Name of the student : Veena Venugopal
2. Name of the Institution : St.Thomas College, Thrissur
3. Title of the project : A study on the prevalence of ectoparasites in domesticated dogs of Thrissur corporation
4. Degree : Part of BSC. Zoology Research
5. Project guide / coordinator : Dr. H.Shameem
6. Revenue generated : Rs.5000
7. **Activities of the Laboratory** : **Clinical laboratory attached to the department is providing diagnostic services to detect parasites in clinical samples obtained from different species of animals as well the from postmortem samples.The referral samples from Govt. health centres and medical colleges of Kerala and neighboring states are also identified. Besides demonstration classes are also provided for BSc MLT students from different institutes across the states**

Number of samples examined

1. Fecal sample - 410
2. Blood smears - 461
3. Others - 8
4. TOTAL - 879

Revenue generated (Sample examination and demonstration) : Rs. 16,800/-

II. Department of Nutrition:

- 1) Mineral mixture - 3,02,980/
- 2) Lab animal feed - 89,156/
- 3) Feed analysis - 15,750/

4) School of Animal Nutrition and feed technology - 13, 86,740/

5) Small animal breeding station - 1,16,560/

Total = 19,11,186/ (Nineteen lakhs eleven thousand and one hundred and eighty six rupees only)

5. Activities of the Laboratory : **Feed and fodder samples from Govt. institutions, NGOs, societies and individual farmers are analyzed for proximate principles. It is an NABL accredited lab.**

III. Department of Veterinary Microbiology

est Done	No.	No. of human sample tested (for Leptospirosis- MAT)
Leptospira diagnosis MAT	268	51
PCR	91	
Blood smear/impression smear/milk smear	25	
Culture and sensitivity	165	
Bacterial/fungal culture	20	
RBPT for Brucellosis	9	
DFM	2	
Total	580	

Revenue generated: Rs. 12,235/-(Rupees Twelve thousand two hundred and thirty five only)

IV. Department of Veterinary Surgery and Radiology

- **Mobile veterinary service** : **369 numbers through eVetconnect**
- **Revenue generated** :
 - Revenue from Surgical procedures : Rs. 2,63,600
 - Revenue from Radiography : Rs. 2,81,450
 - Total : Rs. 5,45,050

V. Awards and Honours

Sl. No.	Name of the institution / staff / student	Name of the award / honour	Awarding body	Purpose of award	Nature of award
1.	Dr Indu V Raj, Assistant Professor	Second best paper award for oral presentation in the session Basic Veterinary and allied sciences.	8 th Kerala Veterinary Science Congress		National Award
2.	Dr K.B.Sumena Assistant Professor	Second best paper award for oral presentation in the session Wildlife.	8 th Kerala Veterinary Science Congress		National Award
3.	Dr. Indu V Raj Assistant Professor	Dr. Md. Hafeezuddin Silver Jubilee Medal and Award	Indian Association of Veterinary Anatomy	Best Paper in "Anatomy of Wild and Zoo Animals"	National Award

4.	Dr. Indu V Raj Assistant Professor	Late Shri L.O. Dhande Memorial Award	Indian Association of Veterinary Anatomy	Best Paper in “Forensic Anatomy Including Archeological Study”	National Award
5.	Dr. P. Sridevi, M.V.Sc. student	Dr. C.Vijaya Raghavan Memorial Silver Jubilee Medal and Award	Indian Association of Veterinary Anatomy	Best Paper in Avian Anatomy	National Award
6	Dr. K. Raji, Assistant Professor	Endeavour Post-Doctoral Research Fellowship	Government of Australia	For pursuing Post Doctorate	Fellowship
7	Dr. Uma R.	Best Poster Award	8 th Kerala Veterinary Science Congress		Certificate
8	Dr. Radhika G.	Dr. G. Nirmalan Memorial Award 2016	IVA Kerala	For best research article published during 2015	-
9	Dr. Bindya Liz Abraham	Best Poster award	SOC DAB 2017	Best Poster	-
10	Ponnala A. K.	Second Best Poster award	SOC DAB 2017	Second Best Poster	-
11	Dr Sajith purushothaman	Best paper	Avinashilingam University, Coimbatore	“Herbal and natural component as the future of pharmacology” international conference	International
12	Dr Jasmine Rani K	Best paper	Avinashilingam University, Coimbatore	“Herbal and natural component as the future of pharmacology” international conference	International
14	Dr S. Minu Sarrah Jasmine	Best poster	Avinashilingam University, Coimbatore	“Herbal and natural component as the future of pharmacology” international conference	International
15	Dr.Biya Ann Joseph	Awarded II Prize for Oral Presentation	VIII Kerala Veterinary Science Congress -2016	Awarded II Prize for Oral Presentation in Animal Production and Management session	
16	Dr. Priya P.M Assistant Professor Dept. of Veterinary Microbiology CVAS, Mannuthy	Best Oral presentation in IPSACON-2016	Indian Poultry Science Association	-	Certificate

17	Dr. Priya P.M Assistant Professor Dept. of Veterinary Microbiology CVAS, Mannuthy	Best poster presentation in IPSACON-2016	Indian Poultry Science Association	-	Certificate
18	Dr. Ambily R Assistant Professor Dept. of Veterinary Microbiology CVAS, Mannuthy	Best oral presentation	Indian Veterinary Association, Kerala	-	Certificate
19	Dr. Rinsha Balan Ph. D Scholar Dept. of Veterinary Microbiology CVAS, Mannuthy	2 nd place in best oral presentation	Indian Veterinary Association, Kerala	-	Certificate
20	Dr. Ambily R Assistant Professor Dept. of Veterinary Microbiology CVAS, Mannuthy	Best paper awrd in Life Science- 26 th Swadeshi science Congress.	Swadeshi Science Movement		Certificate
21	Dr Bibu John Kariyil	Best Poster Award (Second prize)	Laboratory Animals Scientist's Association	Second prize for best poster Award in the International conference on Laboratory Animal Sciences	Certificate and cash prize
22	Dr Bibu John Kariyil	Dr J.V. Angaria Award	Indian Society for Veterinary Pharmacology & Toxicology	Best research in the field of Ethnopharma- cology	Certificate and cash prize
23	D Bibu John Kariyil	Best oral presentation award	World Ayurveda Foundation	International Conference in Veterinary Ayurveda	Certificate
24	Dr Bibu John Kariyil	Best oral presentation award	National Soci- ety for Ethno- pharmacology	International conference on Herbal and Natural components as the future of Pharamcology	Certificate amd memento
25	Dr R. S. Jiji	PG Diploma in Intellectual Property Rights	IGNOU		Educational
26	Dr. T. S. Rajeev	MBA	Sikkim Manipal University		Educational
27	Dr Madhavan Unny (Staff)	Second Prize for Poster presentation in Wild Zoo and Exotic Animal Medicine session in Indian Society for Veterinary Medicine, 35 th Annual Convention on 22-24 th January 2017-	ISVM		National

28	Dr Nayana Kumara (MVSc Student)	Third prize for oral presentation in Companion Animal –Non infectious diseases session in Indian Society for Veterinary Medicine, 35 th Annual Convention on 22-24 th January 2017	ISVM		National
29	Dr Thejaswini (MVSc student)	Secured first prize for oral case presentation in Clinical conference 2016.	Directorate of Clinics, TANUVAS		
30	Dr Justin Davis K	Young scientist award for best oral presentation	Indian society for advancement of canine practice	Best clinical paper presented	Certificate
31	Dr.P.V.Tresamol	Best poster award	Indian society for Veterinary Medicine	Best poster presented in the session of equine, pack and zoo animal diseases	Certificate and memento
32	Dr.Arthi.,P.V.Tresamol	Best poster award	IVA,Kerala	Best poster in the session of animal Health	Certificate and memento
33	Seemanthini,R. Vinodkumar,K.	Second best oral paper	ISVM	Second best oral presentation in the session of infectious diseases of companion animals	Certificate and memento
34	Dr. S Anoop	Best Teacher Award	Dean, CVAS, Mannuthy	Outstanding performance in teaching, research and extension	
35	Dr.C.B.Devanand	Appreciation Award	KVASU	Laudable efforts in successful implementation of eVetconnect in KVASU	
36	Dr. C. Jayakumar	1.University Gold Medal 2. 3.	Karnataka Veterinary, Animal & Fisheries Sciences	Secured highest OGPA during Ph. D degree programme	
37	Dr. C. Jayakumar	Best article published in Intas Polivet Vol.17 (2016) No: 1 under category 'clinical article' – Clinical assessment, ultrasonographic diagnosis and management of Benign Prostatic Hyperplasia in dogs	Intas Polivet	Best clinical article published in 2016	

38		ISACP award for best article on Canine Reproduction and Breeding in Indian journal of canine practice 2016	Indian Society for advancement in Canine Practice	award for best article on Canine Reproduction and Breeding in 2016	
39	Dr Vasudevan V N	Best research paper award (oral)	Indian Meat Science Association	Best research paper award (oral)	
40	Dr. Sathu.T.	Best research paper award (oral)	Association of Meat Scientists and Technologists	In the National Seminar on Food: safety, health and environment	
41	Dr. Sathu.T	Best research paper award (oral)	Indian Veterinary Association	In the national seminar conducted by Kerala veterinary science congress	
42	Dr. Kritiga. K.	Best Oral Presentation	APCRICON		Certificate

MATERIAL RESOURCE

Sl. No.	Name of the equipment	Year of purchase	Cost of equipment	Company / make	Utility of the equipment in brief
Department of Veterinary Anatomy and Histology					
1	Laboratory Microscope and accessories with LCD Projection facility	2015	3,53,805/-	Meiji	Microscope with LCD projection and documentation facility
Department of Animal Nutrition					
2	Blood analyzer	2000	2L	MISPA	Working
3	Bomb calorimetr	2006	4L	Parr Istrumens	Working
4	Gas chromatograph	1993	2L	Anamatrix Nucon	Working
5	AAS	1991	8L	Perkin Elmer	Not working
6	Fibra tech	2013	2.5 L	Pelican	Working
7	Kel plus	1998,2013	2L	Pelican	Working
8	Sox plus	2013	2L	Pelican	Working
9	Muffle furnace	2013	1.3L	Thermoscintific	Working
10	Rusitek	2004	4L	Eaga	Not working
11	Water purifying system	2013	1.5L	Merck	Working
12	Hot air oven	1990,1994,2013		Labline	Working
13	Muffle furnace	1990,2000		Micron	Working
14	Precision balance(4)	2003, 2006		Denver	2 working

Department of Veterinary Microbiology					
15	ELISA Reader	2016	5,40,000/-	BioRad	For reading the results of ELISA test.
16	Laminar Air Flow	2016	1,65,000/-	BIOBASE	For Microbiology works
Department of Veterinary Parasitology					
17	Gel documentation	2016	500000	Biorad	Visualising the results of electrophoresis
Department of Dairy Science					
18	Fermentor	2016	6,00,000	Scigenics	Research
	Moisture analyser	2016	1,80,000	Sartorius	” ”
	Electronic balance	2016	95,500	Sartorius	” ”
	Monocular microscope X 4	2016	80,000	Labomed	” ”
	Laminar airflow	2016	70,000	Genesis	” ”
Department of CM					
20	Biochemical analyser		2 lakhs		For estimating serum biochemistry
21	Biosafety cabinet		4 lakhs		For Microbiological work
22	Blood gas analyser		4 lakhs		Blood gas analysis
23	Echocardiography machine		12 lakhs		For Echocardiography
24	Binocular microscope		50,000/-		Microscopy
25	ELISA reader		2 lakhs		Reading ELISA plates
26	PCR machine		2 lakhs		For PCR
27	Gel Doc Apparatus		5 lakhs		For reading electrophoresis
28	BP apparatus		10,000/-		Measuring BP
29	HPTLC parts		7 lakhs		For chromatography
30	Blood bag refrigerator		1 lakh		For storing blood bag for transfusion
31	ECG machine		30,000/-		Recording ECG
Department of PM					
32	Thermocycler	2016	4.5lakhs	Biorad	Molecular diagnosis of diseases
33	ELISA reader and Washer	2016	5.7lakhs	Biorad	Serological diagnosis of diseases by ELISA
34	Cooling centrifuge	2016	3 lakhs	Biorad	Diagnosis of diseases

Department of Veterinary Surgery and Radiology					
35	Large animal operation table	2016	981090/-	Hospital Equipment Technologies	For large animal surgeries
36	Large animal anaesthesia machine with ventilator	2016	496505/- 592515/-	Mellard Anesthesia machine and ventilator	Anaesthesia for large animals
37	Surgical lamp	2016	435500/-	Veterinary Equipment Technologies	Efficient lighting of the surgical field
38	Anaesthesia monitoring system for large animals	2016	9,90,000/-	Hospital Equipment Technologies	Monitoring of anaesthesia
39	Double station scrub sink	2016	2,97,000/-	Veterinary Equipment Technologies	Preparation of surgical team
40	CCTV System for Large Animal Operation Theatre	2016	2,96,003/-	GS Teletech Cochin	For documentation and teaching of undergraduates
41	C- arm table X-ray translucent top	2016	94,500/-	Surgchem,Thrissur	Real time imaging for orthopaedic surgery



VI. PUBLICATIONS

I. Research Article Published:

Sl. No.	Authors	Year	Title of the article	Name of the Journal	Vol. No. / Page No.	NAAS rating
1.	Indu V. R., Lucy K. M., Ashok N., Maya S. and Priya P.M	2016	Histology and Immunohistochemistry of the Palatine Tonsil in Goats.	Indian J. Anim. Res.	DOI:10.18805/ijar.v0iOF.7657	6.09
2.	Lucy, K. M., Indu, V. R., Leena, C., Fathima, R., George, C., Patki, H. S., Surjith, K. P. and Anneth, A. J.	2017	Gross anatomy of the skull of Hippopotamus (Hippopotamus amphibius).	Indian J. Anim. Res.	B-3277(1-3) DOI:10.18805/ijar.v0iOF.7659. Print ISSN:0367-6722/ Online ISSN:0976-0555.	6.09
3.	N.S.Sunilkumar, K.V.Jamuna, N.M. Rajahsailesha, M.H.Girish and R V Prasad.	2017	Sudies on the morphology of anducent nucleus in the buffalo (Bubalus bubalis).	Indian Journal of Veterinary and Animal Sciences Research	Jan Feb 2017 issue.	4.42
4	Indu V. R., Lucy K. M., Ashok N., Maya S. and J.J. Chungath.	2016	A comparative study on the tonsils in the oropharynx of goats.	Proceedings of the 8 th Kerala Veterinary Science Congress KSVC 2016	12 th & 13 th November 2016.	
5	Indu V. R., Lucy K. M., Ashok N., Maya S. Gleeja V.L. and J.J. Chungath.	2016	Postnatal changes in the Peyer's Patches in small intestine of goats.	Proceedings of the 8 th Kerala Veterinary Science Congress KSVC 2016	12 th & 13 th November 2016.	
6	Sreeranjini, A.R., Ashok, N., Maya, S., Lucy, K.M. and Chungath, J.J.	2016	Histochemical studies on the pancreas and intra and extra-pancreatic ducts in goat kids	J. vet. Anim. Sci.	47(1): 23 – 26.	2.92
7	Sreeranjini, A.R., Ashok, N., Indu V R, Lucy, K.M., Shyam K V, Sunilkumar N S, and Sumena K B.	2016	Morphological studies on the pelvic girdle of peahen (Pavo cristatus) and green- winged macaw (Ara chloroptera).	Proceedings of the 8 th Kerala Veterinary Science Congress KSVC 2016	12 th & 13 th November 2016.	
8	Sreeranjini, A.R., Ashok, N., Maya, S., Lucy, K.M. and Chungath, J.J.	2016	Histological studies on prenatal innervation in the pancreas of crossbred goat kids.	Proceedings of the 8 th Kerala Veterinary Science Congress KSVC 2016	12 th & 13 th November 2016.	
9	Sunilkumar N.S., Deepthi V., Shyamala K. Ashok, N., Lucy, K.M., Indu V R, Sreeranjini, A.R., and Sumena K B.	2016	Effect of praziquantal in treating schistosoma spindale infection in cattle.	Proceedings of the 8 th Kerala Veterinary Science Congress KSVC 2016	12 th & 13 th November 2016.	

10	Sumena, K.B., Lucy k.M., Ashok,N. and Indu V.R.	2016	Pectoral Limb Bones of Black Drongo (Ducrurus macrocercus)	Proceedings of the 8 th Kerala Veterinary Science Congress KSVC 2016	12 th & 13 th November 2016.	
11	A.S. Siddaramesh and V. Beena		The effect of dietary organic selenium and iodine supplemntations on glutathione peroxidase activity in cross bred female calves	Journal of Veterinary and Animal Sciences	4, 1-10	
12	Renuka K.K, Beena V and Jayavardhanan K. K.		Comparative assessment of certain biochemical parameters in native cattle breeds of Kerala	International journal of agricultural sciences and veterinary medicine	Accepted for publication	
13	M.D.Pratheesh, Pawan kumar Dubey,Nitin Gade, Amarnath, Madhu.D.N, Anjali somal, Indu.B, Sreekumar.T.R, G.Taru Sharma, V.L.Gleeja		Comparative study on characterization and wound healing potential of goat mesenchymal stem cells derived from fetal origin amniotic fluid and adult bone marrow	Research in Veterinary Science	Accepted for publication	
14	R. Lakshmi and K. K. Jayavardhanan	2016	Isolation and identification of major causing bacteria from bovine mastitis	International Journal of Applied and Pure Science and Agriculture,	(4), 45-48	4.74
15	R. Lakshmi, K. K. Jayavardhanan and T. V. Aravindakshan	2016	Characterization of promoter sequence of toll-like receptor genes in Vechur cattle	Veterinary World	(9), 626- 632	5.71
16	Shuhaib, P ; Leeba Chacko ; Shynu, M. Amritha Aravind	2016	Blood plasma progesterone concentration in postpartum dairy cows after subjecting to ovulation synchronization with Triu-B® progesterone insert	International Journal of Applied and Pure Science and Agriculture	216-219	4.74
17	Prashant U and Shynu M.	2016	Molecular Sexing of Conures- Comparative evaluation of the efficacy of three different primer pairs	International Journal of Applied and Natural Sciences	35-38	3.73
18	Ciby Somu, Uma Radhakrishnan and Shonima Pala	2016	Outer membrane protein A gene based diagnosis of Riemerella anatipestifer infections in ducks	Advances in Animal and Veterinary Sciences	4(10) 527-535	4.04

19	S. Siji Raj, N. Madhavan Unny, R. Uma and S. Ajithkumar	2016	Obesity associated metabolic syndrome in a dog.	Indian Journal of Canine Practice	8(2), 127- 129	4.42
20	M.V. Chinnu, Varuna P. Panicker and Sisilamma George	June 2016	Promoter sequence analysis of ATP citrate lyase gene in Buffalo and Vechur cattle	Buffalo Bulletin	35 (2) 283-290	6.6
21	G. Rajkumar, K. Shyama, K. Elizabeth, M.T. Dipu, P. Gangadevi, C. Sreenivasan, P.S. Banakar	2016	Effect of feeding of hydroponic fodder maize on growth performance and nutrient utilization in rabbits	Journal of Indian Veterinary Association	Vol 14, issue 1 April	
22	Bindya Liz Abraham and Mathew, A	2016	Performance of Soviet Chinchilla rabbits in the sub-tropical high altitudes of Kerala	Indian Vet. J.	93 (07): Pp 79-81	4.42
23	Radhika G, Raghavan K C and Aravindakshan T V	2016	Polymorphism of exon 2 and 3 of Growth Hormone gene and presence of a rare genotype in native goat breed of Kerala	Small Ruminant Research	145: 81-84	7.08
24	Karthikeyan A, G. Radhika T. V. Aravindakshan & K. Anilkumar	2016	Expression Profiling of Innate Immune Genes in Milk Somatic Cells During Subclinical Mastitis in Crossbred Dairy Cows	Animal Biotechnology	27(4): 303-309	6.69
25	Karthikeyan A., Radhika G., Aravindakshan T.V., Pruthviraj D. R. and Pragathi K. S.	2016	Genetic basis of mastitis resistance in cattle	International Journal of Science Environment and Technology	5 (4): 2192-2199	--
26	Radhika G., Aravindakshan T.V., Jinty S and Ramya K. 2017	2017	Evaluation of Genetic Diversity, Population Structure, and Relationship Between Legendary Vechur Cattle and Crossbred Cattle of Kerala State, India	Animal Biotechnology	http://dx.doi.org/10.1080/10495398.2017.1297719	
27	Lali, F.A. and Anilkumar K.	2016	Diacylglycerol-o-transferase 1 (DGAT1) gene and milk production traits in crossbred cattle of Kerala 2016	J. Vet. Anim. Sci.	47(1): 52-57.	3.65

28	Pavan. M, Renuka. N, kavitha R, sunanda and sathu.T	2016	Development and quality evaluation of chicken nuggets in corporate with Maranta arundinacea (Arrow root)	Indian journal of natural science,	vol 7: 37 .p11411-14	
29	sathuT, Kuttinarayanan, Vasudevan., Rajakumar S.N and Preethy John	2016	Effect of Natural antioxidants Garcinia and rosemary extracts and their blends on the qualities of functional chicken nuggets.	International journal of Agriculture, Environment and Biotechnology	vol8:p69-73.	
30	Kuleswan, P, Sathu, T, and Gunasekaran., P,	2016	Development and evaluation of intermediate moisture chicken Chammanthi formulated with added acidulants	Journal of Indian veterinary Association	vol14:1 p: 35-40	
31	Prajwal, S., Vasudevan, V.N., Kuttinarayanan, P, Sathu, T., Shreeranjini, A.R., Poobal, P, Gunasekaran, P and Kuleswan Pame.	2016	Profiling studies of selected buffalo and bovine muscles for palatability attributes	Journal of Veterinary and Animal Science	Accepted for publication	
32	Kuleswan Pame., Sathu, T., Kuttinarayanan, P, Vasudevan, V.N., Irshad, A., Gunasekaran, P and Prajwal, S.	2016	Development of and evaluation of pet kibbles using meat-cum-bone meal.	Journal of Veterinary and Animal Science	Accepted for publication	
33	Gunasekaran, P, Sathu, T., Kuttinarayanan, P, Vasudevan, V.N., Irshad, A., Kuleswan Pame and Prajwal, S.	2016	Effect of different levels of glycerol on physico-chemical and sensory characteristics of the barbecued chicken	Journal of Veterinary and Animal Science	Accepted for publication	
34	Prajwal, S., Vasudevan, V.N., Sathu, T., Shreeranjini, A.R., Poobal, P, Gunasekaran, P and Kuleswan Pame	2016	Prediction of sensory tenderness of beef muscles having different collagen characteristics using warner-bratzler shear force	International Journal Science Environmental Technology	6(2):1123-1133	
35	Prajwal, S., Vasudevan, V.N., Sathu, T., Irshad A. and Sunanda, C	2016	Characterization of buffalo meat using principal component analysis.	International Journal of Livestock Research	Accepted for publicatio	

36	Irshad A., B. D. Sharma, S. R. Ahmad, S. Talukder, O.P. Malav and Ashish Kumar.	2016	Effect of incorporation of calcium lactate on physiochemical, textural and sensory properties of restructures buffalo meat loaves	Veterinary World	9(2) 151-159.	
37	O.P. Malav, B.D. Sharma, R.R Kumar, S. Talukder, S.R. Ahmed and A. Irshad	2016	Quality characteristics and storage stability of functional mutton patties incorporated with red kidney bean powder	Indian Journal of small ruminants	22(1): 83-91	
38	N. Elanchezhian and Ally K	2016	Replacement of maize by wheat bran on growth and feed intake pattern in pigs	Indian Journal of Veterinary and Animal Sciences Research	Vol 45 (1) January-February	4.42
39	K.Jasmine rani, K. Ally C.R.Chitrima Sheethal, Surej Joseph Benglavan, P. Gangadevi and K. Shyama	2016	Dietary incorporation of Ksheerabala residue and its effects on nutrient utilization, growth performance and blood biochemical parameters in crossbred calves	Indian Journal of Animal Nutrition	Vol 33	5.02
40	Chitrima Sheethal.C.R. K.Jasmine rani, , Surej Joseph Benglavan, P. K. Ally	2016	Effect of dietary incorporation of Ksheerabala residue on drymatter intake and nutrient digestibility in crossbred calves	International journal of agriculture and food science technology	Vol 7 No.1 pp 7-11	
41	K. Jasmine rani, C.R. Chithrima sheethal ,Surej Joseph Benglavan, P. K. Ally and K.Shyama	2016	Effect of dietary incorporation of nutraceutical residue(alpha alpha pellet)and growth performance and haematological parameters in crossbred calves	Indian journal of natural sciences	Vol 6 issue 35	
42	Arathy Saseendran, K.Ally, P. Gangadevi and P.S. Banakar	2016	Effect of supplementation of Lecithin and Carnitine on growth performance and nutrient digestibility in pigs fed high fat diet	Veterinary world	Vol 10	5.71
43	Dr. Surej Joseph Bunglavan	2016	Effect of dietary supplementation of selenium nano particles on intake and utilization of nutrients in wistar albino rats	Journal of Indian Veterinary Association	14(1):35-41	

44	Biju Chacko, K.M.Syam Mohan, K. Ally, K. Shyama, K. S. Anils, and C.T Sathian	2016	production performance of cows reared on complete feeds with varying levels of neutral detergent fibre (ndf) as against the conventional grass concentrate feeding system in kerala	J.Vet.Anim	41 (1) 36-41	3.65
45	G. Jayaprakash , K. Shyama , P. Gangadevi , K. Ally , K.S. Anil, Asha K. Raj , M. Sathiyabarathi and M. Arokia Robert	2016	biomass yield and chemical composition of calliandra calothyrsus, desmanthus virgatus and stylosanthes hamata	International Journal of Science and Environment	Vol. 5, No 4, 2016, 2290 – 2295	3.98
46	Charujith Narayanan, Dildeep V, Sajith Purushothaman, Pramodh K, and Sunanda	2016	Effect of complete feed with Tween 80 on weight gain and Fibre Digestibility on Dairy calves	Indian Journal of Natural sciences	Vol-7, Issue 39	2.51
47	Sankar, S., Chacko, N., Krithiga, K., Chacko, N. and Mini, M.	2016	Report on the isolation of Salmonella enterica subsp. enterica serovar Neastved from ducks of Kerala	Journal of Indian Veterinary Association(JIVA),	14 (2): 59-60	
48	Reshma, S., Sankar, S., Chandran, A.R., Ahmad, S. M., Akkara, T. s., Niyas , E., Mani, B. K. and Mini, M	2016	A case report on Bacillus licheniformis associated with bovine abortion	Journal of Indian Veterinary Association(JIVA),	14(2) :61-62	
49	Akkara, T. S., Sankar, S., Balan, R., Ahmad, S.M., Chandran A.R . and Mini, M	2 016	A report on the isolation of Candida tropicalis and Aspergillus niger from a case of recurrent mastitis in a cow	Journal of Indian Veterinary Association(JIVA),	14(2):63-65	
50	Sankar, S., Chacko, N.,Radhika, S.,Chandran, A.R., Akkara, T.S.,Reshma, S.,Ahmad, S.M. and Mini , M	2 016	Isolation, characterization and antibiogram of Enterococcus faecalis in bovine milk samples from case of recurrent mastitis in a farm	J. Immunol. Immunopathol	8:111-112	4.64
51	Ali, R. M., Mani, B. K., Mini ,M., Priya, P.M. and Vinod Kumar, K	2016	Loop mediated isothermal amplification based detection of canine parvo viral DNA in faecal samples of diarrhoeic dogs	J. Immunol. Immunopathol.	18(1): 32-38	3.1

52	Mani, B. K., Joseph, S., Mini, M., Aravindakshan, T.V. and Latha, C	2016	Polymerase chain reaction based diagnosis of leptospirosis in bovine abortion by detection of LipL32 gene	J. Vet. Anim. Sci.	47(1): 16-18.	3.65
53	Surya, P.S., Priya, P. M. and Mini, M	2016	Biotyping and antibiogram of <i>Riemerella anatipestifer</i> from ducks in Kerala	Biosci. Biotech. Res. Comm.	9(3): 457-462.	4.31
54	Surya, P.S., Priya, P. M. and Mini, M	2016	Protein profiling and restriction enzyme analysis of <i>Riemerella anatipestifer</i> from ducks in Kerala	Indian J. Poult. Sci	51(2):151-154	5.1
55	Reshma, P.S., Sankar,S., Renjith, R., Roshin, M. R., Aiswarya, N., Chandran A.R. and Mini, M	2017	Molecular characterization of <i>Mycoplasma gallisepticum</i> infection in Japanese quails	Journal of Indian Veterinary Association(JIVA)	14(3):23.	
56	Rajagopal, R, Chandran, S. R, Nair, G. K., Mini, M, Joseph. L., Rojan. P. M. and Jayasree, S	2017	Virulence studies of <i>Pasteurella multocida</i> in mice, ducklings and adult ducks.	J. Microbiol. Biotechnol. Food Sci.	6 (5): 1209-1212.	0.29 (impact factor)
57	Koulath, P. R., Priya, P. M., Mani, B. K., Mini, M. and Pillai, U. N	2017	Comparison of different diagnostic tests to detect Feline panleukopenia virus among cats in Kerala, India	Indian J. Anim. Res.	51 (2): 347-349.	6.09
58	Ambily, R. and Mini, M	2017	Incidence of systemic aspergillosis in Japanese quails (<i>Coturnix coturnix japonica</i>) in a private farm	Trends in Biosciences	10 (14):2593-2595	3.94
59	Ambily, R., Athulya, E. P. and Mini, M	2017	Periodontitis in Dogs- A Review	Trends in Biosciences	10 (9):3344-3346	3.94
60	Sankar ,S., Chandran A.R., Reshma P.S., Linju, Lal. and Mini, M	2017	Molecular Detection of Porcine Circovirus from Post Weaning Multi Sytemic Wasting Syndrome in Pigs	Trends in Biosciences	10(17): 3142-3143	3.94
61	Sneha Augustine., Lucy Sabu and Bindu Lakshmanan	2017	Molecular identification of <i>Babesia</i> spp. in naturally infected dogs of Kerala, South India	Journal of Parasitic Diseases.	41:459-462	4.65

62	Vishnurahav R.R., Usha Narayana Pillai., Ajithkumar S. And Lucy Sabu.	2017	Efficacy study of clindamycin as potential monotherapy treatment plan for clinical case of dogs infected with Babesia gibsoni	Malaysian Journal of Veterinary Research	8(1):45-49	
63	Bindu Lakshmanan, K. Devada, Siju Joseph, T. V Aravindakshan and Lucy Sabu	2016	Copro-PCR based detection of bovine schistosome infection in India.	Journal of Helminthology	90:102-107	7.63
64	Bindu Lakshmanan, K. Devada, Siju Joseph and IS Sajitha	2016	Immunoblot profile of soluble egg antigens of Schistosoma spindale.	Journal of Indian Veterinary Association	14(1):63-66	
65	Jayasree, S., Shameem, H., Gleeja, V. L. And Prejith. K	2016	Effect of anthelmintic therapy on milk quality in bovine amphistomosis.	Journal of Indian Veterinary Association	14(1): 60-62.	
66	Karthika, S., Anu, A.P., Praseetha, R., Deepa, C.K., Priya, M.N. and Reghu Ravindran.	2017	Pattern of occurrence of gastrointestinal strongylosis in an organized caprine farm of Wayanad district, Kerala, South India	Int.J.Curr. Micobiol.App. Sci..	6:1038-1042	
67	Gopalakrishnan, A. and Usha P.T.A.	2017	Phytochemical screening and in vitro antioxidant activities of chloroform soluble fraction of Thespesia populnea bark leaf extract	Livestock Science	Under publication	7.29
68	Anu, G., Usha P.T.A., Bibu J.K., Reni, J. and Surya, S.	2016	Phytochemical screening and in vitro antioxidant activities of chloroform soluble fraction of Simarouba glauca leaf extract.	Life Science bulletin	13: 169-171	3.47
69	Bibu John and Usha P.T.A	2016	Antiproliferative effect of chloroform fraction of methanolic extract of A. muricata in breast cancer cell lines	Journal of Veterinary and Animal Sciences	47 (2): 47-50.	3.65
70	Aleymma, A., Shaji, B.N., Bibu, J.K. and Usha P.T.A.	2016	Therapeutic management of pox diseases of cattle using a traditional herbal formulation.	Proceedings of 8 th Kerala Veterinary Science Congress (ISSN No. 2394-255X)	36-39	nil

71	Choudante, S.D., Usha, P.T.A., Preethy, J., Sujith, S. and Beena V.	2016	Hypoglycemic evaluation of ethanolic extract of Costus speciosus in diabetic rats	Journal of Veterinary and Animal Sciences	Accepted for publication	3.65
72	Lisha A, Preethy John, Usha, P.T.A., Sujith, S.,Ajith,J.G	2016	Phytochemical screening & FTIR spectroscopy of Avoerrhoea bilimbi fruits	Journal of Veterinary and Animal Sciences	Accepted for publication	3.65
73	Divyadevi MG, Radhika a, Geetha, R & C.T. Sathian	2016	Evaluation of quality of starter cultures isolated from home made Dahi	Ind.J.Dairy sci.	69(3) 322-327	
74	R.Geetha, C.T.Sathian & Flemy	2016	Isolation & Identification of Lactic acid bacteria from naturally fermented food samples	J. veterinary & animal sciences	46(1) 60-64	
75	K.R.Megha and K.Radha	2016	Development and quality evaluation of prebiotic yoghurt from goat milk	Indian journal of veterinary and animal sciences research	45 (3) 655-661.	4.5
76	Thushara, V. K. Radha and C.T. Sathian	2016	Effect of fat replacers on the quality characteristics of non fat yoghurt	Indian journal of veterinary and animal sciences research	45 (3) 677--684.	4.5
77	Radha,K. , Salumol, M.S. and Sathian, C.T	2016	Assessment of microbiological quality of khoa based sweets marketed in Thrissur city	Indian journal of veterinary and animal sciences research	45 (4) 765--772.	4.5
78	Chithra Chandrasekharan, C., Jiji, R.S., Rajkamal, P.J., Rajeev, T.S. and Mercey, K.A.		Job satisfaction of the scientists in the animal science research institutes of ICAR	J. Vet. Anim.Sci	Accepted for publication	
79	K Vrinda Menon, B Sunil, C Latha and Sunanda C.	2017	Survivability of Listeria monocytogenes in Sea water from coasts of Kerala, India of Arabian Sea.	Int. J Pollution Res	36 (3) : 209-213	
80	Latha, C., Deepthi, V and Vanitha, H.D.	2016	Zoonoses- A double edged weapon	J. Indian Vet. Assoc.	14 (2):5 – 18	
81	Sethulekshmi C., Latha C and Sunil B.	2016.	Occurrence of Enterohaemorrhagic Escherichia coli in raw samples in Kerala.	Int. J. Adv. Res. Biol. Sci.	3(1)220-222	

82	Sethulekshmi C and Latha C.	2016	Occurrence and molecular characterisation of Enterohaemorrhagic Escherichia coli in raw milk.	J. Indian Vet. Assoc.	14(1) 30—34	
83	K.V.Mini, P. V. Tresamol, M.R. Saseendranath, K.Vinod Kumar, C. Latha and G.K.Sharma K.V. Mini, P.V. Tresamol, M R Saseendranath, K Vinod Kumar, C Latha and G K Sharma (2016). Sero – dynamics of maternally derived antibody in new born calves against FMD. 2016. J. Vet. Anim. Sci. 47(1): 86-89	2016	Sero – dynamics of maternally derived antibody in new born calves against FMD.	J. Vet. Anim. Sci.	47(1): 86-89	
84	Binsy Mathew, E Nanu and B Sunil	2016	Isolation of bacteria of public health significance from market beef.	Int j. Adv.Res. Biol. Sci.	3(4):160-164.	
85	Pankaj Dhaka, Deepthi Vijay, Jess Vergis, Mamta Negi; Vysakh Mohan, Manesh Kumar, Swapnil Doijad; Krupali Poharkar; Ashok Kumar, Satyaveer S Malik, Sukhadeo B Barbuddhe, Deepak B Rawool	2016	Predominance of “atypical” Enterococci among human, animal, foods and associated environmental sources. Infection	Ecology and Epidemiology	6: 31055	
86	Manesh Kumar, Pankaj Dhaka, Deepthi Vijay, Jess Vergis, Vysakh Mohan, Ashok Kumar, Nitin V. Kurkure, S. B. Barbuddhe, S.V.S. Malik, Deepak B. Rawool	2016	Antimicrobial effects of Lactobacillus plantarum and Lactobacillus acidophilus against multidrug-resistant Enterococci.	International Journal of Antimicrobial Agents	48: 265–270	
87	Reshma Jacob, Binsy Mathew, Latha C, Neethu KP, and Sunil B	2017	Isolation of Campylobacter from backyard poultry in Kerala, India	Journal of Food borne and zoonotic diseases	5(1):12-15	

88	P.V.Tresamol.,Anju Moonjely, Suchithra,S. and Siju Joseph	2017	Seroprevalence of Leptospirosis among cattle in and around Thrissur District,Kerala	Int. J. Livestock Res.	7(3) 45-48	5.38
89	Varghese Samuel Mathai, Syam K V, C.B. Devanand, M. K. Narayanan	2016	Minimally invasive interlocking nail fixation in a Labrador with oblique tibial fracture	Indian Journal of Canine Practice	8(1)51-54	4.42
90	S S Sreenesh,Usha Narayana Pillai,P C Alex, Ajith Kumar,C.B. Devanand	2016	Hematobiological analysis of cardiomyopathic dogs treated with enalapril and spiranolactone	Indian Journal of Canine Practice	8(1) 8-11	4.42
91	Anoop S, Sudheesh S N, Karthika S and Devanand C.B	2016	Inguinal hysterocele and its surgical management in a female Dachshund dog	Malaysian Journal of Veterinary Research	7(2) 31-34	-
92	SAnoop, Laiju M Philip, Devanand C.B, and S Ajithkumar	2016	Spontaneous urinary bladder perforation and its successful surgical management in adog	Indian Veterinary Jorunal	93(12)16-17	-
93	Sivsankaranand G Rout,PC Alex,Usha Narayana Pillai,SAjith Kumar and C.B.Devanand	2016	Clinicobiochemical and ultrasonographic investigation on splenitis in dogs	Journal of Veterinary and Animal Sciences	47(1) 58-60	3.65
94	Laiju M Philip,C Ramani,B Justin Williams and S Ushakumari	2017	Ultrasosnographic anatomy and biometry of eye in calves and goats	Ind.Journal of Anim. Sci.	87 175-177	-
95	Laiju M Philip, A M Adarsh,and S M Varghese 2016	2016	Surgical Management of oesophageal foreign body obstruction in a cat.	Intas polivet	17 613-614	- 4.79
96	S.Sulficar,MR Saseendra and S Anoop	2016	Dignosis and therapeutic management of sinonasal aspergillosisin Labrador retriever	Intas Polivet	16 (11) 467-468	4.79
97	Karthik V Kuttan, Metilda Joseph, Shibu Simon, K.N. Aravinda Ghosh and Anish Rajan	2016	Effect of intra partum fetal stress associated with obstetrical interventions on viability and survivability of canine neonates	Veterinary World	Vol.9 (12) : pp 1485-1488	5.71

98	Karthik V Kuttan, Metilda Joseph,	2017	A comparative study on spontaneous whelping , Assisted whelping and emergency caesarean section in canines .	Journal of Dairy, Veterinary & Animal Research	Vol 5(1): pp 00129	
99	C. Jayakumar, G. Sudha and A. Krishnaswamy	2016	Clinical Assessment, Ultrasonographic Diagnosis and Management of Benign Prostate Hyperplasia (BPH) in Dogs	Intas Polivet	Vol. 17 (I): 148-150	4.7
100	C. Jayakumar, A. Krishnaswamy and G. Sudha	2016	Feathering response as a prognostic indicator to medical management of uterine inertia in dogs	IJCP	8(1): 33-37	4.42
101	C. Jayakumar, A. Krishnaswamy, G. Sudha and T.G. Honnappa	2016	Assessment of canine newborn viability by umbilical vein lactate evaluation and its prognostic value in short term neonatal survival	Indian Journal of Animal Reproduction	37 (1): 27-29	3.43
102	C. Jayakumar, G. Sudha, S. Kantharaj and G. Imam Hussain	2016	A rare case of complete vaginal prolapse in an advanced pregnant bitch	Indian Journal of Animal Reproduction	37 (1): 59-60	
103	S. Praveen, C. Jayakumar, Amritha Aravind and R.S. Abhilash	2016	True prolapse of gravid uterus, bladder and intestines through vaginal tear in a goat	Indian Journal of Animal Reproduction	37 (1): 63-64	
104	C. Jayakumar, A. Krishnaswamy, G. Sudha and T. G. Honnappa	2016	Blood glucose and total calcium concentration in obstetrical emergencies in dogs	IJCP	8(1):25-29	4.42
105	Akhila V.V.K Promod, A. Arangasamy, A.C. P Azeez, Amritha Aravind and Babitha V	2016	Assessment of Effect of Curcumin supplementation on sperm functional membrane integrity and acrosome integrity of Malabari buck spermatozoa using HOS-G procedure	Indian Journal of Natural Sciences	Vol.7/Issue 39/ December 2016.pp 11753-11759	3.56
106	Yamini P Suresh,K. Promod,Manoj M, Bindya Liz Abraham, S Selvaraju, Abdul Azeez C P, Amritha Aravind and Hiron M Harshan.	2016	Fresh semen characteristics of Vechur bull spermatozoa.	Indian Journal of Natural Sciences.	Vol. 7/Issue 39/ December 2016.	

107	Shuhaib,P,Leeba Chacko, Shynu,M.,and Amritha Aravind	2016	Blood Plasma Progesterone concentration in post partum dairy cows after subjecting to ovulation synchronization with TRIU-B progesterone insert	International J. of Applied and Pure science and Agriculture	Vol 2(6).pp216-218	3.762
108	Jayakumar. C., Sudha C.M., Niyaz. E., and Naveenkumar. R.H	2017	UNILATERAL BARTHOLIN'S GLAND CYST IN A DOG	Indian Journal of Animal Reproduction	38 (1): 74-75.	
109	Jayakumar, C., Sudha, G., Kantharaj, S. and Lakshmikanth, K	2017	Ultrasonographic diagnosis and treatment of hydrometra in jamnapari goats	Indian Journal of Animal Reproduction	38 (1): 72-73	
110	Chinnu. P.V., Jayakumar. C., Smitty, J. and Martin, K.D.	2016	Enbloc ovariohysterectomy as a treatment for fetal cause of dystocia in a cat- a case report	Indian Journal of Canine Practice,	8 (2): 147-148	
111	C. Jayakumar, A. Krishnaswamy, G. Sudha and T.G. Honnappa. Indian Journal of Canine Practice	2016	Blood glucose and total calcium concentration in obstetrical emergencies in dogs	Indian Journal of Canine Practice,	8 (1): 25-29	
112	R.S.Abhilash., Anil Kumar,K., Ghosh,K.N.A., S.Biju. and K.S.Ajith	2016	Efficacy of different therapeutic protocols for the treatment of subclinical endometritis in cows	The North East Veterinarian	XVI pp 12-14	
113	Dr Usha N. Pillai	2016	Occurrence of gastric disorders in dogs with vomiting	Indian J Natural Science	7(37)11456-11466	3.56
114	Dr Usha N. Pillai	2016	Hematobiochemical analysis of dilated cardiomyopathy dogs treated with Enalapril and Spironolactone	Ind. J. canine Practice	8:(1)8-11	4.42
115	Dr Usha N. Pillai	2016	Idiopathic immune mediated haemolytic anemia in dogs –A case study-	J of cell and tissue research	16(3)1-4	
116	Dr Usha N. Pillai	2016	Epidemiological study of urinary tract infection in dogs.	J of cell and tissue research	16(1)5491-5494	
117	Dr Usha N. Pillai	2016	Biofilm production of Staphylococcal aureus associated with canine urinary tract disease	International J. of Science and nature	7(4)891-893	3.56

118	Dr Usha N. Pillai	2016	. Efficacy study of clindamycin as potential monotherapy treatment plan for clinical cases of dogs infected with Babesia gibsoni	Malasian J of veterinary Research	8(1)45-49	
119	Dr Usha N. Pillai	2017	Phytochemical analysis and invitro antifungal studies of medicinal plants- Elephantopus scaber, Cyclea peltata and Artemisia japonica.	Int, J of Pharmacognosy and phytochemical research	9(3)319-322	
120	Dr Madhavan Unny	2016	Management of compulsive tail chasing and biting in a dog	Indian Journal of Canine Practice	8:19-20	4.42
121	Dr Madhavan Unny	2016	Splenic abscess in a German Shepherd dog	Malaysian Journal of Veterinary Research	7:43-45	
122	Dr Madhavan Unny	2016	Obesity associated metabolic syndrome in a dog	Indian Journal of Canine Practice	8:127-129	4.42
123	Dr Deepa Chirayath	2017	Poly cystic kidney disease in a Persian cat –A case Report	Indian Vet j 2017	March94(03)60-61	4.45
124	Nithya Chacko, K.Krithiga, C.Purnima, Ajith Jacob George, J.A. Mammen, S.S. Devi and N. Vijayan	2016	Paratuberculosis in a doe- a case report	Journal of Veterinary and Animal Science	47(1): 94-96	2.92
125	Sovan, R., Krithiga, K., Dhanush, K.B., M.J. Abraham, A.J.George., N. Vijayan and C. B. Manomohan	2016	Bronchogenic adenocarcinoma of lung with metastasis in a rabbit- a case report	Indian Journal of Veterinary Pathology	41 (1): 73-74	5.03
126	Dhanush, K.B., Vishnu, S., Prasad, C., Divakaran Nair, N. Vijayan and Ajith, J.G.	2016	Report of primary rhabdomyosarcoma of the breast muscle with metastasis to liver in a six months old hen	Proceedings; Kerala Veterinary Science Congress 2016	156-157	
127	Krithiga, K., Sovan, R., Devi, S.S., Dhanush, K. B., Ajith, J.G., Nair, N.D. and Vijayan, N.	2016	Sylvatic rabies- A case report	Proceedings; Kerala Veterinary Science Congress 2016	439	

128	Devi, S.S., Nithya, C., Krithiga, K., Dhanush K. B., Ajith, J.G., Nair, N.D. and Vijayan, N.	2016	Canine frenzy – An overview	Proceedings; Kerala Veterinary Science Congress 2016	95-97	
129	Baby Salini.E	2016	“Effects of Yogic Practices on resting heart of differently abled students	(International Journal of Applied Research, www.allrearesearch-journal.com.	ISSN PRINT: 2394-7500, ISSN Online 2394-5869, .impactFactor:5.2, IJAR2016:2(6):332-333,	

Research Papers Presented:

Sl. No.	Authors	Title	Name of the Seminar / Symposium / Conference	Place and Date
1.	Sumena K.B., Lucy K.M., Ashok N., and Indu V	Pectoral limb bones of Black Drongo (<i>Dicrurus macrocercus</i>).	8 th Kerala Veterinary Science Congress KSVC 2016 organized by Indian Veterinary Association, Kerala	Pattikkad, Thrissur on 12 th & 13 th November 2016.
2.	Sunilkumar N.S., Deepthi V., Shyamala K.Ashok, N., Lucy, K.M., Indu V R, Sreeranjini, A.R.,and Sumena K B.	Effect of praziquantal in treating schistosoma spindale infection in cattle.	8 th Kerala Veterinary Science Congress KSVC 2016 organized by Indian Veterinary Association, Kerala	Pattikkad, Thrissur on 12 th & 13 th November 2016.
3.	Thankachen K. C. and Lucy K. M.	Socio-economic impact of FMD outbreak in Thrissur corporation	8 th Kerala Veterinary Science Congress KSVC 2016 organized by Indian Veterinary Association, Kerala	Pattikkad, Thrissur on 12 th & 13 th November 2016.
4	A.R. Sreeranjini, N. Ashok, P. Suvaneeth, V.R. Indu, N.S. Sunilkumar and K.B. Sumena	Comparative morphological studies on the biomechanical adaptations of atlas and axis in African Grey Parrot (<i>Psittacus erithacus</i>) and domestic fowl	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
5	A.R. Sreeranjini, Amritha Aravind, R.H. Naveenkumar, Shravya. G.S. and N. Ashok	A case of congenital kyphosis in thoracic vertebrae, evisceration of abdominal contents and open fontanel in a newborn Doberman puppy	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
6	A.R. Sreeranjini., N. Ashok., S. Maya., K. M.Lucy. and J. J. Chungath	Histological, histochemical and lectin histochemical studies on the major pancreatic duct in crossbred goat kids	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
7	A.R. Sreeranjini., N. Ashok., K. M.Lucy., S. Maya. and J. J. Chungath	Histological studies on the structural relationship between exocrine and endocrine components during development of Pancreas in crossbred goats	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16

8	A.R. Sreeranjini., M.P. Iyyangar, D. Pramodkumar and S. Gopinath	Histological studies on the renal cortex and medulla of Japanese quail (<i>Coturnix coturnix japonica</i>)	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
9	A.R. Sreeranjini., N. Ashok., K. Raji, S. Maya., K. M.Lucy. and J. J. Chungath	Immunohistochemical demonstration of postnatal development of B-cells in the pancreas of crossbred goat kids	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
10	A.R. Sreeranjini, N. Ashok, V.R. Indu, S. Pramod, N.S. Sunilkumar and K.B. Sumena	Gross anatomical studies on the pectoral girdle of African Grey Parrot (<i>Psittacus erithacus</i>)	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
11	Indu V. R., Lucy K. M., Dhande P.L., Ashok N. and Priya P.M.	Immunohistochemistry of the tubal tonsils in goats	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
12	Indu V. R., Lucy K. M., Ashok N., Maya S. and Chungath J.J.	Histology and ultrastructure of the jejunal peyer's patch in goats	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
13	Indu V. R., Lucy K. M., Ashok N., Sreeranjini A. R., Sumena K.B. and Sunilkumar N.S.	Anatomical studies on the lateral malleolus of Vechur cattle	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
14	Indu V. R., Lucy K. M., Ashok N. and Chungath J.J.	Structural basis for forensic identification of skull of big cats	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
15	Indu V. R., Lucy K. M., Ashok N., Sreeranjini A. R., Sumena K.B. and Sunilkumar N.S.	Gross anatomical studies on the tarsal bones of vechur cattle	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
16	Indu V. R., Lucy K. M., Ashok N. and Chungath J.J.	Functional anatomy of the jaw of tiger	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
17	Indu V. R., Lucy K. M., Ashok N., Maya S. and Chungath J.J.	A comparative study on the tonsils in the oropharynx of goats	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16
18	Indu V. R., Lucy K. M., Ashok N., Maya S. and Chungath J.J.	Microanatomical studies on the tonsils in nasopharynx of goats	XXXI Annual Convention of Indian Association of Veterinary Anatomists & National Symposium	College of Veterinary Science, Rajendranagar, Hyderabad. 21.12.16 to 23.12.16

19	Dr. K. Karthiayini	Production performance of stressed broiler chicken with and without probiotic supplementation.	Kerala Veterinary Science Congress 2016	Trissur 12 th and 13 th November 2016
20	V. Beena, V. Ramnath, D. Girija, Dr. KP Sreekumar, Dr. K. Karthiayini and Dr. P. T. Philimona	Crystal protein of a <i>Bacillus thuringiensis</i> inducing S-phase cell cycle arrest and apoptotic cell death in human leukemic cell line -jurkat	36 th Annual conference of IACR	Thrissur 9-11 February
21	V. Beena	Advisories for Animal Husbandry	State level meeting of stakeholders on agromet advisory services in Kerala	16-02-17
22	Ciby Somu, Uma R., Shonima P. and Surya S.	Outer membrane protein A gene based diagnosis of New Duck disease in Kerala.	8th Kerala Veterinary Science Congress	Conducted at Pattikkad, Thrissur from 12-13 November 2016.
23	Siji S. R., Madhavan U. N., Uma R., Gleeja V. L. and Ajithkumar S.	Oxidative stress associated with canine demodicosis	8th Kerala Veterinary Science Congress	Conducted at Pattikkad, Thrissur from 12-13 November 2016.
24	Vinayamohan, P.G., Sankar, S., Reshma, S., Akkara, T.S., Chandran, A.R., Ahmad, S. M, Geethika, A. and Mini, M	A Case Study of Causative agent associated with pyometra in a bitch	Proceedings of National Congress on Canine Practice	27 th -29 th April, 2016, COVAS, Pookode
25	Sankar, S., Chacko, N., Chandran, A.R., Reshma, S., Ahmad, S. M. and Mini, M	Antibiogram profile of pyometra cases in bitches during the period March 2015-16	Proceedings of National Congress on Canine Practice	27 th -29 th April, 2016, COVAS, Pookode
26	Ahmad, S. M., Sankar, S., Akkara, T.S., Reshma, S., Chandran, A.R., Vinayamohan, P.G. and Mini, M.	Characterization of the causative agent from a case of urinary tract infection in dog	Proceedings of National Congress on Canine Practice	27 th -29 th April, 2016, COVAS, Pookode
27	Chandran A.R., Subi, T.K., Sankar, S., Reshma, S., Akkara, T.S., Ahmad, S. M., Vinayamohan, P.G. and Mini, M.	Leptospirosis in a dog infected with <i>Leptospira interrogans</i> serovar Australis- a case study	Proceedings of National Congress on Canine Practice	27 th -29 th April, 2016, COVAS, Pookode
28	Ambily, R., Joseph, S., Mini, M., Krishna, S.V. and Abinay, G	Evaluation of Molecular and Serological tests for diagnosis of canine leptospirosis in an endemic area	Proceedings of National Congress on Canine Practice	27 th -29 th April, 2016, COVAS, Pookode
29	Akkara, T.S., Sankar, S., Reshma, S., Ahmad, S. M., Chandran, A.R., Unni, A.R., Vinayamohan, P.G. and Mini, M	Isolation and characterization of the causative agent from a case of otitis in dog	Proceedings of National Congress on Canine Practice	27 th -29 th April, 2016, COVAS, Pookode

30	Reshma, S., Sankar, S., Chandran, A.R., Ahmad, S. M., Niyas, E., Vinayamohan, P.G. and Mini, M	Isolation and characterization of the bacterial agents associated with otitis in dog	Proceedings of National Congress on Canine Practice	27 th -29 th April, 2016, COVAS, Pookode
31	Priya, P. M., Ratheesh, R. I., Syam, R., Mini, M., Mani, B.K., Joseph, S., Sankaralingam, S., Saseendranath, M. R. and Sissy, Philip	Immunogenicity and safety of oil adjuvant <i>Riemerella anatipestifer</i> vaccine in ducks of Kerala: Laboratory & field trials	33 rd Annual conference of Indian Poultry Association	3 rd -5 th November 2016, College of Veterinary Science, Khanapara, Assam.
32	Rinsha, B., Sankar, S., Mini, M. and Devi, S.S	Molecular Characterisation of Classical Swine Fever from an outbreak of Disease Among Pigs in a Private Farms in Thrissur District	2016- Proceedings, Kerala Science Congress	12-13 th November, organized by IVA at Hotel Dream City, Pattikad
33	Ambily, R., Siju, J., Mini, M., Sriram, V.K. and Abinay, G	Cloning and Expression of <i>loa22</i> gene of pathogenic <i>Leptospira</i> Isolated from Canine Urine	Kerala Science Congress, 2016- Proceedings	12-13 th November, organized by IVA at Hotel Dream City, Pattikad
34	Ambily, R., Joseph, S. and Mini. M	Evaluation of polymerase chain recation targeting the virulent gene <i>loa22</i> in diagnosing acute leptospirosis	26 th Swadeshi science Congress.	7 th -9 th 2016 at CMFRI, kochi
35	Sankar, S., Joseph, S., Chandran, A. R. and Mini, M	Leptospirosis in humans and canines; incidents in Thrissur- concerns and remedies.	26 th Swadeshi science Congress.	7 th -9 th 2016 at CMFRI, kochi
36	Hitaishi VN, Bindu Lakshmanan, Jain Jose K, Praveena E Jose, H. Shameem and Lucy Sabu. 2017.	Detection of <i>Theileria</i> species in naturally infected goats of Kerala by PCR RFLP.	XXVIth National Congress of Veterinary Parasitology & International Symposium	Veterinary College, Shimoga. 15th to 19th February, 2017
37	Jain Jose K, Bindu Lakshmanan, Aravindakshan TV, Hitaishi V N and Syamala,K..	..Molecular detection of <i>Babesia gibsoni</i> isolates from Kerala	XXVIth National Congress of Veterinary Parasitology & International Symposium	Veterinary College, Shimoga. 15th to 19th February, 2017
38	Jain Jose K, Bindu Lakshmanan, Aravindakshan TV and Hitaishi V N.	Evaluation of DNA extraction protocols from ixodiod ticks	29th Kerala Science Congress at Marthoma College, Thiruvalla.	28 -30 January 2017
39	Bindu L, Vinodkumar,K, Aravindakshan TV, Hitaishi V N, Ambily, V R and Lucy S 2016.	Equine trichomonosis-A case report.	Kerala Veterinary Science congress, Thrissur	2016 12-13 November,2016
40	Shameem, H. , Devada, K., Bindu Lakshmanan and Lucy Sabu.	Abattoir studies on the prevalent amphistomes in cattle Thrissur District	International Conference on Microbiology, Agriculture and Environmental Sciences	Sept1-2, Hyderabad
41	Jayasree, S., Shameem, H., Gleeja, V.L. and Prejit, K. 2016.	Studies on bovine amphistomosis in Kanjhikuzhy panchayat of alappuzha district, Kerala.	Kerala Veterinary Science Congress	Nov12-13, Thrissur

42	Reni, J., Shameem,H., Smitha, S., Radhika, R., Thirupathy, V.R., Lucy Sabu and Mercey, K.A. 2016.	Incidence of coccidiosis in an organised goat farm in Thrissur	Kerala Veterinary Science Congress	Nov12-13, Thrissur
43	Shameem, H., Radhika, R., Lucy Sabu and Giridas, P.B. 2016. Compendium on Kerala Veterinary Science Congress,.	A report on <i>Cobboldia elephantis</i> infection in a captive elephant.	Kerala Veterinary Science Congress	Nov12-13, Thrissur
44	Radhika, R., Lucy sabu and Krishnan, S.2016. Compendium on, p118.	Prevalence of coccidiosis in cattle at different agroecological zones and seasons of Kerala.	National Symposium on climatic driven food production systems-Agrometeorological interventions	Dec20-22, Coimbatore
45	Asha Rajagopal and Lucy sabu	Report of invitro detection of benzimidazole resistance in organised goat farm	Kerala Veterinary Science Congress	Nov12-13, Thrissur
46	Radhika, R., Lucy sabu and Krishnan, S. 2016. Compendium on 29 th	Prevalence of buxtonellosis in cattle at different agroecological zones and seasons of Kerala.	Kerala Science Congress	28 th -30 th Jan, Thiruvalla
47	Shameem, H., Devada, K. and Jayavardhanan, K.	Characterisation of partially purified somatic antigens of <i>G.crumenifer</i>	29 th Kerala Science Congress	28 th -30 th Jan, Thiruvalla
48	Shameem, H., Devada, K., Bindu Lakshmanan, Siju Joseph, Lucy Sabu and Usha, A.P.	Standardisation of coproantigen sandwich ELISA for diagnosis of bovine amphistomosis	International Symposium on Current concepts in diagnosis and control of parasitic diseases to combat climate change.	Shimoga 15 th -17 th Feb
49	Syamala and Marykutty Thomas	Assessment of different indicators for gastro intestinal worm burden in native goat population of Kerala reared under resource poor condition	SOC DAB 2017	8/2/17-10/2/17 Mannuthy
50	Syamala and Marykutty Thomas	Validation of FAMACHA eye colour chart using sensitivity and specificity analysis in Attapady black goats of Kerala	Kerala Science Congress 2017	28-30 th Jan 2017
51	Syamala and Marykutty Thomas	Unravelling the relationship between body condition scoring and host resilience /resistance to natural gi parasitism in Attapady Black goats of Kerala	Kerala Veterinary Science Congress	November 12-13 th 2017
52	Bibu John Kariyil, Usha P.T.A. and Ajith Jacob George	Therapeutic efficacy of chloroform fraction of methanolic extract of <i>Annona muricata</i> in Balb/c mice model fo breast cancer	International conference on Advances in Laboratory Animal Science for modeling of Human Diseases	Bangalore from October 14-15 th , 2016.

53	Aleymma, A., Shaji, B.N., Bibu, J.K. and Usha P.T.A.	Therapeutic management of pox diseases of cattle using a traditional herbal formulation.	8 th Kerala Veterinary Science Congress	Pattikkad, Thrissur 12 th & 13 th November, 2016
54	Lisha V, Preethy John, Sujith S, Usha P T A	Antiatherogenic effect of <i>Averrhoa bilimbi</i> fruit powder in rats fed with high fat diet	8 th Kerala Veterinary Science Congress	Pattikkad, Thrissur 12 th & 13 th November, 2016
55	Lisha.V, Preethy John, Sujith S, Usha PTA, Sunanda C	Ameliorative effect of <i>Averrhoa bilimbi</i> on oxidative stress induced by high fat diet in rat liver	International conference sustainable utilization of tropical plant biomass-bioproducts, biocatalysts and biorefinery(SutB4),	TAU, Coimbatore, 17 th to 18 th November, 2016
56	Bibu J.K., George A.J., and Usha P.T.A.	Apoptosis mediated antitumour potential of fraction of <i>Annona muricata</i> in triple negative mammary tumours	XVI Annual Conference on Indian Society of Veterinary Pharmacology and Toxicology	Navsari, Gujarat, 23-25, November, 2016
57	Natiya V.S., Usha P.T.A., Deepa A.K. and John Preethy	Hypolipidemic effect of <i>Calocybe indica</i> (Milky mushroom) in hypercholesterolemic rats	XVI Annual Conference on Indian Society of Veterinary Pharmacology and Toxicology	Navsari, Gujarat, 23-25, November, 2016
58	Sabitha Jose, Usha P.T.A. and Priya P.M.	Screening of antimicrobial property of <i>Annona squamosa</i> , <i>Coleus amboinicus</i> and <i>Myristica fragrans</i>	International Seminar on Veterinary Ayurveda	Kolkatta on 1 st December 2016
59	Maria Lukose, Preethy John, Deepa A K, Usha Pta And Rehna A	Effect of <i>Carica papaya</i> leaves on blood cell count and clotting time in cyclophosphamide induced toxicity in balb/c mice	International conference on agriculture, veterinary & life sciences	Nuvem, goa 2-4 feb, 2017
60	Dr. Harikrishnan S	Growth performance & production characteristics of native chicken varieties of Kerala under intensive system of rearing.	XXXIII- IPSACON	2016 Nov – 3 rd to 5 th
61	Sethulekshmi C, Latha C, Sunil B, Gleeja V L, Aravindakshan T V, Prejit and Beena A K	Occurrence and molecular characterization of Enterohaemorrhagic <i>E.coli</i> in vegetables and fruit juices.	Kerala Veterinary Science Congress, 2016	Pattikad, November 12 & 13, 2016
62	K Vrinda Menon, Latha C, Sunil B, Sunanda A, Nithya K. R	Survivability of <i>L. monocytogenes</i> in major river waters in Kerala	Kerala Veterinary Science Congress, 2016	Pattikad, November 12 & 13, 2016
63	Saju G, K Vrinda Menon, Latha C, Sunil B, Sethulekshmi C, Deepa J	Antimicrobial effect of Bacteriophage on <i>L. monocytogenes</i> in Chicken and fish	Kerala Veterinary Science Congress, 2016	Pattikad, November 12 & 13, 2016
64	Sunil B, Latha C, Nithya K R, K Vrinda Menon, Binasy M, Ashok K	Occurrence of <i>Campylobacter</i> species in a Chicken Processing line from Ernakulam District, Kerala	Kerala Veterinary Science Congress, 2016	Pattikad, November 12 & 13, 2016

65	Neethu K P, K Vrinda Menon, Latha C, Anu C J, Deepthi V	Isolation and biofilm formation of Salmonella species obtained from salad vegetables	Kerala Veterinary Science Congress, 2016	Pattikad, November 12 &13, 2016
66	Latha C, Deepthi V, Sethulekshmi C, K Vrinda Menon	Awareness of School Children on the role of Personal hygiene in the control of Zoonoses	Kerala Veterinary Science Congress, 2016	Pattikad, November 12 &13, 2016
67	Muralikrishna P, Kumarswamy NP, Ajay Balakrishna Thorat, Vani R. P, Vrinda Menon K, Binsy Mathew	Assessment of awareness on the im[portant public health issues in Thrissur, Kerala	XIV Annual conference of IAVPHS	Udaipur, November 21 and 22, 2016
68	Sunil B, Latha C, Nithya K R, Vrinda Menon, K, Binsy Mathew, Ashok Kumar	Occurrence of Campylobacter in drinking water from wells in Chalakudy in Kerala	XIV Annual conference of IAVPHS	Udaipur, November 21 and 22, 2016
69	Latha, C, Anu C J, Sunil B, Ajay Kumar, V J and Deepa Jolly	Prevalence of <i>Listeria monocytogenes</i> , <i>Yersinia enterocolitica</i> , <i>Staphylococcus aureus</i> and <i>Salmonella enterica</i> Typhimurium in meat and meat products using multiplex PCR	XIV Annual conference of IAVPHS	Udaipur, November 21 and 22, 2016
70	Dr Deepa Chirayath	Detection of <i>Brugian sp.</i> microfilariae in a domestic cat in Thrissur, Kerala	9 th Kerala Veterinary Science Congress, 2016	Mannuthy
71	Tresamol,P.V Arthi,A., Amel Dev,P and Mettilda Joseph	Outbreak od Scrotal dermatitis due to <i>Dermatophilus congolensis</i> among bucks	35 th Annual convention and National symposium of ISVM at VCRI Thirunelveli	Thirunelveli , 22-24 February2017
72	Tresamol, Suchithra, S., Prasanth and Vinodkumar,K	Concurrent infection of dermatophilosis and Mange in a camel	35 th Annual convention and National symposium of ISVM at VCRI Thirunelveli	Thirunelveli , 22-24 February2017
73	Arthi,A.,Tresamol,P.V.and Vinodkumar,k	Canine Anaplasmosis-A case Report	35 th Annual convention and National symposium of ISVM at VCRI Thirunelveli	Thirunelveli , 22-24 February2017
74	Seemanthini,R. and Tresamol,P.V.	Diagnosis and Therapeutic Management of Feline babesiosis	35 th Annual convention and National symposium of ISVM at VCRI Thirunelveli	Thirunelveli , 22-24 February2017
75	Seemanthini,R. Vinodkumar,K., Saeendranath,M.R Tresamol,P.V.and George,A.J	Comparative Evaluation of intradermal and subcutaneous prophylactic rabies vaccination in dogs.	35 th Annual convention and National symposium of ISVM at VCRI Thirunelveli	Thirunelveli , 22-24 February2017
76	Amel Dev, P, Tresamol, P.V,Mary Vijaya. And Arsha Raj	Molecular detection and Therapeutic Management of Malasseziosis in a cow	35 th Annual convention and National symposium of ISVM at VCRI Thirunelveli	Thirunelveli , 22-24 February2017

77	Amulya,V.R.,Tresamol,P.V.and Vinodkumar,K	Foot and Mouth disease in Elephants –a serological screening	35 th Annual convention and National symposium of ISVM at VCRI Thirunelveli	Thirunelveli , 22-24 February2017
78	Amulya,V.R.,Tresamol,P.V.and Vinodkumar,K	Foot and Mouth disease in Elephants –a serological screening	35 th Annual convention and National symposium of ISVM at VCRI Thirunelveli	Thirunelveli , 22-24 February2017
79	Justin Davis,K, Vinodkumar, K., Radhika Syam.,Silpa Rajand Tresamol P V. ,	Protein losing nephropathy associated with Leptospirosis in a Great dane –Response to therapy	National congress on Canine Practice and Symposium on Newer approaches in Management of Canine health and rewarding clinical practice as well as trade at GB Pant University,Pantnagar	Pantnagar 09-11 February2017
80	Sulficar,S., Jayakumar,C.,Arthi,A.,Sisilamma George and P.V.Tresamol	Clinical Assessment ,sonographic diagnosis and Therapeutic Management of BPH with prostatitis in a pitbull dog	National congress on Canine Practice and Symposium on Newer approaches in Management of Canine health and rewarding clinical practice as well as trade at GB Pant University,Pantnagar	Pantnagar 09-11 February2017
81	Arthi,A.and Tresamol,PV	Management of <i>Babesia gibsoni</i> infection using a three drug protocol	National congress on Canine Practice and Symposium on Newer approaches in Management of Canine health and rewarding clinical practice as well as trade at GB Pant University,Pantnagar	Pantnagar 09-11 February2017
82	Anoop S, Devanand C B, Syam K V, John Martin K D, Ajith Kumar S, Aravinda Ghosh and Gleeja L.	Pigmentary Keratitis in Dogs – A study on incidents of 83 Corneas.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th ,April 2016. CVAS Pookode.
83	Adarsh AM, John Martin K D, Laiju Philip M, Soumya R and Narayanan M K	Evaluation of wound healing using collagen gel impregnated with 0.1% Gentamycin in dogs	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
84	Devanand C B, Sudheesh S Nair, Anoop S, Abhijith M S, Ashok R U and Fabin P M.	Strangiuria due to uterineleiomyoma and its successful surgical treatment in a spitz.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.

85	Devanand C B, Sudheesh S Nair, Anoop S, Abhijith M S, Ashok R U and Fabian P M.	Surgical Management of prostatic tumor in a four year old dog.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
86	Sudheesh S Nair, Anoop S, Devanand C B, Ashok R U, Vasanth Kumar H G, Karthika S, Tapomay B and Fabian P M.	Successful Surgical Management of Advance Odontogenic tumor in Dogs	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
87	John Martin K D, Anoop S, Sudheesh S N, Devanand C B, Ashok R U, Abhijith M S, Shanthala H, Vaisakh V and Adarsh A M.	Successful clinical management of canine swimmer puppy syndrome (Pectus excavatum) four case reports.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
88	Anoop S, Devanand C B, Dileep Kumar K M , Fabian P M, Karthika S, Vasanth Kumar H G and Shanthala H.	Thoracic esophageal foreign body in Labrador retriever pup and its surgical management.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
89	Narayanan M K, Laiju P M, Soumya R, Tapomay B, John Martin K D and Devanand C B.	Surgical Management of bilateral perineal hernia in a dog.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
90	Narayanan M K, Laiju P M, Soumya R, Tapomay B, John Martin K D and Devanand C B.	Surgical Management of Testicular Maldevelopment complicated with inguinal hernia in a pug.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
91	Anoop S, Devanand C B, Shanthala H, Karthika S and Vasanth Kumar H G.	Trabeculectomy for management of Glaucoma in a Labrador Retriever pup	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.

92	Narayanan M K, Laiju P M, Soumya R, Annie Varghese, Tapomay B, John Martin K D and Devanand C B.	Radiographic evaluation, Anesthetic Management and surgical retrieval of Tracheal foreign body in a pup.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
93	Sudheesh S N, Anoop S, Devanand C B, Fabin P M, Ashok R U, Abhijith M S.	Surgical Management of Urolithiasis in Labrador Retriever	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
94	Dileep Kumar K M, Anoop S, Devanand C B, Vaisakh V and Karthika S.	Surgical Management of Testicular tumor in a Dachshund- A case report.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
95	M K Narayanan, Devanand C B, John Martin K D, Laiju P M, Soumya R and Noronha A A	Surgical Management of Cherry eye in canines – Retrospective study of 32 cases.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
96	Laiju P M, Syamala K, John Martin K D, Madhavan U N, Narayanan M K, Soumya R, Adarsh A M and Devanand C B.	Ocular manifestations due to canine hemoparasitic infections- Review of 32 cases.	XIII Annual Convention of Indian Society for Advancement of Canine Practice and National Symposium on Concepts of One Health in Canine Health Care Management	From 27 th -29 th , April 2016. CVAS Pookode.
97	S Anoop, Pallavi K, Anilkumar T V, Syam K V and Devanand C B.	Cholecyst derived collagen as an extra cellular matrix scaffold graft for repairing large corneal defects in dogs- Report of 3 cases.	8 th Global Ophthalmology Summit	18 th to 20 th July 2016 at Chicago, IL, USA.
98	Adarsh A M, Abhijith M S, John Martin K D, Laiju P M and Soumya R	Paraplegia in dogs- Medical and rehabilitation techniques.	40 th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
99	Jinu John, Narayanan M K, Devanand C B, S Anoop, N Ashok	Radiographic and Neurological evaluation of fracture healing following external skeletal fixation- Intramedullary pin, Tie-in fixation and type I external skeletal fixation in birds.	40 th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.

100	Sudheesh S N, Abhijith M S, Anoop S, Soumya R, C B Devanand and John Martin K D	Surgical Management of contracted tendons in kids- Review of 6 cases.	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
101	Sudheesh S N, Soumya R, S Anoop, Vaisakh V, Devanand C B	Struvite urolithiasis and its surgical management by tube cystostomy in six goats.	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
102	S Anoop, C B Devanand, John Martin K D, Syam K V, S Ajith Kumar, K N Aravinda Ghosh	Porcine small intestinal submucosa (SIS) as an extracellular matrix scaffold graft in the treatment of pigmentary keratitis in dogs.	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
103	Adash A M , John Martin K D, Devand C B, Anoop S, Unnikrishnan M P, Laiju M P	Therapeutic use of soft contact lens in canine corneal ulcer	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
104	Karthika S, S Anoop, Devanand C B, Narayanan M K, Madhavan U N, T V Anilkumar	Comparative evaluation of porcine cholecyst derived collagen and bovine dermal origin collagen for treatment of wounds in dogs	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
105	Nijin Jos B M, Devanand C B, John Martin K D, Syam K V, Ajith Jacob, P R Umashankar	Evaluation of physiological haematological and biochemical values in dogs after hernioplasty using decellularised bovine pericardium.	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
106	Soumya R, Sudheesh S N, S Anoop, Devanand C B	Inguinal hernia in dogs: A review of four cases	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.

107	Anoop S, Vaisakh V, Soumya R, Sudheesh S N, Devanand C B	Successful management of foot rot in Asian Elephant (<i>Elephas maximus</i>) – Report of two cases	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
108	P B Giridas, Dileepkumar K M	Surgical Management of Abscess in Asian elephants (<i>Elephas maximus</i>)	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
109	Nijin Jos B M, Devanand C B, K D John Martin, Syam K Venugopal, Ajith Jacob George, P R Umashankar	Hernioplasty with decellularised bovine pericardium in dogs- A clinical study.	40th Annual Congress of Indian Society for Veterinary and National Symposium on “Biomaterials and stem cells for tissue repair and regeneration in Veterinary Surgery”	2 nd to 4 th December 2016 at Madras Veterinary College, TANUVAS Chennai.
110	Dr.M.K.Narayanan	Common foot disorders in Captive Asian Elephants in Kerala	15 th International Elephant and Rhino Conservation and Research Symposium	14th-18th November, 2016 at Singapore Zoo, Singapore
111	Dr. C. Jayakumar	Induction of fertile estrus in dogs with secondary anestrus using antiprolactin drug, cabergoline”	XXIV annual convention of the ISACP and symposium on Newer approaches in management of canine health and rewarding clinical practice as well as trade”	GBPUAT, Pantnagar from 9 th to 11 th February 2017.
112	Dr. C. Jayakumar	Uterine torsion in a dog and its surgical management by Ovariohysterectomy”	XXIV annual convention of the ISACP and symposium on Newer approaches in management of canine health and rewarding clinical practice as well as trade”	GBPUAT, Pantnagar from 9 th to 11 th February 2017.
113	Sathu.T , Kuttinarayanan, Pand Preethy J.	Effect of incorporation of soluble dietary fibre on the physic-chemical and sensory properties of chicken nuggets.	<i>5th International Seminar on Sustainable Utilisation Of Tropical Plant Biomass-SutB4</i> ,	17 th -18 th Nov,2016, coimbatore, Tamil Nadu.p.124-129.
114	Kuleswan, P, Sathu, T , Vasudevan, V.N andGunasekaran., P	Evaluation of physic-chemical properties and palatability of processed animal byproduct based pet kibbles for dogs.	8 th kerala veterinary science congress	12 th -13 th Nov 2016. pattikad, kerala
115	Sathu.T	Designing of modern abbatoir and its management	In the state level consultative workshop on slaughter house	13-4-2016, Trivandrum
116	Sathu.T	Frozen meat processing plant safety and hygiene protocols	Workshop for the Defense service officer	18-4-2016 to 22-4-2016, DFRL Mysore.

117	Dr V N Vasudevan	Characterization of Buffalo Meat Using Principal Component Analysis	International Symposium & 7 th conference of Indian Meat Science Association	10/11/2016 to 12/11/2016
118	Dr V N Vasudevan	Myofibril Fragmentation Index of Buffalo Muscles Having Different Collagen Characteristics	International Symposium & 7 th conference of Indian Meat Science Association	10/11/2016 to 12/11/2016
119	Dr. V N Vasudevan	Bovine Gall Bladder Bile: A Novel Decellularizing Agent for Development of Extracellular Matrices	International Symposium & 7 th conference of Indian Meat Science Association	10/11/2016 to 12/11/2016
120	Dr S Prajwal	Profiling of Selected Buffalo and Bovine Muscles for Sensory Traits	International Symposium & 7 th conference of Indian Meat Science Association	10/11/2016 to 12/11/2016
121	Dr S Prajwal	Dressing Percent and Yield of Offal of Female Murrah Buffalo and Cross- Bred Cows	International Symposium & 7 th conference of Indian Meat Science Association	10/11/2016 to 12/11/2016
122	Dr S Prajwal	Quality Attributes of Meat from Attapady Black Goat, A Native Breed of Kerala	International Symposium & 7 th conference of Indian Meat Science Association	10/11/2016 to 12/11/2016
123	Dr S Prajwal	Yield of Meat and Offal from Castrated Young Male Murrah Buffaloes and Cross-bred Cattle	International Symposium & 7 th conference of Indian Meat Science Association	10/11/2016 to 12/11/2016
124	Dr. V N Vasudevan	Composition of Meat and Bone Meal Produced from different proportions of Bone and Offal by eco-friendly dry rendering	International Symposium & 7 th conference of Indian Meat Science Association	10/11/2016 to 12/11/2016
125	Fathima Beevi B., Suraj P.T. and Mercey K.A	Prediction of lifetime milk production from early lactation traits in crossbred cattle.	229 th Kerala Science Congress.	Thiruvalla, 28-30 January 2017
126	Ammu J.V. , Gleeja V. L. and Prasad A.	Mixed model repeated measures analysis of variance for milk yield data.	29 th Kerala Science Congress.	Thiruvalla, 28-30 January 2017
127	Dhanush, K.B., Vishnu, S., Prasad, C., Divakaran Nair, N. Vijayan and Ajith, J.G.	Report of primary rhabdomyosarcoma of the breast muscle with metastasis to liver in a six months old hen	Kerala Veterinary Science Congress 2016	Thrissur, November 2016
128	Krithiga, K., Sovan, R., Devi, S.S., Dhanush, K. B., Ajith, J.G., Nair, N.D. and Vijayan, N.	Sylvatic rabies- A case report	Kerala Veterinary Science Congress 2016	Thrissur, November 2016

129	Devi, S.S., Nithya, C., Krithiga, K., Dhanush K. B., Ajith, J.G., Nair, N.D. and Vijayan, N.	Canine frenzy – An overview	Kerala Veterinary Science Congress 2016	Thrissur, November 2016
130	Devi, S.S., Nisha Natarajan, K.Krithiga, J. A. Mammen and N. Vijayan	Multiple parasitism and mixed bacterial infection in a flock of indigenous poultry breed- Aseel- A case report	South Zonal Conference IAVP 2016	Tirupati, July 2016
131	Devi, S.S., N. Nisha, J. Mammen and N. Vijayan	Incidence of multiple lymphoproliferative diseases among layers	South Zonal Conference IAVP 2016	Tirupati, July 2016
132	C. Prasad, A.J. George, M.J. Abraham, K. B. Dhanush, K. Krithiga S. S. Devi and N. Vijayan	Cholangiocellular carcinoma in aduck	South Zonal Conference IAVP 2016	Tirupati, July 2016
133	C. Prasad, N. Vijayan, M.J. Abraham S. S. Devi, K. Krithiga K. B. Dhanush, and A.J. George	Pulmonary aspergillosis in a flock of budgerigars	South Zonal Conference IAVP 2016	Tirupati, July 2016
134	C.S. shilpasree, M.J. Abraham, K.B. Dhanush, K. Krithiga, A.J. George, Bindu Lakshmanan, V. N. Hitashi, Remya R. Nair	Coccidiosis in pigeon- A case report	South Zonal Conference IAVP 2016	Tirupati, July 2016
135	A. Geethika, N. Nisha, J. Keerthana, Remya r. Nair, C. S. Shilpasree, K. Krithiga, M. J. Mammen	A Case report of coligranuloma in chicken	South Zonal Conference IAVP 2016	Tirupati, July 2016
136	S.S. Devi, C.Prasad, J.Mammen and N. Vijayan	Subcutaneous mycosis in a grama sree layer	South Zonal Conference IAVP 2016	Tirupati, July 2016
137	Krithiga, K., Nisha. N., Surya, S., Mammen J. Abraham and Vijayan, N.	Pneumonia associated with <i>A. baumannii</i> infection in a pup- A case report	Kerala Science Congress	Thiruvalla, January, 2017
138	Dhanush, K.B., Uma Sankar, Anil Kumar, T.V. and N,D, Nair	Bioscaffold material regenerate muscle defect via immunomodulation in a rodent hernia model	Kerala Science Congress	Thiruvalla, January, 2017
139	Shilpa sree, Keerthana, Geethika, Mammen.J.A and N.D. Nair	Aspergillosis in African Gray parrot	Kerala Science Congress	Thiruvalla, January, 2017
140	C.Prasad.,A. Aneesh.,Ajith Jacob George and N,D, Nair., K.Krithiga and S.S. Devi	Adenoid hepatocellular and cholangiocarcinoma in a Rottweiler dog	National congress on trends in cancer research under one health concept	Thirupati, February 2017

141	J.Keerthana., A.Geethika., Mammen.J.A and N.D. Nair and Mammen J Abraham	Schwannoma in tongue of a dog	National congress on trends in cancer research under one health concept	Thirupati, February 2017
142	A.Geethika., K.Keerthana.,Dhanush Krishna.B., Mammen.J.A and N.D. Nair	A case of nephroblastoma in a gramasree bird	National congress on trends in cancer research under one health concept	Thirupati, February 2017S
143	Baby Salini.E	Effects of Asanas and Pranayama on agility among down syndrome students	Panampilly Memorial Govt, College, Chalakudy, thrissur	17 th &18 th January 2017
144	Baby Salini.E	Effects of asanas on arm explosive power of differently abled students	Govt.Arts & science College ,Kozhikode,	10 to 12 th January 2017
145	Baby Salini.E	Effects of Plyometirc training on Agility among Higher Secondary boys.	Kannur University	14th to 16 th march 2017

Popular Articles / Technical Report published :

Sl. No.	Authors	Title	Name of the Journal / Magazine / Daily etc.	Date
1	K. M. Lucy	Veterinarians should explore goniometry for effective treatment of condition affecting Joints	Vets weekly http://vetsweekly.coheart.ac.in	16.06.2016
2	K. M. Lucy	Know about the musth gland or temporal gland in elephant	Vets weekly - http://vetsweekly.coheart.ac.in	20.06.16
3	K. M. Lucy	What is the difference between horn, antler and ossicone?	Vets weekly - http://vetsweekly.coheart.ac.in	27.06.16
4	K. M. Lucy	Immunohistochemistry-an overview	Vets weekly - http://vetsweekly.coheart.ac.in	01.07.16
5	K. M. Lucy	Tapetum-a wonderful ocular mirror	Vets weekly - http://vetsweekly.coheart.ac.in	09.07.16
6	K. M. Lucy	Ivory-how to distinguish	Vets weekly - http://vetsweekly.coheart.ac.in	18.07.16
7	K. M. Lucy	Preen gland-a special feature in birds	Vets weekly - http://vetsweekly.coheart.ac.in	23.07.16
8	K. M. Lucy	Cursorial adaptation – the exceptional running ability in animals	Vets weekly - http://vetsweekly.coheart.ac.in	03.08.16
9	K. M. Lucy	Arboreal adaptation – the exceptional climbing ability in animals	Vets weekly - http://vetsweekly.coheart.ac.in	16.08.16
10	K. M. Lucy	Fossorial adaptation-a modification to subterranean life in animals	Vets weekly - http://vetsweekly.coheart.ac.in	30.09.16
11	K. M. Lucy	Aquatic adaptation in animals	Vets weekly - http://vetsweekly.coheart.ac.in	30.10.16
12	Beena and P.I. Geevarghese	Nammude Kalavasthayum mrigasamrakshanavum	A chapter in a book on Climate Change published by Farm Care Foundation	January 2017

13	Harikumar, S., Davis, J. and Anil, K.S. (2016).	Use of unconventional feed in pig production.	<i>Journal of Indian Veterinary Association.</i> 14 (3):5-11.	2016
14	Shameem, H	Kannukaalikilalae pandapuzhubhadha".	Karshakashree. p84	Feb 2017.
15	Bindu Lakshmanan.	Neosporosis: An emerging cause of bovine abortion	Souvenir. Veterinarians Annual Convention. pp. 16-18.	2016
16	Bindu Lakshmanan and K Devada	Bovine Visceral schistosomosis-current status in Kerala	Souvenir .World Environment Day pp. 50-52	2016
17	Kuleswan Pame & Harikrishnan S	Indian egg production trends and marketing systems	Poultry Herald	April 2016
18	Dr Sindhu k Rajan	Chocolateum munthirium ulliyum mrugangalkku hanikaram"	Mathrubhumi online	19-12-2016
19	Dr Ambily V.R	Pashuvin palinu kozhuppu kuranjal	Mathrubhumi online	21-3-2017
20	Dr Ambily V. R.	Valarthunaykkalilum poochakalilum mandhurogam	Mathrubhumi online	15-3-2017
21	Prajwal, S., Vasudevan, V.N., Sathu, T., Irshad, A	Artificial sweeteners: Detection, quantification and health hazards	Beverage Food World	Accepted
22	Irshad A	Public health significance of heavy metal residues in meat and meat products	Beverage and Food world, Volume 43(5). p. 42	May-2016
23	Dr.Devi.S.S	Drought Management in livestock farming	Kerala Karshakan	March 2017
24	Baby Salini.E	Effects of yogic practices on physical responses Among Down syndrome Students ". (Journal of Physical Education & Sports Sciences, Volume 8: Issue 1: June 2016, ISSN: 0976-6618	Journal of Physical Education & Sports Sciences, Volume 8: Issue 1: June 2016, ISSN: 0976-6618	June 2016

I. Pamphlets / Leaflets / Handbooks released :

Sl. No.	Title	Authors / Department	Language
1	Muttakozhikalude Paripalanam	Dr.Harikrishnan S,Dr.P.Anitha	Malayalam
2	Compendium of lectures- Training programme for Assistant Directors of Animal Husbandry Department	Board of editors Dr. Sunil B Dr. Binsy Mathew Dr. DeepaAnanth Dr. Anoop S.	English
3	Anemia in Dairy cattle (Hand Book)	Dr Ambily V. R.	Malayalam
4	Leaflet on Mastitis and its control	Dr.P.V.Tresamol Dept. of Veterinary Epidemiology and Preventive medicine	Malayalam
5	Leaflet on skin diseases of dogs and their management	Dr.P.V.Tresamol Dept. of Veterinary Epidemiology and Preventive medicine	Malayalam

6	Leaflet on Rabies	Dr.P.V.Tresamol Dept. of Veterinary Epidemiology and Preventive medicine	Malayalam
7	Leaflet on goat diseases and their control	Dr.P.V.Tresamol Dept. of Veterinary Epidemiology and Preventive medicine	Malayalam
8	Leaflet on ' Nalla Nadappu Arogyalakshanam as part of the Science Popularisation programme funded by KSCSTE Kulambil Alpam Shradha	Dr.Laiju M Philip	Malayalam
9	Information Brochure – Meat Technology Unit & Livestock Products Technology	Dr. Sunil B Dr V N Vasudevan Dr Sathu T Dr Irshad A	Malayalam
10	Samshudha mamsolpadanam	Dr. P Kuttinarayanan Dr V N Vasudevan Dr Sathu T 11Dr Irshad A	Malayalam
11	Handout on Meat technology Unit & Livestock Products Technology	Dr12. P Kuttinarayanan Dr V 13N Vasudevan Dr Sath14u T Dr Irshad 15A	English

II. Books / Monographs / Manuals :

Sl. No.	Authors	Year	Title	Publisher
1	Dr. Siju Joseph Assistant Professor, Department of Veterinary Microbiology, CVAS, Pookode, Wayanad	2016	Newer trends in Laboratory Diagnosis of Leptospirosis in Animals and Humans	-
2	Bibu John Kariyil, Sujith S., Preethy John and Usha P.T.A.	2016	Training manual on Laboratory Animal Models and Biomethodology	Directorate of Entrepreneurship, KVASU
3	Dr.Harikrishnan S,Dr.P.Anitha, Dr.Beena C Joseph, Dr.Binoj Chacko, Dr.Sankaralingam, Dr.Suja C S,	2016-17	LPM 211-Avian Production & Management	
4	Dr.Harikrishnan S,Dr.P.Anitha, Dr.Beena C Joseph, Dr.Binoj Chacko, Dr.Sankaralingam, Dr.Suja C S,	2016-17	LPM 211-Commercial poultry production & hatchery management	
5	Dr.Harikrishnan S,Dr.P.Anitha, Dr.Beena C Joseph, Dr.Binoj Chacko, Dr.Sankaralingam, Dr.Suja C S, Dr.N.Geetha, Dr.Divya P D	2016-17	Livestock production management (Regional interest) LPM222	
6	Dr.Harikrishnan S,Dr.P.Anitha, Dr.Beena C Joseph, Dr.Binoj Chacko, Dr.Sankaralingam, Dr.Suja C S, Dr.N.Geetha, Dr.Divya P D	2016-17	A Practical manual for LPM Unit 6 –Poultry production management. Unit 7-Diversified poultry production and hatchery management.	
7	Dr.Laiju M Philip	2016	Monograph on ' Kulambinte Arogyaparipalanam- Oru Margaregha' as part of the Science popularisation programme funded by KSCSTE	

8	Dr.Sathu.T	2016	Food safety Management system-PRPs and HACCP	
9	Dr.Sathu.T	2016	Food safety Management system-(ISO 22000:2005)	
10	Dr V N Vasudevan	2016	Food Safety and Quality Assurance (chapter contribution)	
11	Dr V N Vasudevan	2016	Seminar Digest – Orientation Programme on Academic Leadership (chapter contribution.)	
12	Irshad. A	2016	Integrated Waste Management in India”- Status and Future Prospects for Environmental Sustainability” Chapter- Utilization of Cheese Industry Whey for Biofuel–Ethanol Production	Springer International Publishing Switzerland.
13	Irshad. A	2016	Impact of Dairy Effluent on Environment-A Review	Springer International Publishing Switzerland.
14	Irshad. A	2016	Treatment of Waste Water from Meat Industry.	Springer International Publishing Switzerland.
15	Irshad. A	2016	Waste Management in Food Packaging Industry.	
16	Gleeja V. L., Simi Prakash, Ammu J. V., Deepthy M.S. and Mercey K.A	2016	Manual on Analysis of repeated measures data from animal experiments using SPSS	KVASU
17	Mercey K.A., Gleeja V. L., Suraj P.T. and Sunanda C	2016	Research report-Forecasting the lifetime milk production of cattle	KVASU
18	Gleeja V. L. and Mercey K.A	2016	Research report-Analysis of repeated measures data from animal experiments	KVASU

VII. FACULTY DETAILS

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1	Dr. Sisilamma George, Dean	Veterinary Biochemistry	Puthanpurakkal, Pipeline Road, Mannuthy-680651.	sisilamma@kvasu.ac.in ; deanvetmtty@kvasu.ac.in	9447970518; 9446445100
2	Dr. K. Anilkumar, Associate Dean	Animal Genetics, Breeding and Biostatistics	“Rajeevam”, LFLP School Road, Mammiyoor, Guruvayoor 680101.	anilkumar@kvasu.ac.in ; adeanvetmtty@kvasu.ac.in	9447352616; 9446307016
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6	Dr. Indu V. Raj, Asst. Prof.	Veterinary Anatomy and Histology	Krishnanjana, 5C, Skyline Garland, East Fort, Thrissur	indu@ kvasu.ac.in	9447846794
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8	Dr. Sunilkumar N.S. Asst. Prof.	Veterinary Anatomy and Histology	Naduparampil (H), Gokulam Housing colony, Kandeswaram, Irinjalakuda P.O.	sunilkumar@ kvasu.ac.in	9446131336
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27	Dr. Gangadevi P, Professor & Head	Animal Nutrition	Pandath House Mannuthy P O Ollukkara, Thrissur	gangadevi@ kvasu.ac.in	9446453584
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37	Dr.Biya Ann Joseph Asst. Prof.	Livestock Production Management	H-4 quarters, Veterinary college Campus, Mannuthy	biya@kvasu. ac.in	9846024361
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96	Dr Irshad A Asst Professor	Livestock Products Technology	Quarter No. 18/ T Type, Veterinary College, Mannuthy, Thrissur	irshad@kvasu.ac.in	9895213500
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100	Dr.N.Vijayan Professor & Head (retired)	Veterinary Pathology	Saketham, Post office road, Mannuthy, Thrissur	vijayan@kvasu.ac.in	9447828543
101	Dr. N. Divakaran Nair Professor & Head	Veterinary Pathology	Aravindam Plakkatt Lane Near Vivekodayam School Thrissur	divakaran@kvasu.ac.in	9446278057
102	Dr. Ajith Jacob George Associate Professor	Veterinary Pathology	TC8/739, Pongummoodu, Thrivandrum-11	ajithjacob@kvasu.ac.in	9447128933
103	Dr. Krithiga K Assistant Professor	Veterinary Pathology	4/357A-1 Temple street Moovender Nagar, Bagalur Road, Hosur-635109 Tamilnadu	krithiga@kvasu.ac.in	9842098394
104	Dr. Dhanush Krishna B Assistant professor	Veterinary Pathology	Dhanush Bhavan, Alayamon PO, Anjal, Kollam Dt. 691306	dhanushkb@kvasu.ac.in	9497891394
105	Dr. Devi S S Assistant Professor	Veterinary Pathology	T.C.24/111, Lakshmi Sadanam, Thycaud P.O Trivandrum-14	deviss@kvasu.ac.in	9495154440
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VIII. DISTINGUISHED VISITORS

Sl. No.	Name and address of the visitor	Date of visit	Place of visit	Purpose of the visit
1	Adv. V.S. SunilKumar	08.02.2017	CVAS, Mannuthy	Official
2	Prof. M.S.Amarendhra Kumar, Head Anatomist of Cummings School of Veterinary Medicine at Tufts University, United States	25.08.2016	Anatomy Dept.	Handled an interactive session on Body donation programme
3	4 th B. Sc Medical Laboratory Techniques students of Cooperative Institute of Health Science, Kannur	23.04.2016	Dept. of Veterinary Microbiology	Practical on Virus isolation by Chick embryo inoculation
4	4 th B.Sc. Medical Laboratory Techniques students of Cooperative Institute of Health Sciences, Kannur	30.04.2016	Dept. of Veterinary Microbiology	Practical on Virus isolation by Chick embryo inoculation
5	M.Sc Medical Microbiology students of Cooperative Institute of Health Sciences, Thalassery	07.05.2016	Dept. of Veterinary Microbiology	Practical on Virus isolation by Chick embryo inoculation
6	M.Sc MLT students of MIMS college of Allied and Health sciences, Malappuram	15.10.2016	Dept. of Veterinary Microbiology	Practical on Virus isolation by Chick embryo inoculation
7	B.Sc MLT students of Paryiaram Medical College, Kannur	26.11.2016	Dept. of Veterinary Microbiology	Practical on Virus isolation by Chick embryo inoculation
8	M.Sc. MLT students of MIMS college of Allied and Health sciences, Malappuram	25.03.2017	Dept. of Veterinary Microbiology	Practical on Virus isolation by Chick embryo inoculation
9	NDDDB Team	6.6.16	Dept. of VPH, CVAS, Mannuthy	NABL Lab visit
10	Dr. M. Sekhar Professor and Head Department of Veterinary Public Health, Madras Veterinary College	2.7.16	Dept. of VPH, CVAS, Mannuthy	External examiner for PhD Thesis Viva
11	Dr. Anjan Bhattacharya Professor and Head Department of Veterinary Public Health, RIVER, Kurumbapet , Pondicherry	29.9.16	Dept of VPH, CVAS, Mannuthy	External examiner for M.V.Sc Thesis Viva
12	Dr. Kiran Bhilegaonkar Dr. Sunanda Padiyath	28.1.17 to 29.1.17	Dept of VPH, CVAS, Mannuthy	NABL Surveillance Audit of the Quality Control Laboratory
13	Dr. E Venketeshkumar Assi Pro, Dept of Clin Med, VCRI, Thirunelveli	25.08.2016 to 27.08.2016	CVAS Mannuthy Clin Med Dept.	Ext. examiner for UG course
14	Dr Jeyaraja, Professor, Dept of Clin Med, VCRI, Thirunelveli	2.9.2016	CVAS Mannuthy Clin Med Dept.	MVSc Final viva voce examiner

15.	Ashok Kumar Gupta Dr B L Bhandari Dr S Golani Dr Hari Kumar National Dairy Development Board, ANAND	07.06.2016	Meat Technology Unit	Official
16.	Dr. H. Rahman, DDG, ICAR	08.02.2017	CVAS, Mannuthy	Official
17.	Dr. R.S. Gandhi, ADG, ICAR	08.02.2017	CVAS, Mannuthy	Official
18.	Dr. Arjava Sharma, Director, NBAGR	08.02.2017	CVAS, Mannuthy	Official
19.	Dr. Brahma Prakash, Director, CIRC	08.02.2017	CVAS, Mannuthy	Official
20.	Dr. Chauhan, V.S., Director, CIRC	08.02.2017	CVAS, Mannuthy	Official

X. EXTENSION ACTIVITIES

I. Department of Dairy Science	
1.	Dr.R.Geetha taken class for farmers on marketing of milk and milk products at valakkavu milk society on 13.8.16
2.	Dr. C.T. Sathian delivered a Radio Talk on Milk quality parameters & hygienic milk production at AIR Thrissur on 27.12.16.
3.	Students of Dairy diploma arranged stall on dairy production and processing at KKTU Govt. College Kodungallur on 5.1.17 & 6.1.17 in connection with exhibition and seminar on "Know zoonoses to No zoonoses". Dr. C. T. Sathian and Dr. R.Geetha have coordinated the event.
4.	28.1.17. School children visited the department
5.	Dr. C. T. Sathian handled a class on milk quality for dairy farmers of Varakkara, Thrissur on 28.1.2017 as a part of NSS camp.
6.	Dr. R. Geetha handled a class on Value addition of milk and milk products on 7.2.2017 in a farmers training campaign organised by LRS Thiruvizhamkunnu.
7.	Dr. C.T. Sathian acted as chairman for the farmer's seminar in National symposium on Biodynamic animal farming for the management of livestock diversity on 9.2.17
8.	Fifteen farmers from Kanjirappilly panchayath visited the Department and attended classes on milk processing and value addition on 20.06.2017
II. Department of Animal Reproduction, Gynaecology and Obstetrics	
9.	Faculty has attended infertility camps as subject matter specialist : A I and infertility services at farmers door step through AI centre.
10.	Dr. Amritha Aravind attended Infertility camp in Varandarapilly Gramapanchayath on 27.01.17 and 30.01.17 conducted by NSS unit of CVAS, Mannuthy
11.	Dr. C. Jayakumar took a class on Bovine reproduction for farmers of Varandarapilly Gramapanchayath on 30.01.17 conducted by NSS unit of CVAS, Mannuthy
12.	Dr. R.S. Abhilash and Dr. M.P. Unnikrishnan attended Infertility camp at Thanaloor, Malappuram on 25.02.17 conducted by NSS unit of CVAS, Pookode
13.	Dr. C. Jayakumar took a class on Goat reproduction for farmers in Goat and Sheep farm, Mannuthy on 19.04.17.

14.	Dr. M.P. Unnikrishnan took a class on Goat reproduction for farmers in Goat and Sheep farm, Mannuthy on 23.05.17
15.	Dr. C. Jayakumar attended as subject expert for infertility camp organized at Pullazhy in connection with 'Start up village project in cole lands of Thrissur district on 6 th September 2016.
16.	Training class at Extension Training Centre, Mannuthy on "Reproduction and infertility in Dogs" on 12 th April 2016 for self help groups
17.	Expert services in obstetrical cases for e.vet connect at farmers premises
III. Department of Veterinary Parasitology	
18.	Dr Bindu Lakshmanan handled an awareness class for beneficiaries of Chembankandam panchayath, Thrissur on "Control of Parasites of dairy cattle " on 31 st August 2016.
19.	Dr. H. Shameem. "Know zoonoses to no zoonoses" Exhibition at KKTM college, Pullut, Kodungalloor on 5.01.17 and 6.01.17
20.	Class on "Parasitic Diseases in cattle and their Control" by Dr. H. Shameem in Farmers Workshop on Precision Livestock Farming at Peringottukara. Thrissur on 23 rd May, 2017.
21.	Service to public by diagnosis of parasitic diseases in different samples from throughout the district.
22.	Dr. Bindu Lakshmanan, Dr Asha Rajagopal and Dr. Priya. M. N took classes for BSc & MSc MLT, students from different colleges.
23.	Field level extension for investigation of disease outbreak in Thiruvizhamkunnu farm
IV. Department of Veterinary Public Health	
24.	NABL Accredited Laboratory for water testing. Assessment of physio.chemical and microbial quality of water for public from various sources
25.	Public awareness programmes and regular training programmes for veterinarians, Para veterinarians, school children and farmers in areas of zoonoses, food hygiene and safety, environmental hygiene etc.
26.	Organising awareness programme entitled 'Know Zoonoses to No Zoonoses' in schools in Thrissur district in collaboration with NSS units COVAS Mannuthy, Departments of Animal Husbandry, Health and Education, National Rural Health Mission and Suchitva Mission.
27.	Detection of microbial quality of milk and milk products, meat and meat products, livestock and poultry feeds for the public.
28.	Consultancy services in waste management and remedial measures for safe water.
29.	Public awareness programmes through radio, television, newspapers and periodicals
V. Department of Livestock Products Technology	
30.	Purchase of animals and birds (pig, rabbit, cattle, sheep, goat, turkey, duck and other poultry)
31.	Regular production, processing and marketing of meat and meat products and byproducts and close interaction with State Agricultural Universities, Veterinary Officers, Local Self Government authorities, Industries Department, Suchitwa Mission, Health professionals, FSSAI, Animal Husbandry Departments etc.
32.	Sale of meat, meat products, pet food, organic fertilizer and rendered fat
33.	Technical advice to entrepreneurs, Food Safety Commissionerate
34.	Conducting classes to Nursing, Pharmacy, MBBS, BAMS and Food Technology students
35.	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

36.	Stipendiary training in wholesome meat production, meat processing for 1 – 2 years
37.	Dry rendering of animals died in natural calamities routed through Dept of Animal Husbandry
38.	Extending the infrastructure and manpower of MTU for slaughter, dressing and packaging of meat and poultry for private entrepreneurs
VI. Department of Preventive Medicine	
39.	Conducting postgraduate diploma in therapeutic management of infectious diseases of pet animal and pet birds
40.	Conducting Animal Handling courses
41.	Clinical Services Both Mannuthy and Kakkali Hospital
42.	Vaccination and disease screening In University Farms
43.	ARV vaccination for dogs in and around Thrissur
	Disease and outbreak investigation
44.	Advisory services For farms and AHD and nongovernment organization
45.	Laboratory services. Hematological and serological analysis; Bacterial culture and ABST; Molecular tests
46.	Services to other Universities . Conducting classes to MBBS students of Govt.Medical college Thrissur
VII. Department of Veterinary Surgery and Radiology	
47.	The department acts as referral centre to the field veterinarians on surgical problems. Clinical services are extended to the farmers through the Veterinary Hospitals and at the door steps of the farmers
48.	Emergency surgical services to animal patients are provided during extended hours of after academic activities
49.	Conducting training programmes and awareness classes to veterinarians in the state and from outside and to farmers on topics of importance in recent advancements in surgical affections in animals
50.	An Advisory Call Centre of eVetconnect is functioning in Mannuthy campus of University. The customers/ farmers across the State is calling to the centre in the number of call centre and the calls are attended by call centre executives answering the queries .The calls requiring expert advices are being diverted to expert panels for providing scientific informations. The customers are contacting the call centre for veterinary services regularly.
51	Mobile Veterinary Services are provided at the door steps of farmers by veterinary practitioners engaged for the purpose using vehicles with emergency medicines from 4 PM to 12 midnight every day. The service is operated from Mannuthy, Kakkalai and Pookode.
VIII. Department of Poultry Science	
52.	Farmers training classes of Dr. Harikrishnan S on 30.8.16 .Quiz programme for farmers by All India Radio “Vayalum Veedum Programme”, Peringandoor service co.op Bank auditorium
53.	Farmers training classes of Dr. Harikrishnan S on 5.9.16. “Grower and Layer Management” –Two day training on Egger Nursery and Poultry Farming, CASPS, Mannuthy
54.	Farmers training classes of Dr. Harikrishnan S on 14.11.16. “Kozhi valarthai vyaavasayikadisthanathil” One day Entrepreneurship training of AHD, Kunnankulam Vayaparabhavan
55.	Farmers training classes of Dr. Harikrishnan S on 24.1.17.Training on Poultry Entrepreneurship for farmers from Lakshadweep. “Broiler farming and management”, Camp office, Mannuthy
56.	Farmers training classes of Dr. Harikrishnan S on 21.3.17.Current trends in quail farming “Economics of marketing of quail and its products”, CASPS, Mannuthy
57.	Farmers training classes of Dr. Harikrishnan S on 24.3.17 .Farmers training classes of Dr. Harikrishnan S on Two day training on Egger Nursery and Poultry Farming. “Cage system of rearing poultry”, CASPS, Mannuthy

58.	Farmers training classes of Dr. Harikrishnan S on 25.3.17.Two day training on Egger Nursery and Poultry Farming. "Economics, financial assistance & marketing of poultry and its products", CASPS, Mannuthy
59.	Farmers training classes of Dr. Harikrishnan S on 29.3.17.Two day training on broiler production and management "Practical training at a commercial broiler farm", CASPS, Mannuthy
60.	Farmers training classes of Dr. Harikrishnan S on 30.3.17.Two day training on broiler production and management "Economics, financial assistance & marketing of broiler", CASPS, Mannuthy
IX. Department of Livestock Production Management	
61	Hands on training programme for farmers at University Goat and Sheep Farm Mannuthy on 15.06.2016
62	Hands on training programme for farmers at University Goat and Sheep Farm Mannuthy on 15.08.2016
63	Hands on training programme for farmers at University Goat and Sheep Farm Mannuthy on 23.11.2016
64	Hands on training programme for farmers at University Goat and Sheep Farm Mannuthy on 10.1.2017
65	Hands on training programme for farmers at University Goat and Sheep Farm Mannuthy on 22.3.2017

IX. OTHER ACTIVITIES

1. Scholarships : NTS. 11

2. Students performance: JRF.1; Civil Services.1

3. Awards in curricular, co.curricular and extra.curricular activities :

Under Graduate and Post Graduate students have attended and presented papers in TANUVAS 8th Clinical Case Conference on Farm and Companion Animal Practice for Veterinary Students under the guidance of faculty members of Dept. of Veterinary Surgery and Radiology and secured prizes in various sessions.

a. Ms **Souljai Sindhu Jaikumar** secured **First prize in Small Animal Surgery session**

b. Ms **Arya Chand** secured **Third Prize in Small Animal Surgery session**

c. Ms **Athulya T R** secured **Third Prize in Small Ruminant session**

4. Sports, Physical education and Co.curricular activities:

Intra mural activities

Games overall champions CVAS Mannuthy

1. KVASU Inter collegiate Cricket Championship held on 21st, 22nd & 23rd November 2016 at CVAS Mannuthy. CVAS Mannuthy is champions of the tournaments.
2. KVASU Inter collegiate Chess Championship held on 21st, 22nd & 23rd November 2016 at CVAS Mannuthy. CVAS Mannuthy is champions of the tournaments.
3. KVASU Inter collegiate football tournaments held on 26th, 27th & 29th October 2016 at CVAS Mannuthy. CV AS Mannuthy is champions of the tournaments.
4. KVASU Inter collegiate volleyball Championship held on 26th, 27th & 29th October 2016 at CVAS Mannuthy. CVAS Mannuthy is champions of the tournaments.
5. KVASU Inter collegiate Table tennis (M/W) Championship held on (26th, 27th & 29th October 2016 at CVAS Mannuthy CV& AS Mannuthy, CV& AS Mannuthy is champions of the tournaments.

6. KVASU Inter collegiate shuttle badminton (M/W) Championship held on (26th, 27th & 29th October 2016 at CVAS Mannuthy, Men team secured first position and women team is runners up of the tournaments,
7. KVASU inter collegiate Athletic Meet to be held at CVAS Mannuthy, on 18th & 19th January 2017. CV & AS mannuthy runners up of the championship.

Extramural activities

1. CVAS Mannuthy is the champions in the years 2016 and 2017, in Kurukshetra Agri Cricket Premier League, Organizing by Agriculture University.
2. College football team participated local football tournaments, organized by Decathlon sports club Thrissur. And Calicut sports club.







5. Student Union activities:

1. Inaugurated V# Major Music Club on 23.05.2016
2. Inaugurated University Union on 28.05.2017
3. In the Kurukshethra Agri Premier League Cricket Tournament held on 07.06.2016, CVAS, Mannuthy crowned the championship.
4. 18.06.2016 conducted a send off to the retired faculty members
5. Conducted Interclass Table Tennis Competition "Ping Pong" on 16th, 17th and 21st June 2016.
6. Celebrated a "Nilavu" a day for reading on 23.06.2016
7. A film fest was on 25th, 27th and 29th June 2016 "In Living memory of Alisha"
8. Conducted Interclass Chess on 29.06.2016
9. Interclass Arts Festival "Laasya" on 14th to 18th June 2016.
10. Documentary " Gods in Schackles" on 31.06.2016
11. September 1st and 5th 2016– A workshop cum Training on Animal Welfare
12. On 07.09.2016 – Onam Celebrations
13. Final Year's Day on 19.09.2016
14. On 23.10.2016 Blood Donation Camp with Lion's Club and IMA, Thrissur
15. On 25.10.2016 Field Vets Class by Dr. Sudhodhanan
16. 1st to 5th November 2016 Magazine Release
17. On 16.11.2017 'Raveendra Sandhya' in commemoration of Music Director Raveendran Master
18. On 19.11.2016. Fresher's Day
19. Campus cleaning in December 2016

20. on 19.12.2016 X'Mas Celebration
21. In Republic Day Parade January 2017, Anjali CJ got two Silver Medals
22. From 24th to 27th January 2017 'Ithal' Arts Fest
23. On 25.01.2017 with National Integration Club conducted Debate
24. On 28th & 29th January 2017 with Sasthra Sahithya Parishad conducted camp fair
25. On 16.02.2017 conducted Valentine's Day
26. In March 2017 conducted Film Fest
27. Micro Art Exhibition from 18th to 20th April 2017
28. CVAS, Mannuthy came up with the first Runner Up position in the Inter Collegiate Arts Festival "Dhruva" conducted from 24th to 27th May 2017

6. Activities of 1 Kerala Remount & Veterinary Squadron NCC

The NCC unit at Mannuthy campus . 1(K) R&V Sqn NCC Mannuthy .was established in the year 1986. This is the only one R&V NCC unit in Kerala and one among the 17 such in India. This specialised wing of NCC provides equestrian training to the cadets enrolled in this unit. The squadron has strength of 200 cadets with Senior Division (boys) and Senior Wing (girls) and we are authorized with 13 horses for the NCC training.

The Sqn is under the command of Officer Commanding, at present . Lt. Col. P. Deenathayalan and controlled by NCC Group, Ernakulam and NCC Directorate, Kerala & Lakshadweep. The Commanding Officer of the Sqn is a serving officer of RVC of Indian Army and is always a Veterinarian. The JCO's and NCO's from RVC do the Horse Riding and other equestrian sports training. The Associate NCC Officers of the Sqn. are faculty of the College and in charge of all training and welfare of NCC cadets and the liaison officer between the NCC and University. The cadets of the unit are mainly from the College of Veterinary and Animal Sciences, Mannuthy; College of Dairy Science and Technology, Mannuthy and College of Forestry, Vellanikkara.

- Officer Commanding: Lt Col P.Deenathayalan
- Associate NCC Officer: Lt (Dr) S. Sankaralingam
- Associate NCC Officer: Lt (Dr) Justin Davis K.

The NCC unit here imparts training to the cadets in drill, weapon training, firing etc. in weekly parades, with a minimum of 35 parades an year. The horse riding and equitation training is done on every day morning and evening. As per the new VCI syllabus the Sqn. is offering compulsory courses RV NCC to 1st year and 2nd year students of B.V.Sc. & A.H of College of Veterinary and Animal Sciences, Mannuthy. Compulsory NCC training is also offered to students of College of Forestry, Vellanikkara.

This year cadets attended Annual Training Camps; Army attachment Camps at RVC Center and College, Meerut Cantt.; and Republic Day Camps at New Delhi. The cadets also conducted Social Service activities like Blood Donation, Tree Plantation, Yoga day celebration, Republic day commemoration run etc. The cadets participated in 'Swatch Bharath activities of campus cleaning etc.



Dr. K. Anilkumar, Associate Dean, CVAS, Mannuthy hoisted the flag in 68th Republic day on 21.01.2017 and delivered the speech.



68th year of Republic day commemoration run organized by R&V NCC unit, Mannuthy On 25.01.2017

The meritorious NCC cadets after completion of their training write the examinations and get the NCC 'B' certificate and 'C' certificates. This year all the cadets of our college have passed the "C" certificate examination and also "B" certificate examination except one girl cadet.

Republic Day Camp (RDC) 2017 .Participants from 1 (K) R&V SQN NCC Mannuthy

1. Anjali C.J. (14.BVM.41), CVAS, Mannuthy, KVASU
2. Sruthi Chandramohan, (14.BDM.6), CVAS, Mannuthy, KVASU
3. Ammiti Murali Krishna, CDST, Mannuthy, KVASU
4. Royid Poullose, Don Bosco College, Mannuthy
5. Aleesh Michael, Don Bosco College, Mannuthy



NCC Cadets Aleesh Michael, Ammiti Murali Krishna, Anjali C.J., Royid Poulouse and Sruthi Chandramohan with the medals they had won in the RDC.2017 competition at New Delhi

Medal Winners. RDC 2016 . 1 (K) R&V SQN NCC Mannuthy

1. Anjali C.J. (14.BVM.41) CVAS, Mannuthy . KVASU
 - i. Silver medal . Hacks&
 - ii. Silver medal . Dressage
2. Ammiti Murali Krishna, CDST, Mannuthy . KVASU
 - i. Bronze medal . Show Jumping Top Score
4. Royid Poulouse, Don Bosco College, Mannuthy
 - i. Gold Medal . Hacks

The NCC with the motto of UNITY ad DISCIPLINE actively imparts the traits of National Integration, Leadership, Adventure, Courage, Social Service, and Discipline to all the cadets. The NCC Sqn. at Mannuthy specially provides the unique opportunity to all it's cadets to do Horse Riding and Equestrian Sports.

7. Activities of The Placement Cell

The Students Counselling and Placement cell subscribes a series of magazines such as Frontline, Outlook, Civil Services Chronicle, Competition Success Review, Yearbooks etc. to equip the students to prepare for competitive examinations

a. Personality Development and Motivation session: Dr Rajesh, Senior Executive, Virbac: 22.10.2016

The programme was conducted for students of New Courses. MS and Diploma students participated in the programme

b. Commemoration of International Mother Language Day: 22.02.2017

An essay competition was conducted as part of International Mother Language Day on 21.02.2017. A meeting was conducted on 22.02.2017 to commemorate the day and to award the winners of the competition at 11.00 am in the Seminar Hall. Faculty, staff and students participated in the function.

c. Grooming session for internees: 29th and 30th March 2017

The programme was conducted in association with PTA. All internship students participated in the programme

d. Classes for improving proficiency in English: August 2016 to March 2017

The programme was being conducted regularly twice a week and has considerably improved the language proficiency of students.

8. NSS Units, CVAS, Mannuthy. Report

The NSS units of college of veterinary and animal sciences mannuthy had organised variety of programmes from April, 2016. This year, there are two NSS units functioning in the campus.

1. BLOOD GROUP DETECTION AND SCHOOL STUDY MATERIAL DISTRIBUTION

The first programme organised was blood group detection and distribution of study materials conducted at C.M.S L P School Mannuthy on June 4, 2016. The programme was conducted in association with Mannuthy welfare charitable trust which was inaugurated by Sub Inspector Sri.T.G.Dileep. In the Validitory programme study materials were distributed to 152 meterious students by thrissur cooperative standing committee chair person Srimathi.M.R. Rosili.

2. INTERNATIONAL YOGA DAY CELEBRATION

As part of International Yoga Day Celebration in the College of Veterinary and Animal Sciences Mannuthy, NSS Units organized a motivation class on “Yoga the Elixir of Life” for the students of College of Veterinary and Animal sciences, Mannuthy on 22/06/2016.

The program was started at 4.30 pm with NSS Song. Welcome address was given by Chinchu Mary John, President of CVAS NSS Unit. The function was inagurated by Dr. K. Anil kumar, Associate Dean and Dr C Latha and Dr Ajith Jacob George the NSS programme officers had participated in the programme

The Motivation class on ‘Yoga the Elixir of life’ was handled by Smt. Baby Salini, Assistant Professor, Physical Education Department, CVAS, Mannuthy. A Total of 150 students had participated in the programme. Vote of thanks was Deliverd by Vishnu Dev. R. S,Secretary of CVAS NSS Unit.





3. NJATTUVELA CHANDHA,CHUNDEL held on 25/06/2016

Njattuvlachandha was organized by Koonammoochi peoples service cooperative bank. The inaugural function started at 10.30am. Function was presided over by Sri.Murali Perunelli MLA. Welcome speech was done by Sri.A.B. Praveen, Bank president.Sri. A .C. Moideen ,cooperation, Tourism Minister, Inagurated the function. Cine artist sri. Irshad was the chief guest. Vote of Thanks was done by Dr. C.B. Manomohan, General convenor of Inagural committee. Following Inaguration at 2.30 pm, there was a Training class on Value added products from Jackfruit and other Fruits by Dr.K.B.Sheela, Head of processing Technology, Horticulture college.

Under the NSS unit of College of Veterinary Animal Sciences, Mannuthy Pavlion was set up exhibiting different varieties of fancy birds (Golden Silkie, WhiteSilkie, Italian Bantam, Cochin Bandam, Miliflour, Golden Bantam, Japenese Bantam, Old English game, Black Polish Cap, White Polish Cap) other birds (Nicobari, Azeel, New Hamshire, Kadaknath, White Plymouth Rock, Desi.Thalassery) and laboratory animals (Rat, Mice, Rabbit, Hamster, Guinea pig).

A Students Sales Counter was also set up for the sale of Eco Farm products, Meat products and also for providing information to Farmers.

Quiz competition was organised for the Students by NSS Secretary Jobin A Thampi.

4. EYE CAMP

Eye check up camp was organised in the campus by the NSS Units on 02/07/2016. The Programme was organised with the help of Doctors from MALABAR EYE HOSPITAL. There was heavy participation from Students, Teachers and also the workers of the Farms.



5. WORLD ZONONOSES DAY CELEBRATION

World Zoonoses Day was organized on July 8th, 2016 by School of Zoonoses Public Health and Pathobiology in association of NSS units of College of Veterinary and Animal Sciences, Mannuthy at Parmekkavu VidyaMandir School, Thrissur. The programme was inaugurated by Dr R Padbanabha Iyer, Retd. Prof. and Head, Dept of VPH, CVAS, Mannuthy. Dr C Latha, Prof. and Head, Dept. of VPH, presented an overview of the programme. The felicitation address was by Dr C B Manamohan, Retd. Prof., Dept of Veterinary Pathology. Ms Anjali, NSS Secretary delivered the vote of thanks.

A seminar was organized on 'ZONONOSES' for high school students of the school and the session was handled by Dr Binsy Mathew, Asst Prof. Dept of VPH, CVAS, Mannuthy. A painting competition on 'Pets and zoonoses' was also held for the students. A quiz competition was organized for the students which was conducted by Dr K Vrinda Menon, Asst Professor, Dept of VPH, CVAS Mannuthy.

An exhibition on zoonoses was also organized in the school premises for the students as a part of the awareness campaign on 'Know zoonoses to No Zoonoses'.

The valedictory function was organized at 3.00PM and the prizes were distributed to the winners of quiz and painting competition.

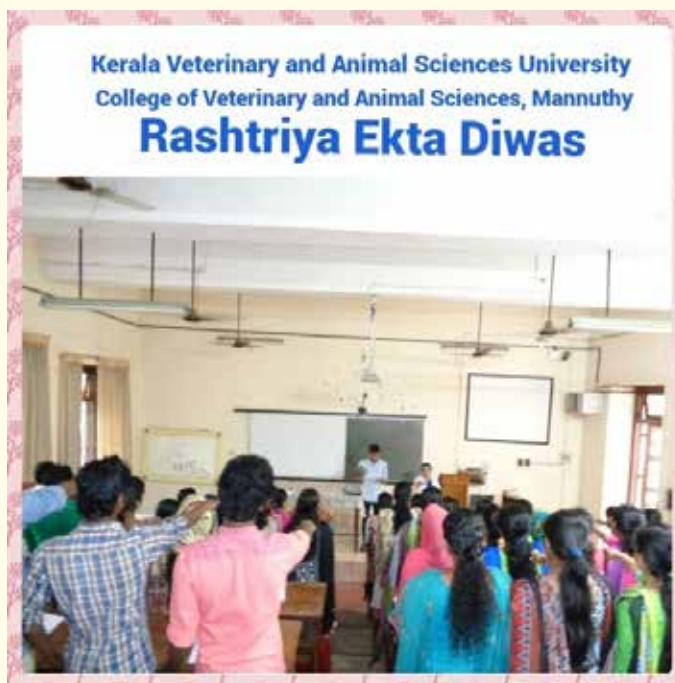


6. AWARENESS PROGRAMME ON “EARLY DIAGNOSIS OF BREAST CANCER”

In the present scenario of increased prevalence of breast cancer, an awareness programme on “Early diagnosis of Breast cancer” was organized by the NSS units of the College of Veterinary and Animal Sciences, Mannuthy on 09/09/16 at 2.30 PM in the seminar hall of College of Veterinary and Animal Sciences, Mannuthy. The program was organized in association with the Lions Club, Mannuthy for the women staff members including teaching, nonteaching and labourers to teach them the methods for early detection of the condition by themselves. The Awareness class was conducted by **Dr. Adbul Azeez, MS**, Managing Director, Daya Hospital and a team of experts.

7. RASHTRIYA EKTA DIWAS (NATIONAL UNITY DAY)

Rashtriya Ekta Diwas (National Unity Day) was commemorated to pay tribute to Sardar Vallabhbhai Patel, who was instrumental in keeping India united. It is celebrated on 31 October every year as annual commemoration of the birthday of the Iron Man of India Sardar Vallabhbhai Patel, one of the founding leaders of Republic of India. Under the auspicious of NSS units of the College of Veterinary and Animal Sciences, Mannuthy, all the NSS volunteers have taken Rashtriya Ekta Diwas oath for the unity of Nation



8. A WORLD WITH PEACE AND HAPPINESS. POSTURE AND DRAWING COMPETITION

In the present scenario of increased violence in the society, creating awareness among the school children is essential and hence, NSS units of the College of Veterinary and Animal Sciences, Mannuthy organized a posture competition for the school children in Thrissur District. The theme of the programme was “A World with Peace and happiness”. The programme was organized in association with the Lions Club, Mannuthy Agri City on 11/11/16 at 2 p.m in the College in the Golden Jubilee Hall and 20 students from different schools had participated in the programme.

On the same day a drawing competition was organized for the students of College of Veterinary and Animal Sciences, Mannuthy and College of Dairy Science and Technology, Mannuthy on the theme “Fight against drug abuse among the students” at 4 p.m.

9. HARITHA KERALAM PROJECT ON 20/12/16

As a part of the 'Haritha Keralam Project of the Government of Kerala, a 'Clean Campus' programme was conducted in the College of Veterinary and Animal Sciences, Mannuthy on 20.12.16. The programme was arranged by the NSS units of College of Veterinary and Animal Sciences, Mannuthy in collaboration with the College Students Union, College Alumni Association and the Parent Teacher Association. Around seven hundred participants comprising of all the teaching and non-teaching staff, labourers and students were actively involved in the programme. The highlight of the programme was the social gathering and active participation of each and every member in the College of Veterinary and Animal Sciences, Mannuthy towards achieving a clean campus mission.



10. EXHIBITION AND SEMINAR ON “KNOW ZONOSSES TO NO ZONOSSES” AT KKTm GOVERNMENT COLLEGE, KODUNGALLUR, THRISSUR

A two days exhibition and seminar on “**Know Zoonoses to No zoonoses**” was conducted jointly by School of Zoonoses Public Health and Pathobiology and NSS units, CVAS, Mannuthy as a part of Exhibition on Biodiversity for Human Health and Welfare conducted by KKTm Government college, Kodungallur, Thrissur on 5th and 6th of January 2017. The programme was officially inaugurated by Shri. Vipin Chandran, Chairman, Kodungallur Municipality and Prof. Vijayamma, Vice principal of the college welcomed the gathering.

Department of Dairy Science, CVAS, Mannuthy also had participated in the programme with exhibition and sale of various dairy products. A seminar was organized on “Zoonoses and Public Health Significance” for the students of the college and the session was handled by Dr. Deepthi Vijay, Assistant Professor, Department of Veterinary Public Health, CVAS, Mannuthy. A posture making competition on “Pets and zoonoses” was also held for the students. A quiz competition was also organized for the college students by NSS Volunteer, Manish. K.M. School students from the neighbouring schools also had attended the programme. Around 500 students had benefitted from the programmes.



9. Academic Activities by the Academic Cell:

I. UG

Activities	Year of Admn and other details
Admission	I Year BVSc&AH 2016 admn on 27.09.2016
Programmes Organized	<p>1. Anti Ragging Campaign by District Legal Services Authority on 03.09.2016 in the Seminar Hall, College of Veterinary and Animal Sciences, Mannuthy</p> <p>2. Interactive Session on Applied animal behaviuor, welfare, ethics & law & Body donation programme in the Seminar Hall, College of Veterinary and Animal Sciences, Mannuthy by scientists from People for the Ethical Treatment of Animals (PETA), India</p>
UG Registration formalities	<p>2013 admn : 06.06.16(6thsem)</p> <p>2012 admn: 08.08.16 (8thsem)</p> <p>2015admn : 17.10.16(3rdsem)</p> <p>2014admn : 25.10.16(5thsem)</p> <p>2013 admn : 10.02.17(7thsem)</p>
Time table setting	2013 admn : 06.06.16(6 th sem)
Midterm examination scheduling and conduct	<p>2011 admn: 9thSem</p> <p>2012 admn: 7thSem& 8thSem</p> <p>2013 admn: 6thSem& 7thSem</p> <p>2014 admn: 4thSem& 5thSem</p> <p>2015 admn : 2ndSem& 3rdSem</p> <p>2015admn (Repeat batch) : 1stSem& 2ndSem</p>
Internal examination scheduling and conduct	<p>2012 admn: 7thSem</p> <p>2013 admn:5thsem& 6thSem</p> <p>2014 admn: 4thSem</p> <p>2015 admn : 2ndSem</p> <p>2015admn (Repeat batch) : 1stSem</p> <p>2016 admn : First Internal assessment & Second Internal assessment</p> <p>2013admn: 6thsem</p>
IUMS	<p>Fee collection , student registration, student course allocation and teacher allocation</p> <p>Monitoring attendance and internal mark entry particulars</p>
Improvement of examination hall facility	<p>*Renovated the examination hall by fixing glass panes</p> <p>*Made permanent seating arrangement in main exam hall for all batch of students</p> <p>*Issued guidelines for the conduct of examinations</p>
Certificate	Verification and preparation of mark certificates, bonafide student certificates, fee structure certificate, course completion certificates etc.
ICAR All India Entrance Examination for admission to UG programme (AIEE) – 2016 on 21.05.2016	Conducted exam for 4549 candidates in 71 Examination Halls in the College campus
ICAR All India Entrance Examination for admission to PhD programme (AIEE) – 2016 on 22.05.2016	Conducted exam for 209 candidates in the Main Examination Hall of the College

Internship Evaluation	Monitored the submission of Log Book Manual, Dessertation and Project of Internship students on 02.04.16. Conducted comprehensive viva voce for internship students (2010 & earlier admn) on 04.04.16, 05.04.16 and 06.04.16.
ICAR, JRF, 2016 results	Six students of this college bagged high ranks among first 100 ranks in Vet. Science JRF, 2016 (Sangeetha S Gireesh . rank 23, Sonu S Nair.38, Varsha Mary Mathai – 50, Serin Sara Philip.71, Sruthi S..73 and Anjana Jossy.91)

2. MVSc & PhD

MVSc Registration	2013 admn: 7 th sem: 12.05.16
PhD Registration	2015 admn: 2 nd sem: 18.04.16 2013 admn: 7 th sem: 12.05.16 2011 admn: 12 th sem: 12.05.16 2013 admn: 8 th sem: 07.11.16
Thesis submission	MVSc: 2 PhD: 5
Conduct of Defense seminar and Credit Seminar	22 MVSc & PhD students
PhD Entrance examination 2016.17 of KVASU	Assisted in the conduct of entrance examination, interview and publishing of rank list of PhD programmes 2016.17 of KVASU from 10th to 14th November 2016
Student Achievements	<ul style="list-style-type: none"> 1st position in KVASU Shuttle Badminton Men & Third in Women championship 1st position in KVASU Table Tennis Men & Women championship 1st position in KVASU Football Men Championship 1st position in KVASU Volleyball Men Championship and Third in women championship Three students represented KVASU for South Zone Badminton (Men) Championship organized by Madurai Kamaraj University from 03/10 2016 to 07/10/2016. Six students won prizes during the International Clinical Conference held at MVC, Chennai

Students Strength as on 31.03.2017

Academic Cell (1). UG, PG & Ph.D.

Year of study	Admission	Semester	Total	Male	Female
			BVSc& AH		
1 st Year	2016	1	146	52	94
1 st Year (repeat)	2015	1	15	11	4
2 nd Year	2015	3	147	61	86
3 rd Year	2014	5	132	46	86
4 th Year	2013	6	92	24	68
5 th Year	2012	8	87	35	52
Internship	2011	10	75	20	55
Total			694	249	445

Year of study	Admission	Semester	Total	Male	Female
			MVSc		
1 st Year	2016	1	51	23	28
2 nd Year	2015	3	59	25	34
3 rd Year	2014	5	1	1	0
Total			111	49	62

Year of study	Admission	Semester	Total	Male	Female
			Ph.D		
1 st Year	2016	1	10	5	5
2 nd Year	2015	3	3	3	0
3 rd Year	2014	5	5	4	1
4 th Year	2013	7	12	7	5
5 th Year	2012	9	2	1	1
Total			32	20	12
GRAND TOTAL			837	318	519

Total strength of UG, PG & Ph.D Students = 837 (M 318 + F 519)

Students Strength as on 31.03.2017 Academic Cell (2). MSc & Diploma			
2016 Admission			
Course	Boys	Girls	Total
M Sc Animal Science	1	1	2
M Sc Animal Biotechnology	1	3	4
MS c Quality Control in Dairy industry	2	6	8
MS c Applied Micro biology	1	9	10
Diploma in Feed technology	1	0	1
Diploma in Laboratory Techniques	1	13	14
Diploma in Poultry Production	4	6	10
Diploma in Dairy science	14	16	30
Total			79

2015 Admission			
Course	Boy	Girls	Total
M Sc Biochemistry & molecular Biology	1	4	5
M Sc Animal Biotechnology	1	2	3
MS c Quality Control in Dairy industry	1	3	4
MS c Applied Micro biology	2	6	8
Diploma in Dairy science	.	.	26
Total			46

College of Veterinary & Animal Sciences, Pookode



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 28th October 1998. Later on, the college started functioning in the Pookode campus on 11th December 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

INFRASTRUCTURE FACILITIES

The college has two Academic blocks encompassing class rooms and labs of all departments, a Teaching Veterinary Clinical Complex (TVCC) which accommodates pre-final and final year class rooms as well as the clinical departments, Instructional Livestock Farm Complex (ILFC), Peripheral Veterinary Clinic at Meenangadi, library facility, internet facility, sales counter, separate hostel facilities for boys and girls, staff quarters, play grounds, auditoriums, riding club, a state-of-art gymnasium, bank facility and canteen facilities. The college houses the Centre for Wildlife which aims at generating trained manpower interested in wildlife and the Centre for One Health Education Advocacy Research and Training (COHEART) which pioneers in one health education in the country.

STAFF DETAILS

There are 22 departments including instructional farm and veterinary clinical complex, and a total of 92 permanent teaching staff working in this college headed by the Dean. Among them 7 are Professors and 85 are Assistant Professors and 28 are non-teaching staff.

ADMINISTRATIVE OFFICE

MAJOR ACTIVITIES

The administrative office of CVAS, Pookode, headed by Administrative officer runs the official procedures of the college. There are four administrative sections namely,

- Establishment Section which carries out the routine activities of the teaching and non-teaching staff of the college
- General Section which performs all miscellaneous activities utilising funds
- Academic Section which carries out the official procedures in connection with the academic activities such as admission procedure, scholarships, allowances, issuing certificates etc.
- Accounts Section deals with the documentation and accounting of funds of and from the college.

Each section is headed by a Section Officer who is supported by Section Assistants.

STAFF DETAILS

Sl No.	Name	Designation	Email	Mobile No.
	Suresh.PM	Administrative Officer		9495228088
	Krishnapriya.I.S	Assistant		8089325056
	Mohammed Muneer	Assistant		8547989033
	Subin.PR	Assistant		9744282012
	Sunil.V	Assistant		9447865629
	Sabitha Raj	Assistant		9526446087
	Riya Mathew	Assistant		8156856166
	Athira.K.P	Assistant		8281560883
	Anvarudeen.M	8921334641		8921334641
	Vijesh C.V.	Section Officer (General & Establishment)	vijesh@kvasu.ac.in	9497556480
	Sheen P. Felix	Section Officer (Accounts)	sheenpfelix@kvasu.ac.in	9747001581
	Harinarayanan .K.	Steno to Dean	padeanvetpkt@kvasu.ac.in	9847564517

DEPARTMENTS AND OTHER UNITS OF THE COLLEGE

1. DEPARTMENT OF VETERINARY ANATOMY AND HISTOLOGY
2. DEPARTMENT OF VETERINARY BIOCHEMISTRY
3. DEPARTMENT OF VETERINARY CLINICAL MEDICINE, ETHICS AND JURISPRUDENCE
4. DEPARTMENT OF VETERINARY & ANIMAL HUSBANDRY EXTENSION
5. DEPARTMENT OF LIVESTOCK PRODUCTION AND MANAGEMENT
6. DEPARTMENT OF VETERINARY MICROBIOLOGY
7. DEPARTMENT OF ANIMAL NUTRITION
8. DEPARTMENT OF VETERINARY PARASITOLOGY
9. DEPARTMENT OF VETERINARY PATHOLOGY
10. DEPARTMENT OF VETERINARY PHYSIOLOGY
11. DEPARTMENT OF POULTRY SCIENCE
12. DEPARTMENT OF STATISTICS
13. DEPARTMENT OF DAIRY SCIENCE
14. DEPARTMENT OF VETERINARY PHARMACOLOGY AND TOXICOLOGY
15. DEPARTMENT OF ANIMAL BREEDING AND GENETICS
16. DEPARTMENT OF VETERINARY EPIDEMIOLOGY AND PREVENTIVE MEDICINE
17. DEPARTMENT OF SURGERY & RADIOLOGY
18. DEPARTMENT OF LIVESTOCK PRODUCTS TECHNOLOGY
19. DEPARTMENT OF PHYSICAL EDUCATION
20. DEPARTMENT OF ANIMAL REPRODUCTION, GYNAECOLOGY & OBSTETRICS
21. DEPARTMENT OF VETERINARY PUBLIC HEALTH
22. DEPARTMENT OF TEACHING VETERINARY CLINICAL COMPLEX (TVCC)
23. INSTRUCTIONAL LIVESTOCK FARM COMPLEX (ILFC)
24. LIBRARY & INFORMATION SYSTEM

DEPARTMENT OF VETERINARY ANATOMY AND HISTOLOGY

MAJOR ACTIVITIES OF THE DEPARTMENT

The Department of Veterinary Anatomy and Histology, CVAS, Pookode started functioning in the College of Veterinary & Animal Sciences, Mannuthy in the year 2001. Later on the department got shifted to CVAS, Pookode in December, 2004. The department has a well maintained museum with mounted skeletons of domestic animals and rare specimens of wild animals and birds which is a source of information for visitors including scientists, school and college students and public. Facilities in the department include a well-equipped dissection lab, embalming room, bone room, histology practical lab with smart board, LCD projector and multimedia facilities, PG research lab and photo gallery. The department is handling the various courses for B.V.Sc. & A.H., M.V.Sc., MS (wildlife) and Ph.D. programmes.

THRUST AREA OF RESEARCH

SALIENT RESEARCH FINDINGS/ ACCOMPLISHMENTS

I. Dr. S. Maya

1. Lamination of the Gray Matter in the Spinal Cord of Foetal Goat
2. Differentiating Deer and Goat species from skin samples-A DNA barcoding approach
3. Estimation of HydroxyProline and Collagen in the Skin samples of Deer and Goat
4. Nucleotide Sequence Variation of the Ovomucoid Gene in Unhatched Chick Embryos with Structural Anomalies
5. Comparative Scanning Electron Microscopic Studies on the Hair in Deer, Goat and Sheep
6. Histology, Lectin Histochemistry and Ultrastructure of Interdigital Gland in Crossbred Sheep

II. Dr. RAJANI C.V.

1. Histomorphology and histochemistry of the testis and the epididymis of rats
2. The paternal antigen expression makes placenta susceptible to immune mediated attack

III. Dr. Leena Chandrasekhar

1. The Electron-microscopic and histological picture of Apoptosis in lymphocytes of the bursa of Fabricius and thymus at the involutary stage was studied in detail.
2. Elucidated important histochemical, histological changes of the bursa, thymus & spleen at the time of involution.
3. Carried out detailed stereological analysis of involuting lymphoid organs

IV. Dr. Patki Harshad Sudhir

Postnatal Development of the Oviduct and Developmental Pattern of the Pancreas in the Kuttanad Duck (*Anas platyrhynchos domesticus*)

V. Dr. Surjith K.P.

Gross and Microanatomical Studies of the Spleen in the Guinea Fowl (*Numida mileagris*)

STAFF DETAILS

Professors (Nos.)- 01w

Associate Professors (Nos.)- NIL

Assistant Professors (Nos.)- 04

Temporary teaching staff (Nos.)- NIL

Non-teaching staff (Nos. specify)- NIL

No.	Name	Designation	Qualifications	Email	Mobile
1	Dr Maya S.	Professor	PhD	maya@kvasu.ac.in	9446625160
	Area of Research Interest	Neuroanatomy, Embryology, Histology			

2.	Dr Rajani C.V.	Assistant Professor	PhD	rajani@kvasu.ac.in	9497643580
	Area of Research Interest	Comparative Anatomy, Histology, Wild Animal Morphology, Biotechnology			
3.	Dr. Leena Chandrasekhar	Assistant Professor (on study Leave)	MVSc	leena@kvasu.ac.in	8547455323
	Area of Research Interest	Histology, Electron Microscopy			
4.	Dr Patki H.S.	Assistant Professor	PhD	harshad@kvasu.ac.in	8281146889
	Area of Research Interest	Comparative Anatomy and Histology, Developmental anatomy, Anatomical techniques			
5.	Dr Surjith K.P.	Assistant Professor	MVSc	surjithkp@kvasu.ac.in	8281589726
	Area of Research Interest	Wild life Anatomy, Histology			

DEPARTMENT OF BIOCHEMISTRY

MAJOR ACTIVITIES OF THE DEPARTMENT

This department offers the courses for B.V.Sc. & A.H as per Veterinary Council of India regulations. In addition, the department also assists in teaching and research activities of MS Wildlife programme. Faculty of the Department is associated with various state plan funded projects during the period. Molecular sexing centre for pet birds was established in the department. The department offers its service as a diagnostic lab for the analysis of clinical samples for various biochemical parameters.

THIRST AREA OF RESEARCH

- Clinical Biochemistry
- Molecular sexing of pet birds

SALIENT RESEARCH FINDINGS / ACCOMPLISHMENTS

- The technique for sexing of pet birds has been standardized (under State Plan Project 2015-16)

STAFF DETAILS

Professors (Nos.) - Nil

Associate Professors (Nos.) - Nil

Assistant Professors (Nos.) - 3

Temporary teaching staff (Nos.) - Nil

Non-teaching staff (Nos. specify)-1 Class IV

No.	Name	Designation	Qualifications	Email	Mobile
1	Dr. Renjith Sebastian	Assistant Professor & Head (i/c)	M.V.Sc.	renjithbiochem@kvasu.ac.in	9495626304
	Area of Research Interest	Molecular Biology, Immunology, Nutritional Biochemistry			
2.	Dr. Naheef K	Assistant Professor	M.V.Sc.	nahif@kvasu.ac.in	8281093584
	Area of Research Interest	Nano-biotechnology, Clinical Biochemistry			
3	Dr.Lijo John	Assistant Professor	M.V.Sc., Ph.D.	lijo@kvasu.ac.in	9446626554
	Area of Research Interest	Clinical Biochemistry, Molecular Biology			

DEPARTMENT OF VETERINARY CLINICAL MEDICINE, ETHICS AND JURISPRUDENCE

MAJOR ACTIVITIES OF THE DEPARTMENT

- Undergraduate and post-graduate teaching
- Routine therapeutic management of inpatient and outpatient cases
- Management of emergency and critical cases
- Farm visits
- Consultancy services to farmers, pet owners and livestock entrepreneurs
- Extension activities to farmers, commodity interest groups etc.
- Organisation of training programmes to veterinarians, para veterinarians etc.
- Conduct/ participation in livestock health camps
- Providing opportunities to the students for expert interactions.

THRUST AREA OF RESEARCH (in bullet form)

- Prevalence and clinic pathological effects of common tick borne haemoparasitic pathogens observed in cattle population of Wayanad district.
- The Prevalence and Distribution of Metabolic Diseases of Ruminants in Kerala

SALIENT RESEARCH FINDINGS / ACCOMPLISHMENTS (in bullet form)

- Occurance of gastric disorders in dogs and clinic biochemical, ultrasonography and radiographic changes associated with the gastric disorders were evaluated.

STAFF DETAILS

Professors (Nos.) - Nil

Associate Professors (Nos.) - Nil

Assistant Professors (Nos.) - 5

Temporary teaching staff (Nos.) - Nil

Non-teaching staff (Nos. specify)-Nil

No.	Name	Designation	Qualifications	Email	Mobile
	Dr. Biju P. Habeeb	Assistant professor	MVSc	bijuhabeeb@kvasu.ac.in	9847209537
	Area of Research Interest	Small animal internal medicine, animal welfare, pet birds			
2.	Dr. Vinu David	Assistant professor	MVSc	vinu@kvasu.ac.in	9846475071
	Area of Research Interest	Large animal medicine, canine cardiology and dermatology			
3	Dr. Sindhu O.K.	Assistant professor	MVSc	sindhuok@kvasu.ac.in	9447671984
	Area of Research Interest	Small animal dermatology and haematology; Laboratory diagnosis of diseases			

4	Dr. Umesh C.G	Assistant professor	MVSc	umesh@kvasu.ac.in	9562179563
	Area of Research Interest	Canine gastro enterology, Critical care and emergency therapeutics			
5	Dr. Manju K. Mathew	Assistant professor	MVSc	manjukm@kvasu.ac.in	9447844886
	Area of Research Interest	Small ruminant internal medicine, small animal dermatology			

DEPARTMENT OF VETERINARY & ANIMAL HUSBANDRY EXTENSION

MAJOR ACTIVITIES OF THE DEPARTMENT

- 1) Undergraduate and post graduate teaching, Extension and Research.
- 2) Knowledge management and technology transfer pertaining to the need based areas of animal husbandry.
- 3) Infrastructural development, income generating activities, consultancy services and market led extension.

THRUST AREA OF RESEARCH

- Human resource development
- Studies on women self-help groups
- Indigenous technical knowledge
- Training need analysis
- Continuing veterinary education
- ICT application
- Knowledge management.

SALIENT RESEARCH FINDINGS / ACCOMPLISHMENTS

- 1) Conducted around 25, six days livestock based commodity interest group trainings at different parts of Kerala.
- 2) Establishment of a multipurpose extension unit at CVAS, Pookode (Ongoing)
- 3) Establishment of village resource expert centre at CVAS, Pookode.
- 4) Completed two post graduate researches.
- 5) Conducted various activities of technology transfer at different parts of Kerala.
- 6) Provided technical support for the *Adugramam* project for WSHG members of Wayanad.
- 7) Provided technical support and conducting thirty, 10 days training programme for the *Pashusaghi* project for WSHG members of Kerala.

STAFF DETAILS

Professors (Nos.)- Nil

Associate Professors (Nos.)- Nil

Assistant Professors (Nos.)- One

Temporary teaching staff (Nos.)- Nil

Non-teaching staff (Nos. specify)- Nil

No.	Name	Designation	Qualifications	Email	Mobile
	Dr. Subin K.Mohan	Assistant Professor	MVSc, PGD, PhD	subin.mohan@kvasu.ac.in	9895900936
	Area of Research Interest	Human resource development, indigenous technical knowledge and training need analysis, continuing veterinary education, Knowledge management.			

DEPARTMENT OF LIVESTOCK PRODUCTION MANAGEMENT

MAJOR ACTIVITIES OF THE DEPARTMENT

The Department of Livestock Production and Management is established in 15th December 2004 with the broad objectives of teaching, research and extension of the knowledge on rearing and taking care of various species of livestock and wild animals for the benefit of the farmers and rural youth. At present, the department offers, as per VCI syllabus, courses to undergraduate (B.V.Sc, & A.H. Degree Course-2009 and 2016 syllabus) students.

The post graduate degree programme (M.V.Sc.) in the discipline of Livestock Production and Management has been started in the department from the year 2013-2014, Up to 2016 three students have completed M.V.Sc. degree programme, Ph.D. in Animal Science (Bio Science) has been started from the year 2014-2015 and Certificate course on Livestock Production has been started from the year 2013-2014, up to 2016 thirteen students have completed.

This department has also been engaged in research on different specialized and integrated livestock farming systems, management techniques, stress management, milking management, nutritional management and economical eco-friendly utilization and disposal of farm waste etc. and giving consultation and bankable projects to needy livestock farmers

THRUST AREA OF RESEARCH (in bullet form)

- Integrated livestock farming
- Developing different bio gas model
- Broiler goat
- Identification and characterisation of Pheromones to augment reproduction of cattle and goat
- Identification and characterisation of Pheromones to predict Musth in elephants
- Developing low cost milking machine
- Developing of Omega 3&6 fatty acid enriched goat milk
- Developing climatic stress amelioration strategies/ techniques for pigs

SALIENT RESEARCH FINDINGS / ACCOMPLISHMENTS

- 40 Purebred Malabari goat were purchased under plan project 2015-16
- Broiler goat ration formulated
- Renovation of Amphi theatre
- Different climatic instruments viz digital thermohygrometer and anemometer, grooming and farrier kits were purchased under ICAR DG 2016-17 for conducting UG & PG practicals

- Broiler goat ration formulated
- Established goat milking machine (first time in Kerala) and Automatic milk packing machine through State Plan Project- RSP-II-11 “Establishment of pure Malabari foundation stock at Pookode

STAFF DETAILS

Professors (Nos.)- Nil

Associate Professors (Nos.)- Nil

Assistant Professors (Nos.)- 4

Temporary teaching staff (Nos.)- Nil

Non-teaching staff (Nos. specify)-Nil

No.	Name	Designation	Qualifications	Email	Mobile
1	Dr.Balusami.C	Assistant Professor	M.V.Sc., Ph.D	Balusami@kvasu.ac.in	9446510821
	Area of research interest	PheromonesPig managementBuffalo production and management Herbal anti-stress			
2.	Dr.John Abraham	Assistant Professor	M.V.Sc., Ph.D., MBA	john@kvasu.ac.in	9447617194
	Area of research interest	Bio energyMilking machineUnconventional feedBio diesel			
3	Dr.Sakkariya Ibrahim	Assistant Professor	M.V.Sc.,M.Phil	sakkariya@kvasu.ac.in	9645677028
	Area of research interest	Goat production systems Dairy cattle management			
4	Dr.Roshin Anie Jose	Assistant Professor	M.V.Sc.,M.Phil PGDTMA	roshin@kvasu.ac.in	9495062861
	Area of research interest	Wild animal and goat managementOmega 3&6 fatty acid enriched goat milk			

DEPARTMENT OF MICROBIOLOGY

MAJOR ACTIVITIES OF THE DEPARTMENT

- 1) Undergraduate (B.V.Sc. & A.H.) and postgraduate (M.V.Sc) teaching.
- 2) Diagnosis of bacterial, fungal and viral diseases
- 3) Molecular detection of common and emerging viral and bacterial pathogens
- 4) Serodiagnosis of brucellosis, salmonellosis, avian mycoplasmosis
- 5) Culture and sensitivity assay

THRUST AREA OF RESEARCH

- 1) Diagnosis of infectious disease of livestock employing molecular methods
- 2) Isolation and identification of emerging viral diseases of pigs
- 3) Molecular diagnosis of respiratory pathogens of poultry
- 4) Diagnosis of leptospirosis in animals

SALIENT RESEARCH FINDINGS / ACCOMPLISHMENTS

- Post graduate research carried out in the Department could detect porcine parvovirus and porcine circovirus 2 in swine in Kerala for the first time.
- When short fragments of the genome of these viruses were sequenced and analysed, it could be observed that they are similar to isolates circulating in neighbouring countries.
- Developed and standardized the multiplex PCR (mPCR) for the detection of avian respiratory pathogens.

STAFF DETAILS

Professors (Nos.) - 1

Associate Professors (Nos.) - Nil

Assistant Professors (Nos.) - 4

Temporary teaching staff (Nos.) - Nil

Non-teaching staff (Nos. specify) – Permanent labourer-1

No.	Name	Designation	Qualifications	Email	Mobile
	Dr. Koshy John	Professor and Head	M.V.Sc., Ph.D.	koshy@kvasu.ac.in	9947450202
	Area of Research Interest	Veterinary Virology, leptospirosis			
2.	Dr. Chintu Ravishankar	Assistant Professor	M.V.Sc., Ph.D.	chintu@kvasu.ac.in	9447716620
	Area of Research Interest	Infectious disease diagnosis employing molecular methods with special reference to viruses of pigs			
3.	Dr. Rajasekhar R.	Assistant Professor	M.V.Sc., Ph.D.	rajasekhar@kvasu.ac.in	8547328290
	Area of Research Interest	Molecular diagnosis of avian viral pathogens and <i>Mycoplasma gallisepticum</i>			
4	Dr.Siju Joseph	Asst.Professor	M.V.Sc., Ph.D.	siju@kvasu.ac.in	9446283382
	Area of research Interest	Conventional and molecular diagnosis of bacterial diseases. Currently involved in leptospirosis research.			
5	Dr. Sumod K.	Assistant Professor	M.V.Sc., Ph.D.	sumodk@kvasu.ac.in	8921763221
	Area of research interest	Antibiotic resistance of pathogens causing mastitis and metritis. Immunocontraception and control of rabies.			

DEPARTMENT OF ANIMAL NUTRITION

MAJOR ACTIVITIES OF THE DEPARTMENT-

Teaching, Research, Extension and consultation services to farmers and Dairy societies

THRUST AREAS OF RESEARCH-

1. Enhancing livestock production through different feeding strategies
2. Formulation of a cost effective complete feed for lactating dairy cows using conventional and Un-conventional feed ingredients.

3. Evaluation of the nutritional potential of ayurvedic medicinal residues for ruminants
4. Formulation of a cost effective milk replacer for calves using soya milk
5. Formulation of Area Specific Mineral mixtures
6. Evaluation of chicken waste derived Rumen Protected Fat
7. Nutrigenomics
8. Total mixed Rations

MAJOR ACHIEVEMENTS-

- Successfully cleared the Surveillance Audit of NABL held on 21-1-2017 & 22-1-2017. Awarded NABL Accreditation for the Feed and Fodder Analytical Laboratory of the Dept. of Animal Nutrition for the 2nd successive year.
- The data bank on nutrient profile of 50 different Ayurvedic medicinal herbs, native of Wayanad District was established in the Department of Animal Nutrition, College of Veterinary and Animal Sciences, Pookode, as part of the State Plan project, "Identification and assessment of nutritive value of herbal products for feeding of livestock". Principal Investigator: Dr. Biju Chacko
- Screening of biological samples of livestock for heavy metal contamination

STAFF DETAILS

Professors (Nos.)-

Associate Professors (Nos.)-

Assistant Professors (Nos.)- 5

Temporary teaching staff (Nos.)-

Non-teaching staff (Nos. specify)-1

No.	Name	Designation	Email	Mobile
1	Dr. Dildeep.V	Assistant professor (Sr Scale) & Head i/c	dildeep@kvasu.ac.in	09446442974
2	Dr. Biju Chacko	Assistant Professor	bijuchacko@kvasu.ac.in	09446574495
3	Dr. SenthilMurugan	Assistant Professor	senthil@kvasu.ac.in	09446233030
4	Dr. Ani Bency Jacob	Assistant Professor	ani.bency@kvasu.ac.in	09497662839
5	Dr. Jinsy. V.S	Assistant Professor	jinsyvs @kvasu.ac.in	09495932997

DEPARTMENT OF VETERINARY PARASITOLOGY

MAJOR ACTIVITIES OF THE DEPARTMENT -

- Teaching on Veterinary Parasitology to undergraduates and post graduates
- Promoting guiding and co-ordination of advanced research in the field of Veterinary Parasitology
- Development of optimal infrastructural facilities for undertaking application oriented research in Veterinary Parasitology
- Fostered inter-departmental and inter-institutional interactions to develop collaborative research programmes.

THRUST AREA OF RESEARCH (in bullet form)

1. Tick and tick borne diseases
2. Molecular Parasitology
3. Haemoparasites
4. Parasites of wild and domestic animals
5. Parasitic Zoonoses
6. Anthelmintic resistance.

SALIENT RESEARCH FINDINGS/ ACCOMPLISHMENTS (in bullet form)

- Reported *Strigiphilus ketupae* Emerson & Elbel, 1957, an owl specific lice collected from a Brown fish owl in the Wayanad district of Kerala.
- Reported *Gnathostoma spinigerum* in a leopard cat
- Reported low level of deltamethrin resistance in south Indian isolates of *Rhipicephalus (Boophilus) microplus*
- Reported *Dirofilaria repens* in scrotum of dogs

STAFF DETAILS

Professors (Nos.) - Nil

Associate Professors (Nos.) - Nil

Assistant Professors (Nos.) - 4

Temporary teaching staff (Nos.) - Nil

Non-teaching staff (Nos. specify) - NIL

No.	Name	Designation	Email	Mobile
1	Dr.ReghuRavindran	Assistant Professor& Head	drreghuravi@yahoo.com	9447713422
2	Dr.Ajithkumar K.G.	Assistant Professor	ajithkg@kvasu.ac.in	9446280765
3	Dr.Deepa C.K	Assistant Professor	deepack@kvasu.ac.in	9495928947
4	Dr.Anju Varghese	Assistant Professor	anju@kvasu.ac.in	8690637955

DEPARTMENT OF VETERINARY PATHOLGY

MAJOR ACTIVITIES OF THE DEPARTMENT

1. Department has grown as a major center for tumour diagnosis in domestic animals in Northern Kerala
2. Involved in rapid and accurate diagnosis of rabies, a disease of great public health significance, through Fluorescent antibody technique
3. Conducts systematic post mortem examination and disease diagnosis of animals and birds including wild life

4. Inception of molecular pathology lab
5. Involved in extension activities like farmers' counselling, field and farm visit for disease investigations and giving awareness on different disease conditions affecting livestock and poultry
6. Aids in disease diagnosis through clinical pathological examination, fine needle aspiration cytology examination etc.
7. Involved in under graduate and post graduate teaching and research

THRUST AREA OF RESEARCH

1. Toxicopathology
2. Biomaterial research
3. Field oriented problem research

MAJOR ACHIEVEMENTS

1. The department has grown as the major center for diagnosis of rabies in Northern Kerala
2. Has established a good teaching pathology museum
3. Established histopathology and cytopathology lab, clinical pathology lab and separate post mortem rooms for large animals and poultry
4. Is equipped with automatic tissue processor, fluorescent microscope, microtome, centrifuge, serum analyzer, ELISA reader etc. which facilitates the conduct of research activities as well as timely dispatch of diagnosis reports
5. Continuing the collaborative research with Sree Chithira Thirunal Institute of Medical Sciences, Biomedical wing on biomaterials on bovine and porcine origin

STAFF DETAILS

Professors (Nos.)- 00

Associate Professors (Nos.)- 01

Assistant Professors (Nos.)- 05*

Temporary teaching staff (Nos.)-

Non-teaching staff (Nos. specify)-02

No.	Name	Designation	Email	Mobile
	Dr. Mammen J Abraham	Associate Professor and Head	mammen@kvasu.ac.in	9447878670
	Dr. Prasanna. K.S	Assistant Professor	prasanna@kvasu.ac.in	9495014780
	Dr. Sajitha. I.S	Assistant Professor	sajitha@kvasu.ac.in	9446193407
	Dr. Hamza Palekkodan	Assistant Professor	hamza@kvasu.ac.in	9447131587
	Dr. Anoopraj. R	Assistant Professor	anoopraj@kvasu.ac.in	9495361872
	Dr. Pradeep,M*	Assistant Professor	pradeep.mampilli@gmail.com	9447945170

*On Study Leave

DEPARTMENT OF VETERINARY PHYSIOLOGY

MAJOR ACTIVITIES OF THE DEPARTMENT

TEACHING; The department offers various courses for BVSc & AH students first and second professional year; Dairy Diploma course; B Tech Dairy Science , B Sc Poultry science & PG & Ph.D courses.

RESARCH; Apart from regular teaching of students faculty are involved in research work, and presently they are executing four state plan research projects.

Also they had submitted various research project to external funding agencies like DBT, DST, AYUSH and ICAR, which are in various stages of evaluation .

HRD development; Two teacher of the department had undergone training for development of human resources.

Publications; Last year department teachers had published 10 research publications in various national and international journals.

THRUST AREA OF RESEARCH

Thrust area of research - Application of biotechnology and molecular biology for better understanding physiological processes, stress physiology and molecular (reproductive) endocrinology were recognized as core area of research by the department

MAJOR ACHIEVEMENTS:

RESARCH; Executing four plan research projects.

HRD development; Two teacher of the department had undergone training for development of human resources.

Publications; Last year department teachers had published 10 research publications in various national and international journals.

Practical Manual: Edited and Modified Two Manual as per old and new Syllabus according to VCI & MSVE guidelines

STAFF DETAILS

Professors (Nos.)-Nil

Associate Professors (Nos.)-Nil

Assistant Professors (Nos.)-Total 4-3 in position &1-in working arrangement at RRTC, Tvm

Temporary teaching staff (Nos.)-Nil

Non-teaching staff (Nos. specify)-1

No.	Name	Designation	Email	Mobile
1	Dr. Babitha V	Assistant Professor & Head i/c	babitha@kvasu.ac.in	9446533056
2	Dr.AzizZarina	Assistant Professor	zarina@kvasu.ac.in	9895016583
3	Dr. Rajesh Kumar	Assistant Professor	drrajesh7.vet@gmail.com rajeshkumar@kvasu.ac.in,	7035980393
4	Dr. Shibu K Jacob	Assistant Professor	shibukj@kvasu.ac.in	9447112160

DEPARTMENT OF POULTRY SCIENCE

MAJOR ACTIVITIES OF THE DEPARTMENT

- Offered the Livestock Production Management course for 2016 B.V.Sc batch
- Offered one course for the Livestock Production Management II for 2015 B.V.Sc batch
- Implementation of the B.Sc PPBM course at CVAS, Pookode
- Offered four courses for the 2016 admission students of B.Sc PPBM PROGRAMME
- Offered six courses for the 2015 admission students of B.Sc PPBM PROGRAMME
- Offered ETR course for two batches of 2013 admission B.V.Sc &AH students
- Awareness classes for poultry farmers in collaboration with Animal Husbandry Department and Kerala Poultry Development Corporation
- Consultancy service to poultry farmers

THRUST AREA OF RESEARCH

- Poultry nutrition
- Hatchery management
- Meat Type Cockerel rearing

SALIENT RESEARCH FINDINGS / ACCOMPLISHMENTS

- Egg quality parameters in Grama Priya layers reared in backyard system

STAFF DETAILS

Professors (Nos.) - nil

Associate Professors (Nos.) - nil

Assistant Professors (Nos.) - Three. Dr.Aswathi.PB is currently on LWA for Ph.D at CARI, U.P

Temporary teaching staff (Nos.) - Two for the B.Sc PPBM programme

Non-teaching staff (Nos. specify)- Currently nil

No.	Name	Designation	Qualifications	Email	Mobile
1	Dr.Aswathi.PB	Assistant Professor	M.V.Sc	aswathi@kvasu.ac.in	8547646917
	Area of Research Interest	Poultry meat products technology			
2.	Dr.Simi.G	Assistant Professor	M.V.Sc	simig@kvasu.ac.in	9495986570
	Area of Research Interest	Broiler nutrition			
3.	Dr.Abdul Muneer.K	Assistant Professor	M.V.Sc	abdul.muneer@kvasu.ac.in	9495649730
	Area of Research Interest	Poultry Nutrition			

DEPARTMENT OF STATISTICS

MAJOR ACTIVITIES OF THE DEPARTMENT (Maximum 100 words)

This department offers courses for Diploma in Dairy Sciences, B.Sc. in Poultry Production and Management, M.V.Sc, M.S. in Wildlife programme and Ph.D. Programme of the University. Department also help the students of MS wildlife, M.V.Sc and Ph.D. Programme of the University in planning and analysis of their Research project. Department is also extending the expertise in the analysis of the data related to research projects of the various department.

THRUST AREA OF RESEARCH (in bullet form)

- Offering courses to various programmes of the University
- Statistical consultation including designing the experiments, sample size determination, data management and statistical analysis in various fields

STAFF DETAILS

Professors (Nos.)- Nil

Associate Professors (Nos.)- Nil

Assistant Professors (Nos.)- 1

Temporary teaching staff (Nos.)- Nil

Non-teaching staff (Nos. specify)- Nil

No.	Name	Designation	Qualifications	Email	Mobile
1	Dr. Sunanda C	Assistant Professor	M.Sc. in Agricultural Statistics with Ph.D.	sunandac@kvasu.ac.in	9447672929
	Area of Research Interest	Designing the experiment and analysis of data			

DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

MAJOR ACTIVITIES OF THE DEPARTMENT -

1. To impart basics of Pharmacology and Toxicology to undergraduate and post graduates
2. Conduct and co-ordinate various research in the field of Pharmacology and Toxicology
3. Guidance and implementation of MVSc. and Ph.D. research works.
4. Collaborations with national institutes in area of advanced technology and research
5. Associated with external aided project and various state plan funded projects
6. Antibiotic and pesticide residue analysis of different biological samples

THRUST AREA OF RESEARCH

- Ethno pharmacology
- Pesticide Toxicology

- Pharmacokinetics
- Molecular Pharmacology
- Molecular Toxicology
- Analytical applications

MAJOR ACHIEVEMENTS

1. Developed optimal infrastructural facilities for undertaking application oriented research in Pharmacology and Toxicology
2. Identified potential acaricide phytomolecules that acts by modulating the dopaminergic pathway
3. Identified potential herbal agents active against dyslipidemia
4. Identified the potential mode of action of lipotropic herbal extract
5. Standardized the methods for antibiotic and pesticide residue analysis of different biological samples

STAFF DETAILS

Professors (Nos.) - Nil

Associate Professors (Nos.) - Nil

Assistant Professors (Nos.) - 6

Temporary teaching staff (Nos.) - Nil

Non-teaching staff (Nos. specify)- One on contract

No.	Name	Designation	Qualifications	Email	Mobile
1	Dr. Sanis Juliet	Assistant Professor & Head	M.V.Sc., Ph.D.	sanis@kvasu.ac.in sanisjuliet@gmail.com	9446259510
	Area of Research Interest	Pharmacokinetics, drug development, pesticide toxicology, Ethnopharmacology			
2.	Dr. Nisha A.R.	Assistant Professor	M.V.Sc., Ph.D.	nishaarvet@gmail.com nisha@kvasu.ac.in	8606391936
	Area of Research Interest	Pesticide toxicology, Immunotoxicology, Molecular toxicology			
3.	Dr. Suresh N Nair	Assistant Professor	M.V.Sc.	suresh@kvasu.ac.in	9446919146
	Area of Research Interest	Pharmacokinetics, pharmacodynamics, drug designing			
4.	Dr. Suja Rani S	Assistant Professor	M.V.Sc., Ph.D.	sujarani@kvasu.ac.in	9400964104
	Area of Research Interest	Ethnopharmacology, Toxicology, obesity, diabetes, liver diseases, dyslipidemia, immunomodulation			
5	Dr. Deepa A.K. *	Assistant Professor	M.V.Sc.	deepaak@kvasu.ac.in	9946553715
	Area of Research Interest	Ethnopharmacology, Pesticide Toxicology			
6	Dr. Ranjith D	Assistant Professor	M.V.Sc.	ranjithd@kvasu.ac.in	9496054688
	Area of Research Interest	Ethnopharmacology			

DEPARTMENT OF ANIMAL GENETICS AND BREEDING

MAJOR ACTIVITIES OF THE DEPARTMENT (Maximum 100 words)

- i) Undergraduate and Post graduate teaching
- ii) Research in the areas of genetic basis of disease resistance and heat tolerance, conservation of Indigenous livestock breeds and varieties and studies on milk composition of Indigenous cattle breeds and varieties.
- iii) Extension services

THRUST AREA OF RESEARCH (in bullet form)

- Continued improvement of livestock through scientific intervention and evaluation of various farm animal genotypes.
- Breeding for disease resistance
- Conservation, characterization, evaluation and improvement of domestic animal biodiversity
- Use of advanced molecular genetics techniques and bioinformatics for livestock improvement

SALIENT RESEARCH FINDINGS/ ACCOMPLISHMENTS (in bullet form)

STAFF DETAILS

Professors - 1 (on leave)

Associate Professors - Nil

Assistant Professors - 5 + 1 (on LWA)

Temporary teaching staff - Nil

Non-teaching staff - Class IV- 1

No.	Name	Designation	Area of Research Interest	Email	Mobile
1	Dr.Bindu K.A	Professor & Head (on leave)	Animal Genetics and Breeding	binsib@gmail.com	9495131152
2	Dr. Rojan P. M.	Assistant Professor	Animal Breeding	rojanpm@kvasu.ac.in	9846510710
3	Dr. Muhasin Asaf V.N	Assistant Professor	Molecular Genetics, Bioinformatics	muhasin@kvasu.ac.in	8281784821
4	Dr. Elizabeth kurian	Assistant Professor	Cytogenetics and Molecular Genetics	elizabeth@kvasu.ac.in	9446234162
5	Dr. Naicy Thomas	Assistant Professor	Animal Genetics and Breeding	naicy@kvasu.ac.in	9446119307
6	Dr.C.N.Dinesh	Assistant Professor	Molecular Genetics	dinesh@kvasu.ac.in	9447227119

DEPARTMENT OF VETERINARY EPIDEMIOLOGY AND PREVENTIVE MEDICINE

MAJOR ACTIVITIES OF THE DEPARTMENT

Teaching: B.V.Sc. & A.H, M.V.Sc. and Ph.D.

Research: Department is involved in researches in the field of preventive and therapeutic studies, sero and molecular epidemiology of various infectious diseases, antimicrobial resistance, diagnosis and control of gastro intestinal and haemoparasites of companion animals and farm animals. **Extension:** Department offers consultancy service to rural farmers, conducting immunization programmes and faculty are involved in various awareness programmes.

THRUST AREA OF RESEARCH

- Studies on antibiotic resistance genes in Staphylococcal pyoderma in dogs
- Canine leptospirosis and clinic-therapeutic studies
- Goat mastitis
- Haemoparasitic diseases

SALIENT RESEARCH FINDINGS/ ACCOMPLISHMENTS

- Etiological identification in bovine enteritis
- Therapeutic management of bovine mastitis
- Screening for bovine brucellosis using milk ELISA

STAFF DETAILS

Professors (Nos.) - Nil

Associate Professors (Nos.) - Nil

Assistant Professors (Nos.) - Five

Temporary teaching staff (Nos.) - Nil

Non-teaching staff (Nos. specify) - Nil

No.	Name	Designation	Qualifications	Email	Mobile
1.	Dr. Deepa. P. M.,	Assistant Professor and Head i/c	MVSc , PhD	deepapm@kvasu.ac.in	9496400982
	Area of Research Interest	Canine viral diseases, molecular biology, canine and feline metabolic and endocrinology research			
2.	Dr. Bipin. K. C.	Assistant Professor	MVSc , PhD, PGNDBP	bipinkc@kvasu.ac.in	9447153448
	Area of Research Interest	Foot-and-mouth disease, serological and molecular research, acute phase protein studies			
3.	Dr. Smitha. J. P.	Assistant Professor	MVSc	smithajp@kvasu.ac.in	8547140423
	Area of Research Interest	Haemo-parasitic diseases, immunological studies			

4.	Dr. Rathish. R. L.	Assistant Professor	MVSc , PhD	rathish@kvasu.ac.in	9387387023
	Area of Research Interest	Bovine mastitis, bacteriology, molecular research			
5.	Dr. Janus. A	Assistant Professor	MVSc , PGDLEFM	janusa@kvasu.ac.in	9446039537
	Area of Research Interest	Infectious disease of small animals, diagnosis, epidemiological studies and control			

DEPARTMENT OF SURGERY AND RADIOLOGY

MAJOR ACTIVITIES OF THE DEPARTMENT

- Teaching
 1. B.V.Sc. & A.H.
 2. M.V.Sc.
 3. Ph.D.
- Imparting trainings for the field level practitioners on various topics as per the requirement of the trainees. Presently trainings are offered in the topics of Small Animal Anaesthesia and Minimally Invasive Surgical procedures.
- Treatment of animals at the door steps of the farmer
- Consultancy services

THRUST AREA OF RESEARCH (in bullet form)

- Small, Large and Wild animal anaesthesiology
- Biomaterial evaluation
- Orthopaedic surgeries
- Ophthalmology
- Imaging techniques

SALIENT RESEARCH FINDINGS/ ACCOMPLISHMENTS (in bullet form)

- Evaluated the efficacy of Sr – HASI as a bone graft material and found out that the same can be effectively used for management of fractures with segmental loss.
- Developed and evaluated the technique of surgical denervation of hip joint for the management of canine hip dysplasia. The technique was found to be effective.

STAFF DETAILS

Professors (Nos.)- Vacant

Associate Professors (Nos.)- 1

Assistant Professors (Nos.)- 6*

One Assistant professor holding additional charge as Director, Centre for Wild Life Studies. One Deputed to TVCC and One on LWA for joining spouse .One Assistant professor on deputation for acquiring higher degree.

Temporary teaching staff (Nos.)- NIL

Non-teaching staff (Nos. specify)- NIL

No.	Name	Designation	Qualifications	Email	Mobile
1.	Dr. John Martin K.D.	Associate Professor	Ph.D	martin@kvasu.ac.in	9847413665
	Area of Research Interest	Soft tissue surgeries, Ophthalmology, Imaging			
2.	Dr. George Chandy	Assistant Professor	Ph.D.	chandy@kvasu.ac.in	9946734408
	Area of Research Interest	Wild Life Anaesthesia and Surgery, Spinal Surgeries			
3.	Dr. Dinesh P T	Assistant Professor	M.V.Sc.	dineshpt@kvasu.ac.in	9447144085
	Area of Research Interest	Orthopaedic Surgeries, Biomaterial evaluation, MIS Surgeries			
4.	Dr. Sooryadas S	Assistant Professor	Ph.D.	sooryadas@kvasu.ac.in	9447462141
	Area of Research Interest	Anaesthesiology, Ophthalmology, Imaging			
5.	Dr. Reji Varghese	Assistant Professor	M.V.Sc.	reji@kvasu.ac.in	9745055033
	Area of Research Interest	Soft tissue surgeries, Physiotherapy			
6.	Dr.Jinesh Kumar N S	Assistant Professor	M.V.Sc.	jinesh@kvasu.ac.in	9447958763
	Area of Research Interest	Ophthalmology, Orthopaedic surgeries			

DEPARTMENT OF LIVESTOCK PRODUCT TECHNOLOGY

MAJOR ACTIVITIES OF THE DEPARTMENT

1. Teaching Under graduate and Post graduate students.
2. Coordination and conduct of MVSc. Research.
3. Research in various fields of Livestock products technology.
4. Technical consultancy on Scientific and hygienic slaughtering of food animals, processing and value addition of milk and meat and utilization of by products to LSGD, AHD, entrepreneurs, policy makers and food safety and standards authority.

THRUST AREA OF RESEARCH

1. Development of novel, functional meat products.
2. Standardization and quality evaluation of traditional meat, poultry and egg products of Kerala.
3. Evaluation of techniques to tenderise spent meat of chicken and buffalo.
4. Effect of edible coatings and oleoresins of spices on quality of meat and meat products.
5. Effect of locally available spices on the quality characteristics of comminuted beef products.
6. Isolation and identification of lactic acid bacteria isolated from raw cow milk and dairy plant effluents in Wayanad district.

MAJOR ACHIEVEMENTS

1. Revolving Fund project for Livestock Products, under which MVSc, BVSc & AH & students are trained, thereby imparting them hands on training apart generating revenue.
2. Entrepreneurial training to BVSc & AH students in milk and meat processing as per VCI syllabus, to develop entrepreneurship among students.
3. Hands on training imparted to Kudumbasree women on Milk and Meat products processing.

STAFF DETAILS

1. Professors (Nos.) - Nil
2. Associate Professors (Nos.) - Nil
3. Assistant Professors (Nos.) - 3 (2+1(Dept. of Dairy science))
4. Temporary teaching staff (Nos.) - Nil
5. Non-teaching staff (Nos. specify) - 2

No.	Name	Designation	Email	Mobile
1	Dr. Renuka Nayar	Assistant Professor	renuka@kvasu.ac.in	9496448914
2	Dr. Kavitha Rajagopal	Assistant professor	kavitha@kvasu.ac.in	9446438510
DEPT. OF DAIRY SCIENCE				
1.	Dr. Magna Thomas	Assistant professor	magna@kvasu.ac.in	9447159119

DEPARTMENT OF ANIMAL REPRODUCTION, GYNAECOLOGY & OBSTETRICS

MAJOR ACTIVITIES OF THE DEPARTMENT

1. To impart undergraduate, post graduate and doctoral programmes
2. To carry out research and extension activities beneficial to livestock holders
3. To encourage companion pet animal reproductive management.

THRUST AREA OF RESEARCH

1. Optimization of post partum breeding in cattle and goats
2. Improving freezability of Malabari buck semen

MAJOR ACHIEVEMENTS

1. Comparative efficacy of Ovsynch and TRIU-C in synchronization of ovulation in Malabari goats: Both the treatment protocols yielded comparable efficacy in induction of oestrus in goats with similar pregnancy rates
2. Comparative efficacy of two synchronization protocols using progesterone inserts in post partum anoestrus dairy cows – TRIU-B+oestradiol+PGF2 α synchronization protocol gave better oestrous response with lesser time taken for the onset of oestrus, more intense oestrus and high first service and overall conception rate than TRIU-B+GnRH+PGF2 α group.

STAFF DETAILS

Professors - Nil

Associate Professors - Nil

Assistant Professors - 6

Temporary teaching staff - Nil

Non-teaching staff - Nil

No.	Name	Designation	Email	Mobile
	Dr. Promod. K	Assistant Professor	pramod@kvasu.ac.in	9447213277
	Dr. Hiron M. Harshan	Assistant Professor	hiron@kvasu.ac.in	9495661032
	Dr. Abdul Azzez	Assistant Professor	azzez@kvasu.ac.in	9847701028
	Dr. Leeba Chacko,	Assistant Professor	leeba@kvasu.ac.in	9447640189
	Dr. Magnus Paul K.	Assistant Professor	magnus@kvasu.ac.in	9400322175
	Dr Lekshmi Bhai K.	Assistant Professor	lekshmi@kvasu.ac.in	9447310206

DEPARTMENT OF VETERINARY PUBLIC HEALTH

MAJOR ACTIVITIES OF THE DEPARTMENT

Department of Veterinary Public Health was started in the year 2004 at CVAS, Pookode. The department endeavours for undertaking the public health issues and offers consultancy services to the public in terms of its core domains of emerging zoonotic threats, environmental issues and food quality assurance with special reference to water quality testing. Apart from Under-Graduate and Post-Graduate teaching, the activities of department envisages to collaborate with the activities of Centre for One Health, Education, Advocacy, Research and Training (COHEART), the first of its kind in promulgating the One Health doctrine. The department holds an NABL accredited laboratory in water quality testing. Recently, the department hosted an ICAR-sponsored 21 days winter school on "Application of One Health concepts for control of Emerging Zoonoses and Health threats".

THRUST AREA OF RESEARCH

1. Food microbiology
2. Detection of zoonotic pathogens
3. water quality monitoring
4. Research on infectious diseases

MAJOR ACHIEVEMENTS

1. The department is the major centre for diagnosis of *Vibrio cholerae* in Northern Kerala
2. Established NABL accredited water quality testing Laboratory
3. Established Molecular biology lab
4. Equipped with Real time PCR, fluorescent microscope, ELISA Reader etc which facilitates the conduct of research activities as well as timely dispatch of diagnostic reports
5. Collaborates with COHEART in popularizing one health concept

STAFF DETAILS

Professors - 01

Associate Professors - Nil

Assistant Professors - 04

Temporary teaching staff - Nil

Non-teaching staff - 01

No.	Name	Designation	Qualifications	Email	Mobile
1	Dr. Prejit	Assistant Professor	MVSc, PhD	prejit@kvasu.ac.in	9497679630
	Area of research interest	Bacterial and viral zoonoses, One health			
2	Dr. Vinod V. K.	Assistant Professor	MVSc	vindvk@kvasu.ac.in	9447677539
		Water quality and environmental hygiene			
3	Dr. Asha K.	Assistant Professor	MVSc	ashak@kvasu.ac.in	9447235528
		Epidemiology and environmental hygiene			
4	Dr. Jess Vergis*	Assistant Professor	MVSc	jess@kvasu.ac.in	9446355683
		Epidemiology and zoonoses			

*ON STUDY LEAVE

TEACHING VETERINARY CLINICAL COMPLEX, CVAS, POOKODE

MAJOR ACTIVITIES OF THE DEPARTMENT

- Teaching Veterinary Clinical Complex functions in three streams viz., the hospital at Pookode, Farm Clinics at Sugandagiri and the Multidisciplinary Specialty Hospital at Meenangadi. It caters the need of farmers from Vythiri, Meenangadi and nearby panchayats. It also conducts undergraduate clinical teaching and provides facilities for postgraduate researches. Through this TVCC, the students of the university get a wider perspective on topics like handling of animals, anamnesis, diagnosis of disease, medical and surgical management of cases, prescription writing, formulation and dispensing of drugs, record keeping, maintenance and extension activities.

THRUST AREA OF RESEARCH

Through its facilities TVCC supports the research projects of the clinical and non-clinical departments on various aspects involving disease diagnosis and management in pet and farm animals.

SALIENT RESEARCH FINDINGS / ACCOMPLISHMENTS

- There is a steady increase in the number of cases presented at both hospitals.
- During the last financial year (2016-2017), plan fund was utilized for strengthening of existing facilities in both the institutions.

STAFF DETAILS

Professors (Nos.) - One (Vacant)

Associate Professors (Nos.) - 1 (1 on WORKING ARRANGMENT)

Assistant Professors (Nos.) - 5 (5 on WORKING ARRANGMENT)

Temporary teaching staff (Nos.) - Nil

Non-teaching staff (Nos. specify) - 6 (2 in position and 4 vacant)

No.	Name	Designation	Qualifications	Email	Mobile
	Dr. John Martin K.D.	Associate Professor and head (i/c)*	PhD	martin@kvasu.ac.in	9847413665
	Dr. Magnus Paul	Assistant Professor*	MVSc	magnuspaul@gmail.com	9400322175
	Dr. Reji Varghese	Assistant Professor*	MVSc	drreji76@gmail.com	9745055033
	Dr. Janus A.	Assistant Professor*	MVSc	janusa@kvasu.ac.in	9446039537
	Dr. Umesh C.G	Assistant Professor*	MVSc	umesh@kvasu.ac.in	9562179563
	Dr. Manju K. Mathew	Assistant Professor*	MVSc	manjukm@kvasu.ac.in	9447844886
*On working arrangement in TVCC					
	Area of Research Interest	Given along with the reports of the Departments from which the faculty is placed on working arrangement			

LIBRARY & INFORMATION SYSTEM

The College Library caters the information needs of more than 900 registered members and the other scholars across the state. The Library adopts the International standard library management software 'Koha' and the Digital Library software D-space and Greenstone for maintaining it's e-library . Besides the traditional library services, it offers e-resource facility at 24x7 basis bestowing 1174 e-books and more than 3000 national and international e-journals through Consortium for e-Resources in Agriculture (CeRA) of ICAR and Elsevier Sciencedirect.com. The statistical information hub of India "the Indiaagristat.com" is a significant digital asset proffered by this library. The distinguished scholarly journal "Nature" is one among it's outstanding print journal subscription.

Documental assets of CVAS Library, Pookode.

Books (Text Books, Reference Books, Annual Reviews etc.)	11100
Thesis (MVSc /PhD)	73
Current Journals	10
On-line Journals/e-contents through CeRA	3000+
CABI Vet CD	1971-2013
Wiley e-journals (archives from1997)	6
e-books/ database series	1174
Off line information contents and databases	110
News Papers and Popular magazines	20

Books are classified according to the Dewey Decimal Classification scheme(DDC) and covered by ANSI/NISO standard Z39.50, and ISO standard 23950 for data exchanging.

Facilities and membership

The library has a floor space of 242.67m² providing reading facility to accommodate 30-40 students. Digital Library facility offers its service to 20 students at a time. The library is functioning from 9 am to 7 p.m on all working days and opens on Sunday and second Saturday. The total user strength is as shown below.

Member Category	Numbers
Diploma Students	60
U.G. Students(BVSc./B.Tech Dairy Science)	570
PhD/PG Students (MVSC & MS)	77
Faculty /Staff	177
Trainees & Non-member scholars (Govt/Private Sector)	20
Total	904

Staff strength

Assistant Librarian - 01

Reference Assistant/Reference Officer - 01

Class IV - 04

Permanent Labourer - 01

Sl.No	Name	Designation	E-mail	Mob. Number
1.	Mohanlal E K	Assistant Librarian and Head	lallu2007@gmail.com , ekmlal@kvasu.ac.in	+919495464972
2.	Nisa Y M	Reference Officer	nisaym@kvasu.ac.in	+919446018915

Conventional services and activities

- Book Lending Services
- Over-night reference loan
- Inter library loan
- Reference Service
- Book bank scheme for SC/ST students &UG/PG Students
- Reprographic facility (Colour/Black & white)

Digital/Electronic Library services

- D space Institutional repository service
- Computerized SDI (Selective Dissemination of Information)
- WEB OPAC (online public access catalogue) Link <http://192.168.10.53:8000>
- Database/Internet Browsing
- Provision for ICAR e-journal consortium (CeRA) and science direct
- Online reservation service
- E-mail alert on check in, check out, overdue, etc.
- User account to each user with login password

ACADEMIC PROGRAMMES/ACTIVITY

The College offers Under Graduate (B.V.Sc. & A.H.), Post Graduate (M.V.Sc. and MS), Doctoral (Ph.D.) and Diploma Programmes in Veterinary & Animal Science subjects in regular mode and Post graduate diploma and Certificate courses in technology enabled mode. There are 439 students studying for five year B.V.Sc. & A.H. programme. Fifty five students were undergoing M.V.Sc. programme in various disciplines and four Ph.D. students. Eleven students were undergoing MS in Wildlife studies and a total of 55 students were attending diploma programmes in Dairy Science and Nine students in BSc Poultry Production. The 635 member strong student community has 269boys and 366 girls. All the academic activities of the college are being controlled by academic cell and the consolidated report of activities are given below.

STAFF POSITION

Sl no	Teaching staff
1.	Dr. S.Maya, Professor Academics
2.	Dr. Koshy John, Officer i/c PG
3.	Dr. Babitha V., Officer i/c UG Academics (BVSc &AH) – Cell I
4.	Dr.Kavitha Rajagopal, Officer i/c Academics (Diploma & MS) – Cell II

ACADEMIC PROGRAMME/ACTIVITY

Student strength CVAS, Pookode as on 31.3.2017

Sl. No.	Batch	Number of students		
		Boys	Girls	Total
1	2011 Batch Admission BVSC&AH	14	23	37
2	2012 & earlier Admission BVSC&AH	22	34	56
3	2013 Admn. BVSC&AH	24	31	55
4	2014 Admn. BVSC&AH	32	44	76
5	2015 Admn. BVSC&AH	51	75	126
6	2016 Admn BVSC&AH	46	80	126
7	2015 PG	12	11	23
8	2016 PG	15	17	32
9	2015 MS Wildlife studies	4	4	8
10	2016 MS Wildlife studies	1	2	3
11	2015 Diploma (Dairy Science)	15	11	26
12	2016 Diploma (Dairy Science)	17	12	29
13	2015 B.Sc. Poultry Production & Business Management	03	06	9
14	2016 B .Sc. Poultry Production & Business Management	10	15	25
15	2014 Ph.D.	2	-	2
16	2015 Ph.D.	1	1	2
	Total	240	320	560

Research (MVSc & PhD)

Sl. No	Name of the student	Department	Name of Major Advisor	Name of Project
1	Dr. Shiju Shaji	Microbiology (Residency)	Dr Koshy John	Molecular diagnosis of leptospirosis and detection of leptospira serovars prevalent in animals in Wayanad district.
2	Dr. Charujith Narayanan	Animal Nutrition	Dr. Dildeep.V	Effect of feeding complete ration with Tween-80 on growth performance of post ruminant dairy calves
3	Dr. Chavan Suraj Janardan	Animal Nutrition	Dr. Dildeep.V	The effect of organic and inorganic zinc on gene expression of glucose transporter and growth in Malabari kids
4	Dr. Nimisha M.	Parasitology	Dr. Reghu Ravindran	Molecular detection of Hemoprotozoans in ticks infesting cattle and dogs of Kerala
5	Dr. Pradeep R. K	Parasitology	Dr. Reghu Ravindran	Molecular characterization of bovine <i>Babesia bigemina</i> Isolates From Kerala
6	Dr. Sreelakshmi. M	Pathology	Dr. N.Divakaran Nair	Biomechemical and histopathological assessment of in vivo remodeling response of decellularised bovine pericardium
7	Dr. Shyam S.	Pathology	Dr. Prasanna. K.S	Morpho-histopathologic and histochemical studies on age related changes in brain of dogs
8	Dr. Nazreen Fathima M. S.	Pathology	Dr. Prasanna. K.S	Morpho-histopathological and molecular identification of viral respiratory infections in chicken
9	Dr. Sabeer Hussain K. V.	Pathology	Dr. N.Divakaran Nair	Tissue Response of Decellularised bovine omental implants in rat subcutaneous model
10	Dr. Yashas R. Kumar	Pathology	Dr. N.Divakaran Nair	Acute and sub-acute oral toxicity studies of ethanolic extract of aerial parts of <i>Blumea virens</i> in rats
11	Dr. Akhila V. V.	ARGO	Dr. K. Promod	Freezability of Malabari buck semen supplemented with curcumin and ascorbic acid
12	Dr. Yamini P. Suresh	ARGO	Dr. K. Promod	Freezability of Vechur bull semen supplemented with varying levels of trehalose and taurine in a Tris based extender
13	Dr. Nimisha soman	VPH	Dr. Prejit	Development of recombinant OmpF protein based indirect ELISA for the detection of Salmonella antibodies in poultry
14	Dr. Mahesh S. Hugar	VPH	Dr. Prejit	Molecular detection and characterization of common enteric bacterial pathogens of public health significance

15	Dr. Divya Suresh	Vet. Surgery & Radiology	Dr. Syam K. Venugopal	Clinical and radiographical evaluation of healing of fracture of long bones in goats treated with bioceramic implants
16	Dr. Kamalesh Kumar K.S.	Vet. Surgery & Radiology	Dr. George Chandy	Evaluation of chlordiazepoxide or haloperidol as premedicants for midazolam-ketamine anaesthesia for vasectomy in Bonnet Macaques (<i>Macaca radiata</i>)
17	Dr. Binu S. Joselin	Vet. Surgery & Radiology	Dr. Sooryadas S.	Clinical evaluation of dexmedetomidine-midazolam-ketamine with atracurium for isoflurane anaesthesia in dogs
18	Dr. Pramod U.	Vet. Surgery & Radiology	Dr. Syam K. Venugopal	Radiography, ultrasonography and laparoscopy for the diagnosis of intraabdominal disorders in dogs
19	Dr. Sarath K.S.	Vet. Surgery & Radiology	Dr. Sooryadas S.	Comparative study on laparoscopic ovariectomy with intracorporeal ligation and haemoclip application in dogs
20	Chethan S Khanapur	LPT	Dr. Renuka Nayar	Quality characteristics of restructured chicken cubes incorporating spent chicken meat
21	Neethu Divakar	LPT	Dr. Renuka Nayar	Effect of tenderization on buffalo meat quality.
22	Dr. Raseel. K	Animal Nutrition	Dr. Biju Chacko	Evaluation of unconventional feed based complete rations for cross bred dairy cows in early lactation
23	Dr. Fahmida. V	Animal Nutrition	Dr. Biju Chacko	Partial replacement of whole milk with soy milk in pre-ruminant calves for economic dairy farming
24	Joruge Nagarjuna Deepak	Animal Nutrition	Dr.S.Senthil Murugan.	Dietary supplementation of DL-Methionine on growth performance and expression of myogenic genes in commercial broilers
25	Sreekutty P.S	Animal Nutrition	Dr.S.Senthil Murugan	Effect of dietary incorporation of cashew apple waste on growth and nutrient utilization in Kids
26	Dr. Madhusudhan S. V.	ARGO	Dr. Promod K.	Ultrasonographic assessment of embryonic and foetal development in Malabari goats
27	Dr. Mahalingeshwara H. S.	ARGO	Dr. Abdul Azeez C. P.	Effect of Gelatin binding proteins (GBP) and non-gelatin binding proteins (NGBP) of seminal plasma on freezability of Vechur bull semen
28	Dr. Meenuja M. S.	ARGO	Dr. Abdul Azeez C. P.	Evaluation of postpartum uterine involution and resumption of ovarian cyclicity in Vechur cows
29	Dr. Neethu M.	ARGO	Dr. Leeba Chacko	Ultrasonographic studies on postpartum uterine involution and ovarian cyclicity in Malabari goats

30	Dr.Prakruthi B.S.	Pharmacology and Toxicology	Dr. Suja Rani S	Evaluation of different extracts of <i>Phyllanthus emblica</i> (nellika) leaves for anti-dyslipidemic effect in albino rats
31	Bedre M. Sumanth	Veterinary Pathology	Dr. Anoopraj R.	Pathology of tumours of the digestive system with special reference to Galectin-3 expression
32	ElletteFronia da Gama	Veterinary Surgery and Radiology	Dr. John Martin K D	Succinyl chitosan-fish collagen-poly ethylene glycol composite hydrogel with curcumin loaded microparticles for cutaneous wound healing in dogs
33	Archana G.	Veterinary Surgery and Radiology	Dr. S. Sooryadas	Efficacy of fibre-reinforced gelatin-nanohydroxyapatite (nHA) composite in healing of fractures with segmental defects
34	Akarsh. K. L	Veterinary Public Health	Dr. Prejit	Occurrence and characterization of Extended Spectrum β -Lactamase producing enteric-bacterial pathogens from food animals and the surrounding environment
35	Annie Navomi Philip	Veterinary Public Health	Dr. Prejit	Evaluation of novel recombinant ompF protein as a vaccine candidate against Salmonellosis in Poultry
36	Kavya M.	Veterinary Pathology	Dr. Sajitha I.S.	Expression of Galectin-3 with respect to hormone receptor status in canine mammary tumours (CMT)
37	Krupa T.L.	Veterinary Pathology,	Dr. Prasanna K.S.	Occurrence, pathomorphological and molecular studies of fish diseases
38	Parvathy G. Nair	Veterinary Epidemiology & Preventive Medicine	Dr. Deepa. P. M	Etiological characterization, antimicrobial resistance and therapeutic studies of Staphylococcal pyoderma in dogs.
39	Prashant. S. Kurbet	Veterinary Parasitology	Dr. Aijth Kumar K. G.	Effects of combination of synergists with crude ethanolic herbal extracts against <i>Rhipicephalus (Boophilus) annulatus</i> .
40	MukshaKini M.A	Veterinary Epidemiology & Preventive Medicine	Dr. Smitha J.P	Etiological characterization, toxin profiling and therapeutic studies of bacterial mastitis in goats
41	Amrutha C N	Dept. of Veterinary Epidemiology & Preventive Medicine,	Dr. Bipin. K.C	Characterization of Leptospiraserovars in relation to clinico-pathological features in dogs
42	Anju. A. D	Veterinary Clinical Medicine, Ethics & Jurisprudence,	Dr. Vinu David. P	Evaluation of various diagnostic tests for detection of hepatic disorders in dogs.
43	Sri Nidhi Y R	Veterinary pharmacology and toxicology	Dr. Suja Rani S	Effect of ethanolic <i>Phyllanthusemblica</i> leaf extract fractions in experimental dyslipidemia and its potential mechanism

44	Dr. Leeba Chacko	Animal Reproduction, Gynaecology and Obstetrics.	Dr. K Pramod	Detection of biofilm forming bacteria in clinical endometrii of crossbred cows and therapeutic efficacy of biofilm breaking agents
45	Beerdev E J	Animal Reproduction, Gynaecology and Obstetrics.	Dr. K Pramod	Evaluation of vaginal discharge scoring of bovine uterus and antibiotic susceptibility profiling for clinical evaluation and treatment of uterine infection
46	Megha Wilson	Animal Reproduction, Gynaecology and Obstetrics.	Dr. Hiron M. Harshan	Cryoperservability of Large White Yorkshire
47	ShakirArafath K.	Animal Reproduction, Gynaecology& Obstetrics.	Dr. Abdul Azeez C.P	Augmenting fertility in crossbred cattle showing prolonged oestrus using PGF2 α analogue and Ovsynch protocol
48	Shylesh T	Animal Reproduction, Gynaecology and Obstetrics.	Dr. Hiron M. Harshan	Storage quality of liquid semen of Large White Yorkshire boar supplemented with cholesterol loaded cyclodextrin
49	Vanishreehiremath	Veterinary pharmacology and toxicology	Dr. Nisha. A. R.	Effect of piperine as an efflux pump inhibitor for fluoroquinolones and tetracyclines in coliform mastitis
50	Amrutha. B. M.	Veterinary Parasitology	Dr. Aijth Kumar K. G.	Molecular characterization of <i>Rhipicephalus (Boophilus) annulatus</i> and <i>R. (B.) microplus</i> using mitochondrial cytochrome c oxidase subunit I (COI) gene and second internal transcribed spacer (ITS2).
51	Deepak Biradar	LPM	Dr. John Abraham	Comparative evaluation of different milking systems in crossbred cattle
52	G. Subrahmanyeswar	Animal Nutrition	Dr. Dildeep. V	Effect of supplementation of rumen protected fat prepared from waste chicken fat and palm oil on milk production in dairy cattle
53	Rasanath. K	Animal Nutrition	Dr. Biju Chacko	Comparative Evaluation of a complete ration for cross bred dairy cows in early lactation formulated using protein rich unconventional feed ingredients <i>vis-à-vis</i> a conventional complete ration by <i>in vitro</i> and <i>in vivo</i> techniques.
54	Honey Shaju	Veterinary Clinical Medicine, Ethics & Jurisprudence	Dr. Vinu David. P	Molecular detection and clinico-therapeutic studies of anaplasmoses in cattle of Wayanad district.
55	Anugna.R	Animal Nutrition	Dr. Biju Chacko	Comparative evaluation of the effect of dietary incorporation of Ayurvedicpharmaceutic residues on growth performance of Malabari goat kids
56	Sachin S P	LPM	Dr. Roshin Annie	Effect of dietary supplementation on milk production and fatty acid profile of lactating Malabari goats

57	Helna Maria Wilson	Veterinary Anatomy and Histology	Dr. Maya S	Pre-hatch development of lower digestive tract in turkey (<i>Meleagrisgallopavo</i>)
58	Mahesh D M	Veterinary pharmacology and toxicology	Dr. Sanis Juliet	In vitro hepatic metabolism of the phytobiotic, 1, 8- cineole in domestic fowl
59	P. Venkataramana	Animal Nutrition	Dr SenthilMurugan. S	Effect of non starch polysaccharide degrading enzymes supplementation on performance and ileal digestibility of cashew apple waste diets in broilers
60	Christina Paulose	Livestock Products Technology	Dr. RenukaNayar	Effect of oleoresins from clove bud (<i>Syzygiumaromaticum</i>) and turmeric (<i>Curcuma longa</i>) on quality of functional chicken cutlet.
61	Lijin James	Livestock Products Technology	Dr. RenukaNayar	Effect of sodium alginate edible coating with clove (<i>Syzygiumaromaticum</i>) bud oleoresin on quality of broiler chicken breast fillets.
62	Koundinya U.	Veterinary Surgery and Radiology	Dr. George Chandy	Clinical significance of cranial and caudal intramuscular sites of injection in Indian snakes using dexmedetomidine-ketamine combination

Ph.D. Research

PhD project

Sl No	Name of the student	Title of the project	Department	Guide/Coordinator
1	Dr.P.T.Dinesh	Healing of long bone fracture treated with diphasic silica containing bio ceramics in rat models	Surgery	Dr.Syam K.Venugopal
2	Dr. Joju Johns	Comparative evaluation of acepromazine, midazolam and Butorphanol as adjuncts to xylazine-ketamine anaesthesia for vasectomy in captive Sambar Deer (<i>Rusa unicolor</i>)	Surgery	Dr. George Chandy
3	Dr.Vegireddi Ramu	Efficacy of dexmedetomidine-midazolam-ketamine with opioids as premedication in isoflurane and sevoflurane anaesthesia in dogs	Surgery	Dr. Sooryadas S.
4	Dr. Elizabeth Kurian	Identification and SNP analysis of differentially expressed genes in the skin of cattle of different genetic groups in response to tick infestation, Name of the student	Genetics	Dr. C. N. Dinesh

EXTERNALLY AIDED PROJETS

Sl. No.	Project Title	Financial year	Funding agency	Investigators (Name of PI followed by Co Pis)	Financial Outlay (in lakhs)	Status (completed/ Ongoing)
1	“Chemo-profiling of potential phyto-acaricides and their functional characterization for controlling resistant cattle ticks”	2016-17	ICAR-NFBSFARA	Dr.Sanis Juliet Dr.Reghu Ravindran Dr Suresh N Nair. Dr.Leena Chandrasekhar Dr. M. Shynu	44.5983	Completed
2	Centre for Tick and Tick Borne Diseases, Kerala under Scheme for Augmentation of Research and Development (SARD)	2016-17	Kerala State Council for Science, Technology and Environment. (KSCSTE)	Dr.Reghu Ravindran	18	Completed on 31-3-2017
3	Molecular detection of ticks and tick borne pathogens under Young Investigators Programme in Biotechnology (YIPB).	2016-17	Kerala Biotechnology Commission (KSCSTE)	Dr.Reghu Ravindran, Dr.Deepa C.K, Dr.Leena Chandrasekhar	21.51,160	Completed on 31-3-2017
4	“Identification of Mechanisms of Anthelmintic Resistance in Gastrointestinal Nematodes of Ruminants of Northern Kerala and Effect of Phytochemicals in Resistant Nematode”	2016-17	Kerala State Council for Science, Technology & environment	Dr. Sujith S, Dr. Deepa. C.K, Dr. Priya. M.N	14.46,940	Ongoing
5	Chemical, structural and functional characterization of identified anti-tick lead phytochemicals and optimization of delivery matrix for effective application of natural formulation for the control of acaricide resistant ticks	2016-17	National Agricultural Science Fund (ICAR-NASF)	D. Sanis Juliet, Dr.Reghu Ravindran DrAjith Kumar K.G Dr. Suresh N. Nair	33.46980	Ongoing

6	Comparison of PCR with conventional methods for the diagnosis of leptospirosis in animal hosts and humans in Wayanad	2014-2017	Kerala State Council for Science Technology and Environment (KSCSTE)	Dr. Koshy John, Ph. D, Dr. Chintu Ravishankar, Dr. Deepthy B.J. (DM-WIMS)	25.3	Ongoing
7	Detection and molecular characterization of emerging viral pathogens of pigs	2016-2019	Kerala State Council for Science Technology and Environment (KSCSTE)	Principal Investigator	29.444	Ongoing
8	Establishment of a multipurpose extension unit at CVAS, Pookode	2016-17 (ongoing)	NABARD RIDF	Dr Subin K Mohan	100	85% completed
9	Pashusaghi-Kudumbasree 10 days training for 1500 members	2016-17 (ongoing)	Kudumbasree	Dr Subin K Mohan	15 lakh	Started

STATE PLAN PROJECTS

Sl No.	Project Title	Financial year	Investigators	Financial Outlay	Status (completed/ Ongoing)
1	Establishment of Centre for Molecular Sexing of Pet Birds	2015-16		10 lakhs	Completed
2	Establishment of reference interval for Biochemical parameters in cattle and dogs of Kannur and Kasaragod districts of Kerala.	2016-17		10 lakhs	Ongoing
3	A Retrospective Study on The Prevalence and Distribution of Metabolic Diseases of Ruminants in Kerala	2016-17	Dr. Umesh C.G. Dr. Manju K. Mathew	8.5 lakhs	Ongoing
4	A study on prevalence and clinic pathological effects of common tick borne haemoparasitic pathogens observed in cattle population of Wayanad district	2016-17	Dr. Manju K. Mathew Dr. Umesh C.G.	15.80	ongoing
5	Establishment of Malabari goat foundation stock	2015-16	PI-Dr.John Abraham Co PI-Dr.Balusami.C Dr.Roshi Anoe Jose	10.0 lakhs	Completed
6	Mapping, standardization and quality evaluation of the traditional value added products from meat, poultry and egg- districts of central Kerala	State Plan 2016-17	Dr. Renuka Nayar, Dr. Kavitha Rajagopal and Dr. Magna Thomas	Rs. 603750 First Instalment allotted- Rs. 50,000/-	Ongoing

7	Efficacy of turmeric (<i>Curcuma longa</i>) and Curry leaves (<i>Murraya koenigii</i>) on the microbiological and sensory qualities and oxidative stability of comminuted meat products from beef.	State Plan 2016-17	Dr. Kavitha Rajagopal, Dr. Renuka Nayar and Dr. Magna Thomas	Rs. 4,86,750/- First Instalment allotted- 50,000/-	Ongoing
8	Isolation and identification of lactic acid bacteria with from raw cow milk in Wayanad district.	State Plan 2016-17	Dr. Magna Thomas, Dr. Renuka Nayar and Dr. Kavitha Rajagopal,	Rs. 7,38,750/- First Instalment allotted- 50,000/-	Ongoing
9	Characterisation of Dairy effluent microbiota from dairy plants in Wayanad district.	State Plan 2016-17	Dr. Magna Thomas, Dr. Renuka Nayar and Dr. Kavitha Rajagopal,	Rs. 7,38,750/- First Instalment allotted- 50,000/-	Ongoing
10	Identification and assessment of nutritive value of herbal by products for feeding of livestock	Government of Kerala, State plan project	PI-.Dr. Biju Chacko CO-PI 1 Dr. Ani Bency Jacob 2.Dr. Dildeep.V	7 Lakhs	Completed
11	Preliminary Screening studies on feed, fodder and biological samples from livestock across Kerala for possible lead and cadmium contamination	Government of Kerala, State plan project	PI-.Dr. Dildeep.V CO-PI 1.Dr. Biju Chacko 2. Dr. SenthilMurugan	5 Lakhs	Completed
12	Transcriptome profiling in Malabari goat exhibiting feed conversion efficiency at different levels of protein	Government of Kerala, State plan project	PI-Dr.SenthilMurugan CO-PI Dr. Dildeep.V Dr. Biju Chacko	10 Lakhs	Completed
13	Zoonotic importance of <i>Orientia tsutsugamushi</i> and its vector identification	2016-17	Dr.Deepa C.K, Dr.Prejith Dr.Neeraj	9 Lakhs	
14	Morphological and Molecular identification of Hemoprotozoan diseases in ruminants of Kerala” for the year 2015-16	2016-17	Dr.Priya M.N, Dr.Sujith. S Dr.Raji. K	10 lakhs	
15	Strengthening of Centres Centre for Ethnopharmacology	State plan 2015-16	Dr. Sanis Juliet Dr. Reghu Ravindran	10 lakhs	Strengthening of Centres Centre for Ethno-pharmacology
16	Evaluation of Lipotropic Potential of Traditional Herbs Locally Available in the District of Wayanad	State plan 2015-16	Dr. Suja Rani S, Dr. Preethy John, Dr. Renjith Sebastian Dr. Anoopraj	10 lakhs	Evaluation of Lipotropic Potential of Traditional Herbs Locally Available in the District of Wayanad
17	Evaluation of anti-microbial polyherbal formulations used by local tribal healers for mastitis and its scientific validation according to WHO guidelines	State plan 2016-17	Dr. Ranjith D	10 lakhs	Evaluation of anti-microbial polyherbal formulations used by local tribal healers for mastitis and its scientific validation according to WHO guidelines

18	Strengthening of Centres Centre for Ethnopharmacology	State plan 2016-17	Dr. Sanis Juliet Dr. Reghu Ravindran Dr. Suresh N Nair Dr. Nisha A.R. Dr. Ajith Kumar K.G	10 lakhs	Strengthening of Centres Centre for Ethno- pharmacology
19	Upgradation of laboratory animal facility, CVAS, pookode	State plan 2016-17	Dr. Suja Rani S, Dr. Sanis Juliet	20 lakhs	Upgradation of laboratory animal facility, CVAS, pookode
20	Screening and LC-MS confirmation of antibiotic residues in milk samples	State plan 2016-17	Dr. Sanis Juliet Dr. Nisha A.R. Dr. Suresh N Nair	8 lakhs	Screening and LC- MS confirmation of antibiotic residues in milk samples
21	Expression profiling of vascular endothelial growth factor (VEGF) in the ovarian follicles of different stages of growth in Malabari goats	State plan Projects for the year 2015-16	Head, Dept of Veterinary Physiology	14.66	Ongoing
22	Study of urine proteome in cattle for identification of markers for survivability at higher altitude	State plan Projects for the year 2016-17	Rajesh Kumar	5.0	Ongoing
23	Identification of estrus specific molecule using proteomic tools in buffalo urine	State plan Projects for the year 2016-17	Rajesh Kumar	5.0	Ongoing
24	Metabolome study of cyclicity in buffalo to explore the phenomenon of different phases in oestrous cycle	State plan Projects for the year 2016-17	Rajesh Kumar	5.0	Ongoing
25	Assessment of antioxidant status and expression profiling of major heat shock protein genes during summer and monsoon season in crossbred cattle	State plan Projects for the year 2016-17	Zarina Aziz	5.0	Ongoing
26	Studies on molecular epidemiology, immunopathology and antimicrobial resistance of infectious organisms associated with clinical mastitis in cattle of Wayanad District	2015-16	Dr. Deepa. P. M, Dr. Bipin. K. C., Dr. Smitha. J. P., Dr. Shyma. V. H., Dr. Rathish. R. L.	10.00	Completed
27	Epidemiological investigations for assessing infection and carrier status of various haemoparasites and therapeutic management for haemoparasitic diseases in goats of Wayanad District	2015-16	Dr. Deepa. P. M, Dr. Bipin. K. C., Dr. Smitha. J. P., Dr. Shyma. V. H., Dr. Rathish. R. L.	10.00	Completed

28	Molecular characterisation and surveillance of genes of antibacterial resistance among bacterial etiologies of bovine mastitis	2016-17	Dr. Rathish. R. L Dr. Deepa.P. M Dr. Bipin. K. C Dr. Smitha. J. P Dr. Janus. A	10.00	Ongoing
29	Etiological and clinical investigations on respiratory infections of goats	2016-17	Dr. Deepa. P. M Dr. Rathish. R. L Dr. Bipin. K. C Dr. Smitha. J. P Dr. Janus. A	9.50	Ongoing
30	A study on prevalence of coccidiosis among poultry in Wayanad Dt.	2016-17	Dr. Smitha. J. P Dr. Deepa.P. M Dr. Bipin. K. C Dr. Rathish. R. L Dr. Janus. A	4.00	Ongoing
31	PCR based detection of classical swine fever in carrier and infected domesticated pigs of Wayanad, Kozhikode & Kannur districts of Kerala	2016-17	Dr. Bipin. K. C Dr. Deepa.P. M Dr. Rathish. R. L. Dr. Smitha. J. P Dr. Janus. A	8.00	Ongoing
32	Investigations on infectious etiology of thrombocytopenia in dogs	2016-17	Dr. Deepa.P. M Dr. Rathish. R. L Dr. Bipin. K. C Dr. Smitha. J. P Dr. Janus. A	10.00	Ongoing
33	A study on etiology of calf enteritis based on antigen ELISA	2016-17	Dr. Smitha. J. P Dr. Deepa.P. M Dr. Bipin. K. C Dr. Rathish. R. L Dr. Janus. A	6.00	Ongoing
34	Management of surgical disorders in cattle.	2015-2016	Dr. Sooryadas S, Dr. Dinesh P T	7.0	Completed
35	Investigations on surgical disorders of large animals in wayanad district	2016- 2017	Dr. Dinesh P T Dr. Sooryadas S,	10.0	On going
36	Evaluation of low level laser for the management of wounds in animals	2016- 2017	Dr. Reji Varghese	25.0	Ongoing
37	Clinico- therapeutic studies on joint ill in calves	2016-17	Dr. Jineshkumar N S, Assistant Professpr	10.5	Ongoing
38	A surveillance study on brucella mediated abortion in small ruminants of wayanad district	2016-17	Head of the Department	7.0	Ongoing
39	Isolation and adaptation of classical swine fever virus in cell culture	2016-2017	Dr. Chintu Ravishankar (Implementing Officer)	10.00	Completed
40	Augmenting Bio-technology and Molecular Biology Research in KVASU	2016-2017	Dr. Koshy John (HOD)	5.00	Completed
41	Augmenting Bio-technology and Molecular Biology Research in KVASU	2017-2018	Dr. Koshy John (HOD)	5.00	Ongoing

PUBLICATIONS

Books

1. Biju P. Habeeb. 2017. 'Pakshikal prashnothari: reference book. Sarus Book, Edamon. P.88
2. John Abraham & Ramesh Saravanakumar (2016) Chapter Title: Bio-fuel from Animal Fat Book Title: Frontiers in Bio-energy& Bio-fuel, Publisher: Intech-2016. Pp 5509 – 110371, ISBN 978-953-51-5024-4.
3. Ravindran, R, Ghosh, S., Ananda K.J., Pradeep, B.S., Rakesh, R.L., Malatesh, D.S Botanicals for treatment of babesiosis and theileriosis. An update on diagnosis and control of parasitic diseases. Department of Veterinary Parasitology, Veterinary College, Shimoga, Karnataka Veterinary Animal and Fisheries Sciences University (KVAFSU), Bidar, Karnataka, India. pp. 332-343

JOURNALS

1. V Vijeesh, Pillai Usha N and Mathew Manju K (2017). Phytochemical Analysis and In Vitro Antifungal Studies of Medicinal Plants *Elephantopus scaber*, *Cyclea peltata* and *Artemisia japonica*. *International Journal of Pharmacognosy and Phytochemical Research*. 9(3): 319-322
2. Koteresh Prasad, C., John Abraham, Balusami, C., Roshin.A. J and Senthil Murugan (2017) Haemato-biochemical profile of Malabari Kids fed Broiler Concentrate Diet. *Indian Journal of Small Ruminants* 2017, 23(1): 94-96.
2. Kotresh Prasad, John Abraham, Deepandita Barma, R.S. Sagar, S.T. Maruthi and M. Pavan (2017) Management of Coccidiosis in an Organized Goat Farm. *International Journal of Science, Environment and Technology*, Vol. 6, No 2, 2017. 219-227
3. Kotresh Prasad, C., John Abraham & Sunanda C (2016) Effect of Nutritional flushing on the birth weight and body weight gain of Malabari Kids. *International Journal of Science and Nature*. Vol (3) 533-536
4. Koteresh Prasad, C., John Abraham, Balusami, C., Roshin Anie Jose and Senthil Murugan.(2016) Haematological parameters of Malabari kids in broiler goat rearing system. *Global Journal of Bioscience and Biotechnology* Vol. 5 (3) July-
5. Yamuna Kurian, Renuka Nayar, Pavan M, Kavitha Rajagopal, Sunanda, C. P. Kuttinarayanan and V.N. Vasudevan. (2016). Development and Quality Evaluation of Novel Chicken Cutlets incorporated with *Amorphophallus paeoniifolius* (Elephant Foot Yam). *Indian Journal of Natural Sciences* 7 (37):11298-306.
6. Pavan M., Renuka Nayar, Yamuna Kurian, Kavitha Rajagopal, Sunanda C, P. Kuttinarayanan and Sathu T. (2016). Development and Quality Evaluation of Novel Chicken Nuggets incorporated with *Maranta arundinacea* (Arrowroot). *Indian Journal of Natural Sciences* 7 (37):11414-425.
7. Naveen Kumar T.J., Renuka Nayar, Kavitha Rajagopal and Sunanda, C. (2016). Effect of vacuum packaging on novel chicken sausage incorporated with *paneer* and oats. *International Journal of Food and Nutritional Science*. 5(4):115-120.
8. Chetan S. Khanapur, Renuka Nayar and Kavitha Rajagopal.(2017). Organic Meat- A Review. *Indian Journal of Natural Sciences*. 7(40):12023-12029.
9. Biju Chacko, K. M. Syam Mohan, K. Ally, K. Shyama, K. S. Anil and C. T. Sathian (2015). [Arrived in circulation in May 2016] Evaluation of Paddy Straw Based Complete Feeds With Different Levels of Neutral Detergent Fibre by In Vitro Gas Production Technique. *Indian Journal of Veterinary and Animal Sciences Research*. 44(6): 374-382.

10. Senthil Murugan.S, Balusami C, Jiji K.K and Asif M.M (2016). Proximate composition, fibre fraction values of Environmentally adapted fodder varieties in Wayanad District, Kerala, India. Intl J. of Sci. Environment and Tech. 5 (5): 2855 – 2860
11. Bhamare, K.S., Dildeep, V., Senthil Murugan, S. and Chavan, S.J (2016). Nutritive evaluation of cashew apple waste in broilers. Intl.J. Sci and Nature.7 (3): 629- 632.
12. Kotresh Prasad C, John Abraham, C. Balusami, A.J. Roshin and S. Senthil Murugan (2017). Haemato-biochemical profiles of Malabari Kids fed broiler concentrate diet. Indian J. of Small Ruminants. 23 (1): 94-96.
13. Chavan, S.J., Dildeep.V., Bhamare, K.S., Ravishankar, C., Babitha, V and Sunanda, C.(2016) The effect of organic and inorganic zinc supplementation on blood haemoglobin and serum cortisol concentration in malabari goat kids. International Journal of Science and Nature.7 (3) 611-613
14. Bhamare, K.S., Dildeep.V., Senthilmurugan and Chavan, S.J.(2016) Nutritive evaluation of cashew apple waste in broilers. International Journal of Science and Nature .7 (3) -629-632
15. Ajith Kumar, K.G., Sharma, A.K., Kumar, S., Ray, D.D., Rawat, A.K.S., Srivastava, S., Ghosh, S. 2016. Comparative in vitro anti-tick efficacy of commercially available products and newly developed phyto-formulations against field collected and resistant tick lines of *Rhipicephalus (Boophilus) microplus*. Journal of Parasitic Diseases, 40, 1590-1596.
16. Ajith Kumar, K.G., Tayade, A.B., Kumar, R., Gupta, S., Sharma, A.K., Nagar, G., Tewari, S.S., Kumar, B., Rawat, A.K.S., Srivastava, S., Kumar, S. 2016. Chemo-profiling and bioassay of phytoextracts from *Ageratum conyzoides* for acaricidal properties against *Rhipicephalus (Boophilus) microplus* (Acari: Ixodidae) infesting cattle and buffaloes in India. Ticks and tick-borne diseases, 7, 342-349.
17. Gupta, S., Ajith Kumar K.G., Sharma, A.K., Nagar, G., Kumar, S., Saravanan, B.C., Ravikumar, G., Ghosh, S. 2016. Esterase mediated resistance in deltamethrin resistant reference tick colony of *Rhipicephalus (Boophilus) microplus*. Experimental and Applied Acarology, 69, 239-248.
18. Paulose, P., Juliet, S., Sujith, S., Sini, M., Divya, T.M., Nair, S.N., Chandrasekhar, L., Pradeep, M., George, A. J., Ravindran, R. 2016. Evaluation of toxicological potential of methanolic extract of *Chromolaena odorata* found in the Western Ghats of Indian subcontinent orally in mice. Advances in Animal and Veterinary Sciences 4, 78-84.
19. Paulose, P., Juliet, S., Samraj, S., Nair, S.N., Chandrasekhar, L., George, A.J., Narayanan, G., John, K., Ravindran, R. 2016. Ameliorative effect of vitamin E on azithromycin induced biochemical and histological changes in liver tissue of rats. Advances in Animal and Veterinary Sciences 4, 85-91.
20. Palayullaparambil, A. K. T., Palayullaparambil, A. K. T., Juliet, S., Renganathan, K., Raju, R., Athalathil, S., Ravindran, R., Chandrashekar, C., Nair, S.N., Ghosh, S., 2016. Pharmaco-chemical characterization and acaricidal activity of ethanolic extract of *Chassalia curviflora* (Wall ex Kurz.) Thwaites. Pharmacognosy Journal 8, 215-219.
21. Lenka, D.R., Johns, J., Gopi, J., Chnady, G., Narayanan, P.M., Kalarikkal, D.C., Ravindran, R. 2016. Occurrence of *Gnathostoma spinigerum* in a leopard cat from Wayanad wildlife sanctuary, Kerala. Journal of Parasitic Diseases, 40, 555–557
22. Lenka, D. R., Ravindran, R, Jyothimol, G., Udaykumar, M., Reddy, P.M.T., Sathish, N., Palla, I., Chandramohan, B., Ajithkumar, K.G., Nair, S. N., Chandrasekhar, L., Priya, M. N., Deepa C. K ., Sabu, L., Juliet, S., Ghosh, S .2016. Deltamethrin resistance in south Indian isolates of *Rhipicephalus (Boophilus) microplus*. Veterinary Parasitology: Regional Studies and Reports, 5, 37-41.

23. Ravindran, R., Julie, B., Swapna, S.A., Jerin, F., Jyothimol G., Lenka, D.R., Nandakumar, S., Sabu, S.M. 2016. *Dirofilaria repens* in scrotum of dogs. *Tropical Biomedicine*, 33, 842–846
24. Ghosh, S., Gupta, S., Ajith Kumar K.G., Sharma, A.K., Kumar, S., Nagar, G., Kumar, R., Paul, S., Fular, A., Chigure, G., Nandi, A. 2017. Characterization and establishment of a reference deltamethrin and cypermethrin resistant tick line (IVRI-IV) of *Rhipicephalus (Boophilus) microplus*. *Pesticide Biochemistry and Physiology*. <http://doi.org/10.1016/j.pestbp.2017.03.002>
25. Ravindran, R., Chithra, N.D., Deepa, P.E., Ajithkumar, K.G., Chandrasekhar, L., Sreelekha, K., Nair, S.N., Juliet, S., Ghosh, S. 2017. In vitro effects of caffeic acid, nortriptyline, precocene I and quercetin against *Rhipicephalus annulatus* (Acari: Ixodidae). *Experimental and Applied Acarology*, 71, 183-193.
26. Ravindran, R., Juliet, S., Ramankutty, S.A., Sathish, N., Nair, S.N., Ajithkumar, K.G., Chandrasekhar, L. and Ghosh, S., 2017. Effects of ethanolic extract of the leaves of *Pongamia glabra* and *Gliricidia sepium* against *Rhipicephalus (Boophilus) annulatus*. *Advances in Animal and Veterinary Sciences*, 5, 1-6.
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28. Abraham, M., Harshal, P. T., Ajithkumar, K. G., Ravindran, R. 2017. Coprological survey of gastrointestinal parasites of dairy cattle in Wayanad, Kerala, India. *International Journal of Current Microbiology and Applied Sciences*, 6, 899-903.
29. Sanalkumar, K., Purayil, A. A., Rajan, P., Kalarikkal, D.C., Narayanan, P. M., Ravindran, R. 2017. Pattern of occurrence of gastrointestinal strongylosis in an organized caprine farm of Wayanad district, Kerala, South India. *International Journal of Current Microbiology and Applied Sciences*, 6, 1038-1042.
30. L Buragohain, R Kumar, T Nanda, SK Phulia, AK Mohanty, S Kumar, S Balhara, SPS Ghuman, I Singh, AK Balhara. 2016. Serum MX2 Protein as Candidate Biomarker for Early Pregnancy Diagnosis in Buffalo. *Reproduction in Domestic Animals* 51(4) • May 2016. DOI: 10.1111/rda.12700
31. Ghosh, M., Sangwan, N., Sangwan, A.K., R Kumar. 2016. Sexual alteration in antioxidant response and esterase profile in *Hyalomma anatolicum anatolicum* (Acari: Ixodidae) ticks. *Journal of parasitic diseases* • April 2016. DOI: 10.1007/s12639-016-0758-5
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39. Z. Aziz, G. G. Varma, K. Raji and K. Karthiayini. Physiological response of Murrah Buffalo calves to varying Temperature Humidity Index prevalent in Central Kerala. *Journal of Veterinary and Animal Sciences*. (Accepted paper in 2016)

COMPENDIUM

1. Sagar R.S., Umesh C. G., Arun George., Manju K. Mathew., Sindhu O. K., Usha N. Pillai. A RARE CASE OF EAR TIP VASCULITIS IN A RAJAPALAYAM DOG. Proceedings on National canine congress. 2016. 21
2. Sagar R.S., Umesh C. G., Arun George., Manju K. Mathew., Sindhu O. K., Usha N. Pillai. MANAGEMENT OF COMPLICATIONS OF HEAT STROKE IN A FILA BRASILEIRO A CASE REPORT. Proceedings on National canine congress. 2016. 22
3. Sagar R. S., Arun George., Manju K Mathew., Deepthi L., Umesh C.G., Sindhu O. K., Usha N. Pillai. TRANSMISSIBLE VENEREAL TUMOUR IN A NON-DESCRIPT DOG A CASE REPORT. Proceedings on National canine congress. 2016. 22
4. Sagar R.S, Anumol Joseph, Arun George, Umesh C. G., Usha. N. Pillai, Manju K. Mathew and Sindhu O.K. THERAPEUTIC MANAGEMENT OF VENTRAL THORACIC SUBCUTANEOUS OEDEMA IN A DOG. Proceedings on National canine congress. 2016. 22
5. Sagar R. S., Maruthi S. T., Umesh C. G., Arun George, Usha. N. Pillai and Syam K Venugopal. A CASE REPORT ON THERAPEUTIC MANAGEMENT OF CANINE DEMODICOSIS ASSOCIATED PYODERMA IN A CHOW CHOW. Proceedings on National canine congress. 2016. 23
6. Sagar, R. S., Reena George, Shyma V.H., Ammu R., Umesh C. G. MEDICAL MANAGEMENT OF BACTERIAL CYSTITIS IN A TERRIER. Proceedings on National canine congress. 2016. 23
7. Sagar R.S., Sindhu.O.K., Manju. K. M., Umesh.C.G, Arun George, and Usha Narayana Pillai. SUCCESSFUL MANAGEMENT OF DERMATOPHYTOSIS AND MALASSEZIOSIS IN A LHASA APSO. Proceedings on National canine congress. 2016. 23
8. Arun George, Sagar R.S., Manju K. Mathew, Sindhu O.K., Umesh C.G., Usha N. Pillai, Biju P. Habeeb. MANAGEMENT OF HAEMORRHAGE IN CYSTITIS USING FORMALIN AS A HAEMOSTAT. Proceedings on National canine congress. 2016. 20
9. Sindhu, O.K and Dinesh, P.T SURGICAL MANAGEMENT OF A CASE OF VAGINAL LEIOMYOMA IN A DOG. Proceedings on National canine congress. 2016. 73
10. Umesh C. G., R.S. Sagar, M. Neethu, D. Meenuja, Arun George, K. M. Manju, O. K. Sindhu and Usha Narayana Pillai. SUCCESSFUL MANAGEMENT OF SPECTACLED COBRA ENVENOMATION IN A DOG - A CASE REPORT. Proceedings on National canine congress. 2016. 40
11. Umesh C G., Arun George, K. M. Manju, O. K. Sindhu and Usha Narayana Pillai. A CASE OF NITRATE INDUCED HAEMORRHAGIC GASTROENTERITIS IN A GREAT DANE. Proceedings on National canine congress. 2016. 40

12. Umesh, C. G., A. P. Nambi, S. Kavitha, G. Dhinakar Raj. IDENTIFICATION AND CHARACTERIZATION OF HELICOBACTER FROM ENDOSCOPIC GASTRIC BIOPSIES AND SALIVA IN DOGS.Proceedings on National canine congress. 2016. 40
13. Manju K. Mathew, Usha Narayana Pillai, Sagar R.S., Arun George, Umesh C.G., Sindhu O.K. and Biju P. Habeeb. A REPORT ON SUCCESSFUL MANAGEMENT OF FELINE LOWER URINARY TRACT DISORDER.Proceedings on National canine congress. 2016. 32
14. Usha Narayana Pillai, Arun George, Manju K. Mathew, Umesh C.G., and Sagar R.S. CARIPILL- A NEWER DRUG FOR IDIOPATHIC THROMBOCYTOPENIA. Proceedings on National canine congress. 2016. 33
15. Divya Suresh, Usha Narayana Pillai, Manju K. Mathew, Sooryadas S., Syam K Venugopal, Aiswarya J and ShijuShaji. SINO-NASALASPERGILLOSIS IN A DOG A CASE REPORT. Proceedings on National canine congress. 2016. 33
16. Manju K. Mathew, Usha Nayarana Pillai, Umesh C.G., AswiniGopal, Arun George, Sagar R.S., Sindhu O.K. and Biju P. Habeeb. SUCCESSFUL MANAGEMENT OF EVAN'S SYNDROME IN A DOG A CASE REPORT. Proceedings on National canine congress. 2016. 33
17. Manju K. Mathew, Vinu David P, Sindhu O.K, Biju P. Habeeb and Umesh C G.EFFECT OF COMBINATION THERAPIES IN THE MANAGEMENT OF CANINE BABESIOSIS. Compendium of abstracts of National symposium on "Innovative techniques, emerging issues and Advancement in Veterinary medicine to meet the challenges : Present and the Future" at VCRI, TNI,2017, pp 36.
18. Arun George, R.S. Sagar, Umesh C G, R Rajaseghar, Sindhu O.K,Manju K. Mathew and Usha N Pillai. STAPHYLOCOCCAL MENINGITIS IN A GOLDEN RETRIEVER: A CASE REPORT. Compendium of abstracts of National symposium on "Innovative techniques, emerging issues and Advancement in Veterinary medicine to meet the challenges : Present and the Future" at VCRI, TNI,2017, pp50
19. Manju K. Mathew and Reji Varghese, SUPERFICIAL BACTERIAL FOLLICULITIS IN A DOBERMAN AND ITS SUCCESSFUL MANAGEMENT. Compendium of abstracts of National symposium on "Innovative techniques, emerging issues and Advancement in Veterinary medicine to meet the challenges : Present and the Future" at VCRI, TNI,2017, pp52.
20. Sindhu O K and Arun George , A CASE REPORT OF INTERDIGITAL FURUNCULOSIS IN A DOG AND ITS SUCCESSFUL THERAPEUTIC MANAGEMENT. Compendium of abstracts of National symposium on "Innovative techniques, emerging issues and Advancement in Veterinary medicine to meet the challenges : Present and the Future" at VCRI, TNI,2017, pp52.
21. Umesh C G., Arun George, K. M. Manju and O. K. Sindhu .A CASE REPORT ON IATROGENIC HYPER ADRENOCORTICISM IN A GERMAN SHEPHERD DOG. Compendium of abstracts of National symposium on "Innovative techniques, emerging issues and Advancement in Veterinary medicine to meet the challenges : Present and the Future" at VCRI, TNI,2017, pp93
22. Umesh C G., O. K. Sindhu., Arun George., K. M. Manju.,Muhammed Kutty and John Martin. IVERMECTIN TOXICITY IN A COLLIE – A CASE REPORT. Compendium of abstracts of National symposium on "Innovative techniques, emerging issues and Advancement in Veterinary medicine to meet the challenges: Present and the Future" at VCRI, TNI,2017, pp120
23. O. K. Sindhu., K. M. Manju., Umesh C G.,Arun George.,Biju P Habeeb., Deepa C K and Smitha J P. ANEMIA IN CALVES- A STUDY REPORT OF TEN CASES. Compendium of abstracts of National symposium on "Innovative techniques, emerging issues and Advancement in Veterinary medicine to meet the challenges : Present and the Future" at VCRI, TNI,2017, pp156.
24. Manju K. Mathew., Reji Varghese and Magnus Paul. SUCCESSFUL MANAGEMENT OF DERMATOPHILOSIS IN A GOAT – A CASE REPORT. Compendium of abstracts of National

- symposium on “Innovative techniques, emerging issues and Advancement in Veterinary medicine to meet the challenges : Present and the Future” at VCRI, TNI,2017, pp198.
25. Biju Chacko, K. M. Syam Mohan, K. Ally, K. Shyama, K. S. Anil and C. T. Sathian. Effect of Paddy Straw Plus Non Forage Fibre Sources Based Complete Feeds Containing Different Levels of Neutral Detergent Fibre on Milk Composition Parameters of Lactating Dairy Cows. Book of Abstracts.National Conference on ‘Enhancing Nutritional Security through Climate Smart Farming practices’. 17-3-2017 and 18-3-2017. Organised by the Cooch Behar Association for Cultivation of Agricultural Sciences (COBACAS) and held at Regional Research Station (Hill Zone) of Uttar Banga Krishi Vidyalaya (UBKV) at Kalimpong, West Bengal. p16.
 26. Biju Chacko, K. M. Syam Mohan, K. Ally, K. Shyama, K. S. Anil and C. T. Sathian. Effect of Paddy Straw Plus Non Forage Fibre Sources Based Complete Feeds Containing Different Levels of Neutral Detergent Fibre on Production and Reproduction Parameters of Lactating Dairy Cows. Book of Abstracts.National Conference on ‘Enhancing Nutritional Security through Climate Smart Farming practices’. 17-3-2017 and 18-3-2017. Organised by the Cooch Behar Association for Cultivation of Agricultural Sciences (COBACAS) and held at Regional Research Station (Hill Zone) of Uttar Banga Krishi Vidyalaya (UBKV) at Kalimpong, West Bengal. p.59.
 27. Senthil Murugan.S.,K.K.Jiji and V.Kumar.In vitro Digestibility Studies of Gamma Irradiated and Sulphuric Acid Treated Oil Palm Empty Fruit Bunch (OPEFB) for Ruminants. Proceedings of 10th Biennial Animal Nutrition Association Conference. 2016. p147.
 28. Senthil Murugan.S.,V.Dildeep, J.N.Deepak and K.S.Sreekutty. Growth performance of Malabari Kids in Different Protein Levels of Concentrate Mixture..Proceedings of 10th Biennial Animal Nutrition Association Conference, 2016.p.198.
 29. Senthil Murugan.S.,Seethalakshimi,M and Ramanathan.A.Effect of replacing De-oiled Rice Bran with Gamma Irradiated Brewer’s Spent Grain Lactating Cows. Proceedings of 8th Kerala Veterinary Science congress 2016.306-307.
 30. **Ajith Kumar K.G.**, Subrmanian, H., Devada K., Lucy Sabu. 2017. A study on the prevalence of hard ticks (Ixodids) infesting dogs of Thrissur in Kerala. Proceedings of XXVI National Congress of Veterinary Parasitology and International Symposium On “Current concepts in diagnosis and control of parasitic diseases to combat climate change” Proceedings of XXVI National Congress of Veterinary Parasitology and International Symposium on “Current concepts in diagnosis and control of parasitic diseases to combat climate change” organized by Department of Veterinary Parasitology, Veterinary College, Vinobhanagar, Shimoga 577204,Karnataka during 15-17 February, 2017 PP:20
 31. Prashant S. Kurbet., Karkaria Tushna Sarosh., Pradeep, R. K., Nimisha, M., Ajith Kumar K.G., Reghu Ravindran , Joju Johns., George Chandy., Amrutha B. M., Deepthy Leelamany., AnjuVarghese., Deepa C. K. 2017. First report of *Strigiphilus ketupae* Emerson &Elbel, 1957, an owl specific lice collected from a Brown fish owl in the Wayanad district of Kerala. Proceedings of XXVI National Congress of Veterinary Parasitology and International Symposium on “Current concepts in diagnosis and control of parasitic diseases to combat climate change organized by Department of Veterinary Parasitology, Veterinary College, Vinobhanagar, Shimoga 577204, Karnataka during 15-17 February, 2017 PP. 65
 32. Amrutha, B. M., Yashas. R. Kumar, Pradeep, R. K., Nimisha, M., Prashant. S. K., Ajith Kumar K. G., Prasanna, K. S., SabeerHussain., Shyam, S., Nazreen Fathima., Anju Varghese., Deepa C. K., Reghu Ravindran. 2017. Occurrence of *Oesophagostomum asperum* and *Thelazia* sp. in Sambar deer (*Rusa unicolor*). Proceedings of XXVI National Congress of Veterinary Parasitology and International Symposium on “Current concepts in diagnosis and control of parasitic diseases to combat climate change” organized by Department of Veterinary Parasitology, Veterinary College, Vinobhanagar, Shimoga 577204,Karnataka during 15-17 February, 2017 PP:66

33. Reghu Ravindran, Pradeep R. K., Nimisha M., Sruthi M. K., Leena Chandrasekhar, Ghosh. S. 2017. Molecular characterization of *Babesia bigemina* from Kerala, South India using 18S rRNA gene. Proceedings of XXVI National Congress of Veterinary Parasitology and International Symposium on “Current concepts in diagnosis and control of parasitic diseases to combat climate change” organized by Department of Veterinary Parasitology, Veterinary College, Vinobhanagar, Shimoga 577204, Karnataka during 15-17 February, 2017 PP.78
34. Nimisha M., Reghu Ravindran, Pradeep R. K., Sruthi M. K., Leena Chandrasekhar, Deepa, C.K., Sanis Juliet, Ajith Kumar K. G., Ghosh S. 2017. Molecular confirmation of vector status of *Rhipicephalus (Boophilus) annulatus* for *Theileria orientalis*. Proceedings of XXVI National Congress of Veterinary Parasitology and International Symposium on “Current concepts in diagnosis and control of parasitic diseases to combat climate change” organized by Department of Veterinary Parasitology, Veterinary College, Vinobhanagar, Shimoga 577204, Karnataka during 15-17 February, 2017 PP.98
35. Pradeep R. K., Reghu Ravindran, Nimisha M., Sruthi M. K., Ajithkumar K.G., Anju Varghese., Leena Chandrasekhar, Dinesh C. N., Ghosh, S. 2017. Molecular phylogeny of field isolate of *Babesia bigemina* from Kerala, South India. Proceedings of XXVI National Congress of Veterinary Parasitology and International Symposium on “Current concepts in diagnosis and control of parasitic diseases to combat climate change” organized by Department of Veterinary Parasitology, Veterinary College, Vinobhanagar, Shimoga 577204, Karnataka during 15-17 February, 2017 PP.96
36. Reghu Ravindran, Ajith kumar, K.G., Srikanta Ghosh. 2017. *Rickettsia* species in adult engorged *Rhipicephalus heamaphysaloides* from Kerala, India. Proceedings of 13th Conference on “Vector and vector borne diseases” organized by National Academy of Vector Borne Diseases (NAVBD) and Central University of Tamil Nadu (CUTN) during 27th February- 1st March, 2017 pp.22 and In: Dash, A.P., Jayalakshmi Krishnan, Sigamani Panneer, Esaki M. Shankar, Indranil Chattopadhyay. Vector and Vector borne diseases: Pathobiological insights, public health challenges and management strategies, Bloomsbury, New Delhi.pp.187.
37. Nagar, G., Sharma, A.K, Ajith Kumar, K.G., Gupta, S, Kumar, S., Fular, A., Saravanan, B.C., Ghosh, S. 2017. Over-expression of a Cytochrome P450 Gene in Pyrethroid resistant strain of *Rhipicephalus (Boophilus) microplus*. Proceedings of 13th Conference on “Vector and vector borne diseases” organized by National Academy of Vector Borne Diseases (NAVBD) and Central University of Tamil Nadu (CUTN) during 27th February- 1st March, 2017 pp.22 and In: Dash, A.P., Jayalakshmi Krishnan, Sigamani Panneer, Esaki M. Shankar, Indranil Chattopadhyay. Vector and Vector borne diseases: Pathobiological insights, public health challenges and management strategies, Bloomsbury, New Delhi.pp.102
38. Ghosh, S., Gupta, S., Ajith Kumar, K.G., Sharma, A.K, Kumar, S., Nagar, G., Kumar, R., Souvik, P., Fular, A., Gajanan, C., Nandi, A., Manjunathachar, H.V., Aquil, M., Saravanan, B.C., Ray, D.D. 2017. Characterisation and establishment of reference deltamethrin and Cypermethrin resistant tick line (IVRI-IV) of *Rhipicephalus (Boophilus) microplus* in India. Proceedings of 13th Conference on “Vector and vector borne diseases” organized by National Academy of Vector Borne Diseases (NAVBD) and Central University of Tamil Nadu (CUTN) during 27th February- 1st March, 2017 pp.22 and In: Dash, A.P., Jayalakshmi Krishnan, Sigamani Panneer, Esaki M. Shankar, Indranil Chattopadhyay. Vector and Vector borne diseases: Pathobiological insights, public health challenges and management strategies, Bloomsbury, New Delhi. pp.143
39. Deepa, C. K., Priya, M. N. 2017 “Prevalence of Gastrointestinal Parasites among Ruminants of Central Kerala” Compendium on 104th Indian Science Congress at Sree Venketeswara University, Tirupati. pp.

POPULAR ARTICLE

1. Sindhu O.K. and Arun George: Theruvile Naykkal sathrukkalayathengane? ; GK current affairs, November 2016; 28-32

Practical Manuals published

1. Hand book of Veterinary Clinical Medicine. Dr. Biju P. Habeeb, Dr. Vinu David, Dr. Sindhu O.K., Dr. Umesh C.G., Dr. Manju K. Mathew
2. Livestock Production management Paper-I for B.V.Sc&A.H 2016 BATCH (New VCI SYLLBAUS)
3. Livestock Production management Paper-II for B.V.Sc&A.H 2016 BATCH (New VCI SYLLBAUS)
4. LPM 111 Livestock Production management- I (General principles and Ruminants) for B.V.Sc&A.H 2015 Repeat Batch (Old VCI SYLLBAUS)
5. LPM 122 Livestock Production management- II (Mono gastric and Laboratory animals) for B.V.Sc&A.H 2015 Repeat Batch (Old VCI SYLLBAUS)
6. LPM 121 Fodder production and Grassland Management for B.V.Sc &A.H 2015 Repeat Batch (Old VCI SYLLBAUS)
7. VPP 322 Aquatic animal diseases, Health care and Management for B.V.Sc &A.H 2013 Batch (Old VCI SYLLBAUS)
8. DH1101 Dairy farm management for B.Tech 2015 batch (Dairy Science and Technology)

SEMINARS/ CONFERENCES /WORKSHOPS/ORIENTATION / REFRESHER COURSES ATTENDED

Sl No.	Name	Title of the programme	Duration	Location
	Dr. Renjith Sebastian	Capacity Development Programme	25.10.2016 to 26.10.2016	IMG, Trivandrum
	Dr. Lijo John	Application of ICT in animal husbandry teaching, research and extension	19.09.2016 to 22.09.2016	CVAS, Mannuthy
	Dr. Umesh.C.G, Dr. Sindhu.O.K	National symposium on "Innovative techniques, emerging issues and Advancement in Veterinary medicine to meet the challenges : Present and the Future" at VCRI, TNI	22.2.17 to 24.2.2017	VCRI, TNI
	Dr. Umesh C.G.	National conference on Trends in Cancer Research under One health concept	4.2.2017 to 6.2017	College of Veterinary Science, SVVU, Tirupati
	Dr. Sindhu O.K.	Work shop on Endoscopy and Ultrasonographic techniques	22.2.2017 to 24.2.2017	VCRI, TNI
	Dr. Umesh C,G.	Hands on training on cancer diagnosis	4.2.2017	SVVU, Tirupati
	Dr. Biju P. Habeeb	KVASU Literary Workshop (Poetry) organized by the University Union during	3.3.2017 to 4.3.2017	Athirapally
	Dr. Umesh.C.G, Dr. Sindhu.O.K Dr. Manju K. Mathew Dr. Biju P. Habeeb	Application of ICT in Animal Husbandary, Teaching, research and extension	3 days	Pattikkad

	Dr. Sindhu O.K.	Dog medicine, behaviour and population management	2 days	Mannuthy
	Dr. Biju P. Habeeb Dr. Umesh.C.G, Dr. Sindhu.O.K Dr. Manju K. Mathew	National seminar on sustainable Rabies control in Kerala	1 day	Pookode
	Dr. Manju K. Mathew	Training programme at Institute of Management	2 days	Trivandrum
	Dr. Biju P. habeeb Dr. Umesh.C.G, Dr. Sindhu.O.K Dr. Manju K. Mathew	National conference on canine practice	3 days	Pookode
	Dr.Balusami.C	Training on Information Communication Technology Mediated agricultural extension	02.08.2016 to 22.08.2016	IARI,New Delhi
	Dr.John Abraham	Training on application of ICT in Animal Husbandry teaching, research and extension	19.9.2016 to 21.9.2016	COVAS,Mannuthy
	Dr.Balusami.C	Training on application of ICT in Animal Husbandry teaching, research and extension	22.9.2016 to 24.9.2016	COVAS,Mannuthy
	Dr.Balusami.C, Dr.John Abraham, Dr.Sakkaryya Ibrahim and Dr.Roshin Anie Jose	National Seminar on Sustainable Rabies control in Kerala	28.9.2016	COVAS,Pookode
	Dr.John Abraham	International seminar on Agriculture & Food for Inclusive growth and development	14.1.2017 to 15.1.2017	National Botanical Research Institute, Lucknow.
	Dr.Balusami.C& Dr.John Abraham	National Congress on Canine Practice-2016	27.4.2017 to 29.4.2017	College of Veterinary and Animal Sciences, Kerala Veterinary and Animal Sciences University, Pookode, Wayand, Kerala
	Dr. Magna Thomas	Introduction to Bioinformatics tools	09.08.2016 to 12.08.2018	CVAS, Mannuthy
	Dr. Renuka Nayar	Training on Application of ICT in Animal husbandry teaching, research and extension	19.09.2016 to 21.09.2016	Hotel High Way palace, Pattikkad, Thrissur
	Dr. Kavitha Rajagopal	Training on Application of ICT in Animal husbandry teaching, research and extension	22.09.2016 to 24.09.2016	Hotel High Way palace, Pattikkad, Thrissur
	Dr. Kavitha Rajagopal	Capacity development training programme to officers of KVASU	25.10.2016 to 26.10.2016	IMG, Thiruvananthapuram
	Dr. Magna Thomas	Capacity development training programme to officers of KVASU	25.10.2016 to 26.10.2016	IMG, Thiruvananthapuram
	Dr. Renuka Nayar	10 day Short course training programme on functional meat products	21.11.2016 to 03.12.2016	DUVASU, Mathura

	Dr.Dildeep.V	Novel paradigms and technologies for augmenting livestock fertility under climate change scenario'	4.11.2016 to 24.11.2016	NIANP, Bangalore
	Dr. Biju Chacko	Applying welfare measures to improve sustainability of small holder dairy production in Kerala	16.12.2016	Hotel Flora, Near Airport, Nedumbassery, Kochi
	Dr.Reghu Ravindran and Dr Ajith Kumar K.G	Application of ICT in Animal Husbandry Teaching, Research and Extension.	06-09-2016 to 08-09-2016	CVAS, Mannuthy
	Dr. Deepa C.K	Application of ICT in Animal Husbandry Teaching, Research and Extension.	19-09-2016 to 21-09-2016	CVAS, Mannuthy
	Dr AjithKumar K.G and Dr.Deepa C.K.	"National seminar on sustainable rabies control in Kerala"	28-09-2016.	CVAS, Pookde
	Dr.ReghuRavindran, Dr AjithKumar K.G andDr.Deepa C.K.	"Interface meet on latest advancement on entrepreneurship in veterinary medicine and public health"	27 -09-16 to 28-09-16	CVAS, Pookde
	Dr. Reghu Ravindran ,	Refresher course in life science and biotechnology at UGC–HRDC, JNU Delhi	03-09-16 to 28-10-16	UGC–HRDC, JNU Delhi
	Dr. Deepa C.K	104th Indian Science Congress	03-1-2017 to 07-1-2017	Sree Venketeswara University, Tirupati
	Dr. Reghu Ravindran and Dr. Ajith Kumar. K.G	XXVI National Congress of Veterinary Parasitology and International Symposium on current concepts in diagnosis and control of parasitic diseases to combat climate change.	15-02-17 to 17-02-2017	Shimoga
	Dr. Deepa. C.K	XIII Annual Convention of Indian Society for the Advancement of Canine Practice (ISACP) and National Symposium on the "Concepts of One-health in canine health care management"	27-04-2016 to 29-04-2016	CVAS, Pookode
	Dr. Nisha AR	56th Annual conference of society of Toxicology and Tox Expo.	12.03.2017 to 16.03.2017	Baltimore, Maryland, USA
	Dr. Sanis Juliet	ICAR Winter School on Analytical techniques in Pharmacology-Toxicodynamic studies: An Analytical, Functional, Molecular and Cytogenotoxicity approach	01-12-2016 to 21-12-2016	DUVASU, Mathura
	Dr. Nisha A.R.	Refresher Course in Innovations in life sciences conducted	01-11-2016 to 21-11-2016	University of Mysore

	Dr. Ranjith D	16th National Conference of Indian Society of Veterinary Pharmacology and Toxicology	23-11-2016 to 25-11-2016	College of Veterinary and Animal Sciences, Navsari Agricultural University, Navsari
	Dr. Ranjith D	6th National Conference on Natural Science	12-01-2017	Holicross College, Trichi
	Dr. Sanis Juliet	Training on application of ICT in Animal Husbandry Teaching. Research and Extension	06.09.2016 to 08.09.2016	CVAS, Mannuthy
	Dr. Nisha A.R Dr. Suja Rani S	Training on application of ICT in Animal Husbandry Teaching. Research and Extension	19.09.2016 to 21.09.2016	CVAS, Mannuthy
	Dr. Suja Rani S Dr. Ranjith D	International Conference on "Advances in Laboratory Animal Science for Modelling Human Diseases"	14.10.2016 to 15.10.2016	Bangalore
	Dr. Suja Rani S	International Conference on Herbal and Natural Components as the Future of Pharmacology	27.02.2017 to 01.03. 2017	Coimbatore
	Dr. Babitha .V	Novel paradigms and technologies for augmenting livestock fertility under climate change scenario	4.11.2016 to 24.11.2016	NIANP, Bangalore
	Dr. Rajesh Kumar	Hands on training on analytical equipments,	5.1.2017 to 7.1.2017	Veterinary College, Bangalore
	Dr. Bipin. K. C	Orientation training for university teachers	17th June to 14th July, 2016	University of Mysore, Mysore
	Dr. Deepa. P. M. Dr. Bipin. K. C. Dr. Smitha, J. P. Dr. Janus, A. Dr. Rathish, R. L.	Training programme of application of ICT in animal husbandry, teaching, research and extension	September 2016	KVASU
	Dr. Deepa. P. M. Dr. Bipin. K. C. Dr. Smitha, J. P. Dr. Rathish, R. L.	Symposium on concepts of one health in canine health care management	27 th to 29 th April 2016	Indian Society for Advancement of Canine Practice
	Dr. Deepa. P. M. Dr. Bipin. K. C. Dr. Smitha, J. P. Dr. Janus, A. Dr. Rathish, R. L.	National seminar on sustainable rabies control in Kerala	28 th September, 2016	IVA, Kerala COHEART
	Dr. Deepa. P. M. Dr. Bipin. K. C.	National symposium on innovative techniques, emerging issues and advancement in veterinary medicine to meet the challenges-present and the future	22 nd to 24 th February, 2017	
	Dr. Bipin. K. C.	Participated in workshop on ultrasonography and endoscopy	22 nd and 23 rd February 2017	TANUVAS

	Dr.Aswathi.PB & Dr.Abdul Muneer Kandangal	i)ICT in Animal Husbandry, Teaching, Research and Extension ii) Interface meet on latest advancements and Entrepreneurship in Veterinary Medicine and Public Health iii) National Seminar on “Sustainable Rabies Control in Kerala” held at KVASU, Pookode	6-9-2016 to 8-9-16 27-9-2016 to 28-9-16 28-9-2016	Thrissur KVASU, Pookode KVASU, Pookode
	Dr.Simi.G	i)Training on Entrepreneurship development through value addition in livestock products ii) XXXIII Annual Conference of the Indian Poultry Science Association and National Symposium, 2016	13-6-2016 to 17-6-2016 3-11-2016 to 5-11-2016	National Institute of Agricultural Extension Management, Hyderabad Assam Agricultural University, Guwahati, Assam
	Dr. Sooryadas S Dr. Jinesh Kumar N S Dr. Reji Varghese Dr. George Chandy	40 th Annual Congress of ISVS	Three days	TANUVAS, Chennai
	Dr. Reji Varghese Dr. Jinesh Kumar N S	Trends in cancer research under one health concept	Three days	Tirupati
	Dr. Dinesh P T	XIV annual congress of ISACP		GB Pant University, Pantnagar
	Dr. Chintu Ravishankar	8th Kerala Veterinary Science Congress	12th and 13th November 2016 (2 days)	Hotel Dream City, Pattikkad, Thrissur
	Dr. Rajasekhar R.	Winter school on Advances in molecular biology for diagnosis and control of infectious diseases.	1 st to 21 st December 2016	SDAU, Dantiwada, Gujarat
		29 th Kerala Science Congress.	28 th to 30 th January	Marthoma College, Thiruvalla
	Dr. Siju Joseph	ICAR sponsored winter school on “Recent advances in development of recombinant vaccines for veterinary use”	8-28, November, 2016	I.V.R.I, Izatnagar, U.P
		29 th Kerala Science Congress.	28 th to 30 th January	Marthoma College, Thiruvalla
	Dr. Sumod K.	Training on ‘Application of ICT in Animal Husbandry Teaching, Research and Extension’	19th to 21 of September, 2016	KFRI, Peechi
	Dr Subin K.Mohan	Capacity Building Programme for KVASU teaching staff	25 th to 25 th October, 2016	IMG Thiruvananthapuram

ADDITIONAL DUTIES OF FACULTY

Sl No.	Name of the faculty	Additional Duties
1	Dr. Naheef K	Officer in charge, Central Instrumentation facility
2	Dr.Lijo John	Officer in charge, ARIS cell
3	Dr. Biju P Habeeb	Head in charge
4	Dr. Sindhu O.K	Canteen committee, Women Legal cell, IVA Treasurer
5	Dr. Manju K. Mathew	PTA Joint secretary; Working arrangement in TVCC
6	Dr. Umesh C.G	Working arrangement in TVCC
7	Dr.Balusami.C	In charge of pig farm
8	Dr.John Abraham	In charge of Eco farm and Bio diesel plant
9	Dr.Sakkariya Ibrahim	In charge of equine and rabbit farm , Coordinator for Study circle
10	Dr.Roshin Anie Jose	In charge of Goat farm
11	Dr. Renuka Nayar	Officer-in-charge, Centre for Student Counselling & Placement, Officer- in- charge, Seminar Hall
12	Dr. Kavitha Rajagopal	Officer- in- Charge, Academic(MS/Diploma)
13	Dr. Magna Thomas	Course Director, Diploma in Dairy Science; Treasurer, PTA, CVAS, Pookode.
14	Dr. Dildeep.V	Head i/c
15	Dr. Biju Chacko	Assistant warden
16	Dr. SenthilMurugan	Head, ILFC
17	Dr. Ani Bency Jacob	
18	Dr. Jinsy. V.S	o/c Fodder production
19*	Dr.Deepa C.K	Assistant Academic Co-ordinator at University
20	Dr. Sanis Juliet	Implementing officer, Centre of Ethnopharmacology Implementing Officer, Central Instrumentation Facility, RIDF- NABARD
21	Dr. Suja Rani S	Officer i/c, Laboratory animal facility, Member Secretary, Institutional Animal Ethics Committee
22	Dr. Ranjith D	Officer i/c, Central Instrumentation facility
23	Dr. Babitha V	Head of Dept i/c, Academic Officer (UG)
24	Dr.Aziz Zarina	Officer in-charge (Central Instrumentation Facility)
25	Dr. Rajesh Kumar	Officers (Central Instrumentation Facility)
26	Dr. Shibu K Jacob	Academic duties at CDST, Trivandrum, Technical Assistance to University officers in the Govt. Secretariat and other offices at Tvpmm

27	Dr. Deepa. P. M.	Assistant Warden, Ladies Hostel OSD to Director of Clinics Principal Investigator, RF project of Clinical Lab
28	Dr. Bipin. K. C.	In charge of Molecular Biology Lab, CWS
29	Dr. Smitha. J. P.	In charge of Clinical Lab, TVCC
30	Dr. Rathish. R. L.	Officer i/c, Vehicles
31	Dr. Janus. A.	Assistant Professor, TVCC
32	Dr.Abdul Muneer.K	Officer-in-charge, Poultry farm and Hatchery of ILFC , Pookode
33	Dr.Simi.G	Assistant Public Information Officer (i/c) , Course Director (i/c) of B.Sc PPBM programme
34		Given along with the reports of the Departments from which the faculty is placed on working arrangement
35	Dr. John Martin K D	Professor & Head, TVCC, Pookode
36	Dr. George Chandy	Director, Centre for Wild Life Studies
37	Dr. Koshy John	Professor (Research Coordination)
38	Dr. Chintu Ravishankar	Officer i/c of Telecommunication
39	Dr. Rajasekhar R.	Officer i/c Academic Cell (IUMS)
40	Dr. Sumod K	Officer I/c, Smart classroom, CVAS, Pookode
41	Dr. Subin K. Mohan	Officer in charge – Information & Sales Centre, CVAS, Pookode
42	Dr.V.K.Vinod	Officer in Charge Canteen, Compilation of Reports
43	Dr.Hamza Palekkodan	NSS Programme officer, Compilation of Reports

College of Dairy Science and Technology, Mannuthy

COLLEGE ACTIVITIES

1. Felicitation of Inter-Collegiate Arts Festival 'Baras – 16' Winners and Best Teacher Awards Presentation on 03-05-2016

College of Dairy Science and Technology, Mannuthy conducted a meeting on 3.5.2016, 3 pm at the Seminar Hall of KVASU Dairy Plant in order to felicitate the students who won prizes at the Inter-Collegiate Arts Festival 'Baras – 16'. It is for the first time that the College has secured runner up position in Arts Festival after the formation of KVASU.

Along with the function, the Best Teacher Awards for the year 2015-16 were given to Prof. P.J. Joseph, Guest faculty (Dairy Business Management) and Dr. K.A.Mercey, Prof. and Head, Department of Dairy Business Management for their services with CDST.

The programme was inaugurated by Dr. G. Girish Varma, Dean, CDST. Students' Union President, Ms. Surabhi, presided over the function. Dr. P.I. Geevarghese, Dr. Ravindranath, Dr. Ligimol James, Mr. Shyam Suraj S.R , Mr. Mohammad Raeesul Islam (Arts Club Secretary) felicitated the function. Mr. Amar Raj, Secretary, Students' Union gave away the vote of thanks.



2. World Milk Day Celebrations on 01-06-2016

The College of Dairy Science and Technology, Mannuthy along with the Indian Dairy Association (Kerala Chapter) celebrated 16th World Milk day on June 1, 2016 at the KVASU Dairy Plant, Mannuthy. Dr. G. Girish Varma, Dean hoisted the dairy flag and Dr. P. I. Geevarghese, Chairman (IDA Kerala Chapter) gave the World Milk Day Message. Ms. Abila Krishna, Teaching Assistant recited the dairy oath to the students. Mr. Shyam Suraj S.R. welcomed the faculty and students and Dr. Ligimol James gave the vote of thanks. Palada pradhanman was served to all. The Farmers training programme, which then followed was inaugurated by Dr. S.N. Rajakumar, Head of Dairy Plant/Department of Dairy Technology. Dr. Divya M.P, Assistant Professor took class to the farmers on 'Milk Testing and Pricing' which was followed by practical sessions handled by Ms. Anumol Jijo, Teaching Assistant. The farmers were given dairy farm kits as compliment.





3. World Environment Day on 06-06-2016

College of Dairy Science and Technology, Mannuthy, observed World Environment Day on 06.06.2016 at Seminar hall of Dairy Plant, Mannuthy. Dr. U. T. Francis, Retd. Professor, Department of Dairy Science, COVAS, Mannuthy was the Chief Guest. Dr. Girish Varma, Faculty Dean inaugurated the programme. Students' Union president, Ms. Haritha.C presided over the function. Dr. P. I. Geevarghese (Chairman, IDA -Kerala Chapter), Dr. S. N. Rajakumar (Professor & Head, Dairy Plant) and Dr. Yancy Mary Issac, Asst. Professor felicitated the programme. Dr. Yancy introduced about the Eco club which is going to be started in the college to promote organic farming among the students using grow bags made from used and unwanted flex. Dr. G. Girish Varma, Dean, CDST honoured the Chief Guest. Mr. Shyam Suraj S. R, Assistant Professor welcomed the gathering and Mr. Amal Biswas, NSS Secretary gave the vote of thanks. As part of the programme, saplings of different trees were planted in the campus





4. Inauguration of Eco Club on 20-06-2016

The College of Dairy Science and Technology, Mannuthy organized a function to mark the genesis of Eco Club on June 20, 2016 at the classroom of 2015 batch in the presence of KVASU Registrar, Dr. Joseph Mathew. The Registrar in his address to the students reiterated the fact that humans cannot dodge themselves from nature. He appreciated the students' interest in organic farming and utilization of used flex materials to make grow-bags; and offered his ardent support to the upcoming Eco Club, to be registered at CDST to promote eco friendly farming at the campus.

Kum. Athira M. Nair (2015 batch) presided over the function. Dr. G. Gireesh Varma, Dean and Mr. Shyam Suraj S.R, Associate Patron gave felicitations. Dr Yancy Mary Issac, Assistant Professor, Department of Dairy Husbandry is the motivating force behind the initiative of the students and her enthusiastic efforts were well admired by all.

A video update of the preliminary activities of the Club like fodder cultivation; visit to organic farm, Department of Olericulture (KAU), Aquaponics unit at Eco Farm and other organized dairy farms was displayed. 2015 batch students Mr. Sayanth (Class representative) welcomed the gathering and Mr. Parameshwar Mohan gave the vote of thanks.



5. International Day of Yoga

College of Dairy Science and Technology, Mannuthy celebrated International Day of Yoga on June 21, 2016. The programme was inaugurated by Dr. S.N. Rajakumar, Head, Dairy Plant and Head, Department of Dairy Technology at the VKIDFT classroom. Students' Union President Kum. Haritha. C. presided over the function. A Yoga Club is started at CDST, where Yoga classes shall be given from 4 pm to 5 pm.

Dr. R. Kanthanathan, Assistant Professor (Physical Education) took a class on Yoga and also gave a live demonstration of various 'asana's in Yoga. The programme was felicitated by Mr. Shyam Suraj S.R, Ms. Indu B and Dr. N. Raveendranath. Mr. Aswin S. Warriar welcomed the gathering and Mr. Raeesul Islam gave the vote of thanks.



6. Farmers' day

The College of Dairy Science and Technology, Mannuthy in association with Indian Dairy Association – Kerala Chapter and Dairy Extension Service Unit, Ollukkara organized a one day 'Dairy Seminar and Students' Visit' under the auspices of Mannamangalam Dairy Co-operative Society (DCS) of Ollukkara block as part of Chingam 1 – 'Karshaka Dinam' (Farmers' Day). The programme was inaugurated by Mr. Reji George, Puthur Grama Panchayath Member and presided over by Mr. I.K. Subramanian Master (President of the DCS). Mr. Mahesh, Dairy Farm Instructor gave the prizes and token of reverence to the dairy farmers of the Society.

Dr. Yancy Mary Issac and Ms. Indu B, Assistant Professors of CDST took classes for the farmers and cleared their doubts. Mr. Lawrence, AH department, Dr. Kanthanathan, Assistant Professor and Mr. Sandeep.B., Teaching Assistant were present. Ms. Divya M.P, Assistant Professor welcomed the gathering and Adv. Davis Kannukkaadan, Secretary of the DCS gave the vote of thanks. The programme was attended by selected 40 farmers of Mannamangalam DCS. The Seminar was followed by lunch and the students of 2014 batch B. Tech (Dairy Science and Technology) studied the functioning of the Bulk Milk Cooler and attended the afternoon milk collection at different centres of the Society. They also visited dairy farms.



I. CO-CURRICULAR ACTIVITIES

1. Dharani Eco Club of CDST, Mannuthy starts Lecture Series

Dharani Eco Club of the College of Dairy Science and Technology, Mannuthy has started a lecture series on 9.2.2016. It was inaugurated by Dr. G. GirishVarma, Dean at the Seminar Hall of KVASU Dairy Plant. The first speaker was Mr.Ranjan Mathew Varghese, State Director of WWF. He delivered a lecture on 'Nature Conservation, Environment Protection and People Participation.' Dr.Yancy Mary Issac made the introductory speech. Mr.ShyamSuraj S.R and Dr.Ligimol James gave felicitations. Eco Club President Ms.AthiraM.Nair welcomed the gathering and Secretary;Prabin E.P. gave the vote of thanks. At least one lecture on nature and eco system shall be conducted every month as part of the series.

Traffic Awareness Class conducted on 08 -04-2016: A traffic awareness class was conducted for the students of the College of Dairy Science and Technology, Mannuthy on 8.4.2016 (Friday) from 3 pm to 5 pm at the Seminar Hall of KVASU Dairy Plant. Thrissur City Police Traffic Awareness Team leader ASI Mr. O.A. Babu led the class. Ms. Manju welcomed the gathering and Ms. Akhila gave the vote of thanks.

3. Harvest of the fodder maintained by the 2015 batch B. Tech (Dairy Science and Technology) students of CDST

The harvest of the fodder plot maintained by the 2015 batch B. Tech (Dairy Science and Technology) students of Mannuthy was done by the Faculty Dean, Dr. G. Girish Varma on 3.9.2016. The fodder plot was prepared as part of the practical for the course – Agronomy and Forage Production of Semester I. The credit for the efforts of the students is to the course teacher Dr. Yancy Mary Issac, Assistant Professor (Dairy Husbandry) whose motivation has resulted in an excellent fodder plot near to the Goat and Sheep farm consisting of Hybrid Napier (Co-3, Co-4 and Co-5), Fodder sorghum, Guinea grass, Para grass, Stylosanthes, Maize, Cow pea, Agathi and Subabul. The area shall remain as the practical plot for the new batches also. The cultivated fodder shall be given for feeding the animals of the Sheep and Goat farm. Mr. Shyam Suraj S.R, Academic i/c also attended the harvest.



4. Mass singing of National Anthem at CDST Mannuthy

As instructed by UGC, the College of Dairy Science and Technology, Mannuthy organized a mass singing of the National Anthem at 11.00 am on 23.9.2016. The programme was organized at the Seminar Hall of KVASU Dairy Plant. Faculty Dean, Dr. G. Girish Varma addressed the students. Ms. Josin. T. Joseph (2013 batch) and Ms. Anjumol (2014 batch) gave speech on '70 years of India's independence'. The programme was conducted as part of Azadi 70 – Yaad Karo Kurban (Freedom Fortnight) extending from 9.8.2016 to 23.9.2016. Earlier on 15.8.2016, National Flag was hoisted at the Administrative Block of CDST by the Dean



5. Anti-ragging campaign

With the co-operation of the District Legal Services Society, College of Dairy Science and Technology, Mannuthy conducted an Anti-ragging campaign at the new classroom of VKIDFT for all the students on 8.9.2016, 3 pm. The programme was conducted as part of the instructions from UGC. All the students and faculty attended the programme presided by Dr. S.N. Rajakumar, Professor and Head, KVASU Dairy Plant. Mr. Mujeeb Rahman, Sub Judge and Mr. K.K. Sajeev, Circle Inspector of Police took classes. Dr. Ligimol James welcomed the gathering and Ms. Aparna gave the vote of thanks.



6. Commemorated the death anniversary of Dr. Verghese Kurien

The College of Dairy Science and Technology, Mannuthy remembered the Father of White Revolution, Dr. Verghese Kurien on his fourth death anniversary on 9.9.2016. In a humble programme organized at the KVASU Dairy Plant, Dean of the faculty Dr. G. Girish Varma addressed the students. Floral tribute was offered by the faculty and the students.





7. Malayalam Shreshtha Bhasha Dinam on November 1, 2016

College of Dairy Science and Technology, Mannuthy observed Malayalam Shreshtha Bhasha Dinam on November 1, 2016 at its Academic Block. In the programme Dr. G. Girish Varma, Dean of the faculty recited the oath to the faculty and office staff. Administrative Officer Sri. Reghu addressed the gathering. Office Assistants Smt. Salini welcomed the meeting and Smt. Remya gave the vote of thanks.



8. Workshop on office procedures for staff at CDST

Dean, Dr.G.Girish Varma welcomed the gathering. He explained the necessity of conducting this type of workshops so as to facilitate the functioning of office. The Dean opined that the understanding of the work pattern of the office/administrative section will provide the faculty/staff a clear and easy approach for various submissions, plan project preparations etc.

Mr.Reghu A., Administrative Officer was invited for the presentaion. The Administrative officer gave an elaborate explanation about various matters like an outline of university administration, services, estimate of revenue, proper format for submissions, different duties and responsibiliies of academic section, general section, bill section in CDST, Duties of clerical assistants, steno to Dean, Administrative Officer etc. Dr. Divya M.P. expressed Vote Of Thanks. The workshop concluded on 4.30pm.

Fourty members (administrative and teaching staff) were present in the workshop. The feedback from members showed that the work shop was highly informative and effective.

9. Lecture series “Navaneetham” inaugurated at CDST, Mannuthy

College of Dairy Science and Technology, Mannuthy started a lecture series named “Navaneetham - the butter churned out of milk and wisdom” with the aim of organizing one lecture every month by prominent speakers of various fields. It was inaugurated on 25.1.2017 (Wednesday) by Hon. KAU Vice Chancellor Dr. P. Rajendran at the Seminar Hall of KVASU Dairy Plant. A technical newsletter “FooDT – Food and Dairy Technology Outlines” was released by the Registrar of KVASU Dr. Joseph Mathew. Dean of the Faculty Dr. G. Girish Varma presided over the function. Dr. S.N. Rajakumar, Head (Dairy plant) delivered the key note address. Dr. P. Sudheer Babu and Dr. Saabin George, Members of the BoM of KVASU and Dr. C.T. Sathian, Head, Dairy Science Dept., COVAS gave felicitations. Dr. Divya M.P. welcomed the guests and Dr. Vinod Viswanath gave the vote of thanks.



10. National Milk Day

College of Dairy Science and Technology, Mannuthy in association with Indian Dairy Association, Kerala Chapter celebrated National Milk Day, the birthday of Dr. Verghese Kurien on 26.11.2016 at the Seminar Hall of KVASU Dairy Plant. The programme was inaugurated by Dr. P.I. Geevarghese, Former Dean of CDST and Chairman, Indian Dairy Association. Dr. S.N. Rajakumar, Head, KVASU Dairy Plant presided over the function.

The programme included a ‘Hands on training in propagation and maintenance of dairy starter cultures for entrepreneurs’ and Dr. Verghese Kurien Commemoration talk by Dr. Ani.S.Das, Director, Centre for Bio-resources and Agricultural Services, Govt. of Kerala. The IDA 2017 calendar was also released on the occasion by Dr. Ani.S.Das. Ms. Indu.B, Assistant Professor (Dairy Chemistry) offered felicitation. Dr. Ligimol James welcomed the gathering and Ms. Divya K.B gave the vote of thanks.



11. Recreation Hall for staff started at CDST, Mannuthy

A Recreation Hall for the staff was opened at the College of Dairy Science and Technology, Mannuthy by the Dean Dr. G. Girish Varma on 15.12.2016. The Hall has facilities for the staff to play games like caroms, chess etc. The Hall shall be open during lunch hours and after 4 pm. Dr. R. Kanthanathan, Assistant Professor (Physical Education) is in charge of the Recreation Hall.



12. Mr. Ammiti Murali Krishna of CDST, Mannuthy bags bronze medal for Show Jumping at Republic Day Camp of NCC

Mr. Ammiti Murali Krishna, second year M. Tech (Dairy Technology) student of the College of Dairy Science and Technology stood at the third position in the Show Jumping for Boys at the Inter Directorate Equestrian Competitions held as part of Republic Day NCC Camp 2017 at New Delhi. He also participated in the Prime Minister's Rally.





13. CDST students fetch prizes at AIMA-TMA MANAGEMENT OLYMPIAD 2017



All India Management Association (AIMA) together with Thrissur Management Association (TMA) conducted 'Management Olympiad' at the Sahridaya College Campus, Kodakara, Thrissur on 27th and 28th of March 2017. Quiz Competition, Poster Making Competition, Case Study Competition and Business Simulation Competition were conducted as part of the programme. 26 students of the College of Dairy Science and Technology, Mannuthy participated in the programme and secured prizes in the following events.

Quiz Competition

1. Anjumol Jacob and Anne Mary Catherine (2014 batch) – Silver medal
2. Abitha P.K. and Sana Jose (2014 batch) – Bronze medal

Poster Making Competition

1. Aswathy M.R and Kavya A.K (2014 batch) – Silver medal
2. Jestin Bose and Adhila C.K. (2016 batch) – Bronze medal

The programme created interest in the students towards management competitions and they received preliminary experience on the same. The students were assisted by the Teaching Assistants, Ms. Neethu Lazar and Ms. Asha Alphonse. The students were sponsored by the Directorate of Entrepreneurship, KVASU.

14. Best Teacher Awards presented at CDST, Mannuthy

The Best Teacher Awards 2016-17 was organized at the College of Dairy Science and Technology, Mannuthy on 10.4.2017. The Award Winners were Ms. Aparna S.V, Assistant Professor (Dairy Microbiology) and Mr. Sandeep B., Teaching Assistant (Dairy Business Management). The award is funded from ICAR grant. In the presence of an impressive gathering at the Seminar Hall of KVASU Dairy Plant, the Dean of the faculty Dr. G. Girish Varma presented the awards to the winners. The selection of best teachers was done through a meticulous process involving the opinion of students and the teacher's credentials. Dr. K.M. Mercey and Dr. A.K. Beena offered felicitations. Ms. Indu B. welcomed the gathering and Ms. Sourabhya offered the vote of thanks. The prizes for utilizing college library services by students and faculty were given. The students who won prizes at AIMA – IMA Olympiad were also congratulated in the function.



II. STUDENTS' UNION ACTIVITIES

1. Students Union 2015-16 Inaugurated on 27.5.2016

The Students' Union 2015-16 of the College of Dairy Science and Technology, Mannuthy – '**Anokhi**' was inaugurated on 27.5.2016 (Friday) 5 pm at the Golden Jubilee Auditorium of the College of Veterinary and Animal Sciences. Mr. Rejith Menon, Cine actor was the Chief Guest. Dr. Girish Varma, Faculty Dean addressed the students. The programme started with the valedictory function of the Union 2014-15 and the occupation of new office bearers of the Union. Students' Union president, Ms. Haritha.C

presided over the function. Dr. P.I. Geevarghese (Former Dean, CDST, Mannuthy), Dr. Sudheer Babu (Special Officer, CDST, Chettachal), Dr. Dinker Singh (Special Officer, CFT, Thumburmuzhi), Mr. Shyam Suraj S.R. (Associate Patron) and Mr. Adith felicitated the function. The prizes to the winners of athletic competitions held at the college were given by the Chief Guest. Mr. Amar Raj, Former Secretary welcomed the gathering and Mr. Mohammed Raeesul Islam, Secretary gave the vote of thanks. The inauguration was followed by cultural activities of students.



2. Commemoration of the Death Anniversary of Dr. APJ Abdul Kalam

The Students' Union of the College of Dairy Science and Technology commemorated the First Death Anniversary of the former Indian President and Missile Man of India Dr. A.P.J. Abdul Kalam on 27.07.2016 at seminar hall of CDST. Dean of the faculty Dr. G. Girish Varma inaugurated the function and gave the commemoration speech. Students' Union President Kum. Haritha.C. presided over the function. Remembrance Speech of the distinguished personality was done by Dr. Ligimol James, Assistant Professor and Mr. P.N. Sivadas, Guest Faculty. Mr. Aadith welcomed the gathering and Mr. Mohammad Azhar gave the vote of thanks. Let the messages given by Dr. APJ inspire the students and faculty for building ignited minds





3. Personality Development Programme for students

Students' Union 2015-16 of the College of Dairy Science and Technology, Mannuthy in association with the Students' Counselling and Placement Cell conducted a one day programme on Personality Development for all students at the Golden Jubilee Hall of COVAS on 20.8.2016, 9 am to 4 pm. The programme was inaugurated by Dr. G. Girish Varma, Dean, CDST and presided by Kum. Haritha. C, President of the Students' Union. Dr. S.N. Rajakumar, Head, KVASU Dairy Plant and Ms. Aparna S., Assistant Professor felicitated the programme. Mr. Shyam Suraj S.R, Associate Patron welcomed the gathering and Mr. Muhammed Raeesul Islam, Secretary, Students' Union gave the vote of thanks. The sessions were handled by Smt. Jaqulin Dominic, Dairy Extension Officer, Ernakulam and Mr. K.T. Thomas, Managing Director, MRCMPU (Milma).



4. Short film fest 'Allusion-16'

The Students' Union of CDST, Mannuthy conducted 3 days short film fest '**Allusion-16**' from 28.12.2016 to 30.12.2016 at the Seminar Hall of the College of Veterinary and Animal Sciences, Mannuthy. The film fest was inaugurated by Sri. Dileep Narayanan, Malayalam Cine Director ('Polentante Veedu' fame). Students' Union President Ms. Haritha presided over the function. Mr. Shyam Suraj S.R (Associate Patron), Dr. Dinker Singh (Special Officer, CFT) and Dr. Kanthanathan (Assistant Professor - Physical Education) gave the felicitations. Mr. Sujin welcomed the gathering and Mr. Adith gave the vote of thanks. A short film contest for students was also organized as part of the programme.



5. Womens day Celebrated on 08.03.2016. Ms. Uma Preman delivered a speech to the lady staff and students of CDST
6. Inter class arts festival held from 30.08.2016 to 01.09.2016
7. Students Union of CDST organized Onam celebrations on 09.09.2016.
8. Fresher's day of 2016 admission held on 08.11.2016
9. Christmas day celebrations held on 23.12.2016

III.

IV. EXTENSION ACTIVITIES

1. Hands on training on Preparation of Milk Products for Small Scale Enterprises

The College of Dairy Science and Technology, Mannuthy in association with Indian Dairy Association – Kerala chapter is organizing Hands on training on 'Preparation of Milk Products for Small Scale Enterprises' from 1.9.2016 to 3.9.2016. The programme is conducted as part of the academic programme of 2012 batch of B. Tech (Dairy Science and Technology). The inauguration of the programme was done by Dr. G. Girish Varma, Dean of the Faculty of Dairy Science and Technology at the Seminar Hall of KVASU Dairy plant on 1.9.2016. Dr. P.I. Geevarghese, Chairman, IDA – Kerala chapter presided over the function. Dr. S.N. Rajakumar, Head, KVASU Dairy Plant and Dr. Ligimol James, Assistant Professor and Secretary, IDA- Kerala chapter gave felicitations. Ms. Divya K.B, Assistant Professor welcomed the gathering and Mr. Abinash, Class Representative of 2012 batch gave the vote of thanks. The programme is attended by 43 entrepreneurs and it shall continue for the next two days consisting of theory and practical sessions on the manufacture and marketing of various milk products. Certificates shall be given to participants by the Directorate of Entrepreneurship, KVASU.





2. Stall in the District Ksheera Sangamam at Meloor

The 2014 batch of B. Tech (Dairy Science and Technology) students participated in the District Ksheera Sangamam organized by the Dairy Development Department at Meloor St. Joseph Church Parish Hall, Chalakkudy. The programme started on 16.12.2016 and shall continue till 17.12.2016. The stall opened by the students sells milk products and snacks prepared by the students as well as those manufactured at KVASU Dairy Plant. The programme is lead by the Dairy Technology Department under the guidance of Ms. Divya K.B., Assistant Professor and Teaching Assistants Ms. Anjali C.T. and Ms. Sajitha Jose. The Dean of the faculty Dr. Girish Varma visited the stall and encouraged the students. The Honorable Animal Husbandry and Dairy Development Minister Adv. K. Raju shall inaugurate the Ksheera Sangamam programme on 17.12.2016.



3. CDST Mannuthy participated at the State Ksheera Sangamam at Pattambi, Palakkad



College of Dairy Science and Technology, Mannuthy participated at the State Ksheera Sangamam organized by the State Dairy Development Department from 28.1.2017 to 30.1.2017. The NSS volunteers of CDST helped the organizers for various arrangements of the programme on 27.1.2017 and actively participated in all the programmes like Seminar, Camps, Young Farmers Meet, Women Entrepreneurs Summit, Cattle Show and Dairy Expo during the following three days. The students had established a stall at the Expo to exhibit milk products and effected sales. The programme was organized under the auspices of CDST, KVASU and NSS unit of CDST. 2014 and 2015 batch B. Tech students participated in the programme

4. CDST Mannuthy and ISCA – Kochi chapter jointly organized Science Awareness Workshop

College of Dairy Science and Technology, Mannuthy in association with Indian Science Congress Association (ISCA) – Kochi chapter organized a Half Day Science Awareness Workshop for High School and Higher Secondary School students at Puthur Government Higher Secondary School, Thrissur on 30.1.2017. The programme was inaugurated by Dr. K.V. Jayachandran, Convener, ISCA – Kochi chapter. Dr.G. Girish Varma, Dean, CDST gave the key note address. Ms. K.V. Jayalatha, Headmistress, Puthur GVHSS presided over the function. Classes were handled by Dr. Ani. S. Das, (Director, Centre for Biosciences), Dr. Dinesh. K. (Associate Professor, KUFOS) and Mr. Shyam Suraj S.R (Asst. Professor, CDST). Science books were contributed to the School Library as part of the programme by ISCA and CDST.



5. College of Dairy Science and Technology, Mannuthy conducted “Dugdham 2017”

College of Dairy Science and Technology, Mannuthy in association with Indian dairy Association, Kerala Chapter organized a 3 day Hands on training on preparation of milk products for small scale entrepreneurs entitled “Dugdham – 2017” from 16.2.2017 to 18.2.2017. The programme was inaugurated by Dr. G. Girish Varma, Dean, CDST on 16.2.2017 presided by Dr. S.N. Rajakumar, Head, Dairy Plant. There were 22 participants for the programme. Certificate distribution was done by Dr. Deepa Anand, Assistant Professor, Directorate of Entrepreneurship, KVASU. The programme was organized with the active participation of the Faculty and Teaching Assistants of the Department of Dairy Technology. The course coordinator was Ms. Divya K.B., Assistant Professor (Dairy Technology).



CONFERENCE / SEMINARS/ TRAININGS CONDUCTED AT THE COLLEGE

- One day training on preparation of milk products for 48 farmers in association with Extension Training centre, Mannuthy by DT department on 7.4.16
- Dr. Divya M.P. conducted a class for PG Diploma (Food safety and Quality management) students on Food Chemistry at COVAS, Mannuthy on 30.05.16
- Divya. K B Asst. Prof. handled a session at Hands on Training programme on milk and meat products organized by District womens council, Idukki District on 18.05.16
- The seven days Extension Training as part of the curriculum of B. Tech (Dairy Science and Technology) for 2012 batch was conducted under the guidance of Dairy Development Department, Wayanad from 30.5.2016 to 6.6.2016.
- Dr. Divya M.P, Assistant Professor, Department of Dairy Chemistry took class to the farmers on 'Milk Testing and Pricing' on 01-06-2016 which was followed by practical sessions handled by Ms. Anumol Jijo, Teaching Assistant.
- One day training on preparation of milk products for 30 farmers in association with Extension Training centre, Mannuthy by DT department on 27.08.16
- Hands on training on Preparation of milk products (3days) as part of experiential learning programme of B.Tech 2012 batch students from 1.9.2016 to 5.9.2016
- Training on 'Propagation and Maintenance of Starter Culture' jointly organized by Revolving Fund 'Starter culture', Department of Dairy Microbiology and Indian Dairy association (Kerala chapter) on 26.11.2016.

Details of extension activities of individual scientists (other than above)

- Ms. Divya. K B Assistant Professor, Dairy Technology handled a session on ‘Milk Product Preparation’ in the Mullassery block Ksheerasangamam conducted by Kerala Dairy Development Department.
- Mr. Shyam Suraj S.R, Assistant Professor, Dairy Extension Mr. Shyam Suraj S.R, Assistant Professor, Dairy Extension conducted Class as part of fodder day at Vadavannur, Kollengode (29.12.2016)
- Mr. Shyam Suraj S.R, Assistant Professor, Dairy Extension
 - o Conducted extension class to farmers at Chittoor Block Ksheera Sangamam (19.11.2016)
 - o Conducted class at UGC sponsored National Seminatr on Milk Value chain at St. Theresas college, Ernakulam on 29.11.2016
 - o Conducted Extension class to farmers at Tanur Block Ksheera Sanagamam
 - o Presented a class on “Leadership styles and skills in Extension Organization” at Dairy Training Center, Kozhikkode for Dairy Extension Officers as part of the Off-campus training organized by Extension Education Insitute, Hyderabad. (19.10.2016)
 - o Presented a class at the Seminar on Fodder Production at Kollengode, Palakkad as part of ‘Fodder Day’ of Dairy Development Department. (26.11.2016)
 - o Presented a class on ‘New research results in cattle rearing’ at the District Seminar organized by Dairy Development Department, Palakkad. (19.11.2016)
 - o Presented a class on dairying at the Chavakkad Block Dairy Seminar. (15.10.2016)
 - o Presented a class on ‘Project preparation’ to Dairy Extension Officers of Idukki district as part of IDDP project of Dairy Development Department. (29.8.2016)
 - o Presented a class on ‘Diversification opportunities in dairying’ for farmers at Kanakakunnu Palace, Thiruvananthapuram as part of a programme of Dairy Development Department. (8.7.2016)
 - o Presented a class for Dairy Development Department Officials on ‘Dairy Farm Management’ at Thodupuzha, Idukki. (15.6.2016)
 - o Presented a class for District Women’s Council, Idukki on ‘Preparing/processing and marketing of milk and meat products’ (18.5.2016)
 - o Presented class on Dairy Farm Management for dairy farmers of Idukki for 3 days (18.4.2016, 22.4.2016 and 25.4.2016)

V. Sports and Games

- 12 students of CDST represented KVASU for South India Inter university football tournament held at Coimbatore
- 2 girl students participated All India Inter Agri Badminton tournament held at Coimbatore
- Inter class football, volleyball, badminton, table tennis, cricket were held

VI. NSS/NCC Activities

The N.S.S. unit of the College taking all efforts to achieve the objectives lay out under this scheme. Ms. Indu B, Assistant Professor (Dairy Chemistry) is serving as the Programme Officer. Various programmes were taken up under this scheme aimed to improve the social commitment of students

and their personality development. The volunteers took earnest steps to educate common people on the need of energy conservation, masking campuses plastic free and keeping the surroundings clean.

National Unity Day

Under the auspices of the National Service Scheme, Social Service League and Student's Union, CDST Mannuthy celebrated **National Unity Day (Rashtriya Ektha Diwas)** on October 31, 2016. The day is commemorated as the 141st Birth Anniversary of Sardar Vallabhbhai Patel, the 'Iron Man of India'. The day is also remembered as the martyr day of the Prime Minister of India Smt. Indira Gandhi also called 'Iron Woman of India'.

As part of the celebration, 'Pledge of Unity' was taken by the students and faculty in the morning at the Seminar Hall of Dairy Plant under the leadership of Dr. G. Girish Varma, Dean of faculty. Sweets were distributed to students. Later in the evening a 'Run for Unity' was organized from the Dairy Plant to the Administrative block of CDST. Dean flagged off the run and addressed the students.



VII. COLLEGE PTA ACTIVITIES

An Orientation programme was organised by the College PTA for the newly admitted students of 2015 admission

VIII. STUDENTS COUNSELLING AND PLACEMENT SERVICES

Orientation programme on FSSAI and FSMS Auditor courses

The Students Counselling and Placement Cell, CDST, Mannuthy and Indian Dairy Association, Kerala chapter jointly organized a half day Orientation programme on FSSAI and FSMS Auditor courses to the final year and pre-final year students of B. Tech (Dairy Science and Technology) on 16.8.2016 at the Seminar Hall of KVASU Dairy Plant. The programme was inaugurated by Dr. S.N. Rajakumar, Professor and Head, KVASU Dairy Plant. Dr. P.I. Geevarghese, President, Indian Dairy Association presided over the function. Dr. Ligimol James, Assistant Professor gave the felicitation. Classes were handled by Dr. Sanu Jacob, Assistant Professor, KUFOSS, Kochi and Mr. Sunil Kumar T.J., IRCLASS systems and Solutions Private Ltd., Bangalore. Dr. Divya M.P welcomed the gathering and Mr. Ashby Love Philip of 2012 batch gave the vote of thanks.



IX. STUDY TOURS

- Dr.Divya M.P. is deputed as Tour Officer for All India Study Tour of 2012 B.Tech students from 04/04/16 to 26/04/16
- A two days industrial visit was organized for the B Tech 2013 admission V semester to Munnar on 14-15th of June 2016, as part of DM 3106 – Food and Industrial Microbiology accompanied by Ms. Aparna S.V and Aswin S Warriar
- South India Study Tour – 2014 admission IV sem -02.01.2016 – 17.10.2016accompanied by Ms. Aparna S.V and Aswin S Warriar
- As a part of the course Food Technology, the students of 2013 admission VI semester gone for Industrial Visit to KolahalameduOne day industrial visit for 2014 admission on 20.09.2016 to two ice cream plants viz-KSE Ltd (Vesta) and Snowcap ice cream Nellikkunnu, Thrissur
- The 2013 batch students were taken to Masco Tea Factory, KLDB farm and Kurisumala farm at Wagamon.

X. AWARDS / HONORS AND OTHER PERSONAL ACHIEVEMENTS

- Dr. A.K.Beena, Head , Department of Dairy Microbiology was a subject expert in the JRF to SRF up gradation assessment interview held on 19.03.2016 of Ms. Subhasree, Ph.D. scholar, St.Teresa's College, Ernakulam
- Dr.Ligimol James, Assistant Professor got recognized as P.G. teacher in the Department of Dairy Microbiology
- 2nd Best Poster award for a poster presented in 10th Convention of Indian Dairy Engineers Association and National Seminar on “Engineering for Innovative Dairy Products and Process Development”, in which Mr. Aswin S. Warriar, Assistant Professor, Department of Dairy Engineering is a co-author
- Aswin S Warriar, Department of Dairy Engineering, Passed online “Basic Certificate Course on RTI, 2005” conducted by IMG, Thiruvananthapuram from 21 Jul 2016 to 03 Aug 2016
- Aswin S Warriar, Department of Dairy Engineering, Selected as external examiner in SVVU, Tirupati, Dairy Science College, Mahagaon Cross, Kalaburagi Karnataka Veterinary Animal And Fisheries Sciences University and Kerala Agricultural University
- Aswin S Warriar, Department of Dairy Engineering, Selected as Associate Member in Institution of Engineers (India) Department of Dairy Engineering, Peer-reviewed 2 articles related to Dairy engineering in Indian Journal of Dairy Science
- Mr. Aswin S Warriar, Assistant Professor, Dept. of Dairy Engineering has been selected as question paper setter for Sri. Venkateswara Veterinary University, Tirupathi
- Dr. Divya M.P, Assistant Professor, Dept. of Dairy Chemistry has been selected as question paper setter for Sri. Venkateswara Veterinary University, Tirupathi
- Ms. Indu B, Assistant Professor, Dept. of Dairy Chemistry has been selected as question paper setter for Sri. Venkateswara Veterinary University, Tirupathi
- Mr. Aswin S Warriar, Assistant Professor, Dept. of Dairy Engineering has been selected as external examiner Maharashtra animal and Fisheries Sciences University
- Aparna Sudhakaran V, Department of Microbiology invited as external examiner in Dairy Science College, Mahagaon Cross, Kalaburagi Karnataka Veterinary Animal And Fisheries Sciences University
- The research paper authored by Indu.B, Aleeba.T.A and Dr.Divya.M.P has been selected for 29th Kerala Science Congress's
- The research paper authored by Aparna S.V, Beena A.K, Ligimol J and Jaiby K and has been selected for 29th Kerala Science Congress's
- The research paper authored by Ligimol J, Praseeda, Beena A.K and Aparna S. V has been selected for 29th Kerala Science Congress

Oral Presentation

- **Dr. Ligimol James** Microbiological Profile Of Composite Samples Of Two Indigenous Cattle Breeds Collected During Summer And Winter. National Seminar on Green Economics and Desi Cow , CMS College, Kottayam. CMS College, Kottayam

Abstract Presentation

- Solanki H, Tyagi A, **Aparna, S.V.**, Rashmi, H.M., Devendra, Batish P.K. and Grover, S. Relative abundance of *Faecalibacteriumprausnitzii* in healthy and diabetic host. 3rd biennial PAi conference and International Symposium on Stress Microbiome and Probiotics. March 11-13, 2016. National Institute of Science Education and Research, Bhubaneswar.
- Praseeda K.S., Ligimol James, Beena A K and **Aparna S .V.** Microbiological profile of composite samples of two indigenous cattle breeds collected during summer and winter. National Seminar on Green Economics and Desi Cow , CMS College, Kottayam, Kerala 26th-28th May 2016 , p: 103.
- Comparison of fibre fractions and Non- Starch Polysaccharide content of sorghum stover and Groundnut haulm. **Yancy M.I.**, Valli. C and Balakrishnan V in Kerala Veterinary Science Congress 2016
- Dr.Divya M.P** presented a poster on “Dependence of Selectivity of Vit.A-Imprinted Polymer on Ratio of Water in Aqueous Solutions of Acetonitrile and Methanol” at the 85th Annual meeting of Society of Biological chemists, India (SBC (I)) conducted at CFTRI, Mysore from 21/11/16 to 24/11/16

Faculty attended Conferences/Seminars/Symposia (2016-2017)

Sl. No	Name	Event attended	Year	Remarks
1	Dr.Ligimol James	National Seminar on Green Economics and Desi Cow organized at CMS College, Kottayam in connection with the Kapila Fest 2016	2016	26.05.2016
2	Dr. Yancy Mary Issac	National Seminar on Green Economics and Desi Cow organized at CMS College, Kottayam in connection with the Kapila Fest 2016	2016	26.05.2016
3	Dr. A.K.Beena, Dr.Ligimol James Dr. Divya M.P Dr. Yancy Mary Issac Ms. Indu B Ms. Aparna Sudhakaran	National Seminar on Newer Approaches in Cow Comfort Systems for better productivity jointly organized by Indian Dairy Association and Indian Veterinary Association	2016	25.06.2016
4	Ms. Divya K B	CAFT Training Programme on R&D Strategies and interventions for Agribusiness and Entrepreneurship development in Dairy and Food Sector at NDRI, Karnal, Haryana	2016	16.9.2016 to 6.10.2016
5	Ms. Divya K B Mr. Syam Suraj Ms. Aparna S.V Mr. Aswin S Warriar	Capacity Building programme on Administrative skills, office procedures and Teaching methodology at IMG, Thiruvananthapuram	2016	25.10.16 to 26.10.16
6	Mr. Sai Sreenivas K N	Entrepreneurship Development and Business Incubation: scope and practical models at NAARM, Hyderabad	2016	24.10.16 to 28.10.16

7	Dr. Yancy Mary Issac	8 th Kerala Veterinary Science Congress 2016 at Hotel Dream City, Pattikkad, Thrissur	2016	12.11.2017 13.11.2016
8	Dr.M.P.Divya	85 th Annual meeting of Society of Biological chemists, India (SBC (I)	2016	21/11/16 to 24/11/16
9	Mr. Shyam Suraj S. R	National Seminar on Milk Value Chain at Sr. Theresa's College, Ernakulam	2016	Paper Presented
10	Ms.Divya K B	State Dairy Expo at 2017Pattambi	2017	28.01.2017 to 30.01.2017
11	Ms. Aparna S.V Dr. Ligimol James Ms. Indu B	29 th Kerala Science Congress at Mar Thomas College, Thiruvalla, Pathanamthitta	2017	28 th to 30 th January, 2017

Faculty attended Trainings/workshops (2016 – 2017)

Sl. No	Name	Event attended	Venue	Duration
1	Aswin.S.Warrier Dr.Yancy Isaac	Training Programme on remote sensing and GIS tools for Natural resource management	College of Forestry, Vellanikkara	19-03-2016 to 23-03 2016
2	Dr. Ligimol James	Hands on training on basic molecular biology techniques organized by the School of Applied Animal Production and Biotechnology	School of Applied Animal Production and Biotechnology, Kerala Veterinary and Animal Sciences University, Thrissur	01-04-2016 to 07-04-2016.
3	Ms. Indu B	Attended HRD Training- Professional Harmony		18.4.2016
4	Ms. Indu. B	The training programme on “Indian Snacks, Breakfast, Confectionary and Traditional Food Technologies” at CFTRI, Mysore.	2016	18.07.2017 22.07.2017
5	Mr. Shyam Suraj S. R Ms. Divya K. B	Application of ICT in Animal Husbandry Teaching, Research and Extension’ organized by the Department of Veterinary and Animal Husbandry Extension, CoVAS, Mannuthy	2 Days	6.9.2016 to 8.9.2016
6	Dr. Yancy Mary Issac Ms. Indu B Dr. Ligimol James	Training Programme on “Application of ICT in Animal Husbandry Teaching Research and Extension” held at CVAS Mannuthy by Department of Veterinary Extension, CVAS, Mannuthy.	2 Days	19.9.2016 to 21.9.2016

7	Mr. Shyam Suraj S. R	National Training Programme on 'R and D Strategies and Interventions for Effective Agribusiness and Entrepreneurship Development in Dairy and Food Sector' organized by ICAR at CAFT- Dairy Processing, Karnal	21 Days	16.9.2016 to 6.10.2016
8	Dr. Yancy Mary Issac	Hands on Training on basic molecular biology techniques organized by Centre for Advanced Studies in Animal Genetics and Breeding from at Centre for Advanced Studies in Animal Genetics and Breeding, Mannuthy, Thrissur	6 Days	22.9.2016 to 28.9.2016
8	Mr. Shyam Suraj S. R	Training programme on 'Agricultural Innovation Systems – Looking beyond ATMA convergence' at MANAGE, Hyderabad	7 Days	27.6.2016 to 2.7.2016
9	Dr. Yancy Mary Issac	Advanced Short Course on "Clinical Nutrition Approaches for Gut Health of Animals" under the Niche Area of Excellence Program on Clinical Nutrition at Centre of Advanced Faculty Training in Animal Nutrition, ICAR-IVRI, Izatnagar	9 Days	16.03.2017 25.03. 2017

XI. RESEARCH

The faculty and students at the College of Dairy Science and Technology intend to make important contributions to research undertaking and societal well-being. The college conducts vibrant research activities that results in socially or economically valuable applications.

Plan Projects Completed (2015 -2016)

Sl. No	Name of the Research Project	Name of the Department	Principal Investigator	Amount (Lakhs)
1	Molecular identification and characterization of potentially probiotic <i>Lactobacillus</i> species of indigenous origin (New)	Department of Dairy Microbiology	Dr. A.K.Beena	3
2	Identification of critical control points for quality improvement of pasteurized milk processed in KVASU dairy plant	Department of Dairy Microbiology	Dr. A.K.Beena	5

Externally aided projects – ongoing (2015 -2016)

Sl. No	Name of the Research Project	Name of department	PI	Funding Agency
1	“Fermented Milk Products for cardiovascular benefits”	Dept. Of Dairy Microbiology	Dr. A. K. Beena	KSCSTE 02.05.2013 to 30.04.2016

Ongoing Plan Projects (2015 – 2016)

Sl No	Name of the research Project	Name of Department	Name of P I
1	Development of starter culture centre	Dairy Microbiology	Dr. A.K.Beena
2	Identification of critical control points for quality improvement of pasteurized milk processed in KVASU Dairy Plant	Dairy Microbiology	Dr. A.K.Beena
3	Setting up of a Centre for Milk Testing and Quality Awareness for Stakeholders	Dairy Chemistry	Ms.Indu. B
4	Research on Fermented and Functional Dairy Foods	Dairy Technology	Dr. S. N. Rajakumar

Revolving Fund

Name of project	Funding Agency	Name of PI	Department	Outlay
Revolving fund project for expanding the starter Culture Sales”	KVASU revolving fund	Dr. A.K.Beena	Dairy Microbiology	Rs.50,000.00

Research Articles Published in referred Journals (2015 – 2016)

Sl.No.	Title of the Article	Authors	Year	Journal
1	Antibiogram of Lactobacilli Isolated from Four Different Niches.	Ligimol James, Beena A K , Anupa A and Sreeshma N.	2016	Journal of Microbiology and Microbial Technology.
2	Effect of asanas on anxiety in non-insulin dependent diabetes mellitus (NIDDM) patients	Dr. R. Kanthanathan , Dr. Vinaya.C. Damu	2016	<i>International Journal of Applied Research</i> 2016: 2(6): 330-331.
3	Effect of pranayama on stress and mood state in sedentary women.	Dr. R. Kanthanathan	2016	Journal of Physical Education and Sports Sciences,
4	Effect of brisk walking on body weight in hypo kinetic women	Dr. R. Kanthanathan	2016	Journal of Physical Education and Sports Sciences
5	Effect of Operating Parameter on Performance of Water–Lithium Bromide Vapour Absorption Refrigeration System. International Journal of Agricultural Science and Research	Chaudhary, D. C. , Bhadania A. G., Chaudhary D. V. and Warrier A. S.	2016	International Journal of Agricultural Science and Research
6	Evolving Customized Non starch Polysaccharidase mixture for effective utilization of sorghum stover and groundnut haulm	M.I.Yancy , C.Valli and V. Balakrishnan	Jan-Feb 2016	Indian Journal of Veterinary and Animal Sciences Research 45 (1) 476-481

Research articles presented in Conferences/Seminars/Symposia

Sl No	Article	Authors	Year	Details
1	Probiotics-Preventive or therapeutic strategy from human health perspective’.	Grover S and SV Aparna	14 th to 16 th 2016 at ICAR- NDRI, Karnal, Haryana.	Compendium of XV th Annual convention of Indian Society of Veterinary Pharmacology and Toxicology (ISVPT) on ‘Nutritional pharmacology and toxicology beyond calories’
2	Microbiological Profile Of Composite Samples Of Two Indigenous Cattle Breeds Collected During Summer And Winter.	Praseeda K.S., Ligimol James, Beena A K and Aparna S .V.	2016	National Seminar on Green Economics and Desi Cow , CMS College, Kottayam
3	Comparison of Fibre Fractions and Non- Starch Polysaccharide Content oof Sorghum stover and Groundnut haulm	M.I.Yancy , C.Valli and V. Balakrishnan	2016	Pg 402, Proceedings of Kerala Veterinary Science Congress 2016
4	Glass Transition Phenomenon: Relevance and Application in Dairy Industry.	Anitha Krishnan V C, Gritty P T, Aswin S. Warriar,Dr. S N Rajakumar and Dr. Sudheer Babu P	2016	Souvenir of 10 th Convention of Indian Dairy Engineers Association (IDEA) and National Seminar on “Engineering for Innovative Dairy Products and Process Development”.
5	Evaluation of probiotic potential of a <i>Lactobacillus</i> isolated from ice cream.	Aparna S.V, Beena A.K , Jaiby K and Ligimol J	2017	29 th Kerala Science Congress from 28 th to 30 th January, 2017 at Mar Thoma College, Thiruvalla, Pathanamthitta
6	Antibiogram of thermal resistant <i>staphylococcus aureus</i> isolated from milk’	JamesL, Praseeda K S, Beena A K, Aparna S.V and Shyama M	2017	29 th Kerala Science Congress from 28 th to 30 th January, 2017 at Mar Thoma College, Thiruvalla, Pathanamthitta

XII. Consultancy

Type of consultancy	Client details	Revenue generated
Dept. of Dairy Engg. provides consultancy services for Design, fabrication and erection of Milk processing Plants in Kerala	Product manufacturers, entrepreneurs, farmers, General Public etc.	Free service.
Supply of Starter Culture at nominal price by the Dept. of Dairy Microbiology	Product manufacturers, entrepreneurs, farmers, General Public etc.	Rs. 50,000
Microbiological analysis of milk and milk products on payment basis by the Dept. of Dairy Microbiology	Product manufacturers, entrepreneurs, farmers, General Public etc.	Free Service
Chemical analysis of milk samples for chemical composition and adulterants by the Dept. of Dairy Chemistry	Farmers, processors, general public etc.	Rs. 3,500
Consultancy Services to small scale entrepreneurs in the area of manufacturing fermented milk products	Entrepreneurs/farmers etc.	Free Service

College of Dairy Science and Technology, Pookode

KVASU has taken the initiative to establish Dairy Science and Technology college as its Pookode campus, during the academic year 2015-16 with an intake capacity of 40 students by sharing the facilities of College of Veterinary and Animal Sciences University, Pookode. Once the land is made available, work shall be initiated by the university to establish a separate campus. The college would follow the curriculum and guidelines prescribed by the Indian Council for Agricultural Research (I.C.A.R) for B.Tech (Dairy Science & Technology) programme. The curriculum is designed in such a way that students would get exposure to the entire gamut of operations taking place in professionally managed dairy processing units, that they acquire the required skills set and confidence to work as highly motivated professionals.

The course curricula is prepared as a unique job oriented degree programme which leads to a total development of graduates and make them capable to face various situations in varied field of work. Students are also enriched with entrepreneurial qualities to start their own industry. 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. This helps students to acquire confidence to work as highly professional human resource for Dairy and Food industry.

I.C.A.R has stipulated Minimum Standards for Higher Agricultural Education (MSHAE) in Dairy Technology. For the time being the requirements of the post graduate curriculum are not considered in this statement as they can be taken up when sufficient funds are allotted in subsequent phases. The intake capacity for the B.Tech (Dairy Technology) programme is presently 20 seats owing to the shortage of infrastructure and manpower.

Objectives of the CDST, Pookode

- To undertake diploma, U.G., P.G., P.G. Diploma and Doctoral level studies in various branches of Dairy Science/Technology and allied sciences.
- To undertake new product development assignments through R&D activities and undertake consultancy services with the industry.
- To develop trained manpower with entrepreneurial skill required to establish, manage and direct small and medium dairy processing enterprise in line with the institutions priority to follow 'Technology for Self Reliance' and "Creation of Rural Employment".
- To train graduates with adequate knowledge of design and fabrication of dairy processing equipments aimed at mechanizing traditional technology.
- To undertake short term training courses and vocational certificate courses in Dairy and Food Processing, Milk and Milk products' Quality Control, Scientific Milk Production etc.
- To undertake extension activities on various aspects of Dairy and Food processing
- To develop graduates with potential for higher education and dissemination of knowledge at various academic institutions of higher learning.

1.0 ACADEMICS

1.1 Programme Offered

The college is offering 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)

1.2 Departments:

The College of Dairy Science and Technology has got the following 7 departments:

1. Department of Dairy Technology
2. Department of Dairy Engineering
3. Department of Dairy Business Management
4. Department of Dairy Chemistry
5. Department of Dairy Microbiology
6. Department of Dairy Husbandry
7. Department of Dairy Extension

*2006 admission onwards Department of Dairy Husbandry and Dairy Extension are included under Department of Dairy Business Management.

1.3 Academic Programmes

College of Dairy Science and Technology provides a unique job oriented degree programme in Dairy Science and Technology. The course curricula for B. Tech (Dairy Science & Technology) is prepared in lines with the pattern specified by the Indian Council for Agricultural Research (I.C.A.R), New Delhi. B.Tech (DSc. & Tech.) is a unique job oriented degree programme which leads to the overall development of graduates and make them capable to face various situations in varied field of work. The course is offered for a total duration of eight semesters. The total credits have been apportioned to Dairy Engineering, Dairy Technology, Dairy Chemistry, Dairy Microbiology, Dairy Business Management and Dairy Husbandry 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 the students 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 skills 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 35 days and in commercial dairy plants for a period of 70 days. This 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 like Amul, Schreiber Dynamix, Mother Dairy, Milma etc.

1.4 Course Curriculum

UG programme - Department-Wise Distribution of Courses for B.Tech (DSc. & Tech) degree programme

No.	Name of the Department	Credit Hours
1	Dairy Technology	59 (21+38)
2	Dairy Engineering	32 (19+13)
3	Dairy Business Management	23 (18+5)
4	Dairy Microbiology	20 (13+7)
5	Dairy Chemistry	19 (12+7)
6	Dairy Husbandry*	15 (7+8)
7	Dairy Extension*	
	Total	
*2016 admission onwards Department of Dairy husbandry and Dairy Extension are included under Department of Dairy Business Management		

Non-Credit Courses			
No.	Catalogue No. of course	Name of the course	Credit Hours
1	STUR 1	South India study tour	1 (0+1) *
2	STUR 2	All India study tour	1 (0+1) *
3	DH 1103	Applied Biology	1 (1+0) **
4	DBM 3210	Report writing and Communication skills	2 (1+1) *
		Total	5 (2+3)

* - Non credit course (not included in the credit load)

** - Non credit optional course (not included in the credit load)

Total credits for work experience = 32

Total Class room credits (upto VIIth semester) = 136

Total credit load (excluding non credit courses) = 168

Total credits for Non credit courses = 5

1.5 Student Profile

Details	2016	
	M	F
UG		
Students admitted	6	14
Dropped out		3
Appeared for final exam	6	14
Failed to appear for final exam	0	0

1.6 Faculty Strength Details

Sl No	Department	Sanctioned Post	Present Status			
			Asso. Prof	Asst. Prof.	TA	Total
1	Dairy Technology	1Prof. + 1Asso. prof. + 3AP + 1AP in food tech. = 6	0	1	2	3
2	Dairy Engineering	1Prof. + 1Asso. prof. + 3AP + 1AP in comp.sci. = 6	0	0	2	2
3	Dairy Chemistry	1Prof. + 1Asso. prof. + 2AP = 4	0	1	1	2
4	Dairy Microbiology	1Prof. + 1Asso. prof. + 2AP = 4	1	1	1	3
5	Dairy Husbandry	1AP = 1	0	0	1	1
6	Dairy Business Management	1Asso.prof. + 1AP = 2	0	0	2	2
7	Dairy Extension	1AP = 1	0	1	0	1
	Total	24	1	3	9	13

Teaching Staff strength as on March 2016

1.6.1 Faculty profile

COLLEGE OF DAIRY SCIENCE AND TECHNOLOGY, POOKODE SPECIAL OFFICER Ms. Archana Chandran Ph: 9744975460 E mail: spobtechpkd@kvasu.ac.in, officecdstpkd@kvasu.ac.in					
Sl No	DEPARTMENT	NAME	DESIGNATION	Contact No.	E mail ID
I	DAIRY MICROBIOLOGY				
1		Dr. A.K.BEENA	ASSOCIATE PROFESSOR (SPECIAL OFFICER)		
2		Mrs. ARCHANA CHANDRAN	AP (SPECIAL OFFICER i/c)*	9744975460	archanac@kvasu.ac.in
3		Ms. ANUPA AUGUSTINE	TA	7736055647	anu.micro88@gmail.com
II	DAIRY CHEMISTRY				
3		Mrs. SMITHA J LUKOSE	AP	9495866742	smitha.lukose@kvasu.ac.in
4		Ms.VANDHANA P.S	TA	9747544997	vandhu1693@gmail.com
III	DAIRY TECHNOLOGY				
5		Dr.DINKER SINGH	AP	9539449016	dinkersingh@kvasu.ac.in
6		Mrs. SHEMA HANNA MATHEW	TA	8547990456	shemahannah@gmail.com

7		Ms. ASWATHY V.A	TA	8589891615	achuasokan06@gmail.com
IV	DAIRY ENGINEERING				
8		Mrs. AKHILA V.	TA	9497315161	akhilavas@gmail.com
9		Mr.VYSHAK C.	TA	8943635684	vyshak.surendran@gmail.com
V	DAIRY BUISINESS MANAGEMENT				
10		Ms. ARYA R.CHANDRAN	TA	9496367457	its2aryachandran@gmail.com
11		Ms. DEEPTHY M.S	TA	8330028574	deepthym27@gmail.com

*Taken charge as Special Officer from 01/02/2016 onwards

1.6.2 Non Teaching Staff Details

SL NO	DEPARTMENT	NAME	DESIGNATION	CONTACT NO.	EMAIL ID
1	OFFICE	ATHIRA S.	ASSISTANT	8943142813	athiravipanjika@gmail.com
2	DAIRY MICROBIOLOGY	HARITHA P	LAB ASSISTANT	9605184838	harithapachat@gmail.com
3	DAIRY CHEMISTRY	ABHINA P.V	LAB ASSISTANT	9745661007	abhinakankol@gmail.com
4	DAIRY TECHNOLOGY	JEENA J. NELSON	LAB ASSISTANT	9539020335	jeenajnelson77@gmail.com

1.6.3 Additional Duties & Responsibilities

NAME	DESIGNATION	DUTIES/ RESPONSIBILITY
Dr. A.K BEENA	ASSOCIATE PROFESSOR	
Mrs. ARCHANA CHANDRAN	ASSISTANT PROFESSOR	
Mrs. SMITHA J.LUKOSE	ASSISTANT PROFESSOR	

1.6.5 Faculty attended Trainings/workshops (2016– 2017)

Sl No	Name	Event attended	Duration	Remarks
1.	Archana Chandran	National workshop on Molecular characterization techniques at GEC,Kozhikode	3 days	

2.0 RESEARCH

The college conducts vibrant research activities that results in socially or economically valuable applications. The activities contribute with new knowledge to the various dimensions of the Dairy Industry. The college inspite of severe faculty shortage could manage to take up some good research projects. A few projects are already in the stage of completion. Research is a major activity of the college which goes side by side to teaching.

2.1 Externally aided student projects – (2016 -2017)

Sl No	Name of the Research Project	Name of department	Guide
1	DEVELOPMENT OF VALUE ADDED WHEY FRUIT BEVERAGE AND CONFECTIONARY	DAIRY CHEMISTRY	Mrs. SMITHA J. LUKOSE
2	STUDIES ON ENRICHMENT OF MILK PEDA WITH DIETARY FIBRE	DAIRY MICRO BIOLOGY	Mrs.ARCHANA CHANDRAN

3.0 EXTENSION ACTIVITIES

3.1 Ongoing BIRD Projects (2016 – 2017)

Sl No	Name of the Research Project	Name of department	PI	Funding Agency
1	FERMENTATION FOR VALUE ADDITION	DAIRY MICRO BIOLOGY	Mrs. ARCHANA CHANDRAN	KSCSTE

Co-curricular activities

Athiksha 16 – Students Union Inauguration:



The students union 2016-17 was inaugurated by Honorable District Collector Shri V . Keshavendra kumar IAS on 31-05-2016. University officials and college faculty were present during the programme. Cultural programmes were performed by students of CDST Pookode 2015 batch.

World milk day celebration:

The world milk day was celebrated on 01-06-2016 at seminar hall of CDST pookode Which was supported and funded by COHEART . Poetry competition was conducted as a part of the programme. In addition to this , milk products was prepared and distributed to the students.



World environment day:



The world environment day was celebrated on 10/06/2016. Saplings of various plants were planted on the university premises.

Iftar celebration:



Iftar was celebrated on 30-06-2016. University officials, CVAS Pookode faculty and students attended the function.

Visit to Wayand Dairy Milma:



As a part of course curriculum, students of 2015 batch visited Wayanad Dairy on 19-07-2016. Students had an exposure regarding milk processing unit. Mr. Mathew Varghese, Assistant Manager Wayanad Dairy gave an overall view of dairy plant.

Visit to Mannuthy Dairy plant:

As a part of course curriculum and the conduct of practicals, students of 2015 batch visited Mannuthy Dairy plant from 08-08-2016 to 12-08-2016. Students had an exposure to various departments including milk processing section, quality assurance laboratory, milk products section and utility section.

Onam celebration:



Onam day celebration was conducted on 08-09-2016. The faculty Dean Dr. Gireesh Verma was the chief guest of the programme. The programme was inaugurated and felicitated by the faculty Dean. It was followed by cultural programmes.

Swachh Bharat Abhiyan “Swachh Pakwada” :



On the occasion of Swachh Bharat, held on 03/10/2016, students of CDST Pookode cleaned premises of the campus. In addition to this, an essay writing competition was conducted in college seminar hall.

Swachh day:

As a part of Swachh day, an elocution competition was conducted on 22/10/2016. The winners were given prize.

Freshers day:

The Freshers day was held on 24-10-2016. The first year students performed various activities and got acquainted with college environment.

National milk day:

National milk day was celebrated on 23/11/16 in college seminar hall. Selected students from Eklavya Model Residential School, Pookode were given classes on Milk and milk products. Classes were handled by the students of CDST, Pookode. Milk products were prepared and distributed.

Christmas day celebration:



Christmas was celebrated on 16/12/16 by preparing and sale of various milk products. The official function and sale of products was inaugurated by financial officer, Dr. Shyam Mohan. Dr. John Martin, Director Clinics, CVAS Pookode felicitated the function. The profit generated was given to a charity organization named 'Snehasadanam'.

Routes and Roots- Personality development programme for capacity building



Two day workshop on personality development programme was held from 24/01/2017 to 25/01/2017. The first day was handled by the motivational speaker Mr. Vipin Roldent from E coral Groups, Thrissur. The second day classes were handled by Dr. Premanand E M and his team from Malabar Christian College on communicative English.

College of Dairy Science and Technology Chettachal, Thiruvananthapuram

The Government of Kerala made a budget provision of Rs. 25 lakhs in the financial year 2013-14 for setting up a new Dairy Science College in Chettachal, Nedumangad Taluk (Thiruvananthapuram district). Accordingly the Kerala Veterinary and Animal Sciences University (KVASU) headquartered at Pookode in Wayanad district decided to start College of Dairy Science and Technology (CDST), Chettachal (Vithura). CDST Chettachal, the second college of its kind in the state started functioning on 14.09.2015 at its temporary campus in KELTRON Equipment Complex, Karakulam (Thiruvananthapuram). The College offers 4-year B.Tech (Dairy Technology) programme from the academic year 2015-16 onwards with an intake capacity of 20 students. The course is offered following the curriculum and guidelines prescribed by the Indian Council for Agricultural Research (I.C.A.R) for B.Tech (Dairy Technology) programme.

Objectives of the Institution:

- To undertake appropriate academic programmes at the undergraduate and postgraduate professional levels in various branches of Dairy Sciences and Technology.
- To create necessary infrastructure to house class rooms, laboratories, library, computer lab, sports amenities and other allied facilities.
- To set up an Experimental Dairy plant for students with the state of art facilities for undertaking academic, research and training activities related to dairy processing.
- To provide R&D support to the Dairy and Food processing industry for developing new value added products and to take up problem oriented research based on feedback from different extension agencies and field feedback from dairy farmers.
- To develop new energy efficient production systems utilizing the emerging technologies in the processing of value added dairy products for minimizing processing cost, energy management etc.
- To undertake collaborative research projects with industries and renowned research institutions to develop products and technologies for entrepreneurs.
- To organize training programmes, farmer-scientist interactions, dairy-clinics, seminars, technology demonstrations and print and visual media programmes for dairy plant personnel, researchers, small entrepreneurs and others in the field of Dairy and Food Processing
- To publish books, booklets and popular articles for the dissemination of new technologies to the dairy farming community and dairy processing industry.

Admission:

The candidates admitted to the UG course are selected through the Common Engineering Entrance Examination conducted by the Government of Kerala. The candidates 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.

Sl. No.	Programme	Level	Duration (Yrs)	Year of Starting	Sanctioned annual intake	Total student strength
1	B.Tech (Dairy Technology)	UG	4 (8 semesters)	2015	20 students	52 students

Note: Sanctioned annual intake temporarily reduced from 40 to 20 students with effect from 2016 admission onwards

Teaching Departments:

The College of Dairy Science and Technology has got the following 6 statutory teaching departments:

1. Dept. of Dairy Technology
2. Dept. of Dairy Engineering
3. Dept. of Dairy Chemistry
4. Dept. of Dairy Microbiology
5. Dept. of Dairy Business Management
6. Dept. of Dairy Husbandry

Academics:

The course curriculum for B. Tech (Dairy Tech.) programme is prepared in lines with the pattern specified by the I.C.A.R, New Delhi. This is a unique job oriented degree programme which leads to the overall development of graduates and make them capable to face various situations in varied field of work. The course is offered for a total duration of eight semesters. The total credits have been apportioned to Dairy Engineering, Dairy Technology, Dairy Chemistry, Dairy Microbiology, Dairy Business Management and Dairy Husbandry disciplines with due weightage for each. The students are also required to undertake an All Kerala Exposure Visit and an All India Exposure Visit as a part of the course curriculum during which the students are required to visit the important institutions and commercial dairy plants across the country. The last two semesters of the B.Tech programme are set apart for Experiential Learning, 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 skills 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 as part of the 'Experiential Learning Programme' during the final year. The Internship programme comprising of In-plant training and Farm training is organized in dairy farms for a period of 35 days and in commercial dairy plants for a period of 70 days. This 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 like Amul, Schreiber Dynamix, Mother Dairy, Milma etc.

Faculty Status(Regular Faculty as on 31st March, 2017):

Faculty Rank	No. of Sanctioned Regular posts	Present Status: Number in position by Highest Qualification			Total Regular Faculty in position	Total Vacancies
		Doctoral Degree	Masters Degree	Bachelors Degree		
Professor	N.A.	0	0	0	0	N.A.
Associate Professor	N.A.	0	0	0	0	N.A.
Assistant Professor	N.A.	2	3	0	5	N.A.
TOTAL	N.A.	2	3	0	5	N.A.

Infrastructure:

With regard to infrastructure, facilities created in the temporary campus are sufficient to support the basic theory and practical sessions prescribed for the first academic year of B.Tech programme. The Dairy Microbiology, Dairy Technology and Dairy Chemistry laboratories are strengthened with sophisticated equipment to meet the academic/research requirements of concerned departments. A spacious drawing hall is arranged in the campus to facilitate the Engineering Drawing course prescribed in the B.Tech curricula. A well-equipped Computer Lab with 15 Desktop PCs (Pentium i3-4160 CPU@3.60 GHz processor) having Internet connection. The institution subscribed to BSNL Landline facility (Telephone No. 0472-2888288) and Broadband connection (BBG Combo ULD 2091 - multi-user facility intended for Institutions). The College Library is being set up with excellent infrastructure and good collection of books and journals required for the B.Tech (DSc. &Tech.) students. The lecture hall is equipped with LCD projection facility, Computer and Public Address Lectern. The college has made arrangements with the Central Polytechnic College, Vattiyoorkkavu for the conduct of practical sessions prescribed for General Engineering courses in B.Tech curricula. The rates and remuneration charges are fixed as per the G.O (Ms) No. 42/2014/H.Edn dated 23/01/2014.

I. EDUCATION, STUDENT AMENITIES AND ACTIVITIES

Students' Union Activities:

- The election processes for constituting the College Students' Union 2017-18 were completed on 10.04.2017 and the first Union members were unanimously elected without the conduct of poll. Dr. K. Lalu., Asst. Professor (Dept. of Dairy Husbandry) and Sri. Rejeesh R, Asst. Professor (Dept. of Dairy Microbiology) were the Returning Officer and Asst. Returning Officer respectively.
- The Arts Club of College Students' Union organized a Debate session for students on the theme 'Technology intensive Learning – a boon or a bane' on 10th August 2016.
- The students organized Onam and Christmas celebrations during the reporting period in a befitting manner.
- The College Students Union celebrated **Onam-2016** on 09.09.2016. In this connection, the Union extended their support by providing financial assistance collected from students and staff of this college to a charitable trust **Shreyas**, Thiruvananthapuram' engaged in several charity programmes including helping aged persons, organizing medical camps, blood donation camps, ambulatory services etc.

Awards in curricular, co-curricular and extra-curricular activities:

- The students actively participated in Dhruva-2017, the KVASU Inter Collegiate Arts Festival held at Veterinary College, Pookode from 25th to 27th of May, 2017 and bagged Fifth position in the Overall Medal Tally. The winners were felicitated jointly by CDST PTA and Student Union CDST on 22.06.2017
- A Poster competition for B.Tech students of the college was organized in connection with World Milk Day 2016 celebrations.

Sports, Physical Education and Co-curricular activities:

- Eighteen students belonging to first and second year students of this College participated in the KVASU Inter-Collegiate Sports' Meet 2016 held at the CVAS Mannuthy ground from 26th October to 28th October, 2016.
- The College purchased essential sports goods/material for use of the students.

NSS/NCC Activities: NOT AVAILABLE

College PTA activities:

- The second Annual General Body Meeting of CDST-PTA Thiruvananthapuram was held on 05.09.2016 at the College Seminar Hall. The PTA has also convened its various executive meetings during the reporting period whenever required. The college PTA has also donated two water purifiers and a water cooler for the students and members of this college. The PTA is taking care of the service and periodic maintenance of installed equipments to ensure purified drinking water to the students. PTA is also providing practical records to students at nominal rates. The association extends financial support to various union and college programmes with the concurrence of the Executive Committee.

Students Counseling and Placement Services:

- The Career Guidance and Placement Cell (CGPC) organized the second Professional Lecture on 'Prospects of Dairy Technology Education in India' under the 'PHRONESIS' monthly lecture series. Former Dean (Faculty of Dairy Science), KVASU and Fellow of Indian Dairy Association, Prof. (Dr.) R. Rajendra Kumar offered the lecture on 12th of April, 2016, Tuesday, 09:30 A.M. at the College Seminar Hall.
- Project **Ritu** is an effort for feminine hygiene and health by the Centre for Hygiene Research and Development (CHRD), a registered NGO committed to undertaking various programmes and activities on hygiene and health in the country. As part of the project, the CHRD in association with Department of Dairy Microbiology and Women Cell of the College organized a session on 'Women's Personal Hygiene and Health' meant for the girl students of the College. The programme was arranged at the College Seminar Hall on 16th of August, 2016 from 3 p.m. to 5 p.m. Subject experts from CHRD lead the sessions.
- The Career Guidance and Placement Cell (CGPC) also organized the third Professional Lecture titled 'Milk and Milk Products Marketing in Kerala: Changing Paradigms' under the 'PHRONESIS' monthly lecture series. Sri. K. G. Satheesh, Senior Manager (Marketing and HRD), Kerala Co-operative Milk Marketing Federation (Milma) offered the lecture on 19th of August, 2016, Friday, 02:00 P.M. at the College Seminar Hall.
- An awareness campaign on anti-ragging measures was organized by the college in association with the District Legal Services Authority, Thiruvananthapuram on 06th September 2016. Adv. Pradeep T. handled awareness sessions for the senior students of CDST Thiruvananthapuram.
- KVASU-CLPR in association with CDST Thiruvananthapuram organized a training session on the theme 'Communication Skills for Professional Excellence' on 08th September 2016. The session was handled by Prof. (Dr.) B. Hariharan, Head, Institute of English, University of Kerala, Thiruvananthapuram
- The College organized an Invited Lecture on the topic 'Dairy Extension: Changing Paradigms - a Kerala Experience' on 17.03.2017 (Friday) from 01:30 p.m. to 04:30 p.m. at the Seminar Hall. The programme was sponsored by the Indian Council for Agricultural Research, New Delhi under the ICAR grant-in-aid scheme; "Strengthening and Development of Higher Agricultural Education in India" for the year 2016-17. Sri. Isaac K Thayil, Jt. Director of Dairy Development (Planning), Govt. of Kerala delivered the lecture.

Other Outreach Programmes:

- The College in association with Dairy Development Department, Thiruvananthapuram District and Vellanad APCOS organized World Milk Day 2016 celebrations at APCOS, Vellanad on 01.06.2016.

Training sessions for dairy farmers and free distribution of mineral mixture to 50 selected farmer members of APCOS were arranged as part of the programme. Around 100 farmers attended the day-long celebrations.

- Dr. P. Sudheer Babu, Professor (Dairy Engineering) and Former Special Officer, Dr. Lalu K., Asst. Professor (Dairy Husbandry), Sri. Rejeesh R., Asst. Professor (Dairy Microbiology), Sri. Jayadevan G.R. Asst. Professor (Dairy Business Management), Smt. Beena R.L. Asst. Professor (Dairy Technology) and Dr. C.R. Rachana, Asst. Professor (Dairy Chemistry) were members in the Panel of Scientists for the 'Farmer-Scientist Interface' programme organized in connection with World Milk Day Celebrations 2016 at APCOS, Vellanad.
- Dr. K. Lalu, Asst. Professor, Dept. of Dairy Husbandry handled technical sessions on 'Clean Milk Production and Farm Hygiene Practices' for the farmers as part of World Milk Day 2016 celebrations organized by the CDST Thiruvananthapuram at the Auditorium of APCOS Vellanad on 01.06.2016.
- The 2015 Admission B.Tech students along with Course Teachers visited KVK - *Mitraniketan* as part of outreach programme in connection with World Milk Day celebrations, 2016
- The 2015 Admission B.Tech students along with Course Teachers were taken to CDST, Mannuthy from 25.07.2016 to 30.07.2016 for carrying out practical sessions related to various courses especially at the University Dairy Plant, Mannuthy.
- The 2015 Admission B.Tech students along with Course Teachers (Rejeesh R and Beena R. L) visited Aavin Dairy, Salem and Hatsun Agro Processing Unit (Arokya Dairy), Salem as a part of Course Tours for Dairy Technology and Dairy Microbiology on 18.02.2017
- The 2016 Admission students along with Course Teachers visited K.L.D.B Hi-Tech Dairy Farm, Kulathupuzha as part of the course 'Milk production management and dairy development' on 15/02/2017.

Scholarships: NIL

Hostel facilities:

- Under the aegis of the College Parent Teacher Association, hostelling of students (paying guest facility) were arranged in and around the Karakulam area. The KELTRON management has extended the services of their Staff Canteen for the staff and students of CDST as well.

Alumni: The first batch of students joined the college during the year 2015-16 only.

Students' Performance: NOT AVAILABLE

List of departments/centers/schools under the station:

1. Dept. of Dairy Technology
2. Dept. of Dairy Engineering
3. Dept. of Dairy Chemistry
4. Dept. of Dairy Microbiology
5. Dept. of Dairy Business Management
6. Dept. of Dairy Husbandry

II. DEPARTMENT WISE DETAILS

Faculty details:

Sl. No.	Name and designation of the Teaching Staff	Discipline	Residential Address	Email ID	Contact No.	
					Land line (Res.)	Mobile
1	Sri. G.R. Jayadevan Special Officer / Asst. Professor & Head	Dairy Business Management	'Sangeeth', K.E.R.A - 175 Muttakkad P.O. Venganoor (Via), Trivandrum – 695 523	jayadevan@kvasu.ac.in	0471-2481980	9496369816
2	Dr. K. Lalu Asst. Professor & Head	Dairy Husbandry	'Prarthana', Neeleswaram P.O., Kottarakkara - 691505	lalu@kvasu.ac.in	0474-2450910	9447150267
3	Smt. Beena R.L. Asst. Professor & Head	Dairy Technology	'V.G. Bhavan', Kallayam P.O., Trivandrum – 695 043	beenarl@kvasu.ac.in	0471-2371135	9947367580
4	Dr. C.R. Rachana Asst. Professor & Head	Dairy Chemistry	'Ponnili', Near Town Hall, Attingal P.O, Trivandrum -695101	cr.rachu@gmail.com	0470-2794401	9497682168
5	Sri. Rejeesh R. Asst. Professor & Head	Dairy Microbiology	'Reshmi', TC 36/631 (3), Perunthanni, Trivandrum-695 008	rejeeshrnair@rediffmail.com	0471-2452583	9497849625

Research

1. Projects Completed: NIL
2. Projects continuing through the year: NIL
3. Student Projects: NIL

Publications

Research Article Published:

- G. Rajkumar, M. T. Dipu, K. Lalu, K. Shyama and P. S. Banakar “Evaluation of hydroponics fodder as a partial feed substitute in the ration of crossbred calves”, Indian Journal of Animal Research (Accepted for Publication)

Research Papers Presented:

Sl. No.	Authors	Title	Name of the Seminar / Symposium / Conference	Place and Date
1.	G. Rajkumar, M. T. Dipu, K. Shyama, P. Gangadevi, K. Lalu, C. Srinivasan and P. S. Banakar	Comparison Of The Growth, Yield And Nutrient Content Of Hydroponics Maize Sprouts Irrigated Using Either Panchagavya Solution or Tap water	National Seminar on “Green Economics and Desi Cow”	26-28 May 2016, CMS College, Kottayam, Kerala-

Books / Monographs / Manuals:

- Smt. R. L. Beena, Asst. Professor - Dept. of Dairy Technology associated with contributing chapters for the Reference Book entitled *Dairy Technology - VHSE (Second Year)*, Govt. of Kerala, Department of Education, State Council of Educational Research and Training (SCERT), 2016

Sl. No.	Authors	Year	Title	Publisher
1	Sri. R. Rejeesh, Dept. of Dairy Microbiology	2017	U.G. Practical Manual on course; <i>Microbiology of Fluid milk</i>	CDST, KVASU
2	Dr. C. R. Rachana, Dept. of Dairy Chemistry	2016	U.G. Practical Manual on courses; <i>Chemistry of Milk, Physical Chemistry of Milk and Chemistry of Milk Products</i>	CDST, KVASU
3	Dr. K. Lalu, Dept. of Dairy Husbandry	2017	U.G. Practical Manual on course; <i>Milk Production Management and Dairy Development</i>	CDST, KVASU
4	Dr. K. Lalu, Dr. Shibu K Jacob & Dr. Anu George, Dept. of Dairy Husbandry	2017	U.G. Practical Manual on course; <i>Fodder Production and Management</i>	CDST, KVASU
5	Dr. K. Lalu, Dept. of Dairy Husbandry	2016	Package of Practices Recommendations of KVASU - Contributor of Forage Section	DE, KVASU
6	Dr. K. Lalu, Dept. of Dairy Husbandry	2017	U G. Breed Manual for the course; <i>Milk Production Management and Dairy Development</i>	CDST, KVASU
7	Smt. R. L. Beena, Dept. of Dairy Technology	2017	U.G. Practical Manual on course; <i>Cheese Technology</i>	CDST, KVASU
8	Dept. of Dairy Business Management	2017	U.G. Practical Manual on course; <i>Computer Applications and Software Packages</i>	CDST, KVASU

C. Consultancy:

Type of Consultancy	Client Details	Revenue Generated
Microbiological and Chemical analysis of milk and milk products by the Departments of Dairy Microbiology and Dairy Chemistry	Product manufacturers, entrepreneurs, farmers, General Public etc.	Free Service
Consultancy Services to small scale entrepreneurs in the area of manufacturing milk products by the Departments of DT, DM and DBM	Entrepreneurs/farmers etc.	Free Service
Consultancy Services to dairy farmers/fodder farmers in the area of dairy farm management practices, fodder cultivation and cattle nutrition by the Department of DH	Dairy farmers	Free Service
Consultancy Service by Sri. Rejeesh R, Asst. Professor in the Dept. of Dairy Microbiology to Department of Dairy Development, Govt. of Kerala in connection with preparation of a booklet entitled <i>Commercial production of Dahi and Yoghurt for the small scale producers and entrepreneurs of Kerala</i> .	Dairy Training Centre, Kozhikode	Free Service
Sri. Rejeesh R., Asst. Professor – Dairy Microbiology received appreciation from Dairy Development Department, Govt. of Kerala for the role and contribution towards obtaining NABL accreditation of State Dairy Laboratory, Pattom, Thiruvananthapuram.(07.09.2016)	Dairy Development Department, Kerala	The service rendered while serving the Govt. of Kerala

Sri. Rejeesh R., Asst. Professor – Dairy Microbiology was a Member of Panel of Experts for the assessment of renewal for approval of Kannur Milma Dairy for export of milk products (28.03.2017)	Export Inspection Agency, Kochi	Service to EIA.
Sri. G.R. Jayadevan, Special Officer and Asst. Professor - DBM was a Member of the Sub-Groups - <i>Milk and Milk Products including Marketing, Processing and Value Addition</i> as well as <i>Veterinary Education and Research</i> in the Working Group for preparation of 13th Five Year Plan Report on the Animal Husbandry and Dairy Development Sector including Veterinary Education and Research – November – December, 2016	State Planning Board, Govt. of Kerala, Thiruvananthapuram	Free Service
Sri. G.R. Jayadevan, Special Officer and Asst. Professor – DBM was a Member – Drafting Committee of the 13th Five Year Plan Report on Animal Husbandry and Dairy Development Sector including Veterinary Education and Research – November – December, 2016	State Planning Board, Govt. of Kerala, Thiruvananthapuram Free Service	Free Service

HRD activities:

Seminar / Workshop / Summer Institute / Symposium / Winter School / Training Programme / Short Courses / Any other programme organized:

- One day Training and Refresher Camp to VHSE students arranged at the College campus as part of Additional Skills Acquisition Programme (ASAP) conducted under the aegis of Govt. Vocational Higher Secondary School, Venjammoodu in Trivandrum District on 02/07/2016.
- Three day training on “Revised Curriculum exposure to the teachers of Dept. of VHSE, Govt. of Kerala in the subject Dairy Technology” organized by the Dept. of Dairy Technology, CDST Thiruvananthapuram from 05/01/2017 to 07/01/2017. Smt. Beena R.L, Assistant Professor (Dairy Technology) was the Course Co-ordinator.

Persons deputed for Training / Workshop / Summer Institute / Seminar / Study Tour /higher studies / any other programme both in India and Abroad:

Sl. No.	Name and designation of the Scientist	Title of the Programme	Duration	Place
1	Smt. Beena R.L, Assistant Professor, Department of Dairy Technology	Workshop for the development of syllabus & reference text books for Final Year Vocational Higher Secondary Education (VHSE) students Subject: Dairy Technology	02/04/2016 to 04/04/2016 (3 days) 11/04/2016 to 13/04/2016 (3 days) 21/04/2016 to 25/04/2016 (5 days) 27/05/2016 to 28/05/2016 (2 days)	State Council of Educational Research and Training (SCERT), Poojappura, Thiruvananthapuram
2	Dr. K. Lalu, Assistant Professor (Dairy Husbandry)	National Seminar on <i>Newer approaches in cow comfort systems for better productivity</i> jointly organized by IDA (Kerala State Chapter) & IVA ,College of Veterinary and Animal Sciences, Mannuthy chapter	25/06/2017	Hotel Pearl Regency, Thrissur
3	Sri. G.R. Jayadevan Asst. Professor, Dept. of Dairy Business Management	ICAR Sponsored Short Course on Agribusiness Management organized by the Agricultural Extension Division, ICAR-IARI, New Delhi	11/07/2016 to 20/07/2016	Indian Agricultural Research Institute (IARI), Pusa, New Delhi

4	Smt. Beena R.L, Assistant Professor, Department of Dairy Technology	Workshop for finalization of teacher version of reference text books for Class XII - Vocational Higher Secondary Education (VHSE) students Subject: Dairy Technology	22/07/2016 to 23/07/2016 (2 days)	State Council of Educational Research and Training (SCERT), Poojappura, Thiruvananthapuram
5	Dr. K. Lalu (Asst. Professor-DH), Sri. G.R. Jayadevan (Asst. Professor-DBM) and Sri. Rejeesh R. (Asst. Professor-DM)	Capacity Building Programme for Faculty Members of KVASU organized by the Institute of Management in Government (IMG), Trivandrum	25/10/2016 and 26/10/2016	Institute of Management in Government (IMG), Trivandrum
6	Mr. Rejeesh R. Assistant Professor (Dairy Microbiology)	ICAR Sponsored CAFT training on 'Probiotics – The therapeutics of 21 st century' organized by the Dairy Microbiology Division, ICAR- NDRI, Karnal	08/11/2016 to 28/11/2016	CAFT, National Dairy Research Institute (NDRI), Karnal, Haryana
7	Smt. Beena R.L, Assistant Professor, Department of Dairy Technology	Workshop for finalization of reference text book for Class XI - Vocational Higher Secondary Education (VHSE) Department Subject: Dairy Technology (4 spells)	17/11/16 to 19/11/16, 01/12/16 to 03/12/16, 15/12/16 to 17/12/16, 09/01/17 and 10/01/17	State Council of Educational Research and Training (SCERT), Poojappura, Thiruvananthapuram

Other HRD related Activities

Sl. No.	Name and designation of the Scientist	Title of the Programme	Duration	Place
1	Dr. P. Sudheer Babu Professor (Dairy Engg) & Former Special Officer	Participated as a Subject Expert in live phone in <i>Krishidarshan</i> programme on 'Dairy Processing and Entrepreneurship' of Doordarshan	01/04/2016	Doordarshan Kendra, Thiru- vananthapuram
2	Sri. Jayadevan G.R. Asst. Professor (Dairy Business Management)	Handled a Session on 'Group Dynamics and Motivation' in the Training Programme for beneficiaries of 'Goat Village' Scheme of <i>Kudumbashree</i> organized by KVASU-RRTC, Trivandrum	04/06/2016	<i>Venganoor</i> Grama Panchayath, Trivandrum District
3	Dr. P. Sudheer Babu Professor (Dairy Engg) and Former Special Officer	Presented a paper on "Entrepreneurship Development in Dairy Processing" at the State Level Management Training Programme for Senior Officers of Department of Dairy Development, Government of Kerala	08/06/16	SAMETI, An- ayara, Thiruva- nanthapuram
4	Dr .K .Lalu Asst. Professor (Dairy Husbandry)	Handled a Session on 'Scientific Goat Rearing' in the Training Programme for beneficiaries of 'Goat Village' Scheme of <i>Kudumbashree</i> organized by KVASU- RRTC, Trivandrum	10/06/2016	<i>Arynad</i> Grama Panchayath, Trivandrum District
5	Sri. Jayadevan G.R. Asst. Professor (Dairy Business Management)	Handled a Session on 'Group Dynamics and Motivation' in the Training Programme for beneficiaries of 'Goat Village' Scheme of <i>Kudumbashree</i> organized by KVASU-RRTC, Trivandrum	10/06/2016	<i>Arynad</i> Grama Panchayath, Trivandrum District

6	Dr .K .Lalu Asst. Professor (Dairy Husbandry)	Handled a Session on 'Scientific Goat Rearing' in the Training Programme for beneficiaries of 'Goat Village' Scheme of <i>Kudumbashree</i> organized by KVASU-RRTC, Trivandrum	17/06/2016	Vembayam Grama Panchayath, Trivandrum District
7	Sri. Jayadevan G.R. Asst. Professor (Dairy Business Management)	Handled a Session on 'Group Dynamics and Motivation' in the Training Programme for beneficiaries of 'Goat Village' Scheme of <i>Kudumbashree</i> organized by KVASU-RRTC, Trivandrum	17/06/2016	Vembayam Grama Panchayath, Trivandrum District
8	Mr. Rejeesh R. Assistant Professor (Dairy Microbiology)	Resource Person in the Workshop on 'Women Personal Hygiene and Health' by CHRD, Kochi. (Project <i>Ritu</i>)	16/08/2016	CDST, TVM
9	Mr. Rejeesh R. Assistant Professor (Dairy Microbiology)	Resource person for training programme organized by DTC Oachira, Kollam	24/09/2016	DTC, Dairy Development Department, Kollam
10	Mr. Rejeesh R. Assistant Professor (Dairy Microbiology)	Resource person for training programme on Milk and Milk product – Microbiology organized by DTC, Oachira, Kollam	27/09/2016	DTC, Dairy Development Department, Oachira, Kollam
11	Dr. P. Sudheer Babu Professor (Dairy Engg) and Former Special Officer	Government of Kerala - Working Group meeting on Animal Husbandry and Dairy Development	04/10/2016	Kerala State Planning Board, Pattom, Trivandrum
12	Dr. P. Sudheer Babu Professor (Dairy Engg) and Former Special Officer	Brain Storming Session of Nodal Officers of the Experiential Learning Programmes	05/10/2016 and 06/10/2016	Education Division, I.C.A.R, New Delhi
13	Dr .K .Lalu Asst. Professor (Dairy Husbandry)	Handled a Session on 'Scientific Goat Rearing' in the Training Programme for Goat farmers of <i>Alayamon</i> Grama Panchayath	12/12/2016	<i>Alayamon</i> Grama Panchayath, Anchal Block Panchayath
14	Dr. P. Sudheer Babu, Professor & Former Special Officer along with Mr. Rejeesh R., Smt. Beena R.L., Dr. Lalu K., Dr. C.R. Rachana and Sri. G.R. Jayadevan, Dr. Shibu K Jacob and Dr. Anu George, Assistant Professors of CDST TVM	Resource persons for training programme on Revised curriculum of Vocational Teachers	27/12/2016	CDST, TVM
15	Mr. Rejeesh R. Assistant Professor (Dairy Microbiology)	Resource person for training programme on Value added Dairy Products organized by DTC, Oachira, Kollam	16/01/2017	DTC, Dairy Development Department, Oachira, Kollam
16	Mr. Rejeesh R. Assistant Professor (Dairy Microbiology)	Delivered lecture on Quality and Safety assurance system in Dairy industry in connection with State Dairy Expo and <i>State Ksheera Sangamam</i> at Pattambi, Palakkad	28/01/2017	Dairy Development Department, Govt. of Kerala

17	Mr. Rejeesh R. Assistant Professor (Dairy Microbiology)	Delivered lecture on Probiotic Milk Products in connection with Trivandrum District <i>Ksheera Sangamam</i> at Neyyattinkara	14/02/2017	Dairy Development Department, Govt. of Kerala
18	Mr. Rejeesh R. Assistant Professor (Dairy Microbiology)	Delivered lecture on Trends and Innovations on Value addition for the officials of Dairy Department	21/02/2017	DTC, Dairy Development Department, Oachira, Kollam
19	Dr .K .Lalu Asst. Professor (Dairy Husbandry)	Handled technical sessions on “Tapping Production potential through Scientific Feeding & Management” for the Officers of Dairy development department, Kerala	22/02/2017	DTC, Dairy Development Department, Oachira, Kollam
20	Mr. Rejeesh R. Assistant Professor (Dairy Microbiology)	Delivered lecture on Milk Microbiology in connection with Lab Assistants Training programme	14/03/2017	DTC, Dairy Development Department, Oachira, Kollam
21	Dr .C. R. Rachana Asst. Professor (Dairy Chemistry)	Delivered a lecture in the ‘Workshop on recombinant DNA Techniques’	01/03/2017 to 03/03/2017	Department of Botany, KKTU Govt. College, Kodungallur
22	Dr .C. R. Rachana Asst. Professor (Dairy Chemistry)	Delivered a session on 22/03/2017 on the topic <i>Electrophoresis</i> in the ‘Workshop on tools and techniques in Biotechnology, Bioinformatics and Cytogenetics’	17/03/2017 to 28/03/2017	S.N College, Cherthala

Important materials/ resources acquired:

Sl. No.	Name of the equipment	Year of purchase	Cost of equipment (Rs.)	Company / make	Utility of the equipment in brief
1	Stereo Zoom microscope	2017	53,547	PRIMUS, Malaysia	In order to meet the curriculum requirements. Colony characteristics of bacteria and mould
2	Phase Contrast and Dark field microscope	2017	94878	HEADZ, Sweden	In order to meet the curriculum requirements. 3D view of micro organism, surface characteristics without staining.

* Details of scientific equipment costing more than Rs. 50,000/- to be furnished.

Any other activities:

- Mr. Rejeesh R had been deputed as the Officer-in-charge and custodian for transporting and maintaining the stock of rectified spirit procured for several analytical and laboratory purpose by Excise Circle office, Nedumangad.
- Dr. Lalu K. was an Expert on Animal Husbandry in the Interview for selection to the post of SMS in *Krishi Vigyan Kendra*, Sadanandapuram, Kollam held on 12.01.2017
- The college has been allotted Permanent Account Number from the Income Tax Department, Government of India in the official designation of the Head of the Station.

College of Avian Sciences and Management (CASM) Thiruvazhamkunnu, Palakkad



In consonance with the decision of the Management Council, sanction was accorded to establish a Faculty of Poultry Science under KVASU (Vide Order No. KVASU/DAR/Admin (2)/3557/13 dated 11-02-2014). Sanction was also accorded to establish a College of Avian Sciences and Management and an Avian Research Station with different components. The notification on the formation of Faculty of Poultry Science and College of Avian Sciences and Management and Avian Research Station under the faculty was published in the Kerala Gazette on 27th October 2014 (Vol. III)

College of Avian Sciences and Management (CASM)

College of Avian Sciences and Management Thiruvazhamkunnu presently offer a three year Under graduate degree programme namely BSc Poultry Production and Business Management. Various training programmes for Farmers are also undertaken by this station. The College is having following six departments.

1. Poultry Breeding and Genetics
2. Poultry Nutrition
3. Poultry Production Management
4. Avian Disease Management
5. Poultry Processing Technology
6. Poultry Business and Entrepreneurship

Avian Research Station

Avian Research Station functioning under Faculty of Poultry Science currently have one poultry farm, feed mill and a hatchery which is under construction. ARS farm maintain chicken, quail and duck breeder stock for supplying inputs required for poultry farmers.

REPORT OF ACHIEVEMENTS & FINANCIAL STATEMENT

Sl No	Fund	Released to the station (Lakhs)	Expenditure (Lakhs)
1	CASM Plan	101.2	96.1
2	CASM Non Plan	50	118.3 (including salary)
3	ARS Plan	62	53.29
4	ARS Non plan	15	10

1. EDUCATIONAL COURSES

- Undergraduate Degree - BSc Poultry Production and Business Management with annual intake capacity of 50 students

2. CONFERENCES/SEMINARS/TRAININGS

- Conducted 6 days training programme for Poultry Entrepreneurs in association with Central Poultry Development Organization, Bangalore
- Conducted training for Assistant Directors of AHD
- One-day training section for Poultry entrepreneurs of Tamil Nadu in collaboration with ATMA

3. RESEARCH PROJECTS

- Funded

SL NO	NAME OF THE PROJECT	Year of start & Completion	Total Outlay (in Lakhs)	Funding Agency
11	Establishing a poultry breeding farm for backyard chicken production Phase II	2016-2017	973	RKVY
12	Strengthening of the Centre for Meat Type thick Production	2016-2017	30	STATE PLAN
13	Strengthening of Integrated Rural Poultry Production Centre	2016-2017	30	STATE PLAN
14	Ensuring nutritional security to the tribal community through homestead cage system of poultry rearing	2016-2017	50	STATE PLAN
15	Establishing Mobile Poultry Unit and Fanners Counselling Centre at Alanallur, Palakkad District	2016-2017	7.5	STATE PLAN
16	Field level study on meat production performance of crossbreed male chicken utilizing food waste at school and its socioeconomic impact	2016-2017	30	STATE PLAN
17	Purchase of a bus for transportation of students • CASM Thiruvazhamkunnu	2016-2017	20	STATE PLAN
18	Strengthening of infrastructure facilities of CASM, 2-floor	2016-2017	70	STATE PLAN

19	Expansion of existing canteen facility at CASM. Thiruvazhamkundu	2016-2017	4	STATE PLAN
20	Strengthening of library and informatics lab and providing book bank scheme for students at CASM, Thiruvazhamkundu	2016-2017	4	STATE PLAN

b. Departmental projects -NIL

4. PUBLICATIONS (mention publications in recent 3 years)

- Training Manual on Poultry Production (English) in connection with 6 days training programme organized jointly by College of Avian Sciences and Management, KVASU and Central Poultry Development Organization -2016
- P.G. Kumar, R.R. Churchil, A. Jalaludeen, K. Narayanankutty, P.A. Peethambaran, P.E. Praveena, B. Chacko and **B. Ajithbabu**. 2016. Egg production and certain behavioural characteristics and mortality pattern of indigenous chicken of India. *Anim. Genet. Res.* 59: 27-36.
- Suvarna A, Manzoor Ahmad Bhat, Hoque M, **Vineetha P.G.** and Azhar Shuaib Batoo. Development of an Improved Rabbit Model of Spinal Cord Compression by Embolectomy Catheter. *Journal of Animal Research*: 5(4):701-706. December 2015.
- P. G. Vineetha**, S. Tomar, V. K. Saxena, C. Susan, S. Sandeep, K. Adil & K. Mukesh. Screening of Lactobacillus isolates from gastrointestinal tract of guinea fowl for probiotic qualities using in vitro tests to select species specific probiotic candidates. *British Poultry Science*, 57(4) 474-82, 2016.
- P. G. Vineetha**, S. Tomar, V. K. Saxena, M. Kapgate, A. Suvarna and K. Adil. Effect of laboratory-isolated Lactobacillus plantarum LGFCP4 from gastrointestinal tract of guinea fowl on growth performance, carcass traits, intestinal histomorphometry and gastrointestinal microflora population in broiler chicken. *Journal of Animal Physiology and Animal Nutrition*, DOI: 10.1111/jpn.12613
- Stella Cyriac** and Leo Joseph. 2016. Trends in the yield of cut-up parts over four generations of selection in Kuttanad ducks. *Int. J. Sci. Res.* 5(9): 502-503
- Stella Cyriac**, Leo Joseph and Jalaludeen A. 2016. Body weight pattern in Kuttanad ducks over two generations of selection. *Proceedings of the 25th World Poultry Congress*. September 5-9, 2016, Beijing, China.
- Stella Cyriac**, Jalaludeen A. and Leo Joseph 2016. Body weight pattern in Kuttanad ducks over two generations of selection. *Processing yield in Kuttanad ducks at 12 weeks of age in three generations*. *Proceedings of the 25th World Poultry Congress*. September 5-9, 2016, Beijing, China.
- Stella Cyriac**, Leo Joseph, P. Anitha, K. Narayanankutty, George T. Oommen and Stephen Mathew. 2016. Development of a meat line of Kuttanad ducks. *Proceedings of the 8th Kerala Veterinary Science Congress*, November 13 & 14, 2016, Pattikkad, Thrissur

5. AWARDS/ HONOURS AND OTHER PERSONAL ACHIEVEMENTS

- Dr. Stella Cyriac, Dr. Vimal Antony, Dr. Prasoon S. and Dr. Vineetha P.G. attended 8th Kerala Veterinary Science Congress.

6. EXTENSION ACTIVITIES

- Training for farmers
- Farmers counselling (Face to face and over phone)
- Visit to poultry farms to solve issues related to farm Management and Disease Management
- Germplasm supply to farmers through Avian Research Station

7. ADMINISTRATIVE, EDUCATIONAL, RESEARCH AND OTHER ASSIGNMENTS

Sl. No	Name	Designation	Duties
1	Dr. Stella Cyriac	Assistant Professor, Special officer i/c	<ul style="list-style-type: none"> • Special Officer • Course Teacher • Student Advisor • Warden (Students Hostels) • Training resource person • PI Attapadi Nutritional Security Project • PI School Meat project • PI RF Feed Mill • PI Mobile Poultry Unit • PI Meat type duck Production Center • PI IRPPC • In charge Duck Farm
2	Dr. Vimal Antony	Assistant Professor	<ul style="list-style-type: none"> • Course Teacher • Student Advisor • Assistant Warden (Mens Hostel) • Officer (Security) • Training resource person • Co- PI Attapadi Nutritional Security Project • Co- PI RF Feed Mill • Officer in charge (University Canteen, Thiruvazhamkunnu) • In charge Feed Mill
3	Dr. Shamna T P	Assistant Professor	<ul style="list-style-type: none"> • Course Teacher • Student Advisor • Assistant Warden • Training resource person • Training co-ordinator • Associate Patron • Officer in charge (NSS) • Co- PI Attapadi Nutritional Security Project • Co-PI Aiswarya- Anaswara Revolving Fund Project • In charge Quail Farm
4	Dr. Prasoon S	Assistant Professor	<ul style="list-style-type: none"> • Course Teacher • Student Advisor • Assistant Warden • Training resource person • Farm Officer • Course Teacher • Officer (Information Technology) • Co-PI School Meat project • Co-PI RF Feed Mill • Co-PI Mobile Poultry Unit • In charge Guest House
5	Dr. Vineetha P G	Assistant Professor	<ul style="list-style-type: none"> • Course Teacher • Student Advisor • Training resource person • Training co-ordinator • In charge NISAGENET • Assistant Warden • In charge Library • Treasurer Parent Teachers Association • Staff editor Student Magazine • Co-PI Aiswarya- Anaswara Revolving Fund Project • Co-PI School Meat project • In charge Chicken Farm

8. SIGNIFICANT EVENTS IN THE DEPARTMENT

- Completed construction of first floor of academic block of CASM
- Smt. Bijimol MLA and Sri. C. K. Saseendran, MLA visited CASM and ARS
- Dr. Mahesh P S., Director Central Poultry Development, Hassarghatta, Bangalore visited campus and interacted with students and faculty.
- Faculty visited Suguna Institute of Poultry Management, Udumalpet and Farm India Chicken, Pollachi for discussion on internship programme for final year BSc PPBM students.

9. STAFF DETAILS:

College of Avian Sciences and Management

Sl No	Name	Designation	Phone number and email
Scientific Staff			
1	Dr. Stella Cyriac	Assistant Professor, Special officer i/c	stella@kvasu.ac.in 9447827637
2	Dr. Vimal Antony	Assistant Professor	vimal@kvasu.ac.in 9447770207
3	Dr. Shamna T P	Assistant Professor	shamna@kvasu.ac.in 9446784921
4	Dr. Prasoon S	Assistant Professor	prasoon@kvasu.ac.in 9446997834
5	Dr. Vineetha P G	Assistant Professor	vineetha@kvasu.ac.in 9400675968
Non-Teaching Staff			
1	N.Radhakrishnan	Administrative Officer Gr.II Hr.Gr.	9562423160 rksoorya1@gmail.com
2.	Mridul Raj. N.A	Section Officer	9995232075 mridulraj@gmail.com
3	Geetha.M	Office Superintendent Hr.Gr.	9744720947 geethamnandanam@gmail.com
4.	Sameer.A	Reference Officer Hr.Gr.	9846361300 sameer@kvasu.ac.in
5.	Anoop.V	Assistant	9495363493 a.v.nair92@gmail.com
6.	Archana Sukumar	Assistant	7560961814 Archanasukumar.md@gmail.comz
7.	Mammed.K	Class IV	9494761836

Avian Research Station, Thiruvazhamkunnu

Sl No	Name	Designation	Phone number and email
Scientific staff - NIL			
Non-Teaching staff			
1.	Prasannakumari.K	Sr.Farm Supervisor	9496172614
2.	C. Muhammed	Farm Assistant Sln.Gr.	9846981837 Muhammedfa1975@gmail.com
3.	Lakshmi.G.M	Assistant	9497296182 lachugeetha@gmail.com
4.	T.Ummusalma	Class IV	

College of Food Technology, Thumburmuzhy

B. Tech (Food Technology) programme inaugurated on September 7th, 2015 at College of Food Technology, Thumburmuzhy under the aegis of the Kerala Veterinary and Animal Sciences University. The College of Food Technology

will give especial thrust in enlightening the young minds to be dynamic and flexible to the opportunities and challenges of Food industries.

University has three faculties, viz, Faculty of Veterinary and Animal Sciences, Faculty of Dairy Science & Technology and Faculty of Poultry Science. KVASU started College of Food Technology, Thumburmuzhy under the Faculty of Dairy Science & Technology.

The candidates admitted to B.Tech (Food Technology) programme are selected through the Common Engineering Entrance Examination conducted by Govt.of Kerala and admission is for 20 students per year. The course curriculum for B.Tech (Food Technology) is in lines with the pattern specified by the Indian Council of Agricultural Research (ICAR), New Delhi.

College of Food Technology is situated at Thumburmuzhy which is 15km away from Chalakudy Town of Thrissur District. College comes under Pariyaram Panchayath and Chalakudy Constituency. 80% of the students are hostellers, but college has no hostel facility now.

The construction of first floor of college has almost completed by the month of December and Classes of 2015 and 2016 batch, Library and computer lab have shifted to the top floor.

OBJECTIVES

1. To establish world class educational centre in the area of Food Technology so as to cater the present demand.
2. To build the graduates acquainted with various facets of professionally managed industries which include production management, raw material purchases, personnel management, sales and marketing by virtue of industrial in-plant training.
3. To undertake consultancy services in the area of Food Safety and Quality Control.
4. To establish a Centre of excellence in terms of Food Analytical Capabilities for the Food Process Industries.
5. To undertake training programmes for small and medium food processing enterprises in the organized and unorganized sector.

SCOPE OF FOOD TECHNOLOGY IN INDIA

India's food processing industry is growing annually about 9% and investment in registered food processing sector grows at about 20% per annum. Food technology courses attract a large number of students because of its novelty as an educational course and also because of the growing demand for food technologists in today's world of packaged and fast foods. Food Technologists are mainly required in food industries, rice mills and packaging industries. The food process industry is one of the largest employment creators in the country.

A food technologist can get the job of a Food Safety Officer, Quality Assurance Manager, Production Manager, Laboratory Supervisor, Food Packaging Manager or as a technician in food processing and packaging industry or even as a Research Associate in premier institutes, universities and research and development units. A Post - graduate in Food Technology can work as an Asst. Professor or an advisor in Government Colleges, Inspection Boards or Quality Control Cells. Companies like Hindustan Lever, Heinz, Kellogg's, Nestle, ITC and many others recruit food technologists periodically for bringing about an improvement in their products.

Both the public and the private sectors provide lucrative job opportunities to food technologists. Food Technologist can work as food packaging technologist and food preservation managers in various food packaging industries.

Food Processing Industry is a sun rise industry with tremendous job prospects in India and abroad. Food Technology has revolutionized the food habits of the people in our country by offering cooked and securely packaged foods in attractive forms. Consumption of processed foods is noticeable across almost all sections of the population. As a result, the market for processed food is growing very fast. Food Processing Industry in India is employment intensive and currently generates employment for about 20 lakhs people. Every year the industry will also generate prospective jobs to an extend of 2.5 lakhs. In many advanced countries, food industry is the largest industry contributing much to their GDP. With the growth of food processing sector speeding up from 6-7 percent prior to 2004 to around 14 percent at present (2015), the level of processing has gone up from 6 percent to 10 percent and of value addition from 20 percent to 26 percent. In this scenario, there will not be any problem of employment for qualified food technologists in our country.

SCOPE OF FOOD TECHNOLOGY ABROAD

A Food Technologist can work as a product development manager in a food research company to devise food products according to the needs of the consumers and effectively implement the products in an innovative way. He can pursue his research work as a scientist abroad to formulate new product range and enhance the existing portfolio of products in various food research institutes and also work as a sensory scientist to monitor organic properties like aroma, flavour and more. Even companies abroad recruit food technologists to ensure and monitor the quality and hygiene of food products in their contamination and adulteration prevention units.

OPPORTUNITIES & EMERGING PROSPECTS

At present only the College of Dairy Science and Technology (CDST) under KVASU is offering a B.Tech course in Dairy Science & Technology in Kerala. The graduate and Post graduate courses in Food Technology are offered from various Arts and Science colleges in Kerala and none of them have the mandatory accreditation for the B.Tech and M.Tech courses in Food Technology approved by the ICAR. Hence the proposed B.Tech (Food Tech) under the aegis of the CFT Thumburmuzhy would be the first institution of its kind in Kerala which can provide qualified technologists on a long term basis to the ever growing food processing sector.

The college is also looking forward for offering Diploma/PG Diploma, Post Graduate and Doctoral programmes in Food Technology. A consultancy cell will soon be functioning in the department delivering services to industries, professionals, entrepreneurs, small scale industries, NGOs, Government Departments & Institutes and research organizations. Collaborative action research projects will be undertaken with industries and renowned research institutions to develop products and technologies for entrepreneurs. Various courses offered by the college shall be open to Indian and foreign students especially for those from African and South East-Asian countries, commonwealth countries in association with FAO.

Admission:

The candidates admitted to the UG course are selected through the Common Entrance Examination conducted by the Government of Kerala. The candidates 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.

Sl. No.	Title of the Programme	Level	Duration (Yrs)	Year of Admission	Sanctioned annual intake	Total student strength
1	B.Tech (Food Technology)	UG	4	2015	40 students	25 students
				2016	20 students	20 students

Note: Sanctioned annual intake decreased from 40 to 20 students with effect from 2016 admission onwards

Departments:

The College of Food Technology has got the following 5 departments:

1. Department of Food and Business Management
2. Department of Food Chemistry and Nutrition
3. Department of Food Microbiology
4. Department of Food Engineering
5. Department of Food Technology

Faculty Status (Regular/On-Contract Faculty as on 31st March, 2017):

Academics:

The candidates admitted to B. Tech (Food Technology) programme are selected through the Common Engineering Entrance Examination conducted by Govt. of Kerala. The course curriculum for B.Tech (Food Technology) is prepared in lines with the pattern specified by the Indian Council of Agricultural Research (ICAR), New Delhi. This is a unique job oriented degree programme which emphasizes on food/dairy engineering aspects along with the food chemistry and food microbiology on the technology of manufacture of safe and high quality food/dairy products. The course is offered for a total duration of eight semesters.

Out of the total credits (191), 136 credits have been apportioned to Food Technology, Food Engineering, Food Microbiology, Food Chemistry and Food Business Management disciplines for course work up to six semesters. Hands on Training (25 credits) and in plant Training and Report and Evaluation (30 credits) are provided to the students at 7th and 8th semester for industry exposure to various food process industries.

Infrastructure:

The College has well equipped Food Microbiology and Food Chemistry laboratories etc. for the estimation of microbiological and chemical quality of food and dairy products. The other practical may also be provided by the nearby best institutions with proper transport facility.

The computer lab with internet access helps the college to perform and document its functions with ease and equip the students to become truly global competitors. The college library provides cutting-edge facilities and services to support teaching, research and learning. It houses an excellent collection of scientific text books, journals, research papers, publications, annual reports, and bound volumes of periodicals. The library facilities are made available to all the students, trainees, faculty members and non-teaching staff.

EDUCATION, STUDENT AMENITIES AND ACTIVITIES

Students' Activities:

Faculty Rank	No. of Sanctioned Regular posts	Present Status: Number in position by Highest Qualification						Total Regular faculty in position	Total vacancies	Total Contract faculty in position
		Doctoral Degree		Masters Degree		Bachelors Degree				
		Regular	Contract	Regular	Contract	Regular	Contract			
Professor	0	0	0	0	0	0	0	0	0	0
Associate Professor	0	0	0	0	0	0	0	0	0	0
Assistant Professor	10	1	1	1	6	0	0	2	8	7
Academic Consultant (Deputation) (ALL UGC/ICARQUALIFIED)	NIL	0	0	0	0	0	0	0	NA	0
TOTAL	10	1	1	1	6	0	0	2	8	7

- The inauguration of first College Students Union 2015-2016 (YUVANA) was held on 26th June, 2016. Film Director Sri. Omar Lulu and Pavizham Group Chairman Sri. M.P. Antony was the guests for the programme.
- The College Students Union 2015-2016 organized Fresher's Day on 1st November 2016. Students of 2015 admission gave warm welcome to their juniors.
- An interclass Mehendi competition was conducted on 9th November 2016.
- An interclass Chess competition was organized by student's union on 16th November 2016.
- A Poster presentation competition was conducted as related to World Aids Day on 1st December 2016.
- The College Students Union 2015-2016 organized Christmas celebrations on 22nd December, 2016. Crib, Carol competitions and games were conducted in connection with the celebrations.
- 4 students of 2016 batch were actively participated in the Drama Workshop "LETS ACT 2K17" organized by University Union 2015-2016 at KOVAS, Pookode on 7th and 8th of January 2017.
- On 22nd of January, a Farewell meeting was conducted for the Special Officer, Dr. Dinker Singh who got transfer to CDST, Pookode.
- Valentine's Day celebrations were conducted on 14th of February 2017.
- Students of B.Tech Food Technology were actively participated in different programmes of "Amritham", 7 day programme organized by NSS unit of Kerala Veterinary College, Mannuthy from 18th February to 24th February 2017.
- Students of CFT participated in Literary club programme 'Lipi' organized jointly by Students Union 2015-2016 and University Union 2015-2016 on 2nd and 3rd of March 2017 at Athirappilly.

College Activities

- College of Food Technology, Thumburmuzhy has celebrated World Environmental Day-2016 on 7th of June with the Support of Kerala State Council for Science, Technology and Environment (KSCSTE). The theme of the celebrations was “Environment and Food Security”. Dr. G. Girish Varma, Dean, Faculty of Dairy Science, Mannuthy, presided the function, Dr. Joseph Mathew, Registrar, delivered the keynote address. Hon’ble MLA of Chalakudy Constituency Sri B.D. Devassy officially inaugurated the function. Inaugural session was followed by two scientific sessions. A documentary was also played for providing awareness to the public regarding the conservation of Environment and Wildlife. Prior to Environmental day celebrations, Poster competition was conducted for students of College of Food Technology, Thumburmuzhy on 1st of June 2016, with the theme ‘Environment and Food Security’. An essay competition was also organized for high school students of nearby schools. Competition was held in the College on 4th of June, 2016 at 10-11 am on the topic ‘Impact of Athirapilly project on nature, natural resources and livelihood’.
- An awareness class regarding the use of drugs and alcohol among youth is organized at CFT on Nov 10th 2016 and the students of both CFT 2015 and 2016 batch attended the lecture given by Sub inspector of Police Mr.Noushad, Athirappilly police station.
- An elaborated lecture and interactive session were conducted in college on 15th of December, 2016. Dr. John Thomas, retired dean of KCAET, Tavannur was the chief guest.
- Republic day was celebrated in CFT on 26th January 2017. Flag hosting was done by special officer. All students and faculties were participated in this program.
- Self Defence class was conducted for girl students of B.Tech (Food Technology) at Government School, Vettilapara. Students participated in the lecture on 21st February 2017.

Sports, Physical education and Co-curricular activities:

The students are given encouragement in various sports and games. Students were participated in intercollegiate games conducted from 26th to 28th October 2016 at COVAS, Mannuthy. Ajilesh Krishna of 2015 batch bagged first prize in long jump and second in javelin throw. Sheba Sunny M got second prize in long jump and Annu Ann Joseph got third prize in high jump in the sports meet. Students were also participated in intercollegiate cricket and chess competitions conducted at COVAS, Mannuthy on 22nd and 23rd of November 2016.

College PTA:

An executive committee meeting of CFT PTA was held on 6th August 2016 at College of Food Technology, Thumburmuzhy. A general body meeting was conducted on 28th September 2016 and the parents of both 2015 and 2016 admission were present in the meeting. Mrs. Aysha C.H, Assistant professor, Department of Food Microbiology was elected as new PTA secretary.

Next general body meeting was conducted on 18th March 2017 for open discussion for taking suggestion on the improvement of college infrastructure and other activities.

Another general body meeting held on 22nd April 2017 was for the reconstitution of committee. In the meeting, Mr. Najeem, Mr.Srinivasan P. and Mr. Abdul Rasheed were added to the existing PTA committee instead of reconstituting it.

Other Outreach Programmes:

- Students participated in “Food Entrepreneur’s Conclave” organized at Kerala University of Fisheries and Ocean studies (KUFOS) by Cochin Chapter of AFST (I) on 18th August 2016.
- KVASU conducted 3 days orientation program from 6th December 2016 to 8th December 2016 for freshers at Pookode, Wayanad. Second batch students (2016 admission) of CFT have attended this program.

- One day industrial visit was arranged for the 2015 admission B.Tech students on 2nd of March 2015 to CIFT, Cochin and Modern Breads, Edappally.
- As part of the NSS camp of COVAS, Mannuthy, a training programme on the topic “Preparation of different milk products” was conducted during the period of 18th to 24th February 2017. Dr. Athira S and Mrs. Aysha C.H were the trainers in the programme.

Scholarships:

11 students of B.Tech (Food technology) 2015 admission and 3 students of 2016 admission are availing Kerala Govt. E-grand scholarships

Faculty details:

Sl. No.	Name and designation of the Teaching Staff	Discipline	Email ID	Contact No.	
				Land line	Mobile
1	Dr. P.Sudheer Babu (Special officer and Head) (On additional charge)	Food Engineering	sudheer@kvasu.ac.in	0480-2748016	9447331231
2	Mrs. Athira S. (Assistant professor)	Food Chemistry	athira05dairy@gmail.com	0480-2748016	9497888348
3	Mrs. Aysha C. H. (Assistant professor)	Food Microbiology	chaysha@gmail.com, aysha@kvasu.ac.in	0480-2748016	9605373428

Preparation of Value added products (Revolving Fund Project)

Name of the product	Method of value addition	Profit (in Rs)
Wine from grapes	By using grape juice	Rs. 27,000

Important materials / resources acquired:

Sl. No.	Name of the equipment	Year of purchase	Cost of equipment (Rs.)	Company / make	Utility of the equipment in brief
	Autoclave	2016	54,799	Chemind	To sterilize media
	Polarimeter	2016	35,000	Chemind	To measure the optical rotation of a substance
	Medico Centrifuge	2016	5200	Chemind	To separate and sediment the substances based on density
	Thermo hygrometer	2016	5000	Chemind	To measure the humidity of air
	Screw gauge	2016	4000	Chemind	To measure the diameter and thickness of material
	Magnetic stirrer	2016	5481	Chemind	To dissolve the substance very quickly
	Visible Spectrophotometer	2017	53,700	Precision Electronic Services	To determine the amount of known substance in the solution

Distinguished visitors in CFT, Thumburmuzhy

GLIMPSES

Sl. No.	Name and address of the visitor	Date of visit	Purpose of the visit	Remarks by the visitor	Outcome of the visit (if applicable)
1	Dr. John Thomas, Former Dean of KCAET, Tavannur	15 th December, 2016	Interactive session with students	NA	NA



CFT campus



Volleyball Court



World Environmental Day celebrations conducted in the College



Awareness class



Students Union Inauguration



Mehandi Competition



Inter College Sports Meet at Inter College Sports meet



Prize winner of CFT



Christmas celebrations



Drama workshop



Republic day celebrations



'Lipi' organized by Literary Club



2016 BATCH STUDENTS



2015 BATCH STUDENTS

DIRECTORATE OF FARMS KVASU

CENTER FOR PIG PRODUCTION AND RESEARCH

Genesis

Centre was started on 12-05-1965 as a small pig breeding unit along with an auxiliary pork production scheme under the Department of Animal Husbandry. It was taken up by Kerala Agricultural University in 1972 and renamed as University Pig Breeding Farm. The farm was upgraded to Centre for Pig Production and Research in 1995 accounting the academic, research and extension activities undertaken in this center. This center was taken up by the Kerala Veterinary and Animal Sciences University since 2011. At present the Centre has a total holding capacity of 2500 pigs including growers and piglets housed in various pens spread over an area of 10.25 acres.

Mandate

1. Promote and undertake research on all aspects of pig production and health.
2. Act as a repository of elite germplasm of different pig breeds and conservation of native germplasm.
3. Operate as an instructional farm for conducting training to students and farmers.
4. Human resource development in the area of pig husbandry and bio-waste management.
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.
10. Development of integrated farming system centered on pigs.

Staff Position

Teaching	Non Teaching		Labourers
	Administration	Technical Staff	
Professor & Head: 1	Section Officer: 1	Senior Farm Supervisor: 1	Permanent: 1 Casual: 34
Assistant Professor: 3	Assistants: 2 Computer Assistant: 1	Farm Supervisor/ Assistants: 3	Class IV: 2

Details of Teaching Staff

Dr. Usha A.P. MVSc., Ph.D (Edin)

Professor & Head

Research Interests: Animal Production and Biotechnology

Number of Publications: Research papers in refereed journals: 41, Conference proceedings: 65, Popular articles: 17, Books/Book chapters, manuals: 9, Gene bank submissions: 7, Others: TV documentaries, radio talks etc 7



Dr. E. B. Benjamin MVSc.

Assistant Professor (Animal Reproduction and Obstetrics)

Research Interests: Study of fertility in farm animals,
Artificial Insemination in pigs, Frozen semen production

Number of Publications: Popular articles: 10, Booklet/leaflets: 10



Dr. Suraj P.T. MVSc., Ph.D

Assistant Professor (Livestock Production and Management)

Research Interests: Farm design, Farm performance analysis,
Improvement of fodder quality. Animal Production Management

Number of Publications: Research papers in refereed journals: 2,
Popular articles: 3, Books/Book chapters 2, radio talks one



Dr. Lali F. AnanadMVSc., Ph.D

Assistant Professor (Animal Breeding and Genetics)

Research Interests: SNP analysis, Animal Production,
Marker Assisted Selection

Number of Publications: Research papers in refereed journals: 13,
Conference proceedings: 11, Popular articles: 10, Books/Book chapters 3,
Gene bank submissions: 14



Details of Non-Teaching Staff

Name	Designation
Mr. Joju Paul M. (i/c)	Section Officer
Smt. K. K. Ushakumari	Senior Farm Supervisor
Mr. Sasi T	Farm Supervisor (Grade I)
Mr. Shibu Timothy	Farm Supervisor (Grade II)
Smt. Sheela R.	Farm Supervisor (Grade II)

Stock Position as on 31.03.2017: Total No. of Pigs: 2138

Age Group	Farm	AICRP	Mega seed
0-2 months	714	72	242
2-3 months	27	-	8
3-4 months	70	-	13
4-5 months	73	-	7
Adult	846	114	129
Total	1730	186	399

Performance of animals

Trait	Large White Yorkshire	Landrace	Duroc	Indigenous	Crossbred
Litter size at birth	10.19	10.12	7.56	8.59	10.29
Litter size at weaning	9.67	9.06	6.04	8.20	9.40
Litter weight at birth (kg)	11.08	11.97	9.86	5.48	9.86
Litter weight at weaning (kg)	91.25	89.26	59.25	48.10	84.65
Average individual weight at birth (kg)	1.08	1.18	1.30	0.65	0.95
Average individual weight at weaning (kg)	9.44	9.85	9.81	5.87	9.02

Accomplishments

The centre functioned as a nodal organization to implement Massive Livestock Development Programme (MLDP) with financial outlay of Rs.70 lakhs during 1993-97 in collaboration with State Animal Husbandry Department for distributing quality piglets to the farmers. ICAR funded All India Coordinated Research Project is under operation since 1993 to evaluate the performance of indigenous pigs and their crosses with exotic breeds. Mega seed project on pigs funded by ICAR has started functioning since 2015.

The Board of Management appreciated the Professor and Head and her team of scientists, staff and labourers for the commendable achievements and revenue generation at the Centre for Pig Production and Research, Mannuthy.

The strategic breeding programmes for more than two decades evolved a new crossbred variety of pig with remarkable disease resistance, heat tolerance, lean meat production and feed conversion efficiency. The new pig variety was released as 'Mannuthy white' by Dr. H.Rahman (Deputy Director General, ICAR) in presence of Dr.R.S. Gandhi, Assistant Director General, Dr. Vineet Bhasin, Principal Scientist and Dr. D.K. Sarma, Director ICAR NRC on Pig in this year. The farmers, laborers, faculties and other beneficiaries witnessed the programme.

The center has distributed more than 5000 piglets (breeding and fattening) to farmers and has generated over 2 crores internal revenue during 2016-17. The centre distributed 150 piglets to 60 tribal families in Malakkappara and Varandarappilly tribal colonies utilizing the recurring contingency of Rs. five lakhs each in the projects AICRP on Pigs and Mega seed (TSP Component). The programme envisages the improvement of socio-economic status by enhancing the food security of tribal colonies. Ninety five M.V.Sc. and thirteen Ph.D. from different disciplines and various plan projects have been completed in this centre.

Facilities

Livestock: The centre has a total stock strength of about 2100 animals, with breedable stock of 686 Large White Yorkshire, 60 Duroc, 174 Landrace, 60 Desi and 240 crossbreds.

Infrastructure: There are six farrowing houses three of which are modernised, three grower sheds, two breeding houses and a piglet shed. Feed mill and mixer with 6 ton capacity is in use. Slurry tank for storing and pumping waste water to grass fields is functioning. Artificial insemination lab was

established for scientific breeding. Non-conventional energy sources like solar power plant and biogas plant are being used to reduce the consumption of electrical energy. A model for water recycling is also functioning with dung drying machine and water recycling tanks. The recycled water is being routinely utilized for sprinkler irrigation of agricultural crops and for recharging the water resources.

Activities

Academic: The scientists of CPPR undertake regular theory and practical classes both for students of B.V.Sc & AH and MVSc programmes. They also conduct practical farm trainings viz. Livestock farm practice, entrepreneurial training and internship training to the undergraduate students. The scientists are assigned as major and minor advisors and provide facilities and technical advice for conducting Post graduate and doctoral research. Training to Vocational Higher Secondary Students in Livestock Management Course and a certificate course in animal handling is also undertaken here.

Research: The various projects undertaken at CPPR during the current financial year with financial outlay is as given below.

Sl. No.	Name of scheme	Expenditure (Lakhs)
Plan projects		
1	Scaling up of piglets production	80.00
2	Conservation of Ankamali pigs	10.00
3	Evaluation of crossbred pigs	20.00
4	Effect of different levels of energy supplementation on breeding performance in gilts	10.00
5	Effect of supplementation of xylanase on growth performance in weaned piglets	10.00
6	Artificial Insemination for improving reproductive efficiency in pigs	10.00
Total		170.00
EAPs		
1	AICRP on pigs	120.75
2	Mega seed project	48.00
Total		338.75

List of student projects

Ph.D. Projects - NIL

M.V.Sc. Projects

- Nutritional management of early weaned Large White Yorkshire piglets by functional amino acid supplementation.
- Effect of weaning age on performance of Large White Yorkshire pigs

Extension:

- National Research Centre on Pig allotted Rs. five lakhs each under recurring contingency in the projects AICRP on Pigs and Mega seed (TSP Component) for distributing piglets to tribal

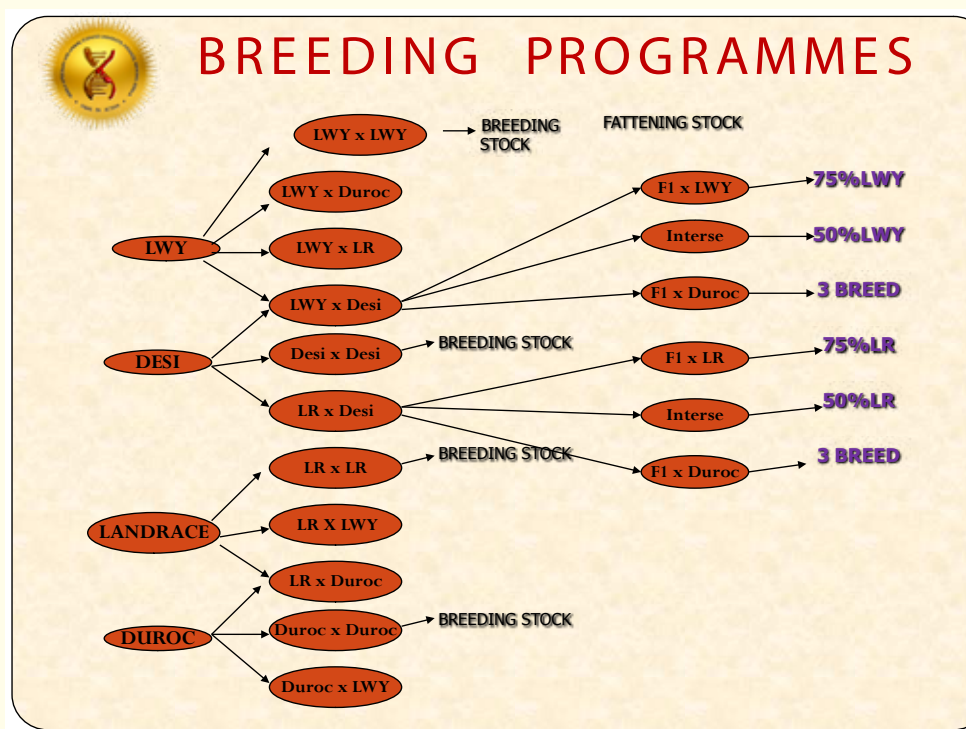
people. As part of the project 150 piglets were distributed to tribal colonies in Malakkappara and Varandarappilly gramapanchayath. Distribution of piglets to 60 tribal families will improve socio-economic status by enhancing the food security of tribal colonies. Many of the beneficiaries were women and thus this programme will contribute to women empowerment and will provide job to the unemployed group. Moreover, utilization of food waste from nearby areas will result in better waste management and produce quality meat.

- Hands on practical trainings are provided to veterinary officers, farmers and self help groups. Faculty provides technical advice to pig farmers and helps in the preparation of project reports for the establishment of pig farms.
- Provision of technical advice to progressive pig farmers, issue of project reports, establishment of field units of pigs and active involvement in people's campaign programmes in decentralised planning.
- The Centre provide technical knowhow to progressive farmers for establishing piggery unit in respect to the construction of shed, health care and management, waste disposal and other problems faced on day to day basis over telephone and personal call.
- Farmer's queries are answered through telephone calls and personal contacts.
- Farmers & students from different states all over India visit the farm.
- The Centre for Pig Production and Research could establish piggery units throughout the State of which sizable number of farmers took up this as a full time engagement and this unit is proud to report that it could provide a sustainable income for the families and now many of them totally depends on their pig farm for their income.
- The centre has been conducting field visits on demand by the farmers to solve their problems.
- The Centre recommended integrated farming system, centered on pigs to farmers.
- Every year the Centre is conducting a 'Farm Day'. Many progressive pig farmers have been participating and discuss the prospects and problems of pig rearing in Kerala and many of the pig farmers expressed their success stories.
- With the collaboration of Kerala Livestock Farmers Association, the Centre has organized farmers meet and discussed the constraints and limitation of the pig farming in the state and remedial measures were evolved and the same has been submitted to state government for necessary action through the association.
- Self employment training was given to unemployed women from weaker section of the community for starting their own piggery units. Different units of Self Help (Kudumbashree) groups have undertaken short-term training on piggery for their better livelihood.
- The Centre has been producing and distributing quality piglets with better performance to the farmers.

Farm management

Breeding

The CPPR houses the nuclear stock of four pure breeds namely Large White Yorkshire, Landrace, Duroc and Desi pigs and various crossbreeds from the above breeds. This center supplies pure bred stock to farmers and governmental agencies within and outside state. The breeding programmes followed in CPPR is as given below:



Nutrition

The CPPR runs a feed mill where the ration for the pigs are compounded with the ingredients purchased on national tender. Around 3000kg feed with crude protein content of 14%, 16%, 18% and 20% are prepared daily to cater to pigs in different stages of growth and requirement. Researches are also being conducted to identify non conventional feed source with good growth performance so as to create low cost ration for pigs.

Management

This includes all the routine activities of the farm like diagnosis of diseases and its treatment, vaccination, deworming, cleanliness of shed, identification of animals and waste management. Vaccination for Swine Fever and FMD are routinely followed in the farm. Micro chipping is practiced for identification of the animals. The waste from the pig farm is put into the aerobic compost pit and the biogas plant. The biogas plant generates enough energy to run the day-to-day activities of the farm. The slurry from the plant and compost from the pit are used as manure for the vegetable cultivation undertaken in the farm.

Financial details

This centre cater to the needs of the farmers not only within state but also from other states like Tamil Nadu, Karnataka, Andra Pradesh, Maharashtra as well as North Eastern states by supplying piglets. The receipts generated are mentioned below:

Year	EXPENDITURE (Lakhs Rs)				REVENUE (Lakhs Rs)	
	AICRP& Mega Seed	Plan	Non Plan	Total Expenditure	Pigs Sold	Revenue Generated
2016-17	167.72	90.28	201.54	459.54	4418	203.82

Release of new pig variety developed at Mannuthy



Release of Publication



Farm Visit



"Mannuthy White" the crossbred pig variety developed at Mannuthy



Pig Dung Dewatering Machine



Farmers Training



FACILITIES AT CPPR



Grower PenV



Breeding Pen

The centre has two breeding houses each to hold 250 adult parent stock and three grower sheds with holding capacity of 500 animals. Three exotic pure bred varieties - Large White Yorkshire, Landrace and Duroc and the Ankamali- the indigenous pig breed of Kerala are maintained in the farm. More than thousand breeding piglets and pigs are sold as parent stock, within and outside state annually.



Crossbred piglets

Two breed and three breed varieties of crossbred piglets having high growth rate and better feed conversion efficiency, evolved in this farm are distributed to farmers within the state. More than five thousand of crossbred piglets sold annual



Farrowing House with Guard Rail House



Modern Farrowing House with crates

There are six farrowing housestwo of which are modernized to house 180 sow with litter. Facilities like nipple drinkers, heating bulbs and creep area for piglets provide better piglet management to yield average litter size of above 10 per farrowing.



Bore well



Ground level water tank

The sources of water include a ground water storage tank, which can store 2 Lakhs litres of water, a bore well with yield of 15,000 Litres and open wells.



Solar Power Plant



Bio gas unit

Non-conventional energy sources like solar power plant and biogas plant are being used to reduce the consumption of electrical energy.

Artificial insemination



Artificial insemination lab has been established for scientific breeding. Semen collected is evaluated, diluted and stored (17° C) for further use. Semen collected is evaluated for quality parameters such as mass activity, motility and sperm abnormalities.

Farm management



Immunization using vaccinator



Pregnancy diagnosis



Micro chip

The routine activities of the farm include vaccination against Swine Fever and FMD and pregnancy diagnosis. Micro chipping is practiced for identification of the animals.

Waste management



Model waste water treatment plant: used to recycle the water generated in the farm for further use



Model Aerobic compost unit for disposal of biological waste including carcass.



Slurry tank to collect the washing from the shed and pumping to fodder plots for fertigation

Field units

Pig crate fabricated with tubular square pipes



Training Session



Hands on practical trainings are provided to veterinary officers, farmers and self help groups have resulted in the establishment of more than 100 field units.

Activities

Distribution of Piglets under Tribal Sub Plan AICRP on Pigs and ICAR Mega Seed Project at Malakkappara, Athirappally Panchayath Chalakudy, Thrissur District Kerala



Distribution of Piglets under Tribal Sub Plan AICRP on Pigs and ICAR Mega Seed Project at Varandarappilly Panchayath Thrissur District Kerala



Waste water recycling at the farm



Visitors at the farm



Integrated Farming – Garden peas cultivated utilizing the washing from the sheds



GOAT AND SHEEP FARM, MANNUTHY

The Goat Farm was established in 1965 under the Department of Animal Husbandry, Kerala and transferred to Kerala Agricultural University in 1972 and renamed as University Goat and Sheep Farm. This unit was attached to Kerala Veterinary and Animal Sciences University on its inception from May, 2011. Presently, the farm maintains goats of Malabari Attappady black breeds, Malabari x Alpine/ Sannan crossbreds and sheep of Mecheri and Ramanad White breeds. The unit is situated in 4.10 acres of land at Mannuthy in College of Veterinary & Animal Sciences Campus, KVASU with the total holding capacity of 350 goats.

2. Mandate

- ❖ Promote and undertake research on all aspects of goat production and health.
- ❖ Act as a repository of elite germplasm of different goat breeds and compare the production potential and adaptability of native breeds /crossbreds.
- ❖ Study the possibility of evolving a dual purpose strain suitable for agro-climatic conditions of Kerala.
- ❖ Operate as an instructional farm to students
- ❖ Conduct extension activities as model unit and supply breeding animals to farmers.
- ❖ Human resource development and capacity building in the area of goat production
- ❖ Function as a centre for technology transfer, validation and consultancy.

3. Conference/seminar/training conducted:

i) Trainings conducted to students - B.V.Sc& AH

S.No.	Date	Number of Participants
1	Livestock Farm Practice	138 students
2	Entrepreneurship training on Goat Production	20 students

ii) Trainings Organized to farmers / Entrepreneurs under Revolving Fund Project

Sl. No.	Duration	Number of participants	Title of training	Revenue Generated (Rs.)
1	15/06/2016 to 16/06/2016	14	Commercial Goat Farming'	14000
2	10/08/2016 to 11/08/2016	12		12000
3.	23/11/2016 to 24/11/2016	8		8000
4.	10/01/2017 to 11/01/2017	17		17000
5.	22/03/2017 to 23/03/2017	14		14000
	Total	65		65000

iii) Sponsored training classes conducted to farmers, Vocational students

Sl. No.	Duration	Number of participants	Duration of training
1	04/04/2016	26	West Vellanikkara, Vayanasala
2	24/05/2016	23	Milma Training Centre, Thrissur
3	24/05/2016	20	Milma Training Centre, Thrissur
4	24/05/2016	56	Milma Training Centre, Thrissur
5	21/07/2016	30	Milma, Training Centre, Thrissur
6	29/09/2016	30	Milma, Training Centre, Thrissur
7	05/10/2016	21	Dr.G.Vijayakumar, Tamil Nadu, ATMA, Interstate training.
8	21/10/2016	45	Assistant Project Officer, Regional A.I. centre, Cherpu, Thrissur
9	27/10/2016	60	GVHSS, Ayyanthole, Thrissur
10	4/11/2016	55	GVHSS, Thattakuzha, Idukki.
11	6/11/2016	33	GVHSS, Ayyanthole, Thrissur
12	8/11/2016	15	SARATHI Institute of Veterinary and Animal Sciences, Thalipparamba, Kannur
13	16/11/2016	27	GVHSS, Agali, Palakkad
14	22/11/2016	46	LMTC, Aluva, Deputy Director in charge
15	3/12/2016	48	GVHSS, Ayyanthole, Thrissur
16	8/12/2016	48	GVHSS, Ayyanthole, Thrissur
17	22/12/2016	23	Milma Training Centre, Thrissur
18	13/3/2017	40	NGO from Nemmara, Palakkad.
	Total	646	

4. Conference/seminar/training attended

Dr. R.Thirupathy Venkatachalapathy, Head attended

- 12th International Conference on Goats, Antalya, Turkey, 25-30th September, 2016.
- National Symposium on “ Biodynamic animal farming for the management of livestock diversity under changing global scenario”, SOCDAB. 8-10th February, 2017 CVAS, Mannuthy, Thrissur
- 8th Kerala Veterinary Science Congress, Nov 7-8, 2016, Thrissur
- National seminar on ‘Improvement of Small Ruminant Production System for Livelihood Security’ 9-10th March, 2017, ICAR- CSWRI, Avikanagar.

5. Research projects with outlay and funding agency (include PG and PhD projects carried out in the unit)

i) Research projects

Sl. No.	Name of the Project	Year	Financial outlay (Laks)	Funding Agency
1	AICRP on Malabari Goat Improvement – Germplasm centre	2016-17	36.40	ICAR
2	Developing an Inclusive Model for Sustainable Goat Production in Kerala	2016-17	8.30	NABARD
3	Establishment of elite malabari goat breeding unit for dissemination of superior germplasm	2016-17	68.65	RKVY- GOI
3	Strengthening of Goat and Sheep Farm	2016-17	30.00	Plan
4	Conservation and Evaluation of Malabari and Attappady Black goats	2016-17	12.00	Plan
5	Goat Farm Training and Pellet manurre	2016-17	1.00	RF

ii) PG Research projects

S.No.	Name of the Project	Year	Discipline
1	Genetic variability and expression profile of ghrelin gene in goats. (Charlotte Coretta Rodricks (14-MVM-14)	2015-17	M.V.Sc., Animal Genetics & Breeding
2	Lactation Performance and milk composition of Attappady Black goats (15-MVM-026)	2015-17	M.V.Sc. LPM
3	Echicardiographic evaluation of Malabari goats with haemoparasitic diseases. - Tejaswani K.G. (15- MVM-055)	2015-17	M.V.Sc. Clinical Medicine
4	Effect of dietary incorporation of spent rosemary (rosemarinus officinalis) leaf meal as an ingredient in kids starter - S. Minu Sarah Jasmine (15-MVM-028).	2015-17	M.V.Sc. Animal Nutrition
5	Ultrasonographic characterization of follicular dynamics in postpartum Attappady Black does. Narmada. M. (2015-MVM- 030)	2015-17	M.V.Sc. Animal Reproduction

6. Publications

i) Research Papers

Sl. No.	Authors	Year	Title of the article	Name of the Journal	Vol. No. / Page No.	NAAS rating	Citation index	MVSc/PhD theses / Non-theses article
1	Bimal, P & R.T. Venkatachalapathy	2016	Economics of household Malbari Goat Farming	Intl. J. Agri. Sci. and Res.	6:529-534	4.13		Non-theses article
2	Bimal, P, R.T. Venkatachalapathy, Jamuna, V. & Rout, P.K	2017	Impact of Trainings on Knowledge level of Goat Keepers and New Entrepreneurs in Kerala	Indian Res.J. of Extension Education	5:184-89	3.66		Non-theses article
3	Bimal.P. R.T. Venkatachalapathy & Rojan.P.M	2017	Constraints and Suggestions expressed by Goat Keepers on Commercial Goat Farming in Northern Region of Kerala	Indian J. of Social Res.	58:213-20.	3.00		Non-theses article

ii) Research papers presented:

Sl. No.	Authors	Title	Name of the Seminar / Symposium / Conference	Place and Date
1	R.Thirupathy Venkatachalapathy, Anjan Behera and T.V. Aravindkshan	Identification of novel SNP at Thyroid hormone responsive (THRSP) gene of native goat breeds of India.	12 th International Conference on Goats	Antalya, Turkey, 25-30 th September, 2016
2	Sunitha Thomas and R.Thirupathy Venkatachalapathy	Udder Morphology and its Association with Milk Production in Malabari, Attappaddy Black and Crossbred (Sannen x Alpine x Malabari) goats of Kerala	8 th Kerala Veterinary Science Congress	Nov 12-13, 2016 at Pattikkad, Thrissur.
3	Thirupathy.V., Jamuna, V and Rojan, P.M.	Analysis of Production Performance of Malabari Goat under field condition	8 th Kerala Veterinary science Congress.	Nov 12-13, 2016 at Thrissur

iii) Books / Training Manuals

1. Monograph on Malabari Goat
2. Thirupathy Venkatachalapathy and Bimal, P.Basheer, Rojan, P.M. (2016). Aduvalarthal Adthayakaramaya Suyamthozhil

7. Awards/ honours:

Sl. No.	Name of the institution / staff / student	Name of the award / honour	Awarding body	Purpose of award	Nature of award
1	Dr.R.Thirupathy Venkatachalapathy	International Travel Grant	Science Engineering Research Board, DST, GOI	Attend 12 th International Goat conference	Cash Rs.74,000/-
2	Dr.R.Thirupathy Venkatachalapathy	Best poster award	8 th Kerala Veterinary science Congress, 2016. IVA	Best presentation	Citation and memento
3	Dr.R.Thirupathy Venkatachalapathy	Best oral paper	ISSGPU	Best presentation	Citation and memento

8. Extension activities (radio talks, TV documentaries, technology developed and transferred etc)

ii) Farmers Visited to farm: 1527

iii) Patent applied /Technology developed

- ❖ Developed an easy to use Weight measuring tape for the use in the field. Gives body weight in kg by directly adding Girth and height of goats above 6 months.

9. Significant achievements (No of animals produced and sold, new strains developed etc)

Production

S.No.	Items	Quantity	Receipts (Rs.)
1	Number of animals sold	166	911435
2	Milk sold (lit)	5375	301796
3	Manure sold (Kg)	31250	121500
4	Miscellaneous items Training		66000
			1400731

Revenue and Expenditure

Receipts (Rs.)	Expenditure (Rs.) Plan (A)	Expenditure (Rs.) Non Plan (B)	Total expenditure (A+B) (Rs.)
14,00,731	32,70,000	25,23,000	57,93,033

10. Staff details

Staff position

Sanctioned Post	Name of the incumbent	In position	Vacant
Senior Farm Supervisor (SFS)	Mathew K.K	1	Nil
Farm Supervisor (Grade II)	Suresh Kumar S	1	Nil
Assistant	Smitha Sadasivam	1	Nil
Class IV	Nidhal P.K	1	Nil

Labourers strength

Category	Sanctioned			In Position		
	Male	Female	Total	Male	Female	Total
Permanent	3	9	12	2	9	11
Total				2	9	11

11. Relevant photographs if any



Distribution of Breeding bucks to farmers by DDM, Palakkad under NABARD Project



Distribution of feed supplements to farmers by DDM, Palakkad under NABARD Project



Smt.Roja, Keezhathur, Thalassery with progenies of Superior Malabari Buck supplied from AICRP on Goat Improvement, KVASU



Training organized to Goat farmers of Puduserry, Palakkad under NABARD project

Livestock Research Station Thiruvazhamkunnu

1. Head of Station : Dr. B. Bibin Becha

2. Faculty Position:

Cadre: Assistant Professor	2
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3. Faculty Improvement Programme: 1

4. Training Programmes

- Training on reproductive management of cattle to farmers & extension functionaries
- Training on Nutritional management of cattle to farmers & extension functionaries
- Training on Hoof care management conducted in association with Dept of Surgery, CVAS-Mannuthy
- Training on Motivation, Positive Thinking & Soft Skills imparted to students of CASM, Thiruvazhamkunnu
- Internship training- BVSc & AH Mannuthy & Pookode
- Internship training- BTechMannuthy
- On the Job Training VHSC students
- Training for Veterinary Officers- 3 months

5. Farm Advisory Services

- 60 Farmers given expert advice in starting entrepreneurships based on dairy farming and goat rearing
- Veterinary Hospital provides services to farmers, pet lovers

6. Livestock Research Station (LRS) Thiruvazhamkunnu, Palghat is the oldest and most serene campuses that Kerala Veterinary and Animal Sciences University (KVASU) have under its belt. Started as a Cattle Farm in 08-04-1950 it synchronizes an ideal balance between humans, livestock and Mother Nature and falls in the buffer region of Silent Valley Forest Division.

The total land holding is of **163 hectares** and is divided as

Land Used as	Area
Fodder	50
Coconut	13
Arecanut	7
Cashew	15
Integrated Farming	6
Agro Forestry	6
Buildings	1
Road	2.5
Artificial Forest	46
Others	16.5
Total	163

Objectives

Objectives of LRS were redefined by KVASU to include

1. To impart training for farmers, internship students, PG students, livestock inspectors, DEO's and Veterinarians
2. To undertake problem oriented and adaptive research projects in feeding, breeding and management of livestock
3. To develop sustainable cross bred cattle that could best accustom to Kerala climatic conditions
4. To conserve native breeds of livestock
5. Undertake researches to find panacea to problems encountered in breeding, feeding and management of domestic animals
6. To undertake extension and technology transfer initiatives in animal husbandry sector
7. To establish demonstration units of various domestic animals
8. To undertake research projects in fodder production and conservation
9. To conserve the natural forest blanket of campus and to undertake studies on ecology, nature and forestry
10. To distribute seeds of good quality fodder and livestock to farmers

Human Resources

LRS has a great array of human resources and contributes most in terms of social well being to Kottopadam Gramapanchayath of Palghat. Scientist, Ministerial staff, Farm staff and labourers work hand in hand and in perfect harmony to achieve above said objectives of this farm.

Livestock Resources

LRS has a vivid variety of livestock resources and are proud to host among cross bred cattle Murrah Buffaloes, Vechur Cattle and Attapadi Black goats etc in its campus

Crossbred Cattle

Milch	48
Dry	30
Heifers	56
Bull Calves	41
Female Calves	25
Bull	4
Total	204

Buffaloes

Milch	7
Dry	3
Heifers	8
Bull Calves	1
Female Calves	2
bull	1
Total	22

Vechur

Milch	6
Dry	5
Heifers	9
Bull Calves	4
Female Calves	3
Total	27

Goats

Doe	39
Buck	11
Kids	4
Total	54

Poultry& Fancy birds

Italian Bantam	6
Cochin Bantam	7
White polish	4
Old English game	3
Duck	8
White cocatails	4
Grey cocatails	1
Lovebirds	9
Bengal Finches	4
Red Pigeon	2
Sulfur Crested cocatails	3

Farm Products

SL. No.	ITEM	INCOME
1	Cow milk	2435492
2	Buffalo milk	206682
3	Cow dung	328306
4	Goat dung	11570
5	Egg (Hen)	2502
6	Duck egg	900
7	Buck sale	13200
	Farm produce Total	2998652
8	Firewood	22755
9	Green grass	886228
10	Co3 slips	72575
11	Coconut	395013
12	Arecanut	1120160
13	Cashew	900166
14	Mango	54950
15	Palm	5110
16	Jackfruit	23101
17	Suppota	400
18	Gooseberry	1001
19	Tamarind	1000
20	Pepper	16650
	Agri. Produce Total	3499109
21	Miscellaneous	384782
	Total	6882543

Research Outputs

Attapadi Black Goat has been identified as a breed prolific in nature and to have heat tolerance best suited to Attapadi region of Palghat. Murrah Buffalo is found to be the best suited breed used in grading up of local buffalo breeds in Kerala. A demonstration unit of model goat farm, Artificial Ponds, Check Dams and Bunker Silo has been developed for farmers benefit.

Road Ahead

Focused researches are underway in integrated farming and linking animal husbandry with apiary and fisheries sector. LRS has always kept in mind to undertake research and development from a farmer's purview and is regarded by local livestock farmers as the one stop panacea for all their livestock related problems. The campus show cases immense possibility to be developed as the best campus in Kerala with regard to water Conservation strategies.

University Livestock Farm and Fodder Research & Development Scheme, Mannuthy

The farm was established on 4th May 1917 under the Thiru- Kochi Government as Ollukara Central Farm and later it became a part of Kerala Veterinary College in 1955. In 1972 it was renamed as University Livestock Farm under Kerala Agricultural University & now it is working as University Livestock Farm & Fodder Research Development Scheme under Kerala Veterinary & Animal Sciences University. The University Livestock Farm houses 95 numbers of Milking Cows and its followers totalling to 275. Average daily milk production is 720 Ltrs. 86 numbers of Buffaloes out of which 17 are milch are maintained which produces 80 Ltrs of milk per day. The farm acts central for field training of UG students (B.V.Sc& AH), B.Sc Agri, B.Tech (Dairy Sciences) B.Sc (C&B). It is the training centre for the programmes like Dairy Diploma, Livestock Assistant, and Farmers Training etc. It is a Model Dairy unit with cross bred animals for demonstrating Scientific & hygienic milk production. The Unit facilitates research on farm animals in the area of nutrition, management & Animal reproduction. In the Fodder Research Development Scheme Hybrid Napier (CO2, CO3, CO4, CO5 & Killikulam), Guinea grass, and Congo signal Fodder Grass varieties are cultivated in 13 hectare of land. On an average 10 tons of green grass is produced per day.

Objectives:

- To impart training for BVSc. AH, B Tech Dairy and Diploma students of Kerala Veterinary & Animal Sciences university
- To impart training for Livestock Assistants & Farmers.
- To produce quality milk from crossbred cattle and buffaloes
- To become a model dairy farm
- To promote research in the areas of feeding, management and reproduction in cattle, buffaloes, fodder cultivation and development.
- To provide research facility to post graduate and doctoral students.

Details of livestock population as on 30.06.2017 (Breed / Strain /Age / Sex wise)

Sl No	Item	Number (Cattle)	Number (Buffalo)
1	Total number of animals	275	86
2	Adult males	NIL	NIL
3	Adult females	211	14
4	Non pregnant females (heifers)	21	14
5	Milch animals	95	17
6	Dry non pregnant cows	7	9
7	Dry pregnant cows	21	20
8	Heifers below 18 month of age	24	10
9	Calves (below 6 months)	40	5
10	No of calvings	32	3
11	No. of calves born alive (M + F)	18+14	2+1

2. Current activities

Institution	No. of students	From	To
Farm training for Dairy Diploma students, Mannuthy (2015 Admn COVAS Pookode)	05	24.10.2016	20.11.2016
Farm training for Dairy Diploma students, Mannuthy (2015 Admn SIVAS Kannur)	15	1.11.2016	28.11.2016
Farm training for Dairy Diploma students, Mannuthy (2015 Admn COVAS Mannuthy)	12	5.12.2016	31.12.2016

1. Conference/seminar/training conducted

Name & Designation	Details of Training conducted			Sponsoring Organization
	Topic	Venue	Date	
Dr. Surej Joseph Bunglavan	Fodder cultivation and farm management	Entrepreneurial Training for farmers of Pullazi Kole Sahakaran Sangham at CV&AS Mannuthy	18.07.2016	Directorate of Entrepreneurship, KVASU
	Feed and Feeding management of goats	Hands on training programme on commercial goat rearing for farmers, Goat and sheep farm, Mannuthy	10.08.2016	Goat and sheep farm, CVAS, Mannuthy
	Eco-friendly Livestock farming	ULF & FRDS Mannuthy	24.10.2016 27.10.2016 23.11.2016	Revolving Fund Project, ULF & FRDS
	Experiential Training on Prophylactic Hoof Care in Farm Animals	ULF & FRDS Mannuthy	April 21-22, 2017	Veterinary Surgery & Radiology Dept. CV&AS Mannuthy

3. Conference/seminar/training attended

Name & Designation	Details of Seminars			Sponsoring Organization
	Topic	Venue	Date	
Dr. Surej Joseph Bunglavan	8 th Kerala Veterinary Science Congress (KVSC 2016)	Hotel Dream City, Pattikkad, Thrissur	12-13 November 2016	Indian Veterinary Association, Kerala
	Kerala Science Congress (29 th KSC)	Mar Thoma College, Thiruvalla	28 th to 30 th January 2017	Kerala State Council for Science, Technology & Environment.
Dr. Ajith KS	ANACON-2016 X th Biennial Conference	SVVU Thirupati	9-11 November 2016	Animal Nutrition Association

4. Research projects with outlay and funding agency (include PG and PhD projects carried out in the unit)

Name of Project	Funding Agency	Name of PI	Name of Co-PI	Outlay
State Plan projects				
Increasing productivity of cross bred cattle of University Livestock Farm	State Plan	Dr. Shibu Simon	Dr. Surej Joseph Bunglavan Dr. Ajith KS	Rs. 60 Lakhs
Strategies for improving the fodder production	State Plan	Dr. Surej Joseph Bunglavan	Dr. Shibu Simon Dr. Ajith KS	Rs. 30 Lakhs
Assessing the performance of Murrah Buffalo herd for milk and meat production in hot and humid climate of Kerala	State Plan	Dr. Ajith KS	Dr. Shibu Simon Dr. Surej Joseph Bunglavan	Rs. 25 Lakhs

5. Research

PG Research Works

1. Performance of early lactating cross bred cows at different ratio of concentrate and roughage.
2. Evaluation of hydroponics fodder as a partial feed substitute on the ration of crossbred calves.
3. Fertility management in crossbred cattle during heat stress by fortifying luteal function.
4. Uterine involution and fertility in cross bred cows tried with ecobolic during the puerperium.
5. Endometrial cytology in post partum cross bred dairy cows and its correlation with fertility.
6. Ultrasonographic studies on periovulation follicular dynamics and response to GnRH therapy in repeat breeding cattle with prolonged estrus.
7. Ultrasonographic studies on uterine and ovarian changes during early pregnancy in bovines.
8. Testing of palatability of silage made from different water hyacinth materials and different additives.
9. Assessment and alleviation of transition stress from pregnancy to lactation CB dairy cattle.
10. Metabolic profile of crossbred dairy cows during transition period.
11. Polymorphism study on candidate genes affecting height in vechur and crossbred cattle of Kerala.

Ph.D. Research

1. Yield and quality of transvaginally retrieved oocytes in normal and repeat breeding cattle.
2. Evaluation of rumen fermentation pattern and nutrient utilization in Murrah buffalo, Vechur and crossbred cattle on different feeding regimen.
3. Reproductive performance of early postpartum cross-bred cows supplemented with bypass fat and subjected to hormonal induction of oestrus.
4. Meteorological profile of Thrissur and assessing its relationship with physiological stress parameters in crossbred cattle.

6. Publications

1. Dr. Surej Joseph Bunglavan 2016. Feeding Management of Periparturient Dairy Cows. *Vetsinfo News Letter*, 19th June 2016.
2. Dr. Surej Joseph Bunglavan 2016. Nutritive Enhancement of Poor Quality Forages for Feeding Dairy Cattle and Buffaloes. *Vetsinfo News Letter*, 23rd June 2016.
3. Dr. Surej Joseph Bunglavan 2016. Use of fermented liquid feeds for feeding swine. *Vetsinfo News Letter*, 2nd July 2016.
4. Dr. Surej Joseph Bunglavan 2016. Preparation of a Standard Mineral Mixture for Cattle/Buffaloes. *Vetsinfo News Letter*, 21st July 2016.
5. Dr. Surej Joseph Bunglavan 2016. Potential use of de-oiled mahua seed cake as a moderate source of protein and secondary metabolites in ruminant feeding. *Vetsinfo News Letter*, 21st July 2016.
6. Dr. Surej Joseph Bunglavan 2016. Chemical disinfection and commonly used disinfectants in livestock and poultry farming. *Vetsinfo News Letter*, 8th July 2016.
7. Effect of Dietary Incorporation of Nutraceutical Residue (Alfalfa Pellet) on Growth Performance and Haematological Parameters in Cross Bred Calves, 2016. K.Jasmine Rani, C.R.Chithrma Seethal, **Surej Joseph Bunglavan**, K.Ally and K.Shyama. *Indian Journal of Natural Sciences* (35: 10841-10846).
8. Effect of Dietary Incorporation Of Ksheerabala Residue On Dry Matter Intake And Nutrient Digestibility In Crossbred Calves, 2016. Chithrma Seethal C. R ., Jasmine Rani K., **Surej Joseph Bunglavan** and Ally K. *International Journal of Agriculture Food Science & Technology* 7: 2249-3050.
9. Dietary Incorporation of Ksheerabala Residue and Its Effect on Nutrient Utilisation, Growth Performance and Blood Biochemical Parameters in Crossbred Calves. K. Jasmine Rani*, K. Ally, C.R. Chithrma Seethal, **Surej Joseph Bunglavan**, P. Gangadevi and K. Shyama, *Indian J. Anim. Nutr.* 2016. 33 (4): 383-387.
10. Utilization of Opuntia (*Opuntia ficus indica*) as a source of feed for ruminants, 2016. **Ajith, K.S.**, Chandrapal Singh, K., Prabhu, T.M., Gloridoss, R.G., Narasimhamurthy, H.N. and Madhura, R. Proceedings of Tenth Biennial conference of Animal Nutrition Association. SVVU, Thirupathi.
11. Evaluation of Spineless cactus (*Opuntia ficus indica*) as Energy supplement in Diets based on Finger millet straw and Maize grain by in vitro Technique, 2017. **Ajith, K.S.**, Arpitha, R., Madhura, Y., Prabhu, T.M., Gloridoss, R.G., Narasimhamurthy, H.N. and Chandrapal Singh, K., *International Journal of Innovative Research in Science, Engineering and Technology*. 6(6): 10976-10982.
12. **Shibu Simon***, K.N. Aravinda Ghosh and A. Ramanathan. 2016. Ultrasonographic assessment of conceptus in canine pregnancy. Compendium XXXXII Annual Convention of The Indian Society for The Study of Animal Reproduction, 6-8 December, Tirupati. Pp 120-132.
13. Karthik V. Kuttan, Metilda Joseph, **Shibu Simon**, K. N. Aravinda Ghosh and Anish Rajan. 2016. Effect of intrapartum fetal stress associated with obstetrical interventions on viability and survivability of canine neonates. *Veterinary World*, EISSN: 2231-091, www.veterinaryworld.org/ Vol.9/December-2016/25.pdf pp 1485-1488
14. **Shibu Simon**, Lekshmi Bhai, K., Resmi S Nair and Shameem Abubaker P.S., 2017. Clinical efficacy of whelping induction protocol using mifepristone in advanced pregnant bitches. *Paper ID: ART20171884*. Volume 6 1510-1513.
15. Arokia Robert M, **Shibu Simon**, Kurien, M.O and Praveen S. 2017. Therapeutic Management of Hydrometra in a Malabari Doe. *International Journal of Science, Environment and Technology*. 6.1418 – 1420
16. **Shibu Simon**. 2017. Application of Ultrasonography in the Critical Management of Canine Pregnancy. *IVA news letter*. 38.4. Pp 6-7.

14. Extension activities (radio talks, TV documentaries, technology developed and transferred etc)

No. of visitors to the Farm (People): 2000 nos.

(Dairy Farmers, Farmer club members, Dairy Extension Officers, ATMA Exposure visit, Farmers exposure visit, Field trip, Group study, Study tour, Study Trip, Students from different schools, Veterinary Colleges, SHG Groups, MILMA trainees, Milk societies, Grama panchayat, Kudambasree units, Army trainees, Health inspectors, Officers of Dairy Department)

9. Significant achievements (No of animals produced and sold, new strains developed etc)

Cattle Farm	Buffalo Farm	FRDS		
Total Milk Production (Lakhs Liters)	Total Milk Production (Liters)	Total Fodder Production (Tons)	Sale of Dry Cow Dung (Tons)	Sale of fodder slips (n)
265,653	55,418	2302.65	65.23	307000

10. Staff details

Sl. No	Name and designation of the Teaching Staff	Discipline	Residential address	Email ID	Contact No.	
					Land line (Resi)	Mobile
1.	Dr. Shibu Simon Professor & Head	Animal Reproduction Gynecology and Obstetrics	Mappilaparambil(H), East Fort, Thrissur-680005	shibu@kvasu.ac.in		9446320200
2.	Dr. Surej Joseph Bunglavan	Animal Nutrition	Bunglavlil house, Gandhinagar Main Street, Cheroor, Thrissur	surej.joseph@kvasu.ac.in		9526862274
3.	Dr Ajith KS	Animal Nutrition	Kalarikkal House, Amballur, Alagappanagar P.O., Thrissur Dist. 680302	ajithks@kvasu.ac.in		9447203151

11. Relevant photographs if any



Laboratory Hall



Renovated Buffalo Heifer shed



New Road to Buffalo Shed



Sick Animal Shed, Cattle Farm



Cultivation of Hybrid Napier CO5 fodder grass in new fodder plots



Roof top sprinklers



Raised platform for cut green fodder



Fodder reaper cum harvester



Rain water harvesting tank

UNIVERSITY POULTY AND DUCK FARM, MANNUTHY



The University Poultry & Duck Farm has been started in the year 1955. This is the 62st year, it serves the public. We are having 30 breeds and varieties of chicken, three breeds of ducks, two varieties of Chinese goose, three varieties of Guinea fowl, two varieties of turkey and Japanese quail, altogether 41 different varieties of birds. We are supplying parent stock to the Regional Poultry Farms of Govt. of Kerala, who are producing commercial chicks out of this parents stock and supplying it to the farmers through Egger nurseries. We are also supplying day old commercial chicks to the farmers directly and also through Egger nurseries. In this financial year one P.G and one PhD research was completed using the facility available in this farm. Twenty B.V.Sc students were rearing birds of their own under non-credit course ETR, around 120 B.V.Sc. students of both CoVAS, Mannuthy and CoVAS, Pookode got internship training, 7 Diploma students were getting Farm practice from this farm. Apart from this, 150 B.V.Sc. students were getting their practical exposure from this farm. This farms annual income is increased to two crores during this period.

This farm has organised the 8th Kerala Veterinary Science Congress (KVSC 2016) and also this farm has published three issues of JIVA (Journal of Indian Veterinary Association) during this period. This farm has organised 4 farmer training programme during this period.

1. CURRENT ACTIVITY

1. One M.V.Sc. student is doing her research in this farm.
2. Imparting practical training to the B.V.Sc students.
3. Implementation of plan research project “Selection for eighth week body weight in Kuttanad ducks to produce a broiler duck line” worth Rs. 14.5 lakhs.
4. Implementation of plan project “Augmenting backyard poultry production in Kerala” worth Rs. 70 lakhs.
5. Conducting of courses like Study circle (STC) and Livestock Farm Practice (LFP).
6. Conducting internship training to around 120 B.V.Sc. students of both CVAS, Mannuthy and COVAS, Pookode.

7. Under ETR 321 course, around 2000 chicks are going to be reared by 20 students and each student will earn around Rs. 10,000.
8. Imparting practical training to the P.G. and PhD students.
9. Imparting practical training to the BSc. (Hons) students of College of Co-operation, Banking & Management, KAU.
10. Conducting two weeks On Job Training (OJT) to the Vocational Higher Secondary Students.
11. Conducting vocational training to the farmers on Layer farming and Egger nursery, Broiler farming and also on Quail farming.
12. Conducting training to the Kudumbasree volunteers on poultry farming.
13. Conducting on-farm training to the Village Extension Officers.
14. Supplies around 5 lakh commercial chicks and 40 thousand parent stocks of different varieties of chicken, ducks etc.
15. Will earn around Rs.2.2 crores in the current financial year.

2. CONFERENCE/SEMINAR/TRAINING CONDUCTED

Sl. No	Name and designation of the Scientist	Title of the Conference/ Seminar/training conducted	Duration From To	Place	Approx. cost involved
1.	Dr. S. Sankaralingam Assistant Professor & Head	8 th Kerala Veterinary Science Congress 2016 held at hotel Dream city, Pattikkad	12-11-16 13-11-16	Hotel Dream City, Pattikkad	Rs. 13.25 lakhs

8th Kerala Veterinary Science Congress Held At Hotel Dream City, Pattikkad On 12th& 13th November, 2016

On 12th November, 2016, the curtains were down for the 8th Kerala Veterinary Science Congress jointly organised by Indian Veterinary Association, Kerala and Mannuthy Veterinary College IVA Unit at Hotel Dream City, Pattikkad.

This flagship programme of our Association has shown a steady growth in volume and contents, over the last seven editions. The Eighth Edition has truly lived up to the tradition and has, by an all time high profile official patronage, scaled up its status to a National level. Dr. P.C. Alex, Chairman of the Organising Committee welcomed the gathering. At his welcome address he requested the chief guest to take necessary step to create Indian Council of Veterinary Research on par with that of ICAR. Dr. Chandramohan Nair, President, Indian Veterinary Association was presiding the function.



Sri. Devandra Chaudhry IAS, Animal Husbandry Secretary, Govt. of India inaugurating the 8th Kerala Veterinary Science Congress by lighting the lamp

The 8th Kerala Veterinary Science Congress was inaugurated by Sri.Devendra Chaudhry IAS, Hon. Animal Husbandry Secretary, Govt. of India by lighting the lamp at around 11 am.His gracious presence and the down to earth messages to the Association and State Level officials of Animal Husbandry were well taken. The Hon.Secretary offered all assistance to the Animal Husbandry sector of the state. He mentioned about the need for detailed study on infertility problem in crossbred cows and also plan to improve the native cattle breeds like vechur by Genome estimated breeding value by spending around 850 crores. He also assured assistance worth Rs. 50 lakhs to set a high security laboratory for animal diseases at Thiruvalla. He congratulated the organisers for the introduction of Farmer's session in this conference. He also assured necessary compensation for the duck farmers who incurred heavy loss due to avian influenza outbreak in Kerala.



Sri Anil X., IAS, Vice-Chancellor of KVASU delivering the key note address

Sri.Anil X, IAS, Vice-Chancellor of Kerala Veterinary & Animal Sciences University and Animal Husbandry Secretary delivered the key note address. It was heartening to note that the Government is fully empathized with the livestock farmers and the gross constraints faced by them. It was a pleasant surprise to see him taking up the issue of double standards of lending rates by the public sector banks for agricultural and livestock finance.



Dr. N. N. Sasi, Director of Animal Husbandry releasing the compendium

Dr.K.R.Arunkumar, President, KGVOA, rightly took up the issues of Bird Flu containment and requested the Govt. of India to review the RRT protocols, which proved disastrous for the field level officers and staffs. He also outlined the difficulties faced in sample submission for Bird flu confirmation. Dr.N.N.Sasi, Director of Animal Husbandry, while releasing the compendium, drew attention to the massive loss in the duck farming and requested a compensation package. Dr. Rajeev of KLDB Board emphasized on the crucial role of KLDB in the roadmap to better productivity by better fertility. Dr. Joseph Mathew Registrar, KVASU facilitated and offered all help for projects to improve the sector. The inaugural function came to an end with the vote of thanks by Dr. S. Sankaralingam, Organising Secretary of the conference.

At 2.00 pm, the session on **Animal Production & Management** have been started with the lead presentation by Dr. D. Sreekumar, Professor & Head of Rajiv Gandhi Institute of Veterinary Research & Education, Pondicherry and Dr. K.P. Ramesha, Principal Scientist and Head, NDRI Southern Regional Station, Bangalore, followed by 21 oral and 7 poster presentation. The first prize in oral presentation was shared by Dr. Sathu T. and Dr. M.V. Silpa and the second prize was shared by Dr. Biya Ann Joseph and Dr. Surej Joseph Banglavan. In the poster presentation, first prize goes to Dr. R. Thirupathy Venkatachalapathy and second prize goes to Dr. M. S. Kannadhasan.

Meantime, the Session on **Animal Health Sciences** was conducted at another hall with the lead presentation by Dr. S. Ajithkumar followed by 16 oral and 12 poster presentations. In oral presentation first prize was given to Dr. B. Udayakumari and second prize was awarded to Dr. M. Vigneswari. The best poster award goes to Dr. Arthi A. and second prize was shared by Dr. B. Subramanian and Dr. Madhavan Unny.

At 4.30 pm, Session on **Basic Veterinary Science** was held with the lead presentation by Dr. A. Palanisammi, Professor & Head, Department of Biotechnology, Madras Veterinary College and Dr. Girish Varma, Dean, College of Dairy Science and Technology followed by 18 oral and 12 poster presentations. In this session first prize of oral presentation was awarded to Dr. Ambily R. and the second prize to Dr. Indu V. Raj. The best poster presentation award was shared by Dr. Uma R. and Dr. Priya P.M. and the second prize goes to Dr. Saranya K.S.

On the 2nd day (13th November, 2016), the session on **Veterinary Science in practice** started at 9.30am with the lead presentation by Dr. K. Vinod Kumar followed by 10 oral and 5 poster presentations. In this session, Dr. Jinu John was awarded first in oral presentation and Dr. Aswin S.S. was awarded second. In the poster session Dr. Melvin V. Jacob have got the first prize and Dr. B. Rekha was awarded second.

At the same time, the **Wild life** session was held at hall no. 2 with the lead presentation by Dr. R. Sridhar, Professor & Head, Department of Pathology, Madras Veterinary College followed by 3 oral and 3 poster presentations. In the oral presentation, Dr. Rani Maria Thomas won the first prize and Dr. K.B. Sumena won the second prize. In the Poster presentation, Dr. T. Rajeev was awarded the first prize and Dr. Maruthi S.T. with the second prize.

The session Innovations by Dairy Farmers started at 11.00am. Four farmers namely Sri. M. B. Gopalakrishnan from Irinjalakuda, Sri P. Sudeer from Kadalasseri, Sri. Sreejith Sarma from Vaikom and Sri. Chandrasekharan Nair from Thiruvananthapuram presented their innovations in dairy farming.



Farmer Sri. Chandrasekharan Nair presenting his innovation

On 13th November, 2016, the valedictory session was inaugurated by Sri.V.S.Sunilkumar; Hon. Minister for Agriculture by lighting the lamp. In his inaugural speech, he emphasized the need for a coordinated work of Agriculture and Animal Husbandry Departments for the Organic farming movement as part of the prestigious Harithakeralam. He also honoured the farmer delegates and awardees of the various sessions. Dr.A.Kowsigan, Thrissur District Collector, stressed the importance of Veterinarians in the rural economy. Dr.C. Sreekumar, General Secretary, KGVOA congratulated the organizers for a well conducted programme. Dr. Manoj Nair, Joint Secretary (SZ) facilitated the gathering. Dr. Sai Prasad, General Secretary, IVA welcomed the guests. Dr. Shameem Aboobaker, Vice-Chairman of the Organising committee proposed the vote of thanks.



Hon. Agriculture Minister Sri. V. S. Sunil Kumar inaugurating the valedictory function by lighting the lamp



Thrissur District Collector Dr. A. Kowsigan IAS delivering the Key note address

The two day deliberations have successfully developed an exchange of ideas among the policy makers, administrators, academicians, clinicians and students. We hope, the 9th edition will surely scale up to be an international event. The Mannuthy Unit of the IVA has been the real winner and this association is indebted to their supreme efforts, innovations and commitments for the ever memorable achievement of making the 8th KVSC a mile stone in our history.

3. CONFERENCE/SEMINAR/TRAINING ATTENDED

Sl. No	Name and designation of the Scientist	Title of the Conference/ Seminar/training attended	Duration		Place	Approx. cost involved
			From	To		
1.	Dr. S. Sankaralingam Assistant Professor	Kerala Veterinary Sciences Congress 2016	12-11-16	13-11-16	Hotel Dream City, Pattikkad	Rs.5000
2.	Dr. S. Sankaralingam Assistant Professor	Newer approaches in com comfort systems for better productivity	25-06-16	25-06-16	Thrissur	Rs.2,000
3.	Dr. S. Sankaralingam Assistant Professor	National Symposium & XIV Annual Convention of Society for Conservation of Domestic Animal Biodiversity (SOCDAB)	08-02-17	10-02-17	CV&AS, Mannuthy	Rs. 4000

4. RESEARCH PROJECTS

Sl. No.	Title of the scheme	Name of the funding agency	Name of the PIs and Co-PIs	Outlay
1	Selection for eighth week body weight in Kuttanad ducks to produce a broiler duck line"	Plan project	Dr. S. Sankarlingam, Assistant Professor Principal Investigator	14.5 Lakh
2	Association of polymorphism of <i>prolactin</i> gene with production traits in White Leghorn and Native chicken	PG Research	Dr. S. Sankaralingam, Major Advisor	30 thousand

OTHER PROJECTS

Sl. No.	Title of the scheme	Name of the funding agency	Name of the PIs and Co-PIs	Outlay
1	Augmenting backyard poultry production in Kerala	Plan Scheme	Dr.S. Sankaralingam, Assistant Professor & Head, Principal Investigator	70 Lakh
2	Augmenting production facility in University Poultry & Duck Farm hatchery	Plan Scheme	Dr.S. Sankaralingam, Assistant Professor & Head, Principal Investigator	10 Lakh
3	Student's Egger Nursery	UG project for the course ETR 321	Dr. S. Sankaralingam, Co-ordinator	0.9 lakh

5. PUBLICATIONS

Name of the Centre / Department / Research Station: University Poultry & Duck Farm, Mannuthy

I. Research Article Published : 2

Sl. No.	Authors	Year	Title of the article	Name of the Journal	Vol. No. / Page No.	NAAS rating	Citation index	MVSc/PhD theses / Non-theses article
1	Manvir Singh Nahal, S. Sankaralingam, Leo Joseph, P. Anitha & M.T. Dipu	2016	Effect switching from starter to finisher ration at different ages on growth performance of gramasree cockerels	JIVA	14(1): 24-29	Nil	Nil	MVSc Thesis article
2	G. Greeshma, S. Sankaralingam, Leo Joseph, P. Anitha & T.V. Aravindakshan	2016	Association of SNP in the exon 2 of <i>ovocalyxin-32</i> gene with production traits in IWN strain of White Leghorn	JIVA	14(2): 32-34	Nil	Nil	MVSc Thesis article

II. Research Papers Presented : 2

Sl. No.	Authors	Title	Name of the Seminar / Symposium / Conference	Place and Date
1	S. Sankaralingam	"Comparison of Reproduction Performance of Different Varieties of Fancy Chicken with the White Leghorn Birds"	8 th Kerala Veterinary Science Congress 2016	Hotel Dream City, Pattikad
2	S. Sankaralingam, Thirupathy Venkatachalapathy & M. Kabeer	A report on Lakshdweep desi fowl and their managemnet	XIV Annual Convention of Domistic Animal Biodiversity 2017	CV&AS, Mannuthy

1. Popular Articles / Technical Report published : 2

Sl. No.	Authors	Title	Name of the Journal / Magazine / Daily etc.	Date
1	Dr. S. Sankaralingam	Breeding for the production of hybrid ducks	Training Manual for 21 days faculty training programme on "Augmentations in conservation and improving genetic resources of indigenous poultry for food security"	09.11.2016
2	Dr. S. Sankaralingam	Goose rearing	Book on "Poultry Farming" published by TANUVAS	23.03.2017

2. Non-Technical Reports published : Nil

Sl. No.	Authors	Title	Name of the Journal / Magazine / Daily etc.	Date

3. Pamphlets / Leaflets / Handbooks released :3

Sl. No.	Title	Authors / Department	Language
1	Training handout on "Quail production"	S. Sankaralingm, P. Anitha, Binoj Chacko, Harikrishnan S., Suja C.S. and Sabitha Antony	Malayalam
2	Training handout on "Layer production"	S. Sankaralingm, P. Anitha, Binoj Chacko, Harikrishnan S., Suja C.S	Malayalam
3	Training handout on "Broiler production"	S. Sankaralingm, P. Anitha, Binoj Chacko, Harikrishnan S., Suja C.S	Malayalam

4. Books / Monographs / Manuals : 2

Sl. No.	Authors	Year	Title	Publisher
1	S. Sankaralingam (Editor)	2016	Journal of Indian Veterinary Association Vol 14 Issue 1	Indian Veterinary Association, Kerala
2	S. Sankaralingam (Editor)	2016	Journal of Indian Veterinary Association Vol 14 Issue 2	Indian Veterinary Association, Kerala



JIVA Vol.14 Issue 1 is released at World Zoonosis day celebration 2016 on 06.07.2016 held at Thodupuzha

6. AWARDS AND HONOURS

- a. Got Appreciation for excellent team effort for the successful conduct of the 8th Kerala Veterinary Science Congress from the Indian Veterinary Association, Kerala

7. EXTENSION ACTIVITIES

1. Conducted two vocational training on “Egger Nursery and Poultry farming to farmers as course director.
2. Conducted one vocational training on “Current trends in quail farming” to farmers as course director.
3. Conducted one vocational training on “Broiler production and management” to farmers as course director
4. 14 days On job training (OJT) to 28 students of VHSC, Ayyanthole.
5. Counseled around 50 farmers on starting poultry farm, treatment etc.
6. Enrolled 90 cadets into the NCC, conducted 105 periods of NCC parade to 200 cadets of 1(K) R&V SQN NCC, Mannuthy as Associate NCC Officer.

8. SIGNIFICANT ACHIEVEMENTS

A. LIVESTOCK POPULATION AS ON 01.04.2017

Sl. No.	Species / Breed	Old Stock	New Stock	Species/Breed Total
	Fowl			
1	Gramasree	3459	2773	6232
2	White Leghorn		467	467
3	White Plymouth Rock	8	308	316
4	Red Cornish	21	316	337
5	Australorp	4	431	435
6	Rhode Island Red		298	298
7	New Hampshire		172	172
8	Desi Naked neck & Frizzled		498	498
9	Tellichery		235	235
10	Kadaknath	261	628	889
11	Fancy	163	994	1157
13	Aseel		102	102
	Fowl total	3916	7222	11138
	Duck			0
1	WP		784	784
2	Kuttanad		1471	1471

3	Muscovy		21	21
	Duck total	0	2276	2276
	Guinea fowl		24	24
	Turkey		106	106
	Japanese Quail	1150	504	1654
	Goose		11	11
	Total	5066	10143	15209

B. EGG PRODUCTION

Sl. No.	Species	No. of Egg Produced	
		2015-16	2016-17
1	Chicken	774021	763274
2	Duck	55692	110540
3	Quail	277542	348907
4	Turkey	1925	3182
5	Guineafowl	582	564
6	Goose	0	0
Total		1109762	1226467

1. MONTHWISE PRODUCTION AND DISPOSAL OF CHICKEN EGG FOR THE YEAR 2016-17

Month	PRODUCTION					SOLD/INCUBATED				DISPOSE
	HATCH	TABLE	SMALL	CHIPPED	SMASH	HATCH	TABLE	SMALL	CHIPPED	SMASH
Mar-16	41320	9567	909	1665	442	44488	9834	849	1683	442
Apr-16	22552	6911	2144	987	345	22010	7130	2066	985	345
May-16	2594	2470	688	225	79	4051	2685	849	248	79
Jun-16	0	2812	10027	472	44	0	1640	9909	451	44
Jul-16	21881	35753	12786	2046	219	11047	28346	12350	1841	219
Aug-16	65778	20453	2666	2743	485	63642	27698	3192	2877	485
Sep-16	59653	18396	649	2374	519	65416	16866	490	2321	519
Oct-16	58406	14222	358	2027	535	59819	15740	537	2120	535
Nov-16	55500	13782	378	2480	516	46087	14084	404	2422	516
Dec-16	58269	13311	402	3117	546	68532	13308	381	3030	546
Jan-17	54193	12192	648	3471	503	48149	12403	678	3406	503

Feb-17	50882	7979	559	2230	475	51269	7782	512	2412	475
Mar-17	43346	6701	681	2353	558	51995	7389	700	2314	558
TOTAL	534374	164549	32895	26190	5266	536505	164905	32917	26110	5266
Grand Total	763274					760437				5266

2.1. MONTHWISE PRODUCTION AND DISPOSAL OF KUTTANAD DUCK EGG FOR THE YEAR 2016-17

Month	PRODUCTION					SOLD/INCUBATED					DISPOSED
	HATCH	TABLE	SMALL	CHIPPED	SMASHED	HATCH	TABLE	SMALL	CHIPPED	SMASHED	
Mar-16	0	0	0	0	0	0	0	0	0	0	0
Apr-16	561	1466	0	134	5	643	1475	0	137	5	5
May-16	0	879	0	258	0	0	637	0	246	0	0
Jun-16	0	5353	0	321	0	0	5324	0	282	0	0
Jul-16	2795	4791	1018	925	0	2490	4214	931	180	0	0
Aug-16	7184	1825	392	280	1	4817	2098	450	138	1	1
Sep-16	5988	1306	0	225	0	7568	1801	0	146	0	0
Oct-16	2467	461	0	180	0	3034	519	0	248	0	0
Nov-16	921	2322	0	160	0	1037	1567	0	180	0	0
Dec-16	0	3252	0	268	0	0	3794	0	405	0	0
Jan-17	0	4698	0	389	0	0	4769	0	389	0	0
Feb-17	0	5287	0	335	0	25	4597	0	350	0	0
Mar-17	0	5530	0	381	0	400	5970	0	307	0	0
TOTAL	19916	37170	1410	3856	6	20014	36765	1381	3008	6	6
GRAND TOTAL	62358					61168					6

2.2. MONTHWISE PRODUCTION AND DISPOSAL OF WHITE PEKIN DUCK EGG FOR THE YEAR 2016-17

Month	PRODUCTION					SOLD/INCUBATED					DISPOSED
	HATCH	TABLE	SMALL	CHIPPED	SMASHED	HATCH	TABLE	SMALL	CHIPPED	SMASHED	
Mar-16	0	0	0	0	0	0	0	0	0	0	0
Apr-16	0	0	0	0	0	0	0	0	0	0	0
May-16	0	0	0	0	0	0	0	0	0	0	0
Jun-16	0	0	0	0	0	0	0	0	0	0	0
Jul-16	0	0	0	0	0	0	0	0	0	0	0
Aug-16	1567	45	167	34	0	1070	0	158	19	0	0

Sep-16	6350	1189	0	284	0	6215	1143	0	284	0
Oct-16	6843	819	0	217	0	6440	888	0	215	0
Nov-16	2928	3616	0	265	0	3963	2669	0	272	0
Dec-16	0	4982	0	220	0	0	5769	0	212	0
Jan-17	200	6074	0	386	0	200	6049	0	390	0
Feb-17	25	5069	0	321	0	25	4192	0	318	0
Mar-17	400	4358	0	307	0	400	5226	0	297	0
TOTAL	18313	26152	167	2034	0	18313	25936	158	2007	0
GRAND TOTAL	46666					46414				0

2.3. MONTHWISE PRODUCTION AND DISPOSAL OF MUSCOVY DUCK EGG FOR THE YEAR 2016-17

Month	DAILY PRODUCTION					SOLD/INCUBATED					DISPOSED
	HATCH	TABLE	SMALL	CHIPPED	SMASH	HATCH	TABLE	SMALL	CHIPPED	SMASHED	
Mar-16	209	1	0	1	0	0	0	0	0	0	0
Apr-16	141	7	0	2	1	0	0	0	0	0	1
May-16	0	72	0	1	0	0	10	0	0	0	0
Jun-16	0	70	0	0	0	0	75	0	0	0	0
Jul-16	17	68	0	0	0	0	68	0	0	0	0
Aug-16	110	0	0	0	0	0	0	0	0	0	0
Sep-16	124	2	0	0	0	0	0	0	0	0	0
Oct-16	58	17	0	1	0	0	0	0	0	0	0
Nov-16	143	2	0	2	0	0	0	0	0	0	0
Dec-16	48	10	0	0	0	0	0	0	0	0	0
Jan-17	97	0	0	3	0	0	0	0	0	0	0
Feb-17	116	1	0	1	2	0	0	0	0	0	2
Mar-17	173	11	0	5	0	0	0	0	0	0	0
TOTAL	1236	261	0	16	3	1261	153	0	0	0	3
Grand Total	1516					1414					3

3. MONTHWISE PRODUCTION AND DISPOSAL OF QUAIL EGG FOR THE YEAR 2016-17

MONTH	PRODUCTION				SOLD/INCUBATED				DISPOSED
	HATCH	TABLE	CHIPPED	SMASHED	HATCH	TABLE	CHIPPED	SMASHED	
Mar-16	20923	2282	815	270	19063	2262	757	270	
Apr-16	17712	2410	1071	259	16360	2425	1103	259	

May-16	8896	1672	571	118	12993	1767	622	118
Jun-16	0	0	0	0	0	0	0	0
Jul-16	2448	1444	44	35	0	1379	39	35
Aug-16	22537	5237	718	272	15925	5237	708	272
Sep-16	37271	2218	1455	0	39103	2227	1385	0
Oct-16	34801	1709	1581	10	41605	1709	1616	10
Nov-16	32391	2303	1742	0	30689	2269	1742	0
Dec-16	34186	3609	1648	0	29303	3557	1645	0
Jan-17	33601	2880	1275	0	39665	2941	1273	0
Feb-17	27349	2439	1567	0	26774	2417	1552	0
Mar-17	28594	4795	1749	0	20046	4642	1709	0
TOTAL	300709	32998	14236	964	291526	32832	14151	964
GRAND TOTAL	348907				338509			964

4. MONTHWISE PRODUCTION AND DISPOSAL OF TURKEY EGG FOR THE YEAR 2016-17

MONTH	PRODUCTION					SOLD/INCUBATED				DISPOSED
	HATCH	TABLE	SMALL	CHIPPED	SMASH	HATCH	TABLE	SMALL	CHIPPED	SMASH
Mar-16	12	0	0	0	0	0	9	0	0	0
Apr-16	0	48	0	7	0	0	46	0	6	0
May-16	0	101	0	2	0	0	105	0	3	0
Jun-16	0	282	0	14	0	0	276	0	14	0
Jul-16	97	323	0	26	0	67	326	0	26	0
Aug-16	507	24	2	27	0	396	24	0	27	0
Sep-16	314	31	0	14	0	432	30	0	14	0
Oct-16	307	26	0	14	0	276	25	0	14	0
Nov-16	169	7	0	8	0	172	9	0	8	0
Dec-16	173	9	0	7	0	205	9	0	7	0
Jan-17	208	9	0	14	0	190	9	0	14	0
Feb-17	182	11	0	7	0	176	11	0	7	0
Mar-17	190	6	0	4	0	215	6	0	3	0
TOTAL	2159	877	2	144	0	2129	885	0	143	0
GRAND TOTAL	3182					3157				0

5. MONTHWISE PRODUCTION AND DISPOSAL OF GUINEAFOWL EGG FOR THE YEAR 2016-17

MONTH	PRODUCTION					SOLD/INCUBATED				DISPOSED
	HATCH	TABLE	SMALL	CHIPPED	SMASH	HATCH	TABLE	SMALL	CHIPPED	SMASH
Mar-16	0	0	0	0	0	0	0	0	0	0
Apr-16	0	42	0	0	0	0	39	0	0	0
May-16	0	30	0	0	0	0	30	0	0	0
Jun-16	0	24	0	0	0	0	27	0	0	0
Jul-16	42	2	0	0	0	23	75	0	0	0
Aug-16	128	3	0	0	0	109	3	0	0	0
Sep-16	121	6	0	0	0	155	6	0	0	0
Oct-16	42	0	0	0	0	43	0	0	0	0
Nov-16	24	0	0	0	0	23	0	0	0	0
Dec-16	13	0	0	0	0	16	0	0	0	0
Jan-17	18	0	0	0	0	14	0	0	0	0
Feb-17	17	1	0	0	0	19	1	0	0	0
Mar-17	50	1	0	0	0	50	0	0	0	0
TOTAL	455	109	0	0	0	452	181	0	0	0
GRAND TOTAL	564					633				0

C. CHICK PRODUCTION & HATCHABILITY 2016-17

a. Number of chicken produced

Item	Number
Chicken	318711
Duck	16478
Quail	153809
Turkey	1034
Guineafowl Goose	116 0

b. Species / breedwise hatchability

Sl. No.	Species / Breed	Egg set	Chicks hatched	Hatchability on Total Egg set
	Fowl			
1	Gramasree	239293	201660	84.27
2	White Leghorn	29829	24874	83.39
3	White Plymouth Rock x Red Cornish Cross	14486	11007	75.98

4	Australorp	19019	14572	76.62
5	Rhode Island Red	9844	7294	74.10
6	New Hampshire	6389	5146	80.54
7	Desi Naked Neck & Frizzled	14319	9467	66.11
8	Tellichery	4724	3855	81.60
9	Kadaknath	43801	30160	68.86
10	Fancy	16895	8881	52.57
11	Aseel	2651	1795	67.71
	Fowl Total	401250	318711	79.43
	Duck			
1	Kuttanad	15587	8404	50.50
2	White Pekin	16642	7820	47.06
3	Muscovy	976	254	26.02
	Duck Total	33205	16478	49.63
	Turkey	1973	1034	52.41
	Guineafowl	400	116	29.00
	Japanese Quail	213654	153809	71.99
	Goose	0	0	0.00
	Grand Total	650482	490148	75.35

3.1. Datewise hatchability (on Total Egg Set) of different breeds of chicken

Sl. No.	Date of setting	Date of hatch	Hatchability on (TES)										
			GS	WLH	WR & RC	ALP	RIR	NH	DC & DCF	DCT	DCK	Fancy	Aseel
1	17-Mar-16	7-Apr-16	86.12	78.40							60.82	44.90	60.00
2	24-Mar-16	14-Apr-16	80.94								59.53	48.01	62.32
3	31-Mar-16	21-Apr-16	84.19								45.99	49.45	50.00
4	7-Apr-16	28-Apr-16	81.10									57.47	
5	14-Apr-16	5-May-16	79.02									32.80	
6	21-Apr-16	12-May-16	75.44									45.09	
7	28-Apr-16	19-May-16	76.49									37.50	
8	5-May-16	26-May-16	77.49										
9	28-Jul-16	18-Aug-16	86.52	84.46	77.88	70.45	75.98	73.91	67.83	80.41	55.32	42.64	65.96
10	4-Aug-16	25-Aug-16	88.21	85.96	77.08	76.14	75.35	82.82	65.48	80.00	50.66	40.37	68.97

11	11-Aug-16	1-Sep-16	89.64	83.69	82.07	71.93	70.69	85.55	71.27	90.68	64.11	47.71	70.00
12	18-Aug-16	8-Sep-16	95.34	86.60	78.61	77.22		87.50	69.05	83.45	65.80	42.56	66.39
13	25-Aug-16	15-Sep-16	76.04	82.32				80.43	72.86	77.01	70.17	51.25	72.67
14	1-Sep-16	22-Sep-16	88.57	86.68	78.60	80.58	82.31	79.08	75.71	88.04	73.92	57.01	78.72
15	8-Sep-16	29-Sep-16	88.14	83.25	85.13	79.76	80.70	82.70	80.58	76.81	70.73	88.79	54.69
16	15-Sep-16	6-Oct-16	87.49	83.76	83.88	78.31	81.75	81.52	88.86	83.45	72.44	51.54	71.07
17	22-Sep-16	13-Oct-16	85.47	84.44	79.14	80.56	73.89	83.04	73.25	84.92	77.64	60.83	69.74
18	29-Sep-16	20-Oct-16	87.47	82.01	78.45	73.50	73.16	82.26	65.74	85.12	75.38	56.07	55.06
19	6-Oct-16	27-Oct-16	84.68	82.93	75.37	78.50	58.14	81.82	70.25	84.50	69.54	43.27	76.83
20	13-Oct-16	3-Nov-16	87.76	92.80	81.70	79.92	77.97	80.44	74.75	86.61	76.32	67.92	74.24
21	20-Oct-16	10-Nov-16	88.69	84.48	84.81	80.56	81.82	85.33	35.86	84.14	78.30	67.76	72.63
22	27-Oct-16	17-Nov-16	87.86	86.89	95.05	83.47	78.53	80.56	73.47	86.01	73.91	65.00	68.93
23	3-Nov-16	24-Nov-16	88.79	88.05	81.08	79.69	80.17	82.61	73.12	80.20	74.54	63.07	67.83
24	10-Nov-16	1-Dec-16	86.89	85.26	82.27	82.07	74.75	76.54	65.12	80.00	74.17	11.17	78.16
25	17-Nov-16	8-Dec-16	83.78	82.77	73.65	78.37	35.84	80.40	55.58	79.58	73.48	55.97	46.67
26	24-Nov-16	15-Dec-16	83.50	84.27	72.41	77.56	73.81	79.51	61.86	61.72	69.82	46.06	52.17
27	1-Dec-16	22-Dec-16	85.75	87.40	77.15	81.93	77.97	84.85	62.67	91.63	73.82	58.45	56.67
28	8-Dec-16	29-Dec-16	87.33	83.88	98.12	80.18	78.13	82.57	68.10	87.50	78.38	50.85	63.64
29	15-Dec-16	5-Jan-17	85.13	82.47	71.99	36.65	78.48	74.67	60.82	85.63	80.77	10.56	68.29
30	22-Dec-16	12-Jan-17	85.82	85.82	80.64	74.81	81.70	89.36	50.94	36.36	76.43	63.15	65.08
31	29-Dec-16	19-Jan-17	82.42	84.87	77.29	78.89	73.20	79.35	66.75	80.84	77.46	64.26	79.03
32	5-Jan-17	26-Jan-17	73.64	83.68	32.89	82.69	78.40	82.88	74.57	83.15	76.79	65.05	67.65
33	12-Jan-17	2-Feb-17	80.95	73.72	57.96	68.92	74.40	76.09	66.78	84.00	71.50	58.61	71.93
34	19-Jan-17	9-Feb-17	85.59	77.47	97.18	70.75	93.88	81.90	58.81	90.58	74.74	70.78	62.50
35	26-Jan-17	16-Feb-17	84.06	82.45	61.79	76.43	76.82	78.34	64.51	85.00	75.43	65.02	77.36
36	2-Feb-17	23-Feb-17	85.68	80.14	25.54	75.68	72.32	79.60	63.83	83.61	66.67	67.06	66.18
37	9-Feb-17	2-Mar-17	84.18	81.78	78.60	75.60	63.35	70.83	65.08	79.26	18.69	57.47	68.75
38	16-Feb-17	9-Mar-17	86.15	80.43	74.87	79.47	72.53	84.15	58.28	97.35	18.60	16.16	77.33
39	23-Feb-17	16-Mar-17	83.01	82.01	73.25	81.33	72.49	78.75	66.98	83.54	70.57	62.62	72.22
40	2-Mar-17	23-Mar-17	81.04	77.85	70.63	77.57	68.26	74.29	59.02	84.87	69.93	57.36	73.81
41	9-Mar-17	30-Mar-17	84.83	81.41	81.97	79.25	69.50	77.78	66.44	88.41	71.85	58.33	53.97

3.2. Datewise hatchability (on Total Egg Set) of other species of poultry

Sl. No.	Date of hatch	Hatchability on (TES)						
		Kuttanad duck	White Pekin duck	Muscovy duck	Turkey	Guineafowl	Japanese quail	Goose
1	7-Apr-16	47.75	65.38	20.00			74.22	
2	14-Apr-16	49.37		28.00			72.95	
3	21-Apr-16	53.38		26.67				
4	28-Apr-16	49.08		37.50			68.43	
5	5-May-16	32.28		21.28			70.36	
6	12-May-16	31.03		21.57			69.31	
7	19-May-16	52.46		13.64			68.95	
8	26-May-16	55.79					66.77	
9	18-Aug-16							
10	25-Aug-16				62.69	13.04		
11	1-Sep-16				46.51	21.88	71.00	
12	8-Sep-16				58.06	27.59		
13	15-Sep-16							
14	22-Sep-16			6.06	56.01	29.17		
15	29-Sep-16		32.19		56.03	31.58		
16	6-Oct-16	52.98	43.40	13.79	61.62	59.46	79.26	
17	13-Oct-16	51.50	54.85	4.88	61.04	56.25	69.07	
18	20-Oct-16	32.26	31.47	0.00	59.02	56.52	82.27	
19	27-Oct-16	57.88	62.68	32.00	56.90	28.00	74.54	
20	3-Nov-16	50.97	50.49		25.00	33.33	79.37	
21	10-Nov-16	40.03	27.04		39.33		81.23	
22	17-Nov-16	55.99	62.95	12.82	35.94		79.07	
23	24-Nov-16	61.95	63.18		33.90		77.97	
24	1-Dec-16	60.39	64.21	63.64	37.93		77.43	
25	8-Dec-16	60.83	58.13		33.33		74.91	
26	15-Dec-16	50.00	40.85	54.84	46.67		69.72	
27	22-Dec-16			13.33			76.77	
28	29-Dec-16				53.19		74.14	

29	5-Jan-17			54.43	47.62		75.27	
30	12-Jan-17			93.94	57.78		74.30	
31	19-Jan-17				70.69		72.63	
32	26-Jan-17				55.81		71.97	
33	2-Feb-17				69.64		75.98	
34	9-Feb-17			9.52	36.11	75.00	74.38	
35	16-Feb-17				62.50		57.36	
36	23-Feb-17			20.59	50.00		35.40	
37	2-Mar-17				53.66	20.00	48.65	
38	9-Mar-17			6.67	39.02		60.92	
39	16-Mar-17			41.38	61.70	40.00	65.26	
40	23-Mar-17			20.00	70.21	25.00	64.42	
41	30-Mar-17				45.65		77.98	

D. FEED UTILIZED (INCLUDING FEED GIVEN TO ECO-FARM UNDER ILFC COMPONENT)

1. Feed utilised for UPDF farm stock (including feed given to eco-farm) (in Kgs)

MONTH	CHICK MASH	CHICKEN GROWER	CHICKEN BREEDER	BROLILER STARTER	DUCK BREEDER	QUAIL STARTER	QUAIL BREEDER
Apr-16	0	15400	12550	3100	200	100	1050
May-16	0	22400	1200	1950	250	450	500
Jun-16	0	9000	14350	0	250	1600	700
Jul-16	1650	19750	0	300	1300	700	0
Aug-16	0	1300	24350	0	3450	0	2200
Sep-16	0	850	18500	0	2050	0	2200
Oct-16	100	850	17350	0	2250	0	1550
Nov-16	3300	900	24100	0	3600	0	2200
Dec-16	1300	450	18850	6900	2200	0	1650
Jan-17	750	350	22450	13350	3900	0	1950
Feb-17	1530	0	19000	5350	2350	0	1500
Mar-17	8650	100	15850	650	2250	0	1350
TOTAL	17280	71350	188550	31600	24050	2850	16850

2. Feed utilised for Kuttanad duck project (in Kgs)

MONTH	BROILER STARTER	DUCK GROWER	CHICKEN GROWER	DUCK BREEDER
Apr-16	2200	650		550
May-16		4000		3000
Jun-16		2350		2500
Jul-16		850		1200
Aug-16		200		700
Sep-16				1600
Oct-16		300		1400
Nov-16		200		1250
Dec-16		150		1400
Jan-17			100	650
Feb-17			200	1450
Mar-17			250	1400
TOTAL	2200	8700	550	17100

E. REVENUE RECEIVED BY SALE OF ANIMALS / PRODUCTS ETC IN THE YEAR 2015-16

Sl. No.	Animals/Products	Amount Generated		
		KVASU	VAT	Total
I	Chicks			
1	Parent stock	3929598	569792	4499390
2	Commercial	8012701	1083925	9096626
	Total	11942300	1653716	13596016
II	Grown-up/adult/culled	3381349	300860	3682209
III	Egg			
1	Hatching egg	1187665	0	1187665
2	Embryonated egg	3792	0	3792
3	Table egg	1478108	0	1478108
	Total	2669565	0	2669565
IV	Manure	87565	0	87565
	Total Revenue received	18080779	1954576	20035355

9. STAFF DETAILS

Sl. No.	Name	Designation
Technical Staffs		
1	Dr. S. Sankaralingam	Associate Professor & Head (i/c)
2	Dr. Ashitha K.	Teaching Assistant
3	Dr. Neethu K.P.	Teaching Assistant
Office Staffs		
1	Mr. Vijayakumar P.	Administrative Assistant
2	Smt. Bindu S.	Computer Assistant
8	Mr. Nishad E.S.	Class IV
Farm Staffs		
4	Mr. Haridasan T.K.	Senior Farm Supervisor
5	Mr. Roy M.D.	Farm Supervisor
6	Mr. Suresh Babu P.	Farm Supervisor
7	Smt. Licy K.L.	Farm Assistant

10. ACADEMIC ACTIVITIES

List of classes taken in the year 2016-17

Sl. No.	Name of Teacher	To whom taken	Course Number	Course credits	Hours spent
1	Dr. S. Sankaralingam	MVSc	PSC 601	2+1	28
2	Dr. S. Sankaralingam	MVSc	PSC 606	2+1	56
3	Dr. S. Sankaralingam	MVSc	PSC 607	2+1	39
4	Dr. S. Sankaralingam	BVSc	NCC 111, 121, 211 & 221	Non Credit	70
5	Dr. S. Sankaralingam	BVSc	LFP 211 & 221	Non Credit	42
6	Dr. S. Sankaralingam	BVSc	LPM 222	1+1	49
7	Dr. S. Sankaralingam	BVSc	ETR 321	Non Credit	28
8	Dr. S. Sankaralingam	BVSc	STC 411 & 421	Non Credit	28
9	Dr. S. Sankaralingam	BSc (Hons')	Anhs 2102	1+1	39
10	Dr. S. Sankaralingam	DPP	DPP 13	1+0	14
11	Dr. S. Sankaralingam	DPP	DPP 19	1+1	28
12	Dr. S. Sankaralingam	DPP	DPP 24	1+1	42
13	Dr. S. Sankaralingam	DPP	DPP 28	0+3	84
14	Dr. S. Sankaralingam	BSc (Hons') Forestry	Bass 1210	Non Credit	40
	Total				587

Advisor for the following students

Sl No.	Name of Advisor	Name of student	Admin. No.	Major/Minor advisor	period of advisorship
1	Dr. S. Sankaralingam	Greeshma Girijan	14-MVM-11	Major Advisor	01.04.16 to 10.07.16
2	Dr. S. Sankaralingam	Jeni George	14-MVM-18	Minor Advisor	01.04.16 to 10.07.16
3	Dr. S. Sankaralingam	Joby Elizabeth	14-MVM-26	Minor Advisor	01.04.16 to 10.07.16
4	Dr. S. Sankaralingam	Azhaguraja M.	15-MVM-11	Major Advisor	01.04.16 to 31.03.17
5	Dr. S. Sankaralingam	Lipin L.S.	15.-MVM-24	Major Advisor	01.04.16 to 31.03.17
6	Dr. S. Sankaralingam	Saranya K.S.	15-MVM-34	Minor Advisor	01.04.16 to 30.11.16
7	Dr. S. Sankaralingam	Rekha Mohan	14-MVM-15	Minor Advisor	15-06-16 to 31.12.16
8	Dr. S. Sankaralingam	Soma T.G.	15-MVM-49	Minor Advisor	15-06-16 to 31.03.17
9	Dr. S. Sankaralingam	Vaibhav J.S.	16.MVM-39	Major Advisor	11.01.17 to 31.03.17
10	Dr. S. Sankaralingam	Ancy M.	16.MVM-04	Minor Advisor	11.01.17 to 31.03.17
11	Dr. S. Sankaralingam	Sreeveen E.N.	16.MVM-41	Minor Advisor	11.01.17 to 31.03.17
12	Dr. S. Sankaralingam	Anandhu V.	16-BVM-55	Student Advisor	27.09.17 to 31.03.17
13	Dr. S. Sankaralingam	Rajalakshmi V.J.	16-BVM-56	Student Advisor	27.09.17 to 31.03.17
14	Dr. S. Sankaralingam	Jiji Jacob	16-BVM-57	Student Advisor	27.09.17 to 31.03.17
15	Dr. S. Sankaralingam	Anitta George	16-BVM-58	Student Advisor	27.09.17 to 31.03.17
16	Dr. S. Sankaralingam	Subina A.	16-BVM-59	Student Advisor	27.09.17 to 31.03.17
17	Dr. S. Sankaralingam	Basil Rahman K.	16-BVM-60	Student Advisor	27.09.17 to 31.03.17

11. OTHR ACTIVITIES AND RELEVANT PHOTOGRAPHS

A. Student,s Egger Nursery Project (ETR 321)

Under ETR 321 course, 20 students have evolved a project entitled “Student’s Egger Nursery” worth Rs. 90,000. They have reared 2000 birds with an additional expenditure of Rs. 45,000 and earned a net profit of Rs. 2,00,000 by selling the pullets at different age. The net profit of Rs.2,00,000 was shared among the 20 students (Rs.10000/student). The photo shows the profit distribution to the students by Dr. Leo Joseph, Director, Centre for Advanced Studies in Poultry Science, Mannuthy.



A student receiving the profit share of Rs. 10000 from Dr. Jiji R.S., Professor & Head and Programme Co-ordinator of ETR



The ETR team members with the Course Coordinator Dr. S. Sankaralingam and ETR Programme Co-ordinator Dr. Jiji R.S.

B. Vocational training on “Egger Nursery and Layer Farming”

Dr. S. Sankaralingam have conducted two trainings on “Egger Nursery and Layer Farming” to the farmers as Course Director. In the valedictory function, Dr. P. Anitha, Director, Centre for Advanced Studies in Poultry Science, Mannuhty was interacting with the farmers.



C. Organised the DPP 2015 batch study tour to Tamil Nadu Poultry industry at Udumalpet, Pollachi and Namkkal.



Diploma in Poultry Production 2015 batch students are studying the operation of Room type incubators



Students visited the Suguna Processing Plant



1. INTRODUCTION

The University Poultry & Duck Farm has been started in the year 1955. This is the 61st year, it serves the public. We are having 28 breeds and varieties of chicken, three breeds of ducks, two varieties of Chinese goose, three varieties of Guinea fowl, two varieties of turkey and Japanese quail, altogether 39 different varieties of birds. We are supplying parent stock to the Regional Poultry Farms of Govt. of Kerala, who are producing commercial chicks out of this parents stock and supplying it to the farmers through Egger nurseries. We are also supplying day old commercial chicks to the farmers directly and also through Egger nurseries. In this financial year one P.G and one PhD research was completed using the facility available in this farm. Twenty B.V.Sc students were rearing birds of their own under non-credit course ETR, around 120 B.V.Sc. students of both CoVAS, Mannuthy and CoVAS, Pookode got internship training, 25 Diploma students were getting Farm practice from this farm. Apart from this, 90 B.V.Sc. students were getting their practical exposure from this farm. This farms annual income is increased to 1.5 crores during this period.

2. CURRENT ACTIVITY

1. One M.V.Sc. and one PhD students are doing their research in this farm.
2. Imparting practical training to the B.V.Sc students.
3. Implementation of plan research project “Selection for eighth week body weight in Kuttanad ducks to produce a broiler duck line” worth Rs. 10 lakhs.
4. Implementation of plan project “Augmenting backyard poultry production in Kerala” worth Rs. 50 lakhs.
5. Conducting of courses like Study circle (STC) and Livestock Farm Practice (LFP).
6. Conducting internship training to around 120 B.V.Sc. students of both CVAS, Mannuthy and COVAS, Pookode.
7. Under ETR 321 course, around 2200 chicks are going to be reared by 20 students and each student will earn around Rs. 10,000.
8. Imparting practical training to the P.G. and PhD students.
9. Imparting practical training to the MSc. (Climate change) Integrated students of KAU.
10. Imparting practical training to the BSc. (Hons) students of College of Co-operation, Banking & Management, KAU.
11. Conducting two weeks On Job Training (OJT) to the Vocational Higher Secondary Students.
12. Conducting vocational training to the farmers on Layer farming and Egger nursery and also on Quail farming.
13. Conducting training to the Kudumbasree volunteers on poultry farming.
14. Conducting on-farm training to the Village Extension Officers.
15. Supplies around 5 lakh commercial chicks and 20 thousand parent stocks of different varieties of chicken, ducks etc.
16. Will earn around Rs.1.6 crores in the current financial year.

3. CONFERENCE/SEMINAR/TRAINING CONDUCTED

Sl. No	Name and designation of the Scientist	Title of the Conference/Seminar/training conducted	Duration		Place	Approx. cost involved
			From	To		
1	Dr. S. Sankaralingam Assistant Professor	Canine Atopic Dermatitis and Rumen Feeding	30-06-16	30-06-16	COVAS, Mannuthy	Rs. 50,000
2	Dr. Leo Joseph, Professor & Head	XXXII Annual Conference of Indian Poultry Science Association and National Symposium (IPSACON 2015)	19-11-16	21-11-16	CASM, Thiruvazhamkunnu	Rs. 20 lakh

4. CONFERENCE/SEMINAR/TRAINING ATTENDED

Sl. No	Name and designation of the Scientist	Title of the Conference/Seminar/training attended	Duration		Place	Approx. cost involved
			From	To		
1	Dr. S. Sankaralingam Assistant Professor	Kerala Veterinary Sciences Congress 2015	14-11-15	15-11-15	COVAS, Pookode	Rs.2,500
2	Dr. S. Sankaralingam Assistant Professor	XXXII Annual Conference of Indian Poultry Science Association and National Symposium (IPSACON 2015)	19-11-15	21-11-15	CASM, Thiruvazhamkunnu	Rs.5,000
3	Dr. S. Sankaralingam Assistant Professor	Introduction to Bioinformatics tools	12-05-15	14-05-15	SOAAPB and Dept. of AGB, CVAS, Mannuthy	Rs.5,000
4	Dr. Leo Joseph Professor & Head	XXXII Annual Conference of Indian Poultry Science Association and National Symposium (IPSACON 2015)	19-11-15	21-11-15	COVAS, Pookode	Rs. 5,000

5. RESEARCH PROJECTS

Sl. No.	Title of the scheme	Name of the funding agency	Name of the PIs and Co-PIs	Outlay
1	Selection for eighth week body weight in Kuttanad ducks to produce a broiler duck line"	Plan project	Dr. Leo Joseph, Professor & Head (PI) and Dr. S. Sankarlingam, Assistant Professor (Co PI)	10 Lakh
2	Standardizing age of introduction of finisher ration in Gramasree cockerels (Dr. Manvir Singh Nahal have completed his work and thesis preparation is going on)	PG Research	Dr. S. Sankaralingam, Major Advisor	20 thousand

3	Identification of SNPs of <i>ovocalyxin-32</i> gene in IWN strain of White Leghorn and its association with production traits	PG Research	Dr. S. Sankaralingam, Major Advisor	25 thousand
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OTHER PROJECTS

Sl. No.	Title of the scheme	Name of the funding agency	Name of the PIs and Co-PIs	Outlay
1	Augmenting backyard poultry production in Kerala	Plan Scheme	Dr.Leo Joseph(PI), Professor & Head and Dr.S. Sankarlingam, Assistant Professor (Co PI)	50 Lakh
2	Student's Egger Nursery	UG project for the course ETR 321	Dr. S. Sankaralingam, Co-ordinator	0.9 lakh

II. Research Papers Presented : 1

Sl. No.	Authors	Title	Name of the Seminar / Symposium / Conference	Place and Date
1	S. Sankaralingam and Leo Joseph	“ Effect of egg weight and shape index on reproduction traits of different types of Japanese quail (<i>Coturnix coturnix japonica</i>)”	Kerala Veterinary Science Congress 2015	COVAS, Pookode 14 to 15, November, 15
2	Divya V., Sankaralingam S., and Anitha P.	“Influence of varying levels of protein and enery on edible meat yield and carcass characteristics of Gramashree cockerels at 14 weeks of age”	Kerala Veterinary Science Congress 2015	COVAS, Pookode 14 to 15, November, 15
3	Divya V., Sankaralingam S., and Anitha P.	“Effect of different levels of dietary protein and energy on growth performance of gramsree male chicks at early growth stage”	XXXII Annual Conference of Indian Poultry Science Association and National Symposium (IPSACON 2015)	CASM, Thiruvazhamkunnu 19-21, November, 16
4	Divya V., and Sankaralingam S.	“Influence of varying levels of dietary protein and energy on growth performance and carcass characteristics of gramasree cockerels at 16 weeks of age	XXXII Annual Conference of Indian Poultry Science Association and National Symposium (IPSACON 2015)	CASM, Thiruvazhamkunnu 19-21, November, 16
5	Divya V., Sankaralingam S., and Anitha P.	“Edible meat yield and carcass characteristics of gramasree cockerels on diet containing different levels of protein and energy”	XXXII Annual Conference of Indian Poultry Science Association and National Symposium (IPSACON 2015)	CASM, Thiruvazhamkunnu 19-21, November, 16

6	Divya V., Sankaralingam S., and Anitha P.	“Economics and profitable marketing age of Gramasree Cockerels reared for meat purpose on different dietary treatment combination”	XXXII Annual Conference of Indian Poultry Science Association and National Symposium (IPSACON 2015)	CASM, Thiruvazhamkunnu 19-21, November, 16
7	Stella Cyriac, Leo Joesph, Anitha P., Soma T.G., Divya V. and Ajith Babu B.	“Trends in the yield of carcass and cut-up parts of male Kuttanad ducks at 8, 10 and 12 weeks of age”	XXXII Annual Conference of Indian Poultry Science Association and National Symposium (IPSACON 2015)	CASM, Thiruvazhamkunnu 19-21, November, 16
8	Stella Cyriac, Leo Joesph, Anitha P., Soma T.G., Divya V. and Shamna T.P. and Vimal Antony	“Trends in the yield of carcass and cut-up parts of male Kuttanad ducks at 8, 10 and 12 weeks of age”	XXXII Annual Conference of Indian Poultry Science Association and National Symposium (IPSACON 2015)	CASM, Thiruvazhamkunnu 19-21, November, 16

III. Pamphlets / Leaflets / Handbooks released :

Sl. No.	Title	Authors / Department	Language
1	Training handout on “Quail production”	S. Sankaralingm, Binoj Chacko, Harikrishnan S., Stella Cyriac, Suja C.S. and Leo Joseph	Malayalam
2	Training handout on “Layer production”	S. Sankaralingm, Binoj Chacko, Harikrishnan S., Suja C.S. and Leo Joseph	Malayalam
3	LPM 222 Practical Manual	S. Sankaralingam, Binoj Chacko, P. Anitha, Suja C.S., Harikrishnan S., Leo Joseph	English

6. EXTENSION ACTIVITIES

1. Conducted one vocational training on “Egger Nursery and Poultry farming to farmers as course director.
2. Conducted one vocational training on “Current trends in quail farming” to farmers as course director.
3. 14 days On job training (OJT) to 28 students of VHSC, Ayyanthole.
4. Counseled around 50 farmers on starting poultry farm, treatment etc.
5. Enrolled 55 cadets into the NCC, conducted 105 periods of NCC parade to 196 cadets of 1(K) R&V SQN NCC, Mannuthy as Associate NCC Officer.

7. SIGNIFICANT ACHIEVEMENTS

Livestock Population

Item	No.
Chicken (including fancy breeds)	11734
Duck	1063
Muscovy duck	22

Turkey	108
Quail	1655
Goose	17
Guinea Fowl	24

Egg production in the year 2015-16

Item	No.
Chicken	774021
Duck	55692
Quail	277542
Turkey	1925
Guineafowl	582
Goose	0

Chick Production in the year 2015-16

Item	Commerical chicks	Parent stock	Total chicks produced
Chicken	262562	32977	295539
Duck	14830	-	14830
Quail	183732	-	183732
Turkey	819	-	819
Guineafowl	124	-	124
Goose	0	-	0

Revenue received by sale of animals / products etc in the year 2015-16

Sl. No.	Animals/Products	Amount Generated		
		KVASU	VAT	Total
1	Commercial chicks/ Parent Stock/Grown-up	1,11,88,084	14,75,558	1,26,63,642
2	Egg(Table & Hatching eggs)	26,86,177	-	26,86,177
3	Manure	1,03,190	-	1,03,190
	Total Revenue received	1,39,77,451	14,75,558	1,54,53,009

8. STAFF DETAILS

Sl. No.	Name and designation of the Teaching Staff	Designation
1	Dr. Leo Joseph	Professor & Head
2	Dr. S. Sankaralingam	Assistant Professor
3	Mr. Vijayakumar	Administrative Assistant

4	Mr. Chackochan K.A.	Senior Farm Supervisor
5	Mr. Roy M.D.	Farm Supervisor
6	Mr. Ramendran	Farm Supervisor
7	Smt. Licy	Farm Assistant
8	Mr. Nishad E.S.	Class IV

9. RELEVANT PHOTOGRAPHS

Student,s Egger Nursery Project (ETR 321)

Under ETR 321 course, 20 students have evolved a project entitled “Student’s Egger Nursery” worth Rs. 90,000. They have reared 2000 birds and earned a profit of Rs. 2,70,000 by selling the pullets at different age. The net profit of Rs.1,80,000 was shared among the 20 students (Rs.9000/student). The photo shows the profit distribution to the students by Dr. Leo Joseph, Director, Centre for Advanced Studies in Poultry Science, Mannuthy.



A student receiving the profit share of Rs. 9000 from Dr. Leo Joseph



The ETR team members with the Course Coordinator Dr. S. Sankaralingam and Director, CASPS Dr. Leo Joseph

Vocational training on “Egger Nursery and Layer Farming”

Dr. S. Sankaralingam have conducted two trainings on “Egger Nursery and Layer Farming” to the farmers as Course Director. Dr. T.P. Sethumadhavan, Director of Entrepreneurship speaks on valedictory function



10. ACADEMIC ACTIVITIES

Sl. No.	Name of Teacher	To whom taken	Course Number	Course credits	Hours spent
1	Dr. S. Sankaralingam & Dr. Leo Joseph	MVSc	PSC 601	2+1	28
2	Dr. S. Sankaralingam	MVSc	PSC 604	2+1	56
3	Dr. S. Sankaralingam	MVSc	PSC 606	2+1	56
4	Dr. S. Sankaralingam	MSc (Climate change)	Vety 4204	2+1	28
5	Dr. S. Sankaralingam	BVSc	NCC 111, 121, 211 & 221	Non Credit	70
6	Dr. S. Sankaralingam	BVSc	LFP 211 & 221	Non Credit	42
7	Dr. S. Sankaralingam	BVSc	LPM 222	1+1	49
8	Dr. S. Sankaralingam	BVSc	ETR 321	Non Credit	28
9	Dr. S. Sankaralingam	BVSc	STC 411 & 421	Non Credit	28
10	Dr. S. Sankaralingam	BSc (Hons')	Anhs 2102	1+1	39
11	Dr. S. Sankaralingam	DPP	DPP 13	1+0	14
12	Dr. S. Sankaralingam	DPP	DPP 19	1+1	28
13	Dr. S. Sankaralingam	DPP	DPP 24	1+1	42
14	Dr. S. Sankaralingam	DPP	DPP 28	0+3	84
15	Dr. S. Sankaralingam	Certificate Course in Animal Handling			72
	Total				664

BASE FARM, KOLAHALAMEDU, IDUKKI

Financial Details

Expenditure -- Rs. 163.40 Lakhs Rs

Revenue -- Rs. 40.99 Lakhs Rs

No. of animals

Sl No	Item	Number/Quantity
1	Total number of animals	120
2	Adult males	1
3	Non pregnant females	20
4	Milch animals	32
5	Dry non pregnant cows	16
6	Dry pregnant cows	9
7	Heifers below 18 month of age	29
8	Calves (below 6 months)	13

Production details

Parameters	Quantity	Amount
Milk production	96472 Kg	Rs 3013957
Fodder production	536450 Kg	
No. of calving	27	
Sale of animals	24	Rs 269740
Death of animals	9	
Sale of cow dung (wet)	15.5 ton	55743
Sale of cow dung (dry)	3353.6 kg	

Production details

Birth weight	28.25 kg
Yearling weight	-
Age at first calving	3.3 years
Lactation length	301 days
Lactation milk yield	3220 kg

Peak yield	20.5 kg
Average milk yield/cow	8.90 kg
Calving interval	408days
Conception rate(AI/conception)	3.25

Extension/ Entrepreneurial activities

1. Established the *Kasavu*, Restaurant and Cafeteria to be operated by self help groups
2. Plan projects (2016-2017)
 - a) High range climate study centre
 - b) Establishment of an Eco-farm at The Base Farm, Kolahalamedu
 - c) Intensive productivity augmentation measures in the Establishment of Heritage Farm at Base Farm, Kolahalamedu

3. Faculty Details

Sl. No	Name	Designation
1	Dr Dipu M T	Asst Prof & Head
2	Dr George Sherin K	Asst Prof (WA)

CENTRE FOR LIVESTOCK DEVELOPMENT AND POLICY RESEARCH & REGIONAL RESEARCH AND TRAINING CENTRE, THIRUVANANTHAPURAM

I. Administration of Research and Training Centres

Establishment matters of the staff and routine activities of the centre are being handled

- Total files handled during the period: 187
- Details of financial transactions done
- Non Plan: Rs.15,57,363 /-
- Plan fund: Rs. 13,10,611/-
- Internal receipt: Rs.70/-
- Imprest amount: Rs. 1,74,421/-

II. Academic activities

- Handled theory and practical classes of Dairy Farm Management (DH-1101) Dairy cattle Physiology and Nutrition (DH-1201) and Milk Production Management (DBM-1101) courses to B. Tech Dairy Science students at CDST, Thiruvananthapuram.
- Attended the Viva-Voce board examinations of the 2015 batch on 07.04.2016 and 19.09.2016
- Attended the Examination duty on 26.09.2016 of the 2015 batch
- Organised study tours to high tech semen lab of Kerala Livestock Development Board and District Livestock Farm of Department of Animal Husbandry as part of the courses.

III. Trainings/Seminars/Workshops conducted



- Training Programme for Kudumbasree groups on scientific goat rearing at Venganoor Grama Panchayat Hall on 04.06.2016.
- Training Programme for Kudumbasree groups on scientific goat rearing at Aryanad Community Hall on 10.06.2016.
- Training Programme for Kudumbasree groups on Scientific Cattle Management at Vembayam Gram Panchayat Hall on 17.06.2016.
- Need based Training programme for Veterinary Officers of the Department of Animal Husbandry at Kerala State Veterinary council Building, Peroorkada on the topic “Skill Development in Clinical Competencies” on 26.07.2016 and 27.07.2016 .
- Workshop on Communication Skills for B.Tech Students of College of Dairy Science and Technology, Thiruvananthapuram on 08.09.2016 at Keltron Equipment Complex, Karakulam.
- Two days Capacity Development Training Programme for the Faculty of KVASU on 25.10.2016 and 26.10.2016 at Institute of Management in Government, Thiruvananthapuram.



IV. Papers published

- George, A. and Jacob S. K. 2016. Training need analysis and job preference of students, Imperial Journal of Interdisciplinary Research, 2(8): 732-734
- Jacob S. K. and George, A. 2016. Significance of adolescent growth in an individual's development, Imperial Journal of Interdisciplinary Research, 2(8): 1251-1253

- George, A. George, A. and Jacob S.K. 2016. Production statistics of meat in Kerala, Journal of Dairy Veterinary and Animal Research,3(4): 90

V. Trainings/Seminars/Conferences attended

- Attended Training programme on Geo-tagging of R.K.V.Y assets at Kerala Water Authority Training Hall Vellayambalam on 9th and 10th of February 2017.
- Attended 29th Kerala Science Congress at Marthoma College, Thiruvalla from 28th to 30th of January 2017.
- Attended Third Extension Council meeting of KVASU at the Chamber of Hon. Vice Chancellor and Secretary to Government (Animal Husbandry), Govt Secretariat Thiruvananthapuram on 28.12.2016.
- Attended Biopreneurs meet 2016 at Mascot Hotel, Thiruvananthapuram on 06.09.2016
- Attended IUMS training at CDST Karakulam on 16.01.2017.

VI. Consultancy and other services offered

Technical advice to various stakeholders such as farmers, entrepreneurs and extension functionaries in and around the district was provided through the centre. Sale of university publications to the needy persons was arranged and thereby collected internal revenue.

VII. Participated in Conferences/Seminars/Trainings as Expert

- Handled technical sessions of Self Entrepreneurship, Total Quality Control and Successful Marketing sessions during the training programme on “Value addition of poultry meat” conducted by Kerala State Poultry Development Corporation for the LMTC trainees at KEPCO, Pettah on 01.11.2016.
- Acted as a member of judging panel for exhibits in the Science Fair 2016 at CNHS School Kowdiar on 11.11.2016.
- Handled technical sessions of Self Entrepreneurship, Total Quality Control and Successful Marketing sessions during the training programme on “Value addition of poultry meat” conducted by Kerala State Poultry Development Corporation for the LMTC trainees at KEPCO, Pettah on 05.12.2016.
- Attended the Stakeholder workshop at Pathiyoor Grama Panchayat School as part of the farmer First project on 26.11.2016.

VIII. Reviewer/ Referee

The faculty members acted as Reviewer/ Referee in journals and reviewed articles during 2016-17.

IX. Technical Assistance to University Officers

The coordinators had been deputed for the following official Government meetings representing the University during the period in the Government Secretariat and other offices at Thiruvananthapuram.

1. NSS meeting at Science and Technology Museum on 26.04.2016
2. Planning Board on 04.10.2016
3. Legislative Assembly on 18.10.2016 and 19.10.2016
4. Meeting at KSIDC on 11.11.2016
5. Official Language Meeting on 08.03.2017 at Govt .Secretariat

6. Official Language Meeting on 14.03.2017 at Govt .Secretariat
7. NSS Programme Coordinators meeting on 02.03.2017
8. Plan Review meeting on 16.03.2017 at the chamber of Secretary (AH)

X. Research Projects

- **Projects implemented (State Plan 2015-16)**

Capacity Building programmes for various stakeholders of livestock sector [4 Lakhs]

- **Projects ongoing (State Plan 2016-17)**

1. Pattern of consumption of Livestock Products Among Adolescent people in Kerala [4 Lakhs]
2. Capacity Building programmes for various stakeholders of livestock sector [7.5 lakhs]

- **Research collaboration with External Institutions**

Participatory Technology Integration to empower and ensure Livelihood Security of farmers in Alappuzha District [ICAR Project of CPCRI, Kayamkulam]

XI. Other Activities

1. Designed and edited Organizer, Student Data Book and Calendar 2017 of the University
2. Assisted the Director of Entrepreneurship in organizing the programme “CONNECT 2016” at Hotel Mascot Thiruvananthapuram on 30.11.2016
3. Assisted the Director of Entrepreneurship in editing publications like Annual Report 2015-16, Package of Practices Recommendations 2015 and Newsletters.

XII. Transfer and postings of staff

Sl.No	Designation	Name	Details
1	Class IV on contract	Sri.N.D. Rajesh Kumar	Joined on 24.05.2016
			Relieved on 20.11.2016
2	Assistant	Smt.Vidya Vasudevan	Joined on 07.10.2016
			Relieved on Transfer w.e.f. 29.12.2016
			Joined on working arrangement on 07.01.2017
3	Assistant	Smt. Ansy H.S	Joined on 29.12.2016

CENTRE FOR ADVANCED STUDIES IN ANIMAL GENETICS & BREEDING

The Department of Animal Breeding and Genetics 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. From the year 2011 April onwards the Centre is attached to the newly formed university, Kerala Veterinary and Animal Sciences University.

SECTION - II MAJOR ACTIVITIES

CASAGB carries out works in Livestock breed characterization, germplasm conservation and breed improvement programmes. It also carries out research in genetic analysis of animals at molecular level. The centre also plays a major role for the formulation of livestock breeding policies for the state. Animal breeding and genetics teaching and research of the university are undertaken in the main laboratory, farms and in farmer's field. The central laboratory in the Centre for advanced studies in Animal Genetics and Breeding serves as the place for laboratory work, with university goat and sheep farm Mannuthy, University pig farm, Mannuthy, Vechur cattle farm Mannuthy, Rabbit farm, Mannuthy, Livestock research station Thiruvazamkunnu (Buffalo farm), farmers fields in Thrissur, Malappuram, Kozhikkode and Kannur districts catering the need for the research inputs in terms of live animals. Experts in different field are working in respective places.

M.Sc Projects: Seven

Sl.No	Name of the course	Course credits	Theory Batch	Practical Batch	Course teachers
1	Molecular Genetics in Animal Breeding AGB-602	2 + 1	M.V.Sc 2016 batch	5 students	Dr. T.V. Aravindakshan
2	Advanced Molecular Genetics, AGB-701	2+0	PhD 2016	8 students	Dr. T.V. Aravindakshan
3	Basic and applied Biotechnology ABT-601	3 + 0	M.Sc 2016 batch	4 students	Dr. T.V. Aravindakshan
4	Recombinant DNA Technology ABT-603	1+1	M.Sc 2016 batch	4 students	Dr. T.V. Aravindakshan
5	Animal Genomics ABT-607	2+1	M.Sc 2016 batch	4 students	Dr. T.V. Aravindakshan
6	Molecular Diagnostics ABT 611	1+2	M.Sc 2016 batch	4 students	Dr. T.V. Aravindakshan

Student Advisorships

Sl No.	Name of Officer	Student Advisorships
1	Dr. T V Aravindakshan Director, CASAGB	Major Advisor Reshma R S – MSc Animal Biotechnology Minor Advisor Lavania Wahlang – MSc Animal Biotechnology Menda Rajender – MSc Animal Biotechnology Leo Maria – MSc Animal Biotechnology Anjana A – MSc Animal Biotechnology Jasin Jose – MSc Animal Biotechnology Anu Bosewell – MSc Animal Biotechnology
2.	Dr.Thirupathy Venkatachalapathy	Major Advisor Charlotte Rodricks – MVSc Animal Breeding & Genetics Minor Advisor Mayur Pawsha – PhD Obstetrics & Gynaecology Ambili John – PhD Obstetrics & Gynaecology Upasana Rathnakar – PhD Obstetrics & Gynaecology Smitha – PhD LPM Narmada - MVSc Obstetrics & Gynaecology Thejas Vani – MVSc Clinical Medicine Minu Sara Jasmin – MVSc Animal Nutrition Lidin M S – MVSc Poultry Science Chinju – MVSc Animal Biochemistry
6.	Dr. Marykutty Thomas	Minor Advisor Shalu Elizabeth MVSc Animal Breeding & Genetics
10	Dr. Jamuna Valsalan	Minor Advisor Prakash G- MVSc Animal Breeding & Genetics

SECTION - III RESEARCH

PROJECTS COMPLETED

Name of the Centre / Department / Research Station: CASAGB

I

1. Name of the scheme / project : Field Progeny Testing Scheme
2. Name of the funding agency : ICAR
3. Date of start and closure :
4. Budget : 42 lakhs
5. Principal Investigator & Co-PIs : Dr. K. Anilkumar & Dr. G. Radhika
6. Research highlights :
(in 3 – 4 Bullet points) :
 - The rate of improvement in milk production among progenies is more than that of contemporaries of the scheme.
 - A total of 4755 inseminations were done in 2016. Total number of progeny born during 2016 was 1069 of which 513 are female.
 - Average age at first calving in the scheme was 1014.98 days during 2016 which was lesser than that of the contemporaries.
 - Progenies of different bulls are available at different ages in the Field Progeny Testing centres (1250 females in growing stage).

- They are strictly followed and data recorded till completion of their first lactation. Also steps are adopted to assure their maximum milk production potential.
7. Scientific utility of the findings :
(in 2-3 bullet points) :
 - Average 305 days milk yield of daughters obtained from bulls tested in the existing Progeny Testing Scheme for 2016 is 2791.36 litres which shows a gradual increase over a period of several years.
 8. Relevant photographs / other :
illustrations (in digital form)
 9. Significant achievements made in science and technology (in 2-3 bullet points):

II

1. Name of the scheme / project : AICRP on goat
2. Name of the funding agency : ICAR
3. Date of start and closure :
4. Budget : 30 lakhs
5. Principal Investigator & Co-PIs : Dr. Thirupathy Venkatachalapathy
6. Research highlights :
(in 3 – 4 Bullet points) :
7. Scientific utility of the findings :
(in 2-3 bullet points) :
8. Relevant photographs / other :
illustrations (in digital form)
9. Significant achievements made in science and technology (in 2-3 bullet points):

III

1. Name of the scheme / project : Developing an inclusive model for sustainable goat production in Kerala
2. Name of the funding agency : NABARD
3. Date of start and closure :
4. Budget : 8.30 lakhs
5. Principal Investigator & Co-PIs : Dr. Thirupathy Venkatachalapathy
6. Research highlights :
(in 3 – 4 Bullet points) :
7. Scientific utility of the findings :
(in 2-3 bullet points) :
8. Relevant photographs / other :
illustrations (in digital form)
9. Significant achievements made in science and technology :
(in 2-3 bullet points)

PROJECTS CONTINUING THROUGH THE YEAR

Sl. No.	Title of the scheme	Name of the funding agency	Name of the PIs and Co-PIs	Outlay
1	Strengthening Biotechnology Research -Lead Centre CASAGB	State Plan 2016-17	Dr. T. V. Aravindakshan	15 lakhs
2	Strengthening of Centre for Advanced Studies in Animal Genetics & Breeding	State Plan 2016	Dr. T. V. Aravindakshan	10 lakhs
3	Strengthening of School of Applied Animal Production and Biotechnology	State Plan 2016	Dr. T. V. Aravindakshan	10 lakhs
4	Conservation and Evaluation of Malabari and Attappady Black goats	State Plan 2016	Dr. ThirupathyVenkatachalapathy	12 lakhs
5	Sire evaluation and selection for genetic improvement in Malabari goats under farm and field conditions	State Plan 2016	Dr. ThirupathyVenkatachalapathy	7 lakhs
6	Strengthening of Goat and sheep farm, Mannuthy	State Plan 2016	Dr. ThirupathyVenkatachalapathy	30 lakhs
7	Evaluation of lactation performance and establishment of system of milk recording in cross bred cows of Kerala for sire evaluation	State Plan 2016	Dr. G. Radhika	5 Lakhs
8	Comprehensive approach to economic broiler rabbit production	State Plan 2016	Dr. Marykutty Thomas	25 Lakhs
9	Vechur Cattle Conservation Centre	State Plan 2016	Dr. Manoj M	40 lakhs
10	Establishment of a germplasm repository for Domestic animal diversity of Kerala	State Plan 2016	Dr. Manoj M	10 lakhs
11	Characterization and SNP analysis of candidate genes for lean meat production ability in Murrah Buffaloes	State Plan 2016	Dr. Bimal C B	5 lakhs
12	Field Progeny Testing Scheme	ICAR	Dr. K. Anilkumar & Dr. G. Radhika	42 lakhs
13	Developing an inclusive model for sustainable goat production in Kerala	NABARD	Dr. Thirupathy Venkatachalapathy	8.30 lakhs
14	Establishment of elite malabari goat breeding unit for dissemination of superior germplasm	RKVY - GOI	Dr. Thirupathy Venkatachalapathy	68.65 lakhs
15	AICRP on goat Improvement	ICAR	Dr. Thirupathy Venkatachalapathy	30 lakhs

THESIS ABSTRACT

Name of the Centre / Department / Research Station:

1. Title of the thesis : **Exome wide DNA capture
And Next Generation Sequencing
In Vechur Cattle Of Kerala**
2. Name and ID No. of the student : **RESHMA R. S, 14-MVM-17**
3. Name of the Chairman of the Advisory Committee :
4. Degree for which thesis was submitted :
5. Abstract of the thesis :
(in 3 – 4 Bullet points)
6. Relevant Photographs (Original IN DIGITAL FORM) :
7. Significant achievements made in science and
technology (in 2-3 bullet points):

Student Projects

1. Name of the student :
 2. Name of the Institution :
 3. Title of the project :
 4. Degree :
 5. Project guide / coordinator :
 6. Abstract of work (in 3 – 4 Bullet points) :
 7. Revenue generated :
 8. Significant achievements made in science and technology (in 2-3 bullet points):
- B. Persons deputed for Training / Workshop / Summer Institute / Seminar / Study Tour / Higher Studies / any other programme both in India and Abroad

Sl. No.	Name and designation of the Scientist	Title of the Programme	Duration		Place	Approx. cost involved
			From	To		
1	Dr.T.V. Aravindakshan, Dr.Thirupathy Venkatachalapathy and Dr. Jamuna Valsalan	8 th KERALA VETERINARY SCIENCE CONGRESS	12-13 November 2016		Pattikkad, Thrissur	-
2	Dr.T.V. Aravindakshan, Dr.Thirupathy Venkatachalapathy, Dr. Marykutty Thomas and Dr. Jamuna Valsalan	National Symposium on “Biodynamic Animal Farming for Management of Livestock Diversity under the Changing Global Scenario	8 th to 10 th February 2017		CVAS, Mannuthy	-

3	Dr.Thirupathy Venkatachalapathy and Dr. Jamuna Valsalan	National Seminar on “ <i>Green Economics and Desi cow</i> ” organized by Kapila Fest-2016 and Centre for Innovation in Science and Social Action (CISSA),	26 th to 28 th May, 2016	CMS College, Kottayam	-
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II. Research Papers Presented:

Sl. No.	Authors	Title	Name of the Seminar / Symposium / Conference	Place and Date
1	R.T. Venkatachalapathy, C.B. Bimal and K. Anil Kumar	The A2 milk and its implications in the dairy sector	National Seminar on Green Economics and Desi cows	26-28, May 2016, CMS College, Kottayam, Kerala
2	R.Thirupathy Venkatachalapathy, Anjan Behera and T.V. Aravindkshan	Identification of novel SNP at Thyroid hormone responsive (THRSP) gene of native goat breeds of India.	12 th International Conference on Goats	Antalya, Turkey, 25-30 th September, 2016
3	Sunitha Thomas and R.Thirupathy Venkatachalapathy	Udder Morphology and its Association with Milk Production in Malabari, Attappaddy Black and Crossbred (Sannen x Alpine x Malabari) goats of Kerala	8 th Kerala Veterinary Science Congress	Nov 12-13, 2016 at Pattikkad, Thrissur.
4	Deepa, C.N. Anjan, B. and Thirupathy Venkatachalapathy	Association of Follicle Stimulating Hormone Beta gene variants with reproduction traits in Pigs	8 th Kerala Veterinary Science Congress	Nov 12-13, 2016 at Pattikkad, Thrissur.
5	Anjan Behera, R.Thirupathy Venkatachalapathy and T.V. Aravindkshan	Genetic Variability at Insulin like growth factor binding protein-3 locus in Malabari and Attappaddy black goats of Kerala	National seminar on ‘Improvement of Small Ruminant Production System for Livelihood Security’	9-10 th March, 2017, ISSGPU, ICAR-CSWRI, Avikanagar, Rajasthan.
6	Bimal.PBashir, Thirupathy Venkatachalapathy, R., Jamuna Valsalan and Upasana Rathnakaran	Study on Supply Chains on Goat in Northern Kerala	8 th National Extension Education Congress,	January, 28 -31, 2017 at ICAR- NAARM, Hyderabad.

7	Bimal.P.Bashir, Thirupathy Venkatachalapathy, R., Jamuna Valsalan and Rout, PK	Impact of trainings on knowledge level of goat keepers in Kerala	National Symposium on “Biodynamic animal farming for the management of livestock diversity under changing global scenario”, SOCDAB.	8-10 th February, 2017 CVAS, Mannuthy, Thrissur, Kerala.
8	Jamuna Valsalan., Thirupathy Venkatachalapathy, R. Rojan, P.M and Bimal.P.Bashir.	Estimation of genetics and phenotypic trends for performance traits in Malabari Goats	National Symposium on “Biodynamic animal farming for the management of livestock diversity under changing global scenario”, SOCDAB.	8-10 th February, 2017 CVAS, Mannuthy, Thrissur, Kerala
9	Thirupathy.V., Jamuna, V and Rojan, P.M.	Analysis of Production Performance of Malabari Goat under field condition	8 th Kerala Veterinary science Congress.	Nov 12-13, 2016 at Thrissur
10	P.K.Rout, Madumitha Singh, M.S.Dige, Thirupathy Venkatachalapathy	Goat: Contribution towards livelihood security in India.	ISSGPU, National seminar on ‘Improvement of Small Ruminant Production System for Livelihood Security.	9-10 th March, 2017, ISSGPU, ICAR-CSWRI, Avikanagar, Rajasthan
11	Thirupathy Venkatachalapathy, S.Sankaralingam, K.Radha and Kabber, M.	Goat – A unique genetic resources of Lakshadweep	National Symposium on “Biodynamic animal farming for the management of livestock diversity under changing global scenario”, SOCDAB.	8-10 th February, 2017 CVAS, Mannuthy, Thrissur, Kerala.

IV. Books / Monographs / Manuals :

Sl. No.	Authors	Year	Title	Publisher
1	R.T.Venkatachalapathy, A.P.Usha, Suraj, P.T. and E.D.Benjamin	2017	Monograph on Ankamally Pigs	KVASU publication

FACULTY DETAILS (AS ON 31.3.2017)

Sl. No.	Name and designation of the Teaching Staff	Discipline	Residential address	Email ID	Contact No.	
					Land line (Residence)	Mobile
1	Dr. T V Aravindakshan Director	CASAGB	7/409/4, Lenin Nagar, Pattalakunnu, Mannuthy P O, 680651	aravindakshantv@kvasu.ac.in		9895268573
2	Dr. Thirupathy Venkatachalapathy, Associate Professor	CASAGB	H-5, Staff Quarters CVAS, Mannuthy	thirupathy@kvasu.ac.in		9747728625
3	Dr. Marykutty Thomas	CASAGB	Kuttikkattu House, Near KVR High School, Shornur-1	marykutty@kvasu.ac.in		9446042919
4	Dr. Jamuna Valsalan	CASAGB	H-15, Staff Quarters CVAS, Mannuthy	jamuna@kvasu.ac.in		9495794342

DISTINGUISHED VISITORS

Sl. No.	Name and address of the visitor	Date of visit	Place of visit	Purpose of the visit	Remarks by the visitor	Outcome of the visit (if applicable)
1	Dr. H Rehman, DDG-AS, ICAR	08/02/2017	SAAPBT, CASAGB, Vechur farm, Pig farm	SOC DAB 2017	-	-
2	Dr. R S Gandhi, ADG-AS, ICAR	08/02/2017	SAAPBT, CASAGB, Vechur farm, Pig farm	SOC DAB 2017	-	-

HOSPITALS AND SUPPORT SERVICES UVH & TVCC, MANNUTHY

Teaching Veterinary Clinical Complex (TVCC) congregates the services of the clinical departments like Veterinary Clinical Medicine, Ethics and Jurisprudence, Veterinary Epidemiology and Preventive Medicine, Veterinary Surgery and Radiology and Animal Reproduction, Gynaecology and Obstetrics under one umbrella to impart a cohesive health benefit to the public. It is the platform for conducting graduate, post graduate as well as post doctoral works in these fields along with treatment and consultation services to the community.

Educational courses

	Programmes	credits	Duration
UG(offered directly by TVCC)	VCP- 411 Veterinary clinical practice VCP- 421 „ VCP- 511 „ TRP - 311 Tracking program	0+5 0+5 0+5	1semester „ „
PG(Offered by other departments and training given at TVCC)	VOG 607 CLINICAL PRACTICE I VOG 608 CLINICAL PRACTICE II VCM 612 CLINICAL DIAGNOSTIC TECHNIQUES VCM 613 VETERINARY EMERGENCY MEDICINE VCM 614 CLINICAL PRACTICE I VCM 615 CLINICAL PRACTICE II VSR 602 CLINICAL PRACTICE – I VSR 603 CLINICAL PRACTICE – II	0+3 0+3 0+2 0+2 0+3 0+3 0+3 0+3	1semester
PhD Offered by other departments and training given at TVCC)	VOG 706 CLINICAL PRACTICE I VOG 707 CLINICAL PRACTICE II VOG 790 SPECIAL PROBLEM VCM 709 ADVANCED CLINICAL PRACTICE I VCM 710 ADVANCED CLINICAL PRACTICE II VCM 711 ADVANCED CLINICAL PRACTICE III VCM 790 SPECIAL PROBLEM VSR 701 CLINICAL SURGICAL PRACTICE – I VSR 702 CLINICAL SURGICAL PRACTICE – II VSR 703 CLINICAL SURGICAL PRACTICE – III	0+3 0+3 0+2 0+2 0+2 0+2 0+2 0+2 0+2 0+2	1semester

Dept. of TVCC also offers stipendiary training to VHSE pass outs in “Animal handling, veterinary laboratory techniques, pharmacy and nursing” (two batches per year) consisting of four people each, which equips the selected candidates with all supportive activities related to para veterinary aspects in full fledged veterinary hospitals/ farms in public and private sectors. Two batches were engaged in the last year

Ambulatory Clinic is functioning at selected milk societies (Cherumkuzhy and Malamukku) in an ambulatory van engaged solely for this purpose. The experienced faculty extends their service to the farmers of Cherumkuzhy and Malamukku, APCOS through conducting infertility camps and awareness programmes.

Emergency services for large animals were offered during the working hours and even during night hours and holidays. Resident PG students are engaged for this service.

House visits and farm visits were conducted to treat large animals.

Rare medicines like Buparvaquone for Theileriosis were procured and used for the benefit of farmers.

Animals requiring continuous treatment were housed in the inpatient section of the hospital.

Staff details

Dr. S. Ajithkumar, Professor and Head, UVH and TVCC, Mannuthy

Assistant Professors

- 1) Dr.Soumya Ramankutty, Assistant Professor, Department of Veterinary Surgery and Radiology (on working arrangement)
- 2) Dr. Amritha Aravind, Assistant Professor, Department of Animal Reproduction, Gynaecology and Obstetrics (on working arrangement)
- 3) Dr. Shyma V.H., Assistant Professor, Department of Veterinary Epidemiology and Preventive Medicine (on working arrangement)
- 4) Dr. Ambily R., Assistant Professor, Department of Veterinary Microbiology (from Feb 2016 onwards)

Non teaching staff:

- 1) Sri. T. K. Kunjumon, Farm Supervisor Gr. I, Ph : 9496401869
- 2) Sri. Nimesh A S, Assistant, Ph : 9446248207
- 3) Sri. Silju C, Computer Assistant Gr. I, Ph: 9037644407
- 4) Sri. K S Jayan, HDV Driver (Sel. Gr.)Ph : 9447918455
- 5) Sri.V.V. Jayan, Class IV, ph 9562672174
- 6) Sri. Chamy T K, Class IV, Ph: 9539252514
- 7) Sri. Renil Aby, Permanent Labour
- 8) Sri. Shameer C P, Permanent Labour
- 9) Smt. Saina P, Permanent Labour
- 10) Smt. Shyama Viswamithran, Permanent Labour
- 11) Smt.Priya P M, Farm Assistant (temporary appointment through Employment Exchange)
- 12) Sri. Vipin T. P., Lab Technician (daily wages basis)

Table showing summary of cases handled in 2016-17

	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
Bovine	148	174	146	212	224	143	161	208	915	184	141	190
Caprine	360	340	520	469	490	419	421	478	389	353	273	412
Small animals	1190	1142	1179	1166	1216	1056	1277	855	674	1275	1181	1610
Birds	1374	2179	2671	2812	2482	2683	2662	1909	2423	1615	2451	3049
others	27	37	35	47	67	26	26	26	11	33	22	56
TOTAL	3099	3872	4551	4706	4479	4327	4547	3476	4412	3460	4068	5317

Revolving Fund – Revenue during 2016-17

	2016 April	2016 May	2016 June	2016 July	2016 Aug	2016 Sept	2016 Oct	2016 Nov	2016 Dec	2017 Jan	2017 Feb	2017 Mar
Registration	18480	17310	18660	19110	19320	18510	20730	19020	20220	21720	19200	24180
Ultra sound scanning	15600	14700	8700	13200	12900	11700	15600	15300	16200	12600	6300	12000
ECG	500	700	1400	1300	1100	1500	700	500	600	500	400	400
IP admission charges	500	2500			2300	200		3000	5150	3100	2000	750
Dystocia		500	500	500	500	1500		1500	500		500	
Exfoliative vaginal cytology	5750	3750	2450	5150	7000	7750	6950	6650	5750	6600	6150	6350
Clinical Laboratory investigation	39630	32370	33420	38690	40870	36630	40420	44800	40950	46710	40240	72552
Vaccine	42610	43270	35980	39590	35600	27470	23070	32050	37170	61220	53790	68910
Endoscopy											250	
Minor Surgery	2750	1500	2750	4000	2750	750	3000	5500	2000	2750	750	2500
Major Surgery	1000	2000		1500		2000		6000	4500	3500		
House visits	100	400	300	200	100		100	200	200	100		200
Emergency charge	2400	2800	5500	2800	3500	2800	3400	2900	4300	3200	3100	3600
Oxygen therapy			400	1600	1600	400			1200			400
Blood transfusion				300	300			420	300			
US dental cleaning												
Semen collection			2500					1000				
Farm visit	750		250			250		500				
Echocardiography	400	3600	2400	2400	2000	3600	2000	2000	2000	400	2000	1200
Anitvenom									2400			2400
TOTAL	130470	125400	115210	130340	129840	115060	115970	141340	143440	162400	134680	195442

Total income - Rs. 16, 39,592 (Rupees Sixteen lakhs Thirty Nine thousand Five hundred and Ninety Two only)

SECTION - II MAJOR ACTIVITIES

Student outreach programme

- Health camps
- Infertility camps



Infertility and health care camp at Mannamangalam – August 22, 2016



SECTION - III RESEARCH

Research projects under State plan

1. Application of modern diagnostic methods for early tumor detection and its management in veterinary practice – 7 lakhs
2. Study of causative organisms and its control strategy for specific and nonspecific infectious agents causing infertility in cows – 5 lakhs

Journal Publications in the recent years

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
	Ambily, R. and M. Mini	Incidence of Systemic Aspergillosis in Japanese Quails (<i>Coturnix coturnix japonica</i>) in A Private Farm	Trends Biosci.	10(14)	2593-2595	2017
	Ambily, R., Athulya, E.P.and M. Mini	Periodontitis in Dogs – A Review	Trends Biosci.	10(19)	3344-3347	2017
	Ambily, R., M. Mini, and Siju Joseph.	Evaluation of two rapid field level diagnostic tools for acute canine leptospirosis in Kerala.	Proceedings of the 29 th Kerala Science Congress, 29 th to 31 st January, 2017, Thiruvalla.			2017
	Ambily R., M. Mini, Siju Joseph, S. Vamshi Krishna and Abhinay, G...	Cloning and expression of <i>loa22</i> gene of pathogenic <i>Leptospira</i> isolated from canine urine	Proceedings of the Kerala Veterinary Science Congress – 2016, 11 th and 12 th November, 2016, Pattikkad, Kerala.			2016
	Ambily Ramachandran, Siju Joseph and Mini Mangattumuruppel..	Evaluation of Polymerase Chain Reaction targeting the virulent gene <i>loa22</i> in diagnosing acute leptospirosis.	Proceedings of the Swadeshi Science Congress – 2016, 7 th to 9 th November, 2016, CMFRI, Kochi			2016

Awards, honours and personal achievements

Dr. Ambily R., Assistant Professor	Best Research paper award in 29 th Swadeshi Science Congress	Swadeshi Science Movement	Nov 7 th to 9 th 2016, CMFRI, Kochi
	Best oral presentation award in 8 th Kerala Veterinary Science Congress	Indian Veterinary Association, Kerala	Nov. 12 th and 13 th 2016, Pattikkad

PROJECTS CONTINUING THROUGH THE YEAR

Sl. No.	Title of the scheme	Name of the funding agency	Name of the PIs and Co-PIs	Outlay
1	“Universal Veterinary Health Coverage to optimize the productivity of livestock”	State plan 2016-17		10 lakhs
2	Doorstep Veterinary Services to the Rural Farmers of Selected Villages through Ambulatory Clinic	State plan 2016-17		7 lakhs

3	Development of TVCC to impart advanced veterinary health service and academic excellence	State plan 2016-17		17 lakhs
4	Study of casuative organisms and its control strategy for specific and nonspecific infectious agents causing infertility in cows	State plan 2016-17		5 Lakhs
5	Application of modern diagnostic methods for early tumour detection and its management in veterinary practice	State plan 2016-17		7 lakhs

UNIVERSITY VETERINARY HOSPITAL, KOKKALAI

9. BACKGROUND INFORMATION OF THE DEPARTMENT

University Veterinary Hospital, Kokkalai, initially known as Cochin State Veterinary Hospital established in 1904, currently functioning as an independent station under Kerala Veterinary and Animal Sciences University. The hospital occupies an area of 1.19 acres. The outpatient clinic of the hospital (OP Clinic) works from 8.00A.M to 12.00 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 100 to 110 cases daily with an annual increment of about 20%.

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:

Video endoscopy, Ultrasonography, Computed Radiography with networking to units, Operation theatre with gaseous anaesthesia, digital monitoring, ventilator, oxygen administration, facility for soft tissue, orthopaedic, gynaecological and ophthalmic surgeries. ECG, emergency and critical care with defibrillator, breeding advice with EVC, gynaecological operation theater, Laboratory with autohaematology analyser, semi-automatic serum chemistry 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.

Details of Service Rendered

No. of cases attended – (species wise)

Canine : 24033
Bovine : 3852
Caprine : 4823

Feline : 1693
Avian : 1974
Others : 109
TOTAL : 36484

In-patient facilities : NIL

No. of cases admitted and quarantined : NIL

Vaccination

- Multi component Vaccine in dogs : 2622
- Anti-rabies Vaccination : 2724
- Cat Vaccination : 90
- Ranikhet Disease Vaccine : 1250

Referral units (No. of cases attended) : 2669

- Theatre services : Major: 362 Minor :289
- Emergency and critical care service : 318
- Mobile veterinary service : Not available
- Veterinary Medical Record System : Manually maintained through a nominal register and case sheets. Registration valid for two months
- 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 upto 31.3.2017)

Non-Plan : Rs. 1, 33, 100.00

Revolving Fund : Rs. 6, 00,000.00

11. EDUCATIONAL COURSES

Undergraduate/ Post graduate/PhD/Diploma/any other

- Supports clinical courses of BVSC &AH 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.

12. CONFERENCES/SEMINARS/TRAININGS

A. Conference/Seminars/Trainings/Workshops conducted:

Organised a two day **International Workshop on Dog medicine, Behaviour, and Population Management of Dogs** by Kerala Veterinary and Animal Sciences in collaboration with the **Jeanne Marchig International Centre for Animal Welfare Education of The Royal(Dick) School of Veterinary Studies, University of Edinburgh, Easter Bush, Scotland, UK**, on 28th to 29th of November, 2016, at University Veterinary Hospital, Kozhikode.

B. Conference/Seminars/Trainings attended:

Name of the Incumbent	CONFERENCES/SEMINARS/TRAININGS ATTENDED
<p>Dr. Dhanush Krishna Assistant Professor</p>	<p>Papers presented at seminars:</p> <ul style="list-style-type: none"> Presented a paper on “Prevalence of Haemoprotozoan Infections in Crossbred Cattle of Thrissur Region of Kerala State” in the XIV Annual Convention of Society for Conservation of Domestic Animal Biodiversity held at College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala from 8th to 10th February, 2017. Presented a paper on “Bio scaffold materials regenerate muscle defects via immunomodulation in a rodent hernia model” in the 29th Kerala Science Congress held at MarThoma College, Thiruvalla organized by the Kerala State Council for Science, Technology and Environment (KSCSTE) from 28th–30th January 2017. <p>Conference/Seminars/Trainings/Workshops attended:</p> <ul style="list-style-type: none"> XIV Annual Convention of Society for Conservation of Domestic Animal Diversity (SOCDAB) from 8th to 10th February, 2017 organized at College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala. 29th Kerala Science Congress from 28th–30th January 2017 at MarThoma College, Thiruvalla organized by the Kerala State Council for Science, Technology and Environment (KSCSTE). “Application of ICT in animal husbandry teaching research and extension” held from 6th to 8th September 2016 at CVAS, Mannuthy
<p>Dr. Jayakumar, C Assistant Professor</p>	<p>Papers presented at seminars:</p> <ul style="list-style-type: none"> Presented a paper on “Induction of fertile oestrus in dogs with secondary anoestrus using antiprolactin drug, cabergoline” in the XIV annual convention of the ISACP and symposium on Newer approaches in management of canine health and rewarding clinical practice as well as trade” held at GBPUAT, Pantnagar from 9th to 11th February 2017. Presented a paper on “Uterine torsion in a dog and its surgical management by Ovariohysterectomy” in the XIV annual convention of the ISACP and symposium on Newer approaches in management of canine health and rewarding clinical practice as well as trade” held at GBPUAT, Pantnagar from 9th to 11th February 2017. <p>Conference/Seminars/Trainings/Workshops attended:</p> <ul style="list-style-type: none"> Participated in the twenty one day training programme on “The cutting edge technologies to enhance fertility in farm animals” from November 4th to 24th 2016 sponsored by ICAR and organized at GADVASU, Ludhiana. Participated in the two day workshop on “Dog medicine, behavior and population management workshop” organized by KVASU and Uni. of Edinburgh on 28th and 29th November 2016 at UVH, Kozhikode, Thrissur

<p>Dr. Laiju M. Philip Assistant Professor</p>	<p>Papers presented at seminars:</p> <ul style="list-style-type: none"> Presented a paper on “Ocular manifestations due to canine haemoparasitic infections- review of 32 cases” XIII Annual Convention of the Indian Society for Advancement of Canine Practice and National Symposium on “Concepts of One-Health in Canine Health Care Management” held at CVAS, Pookode, Wayanad from 27th to 29th April, 2016. Presented a paper on “Alveolar Rhabdomyosarcoma of Tongue and its Surgical Management by Partial Rostral Glossectomy in a dog” in the XIV annual convention of the ISACP and symposium on Newer approaches in management of canine health and rewarding clinical practice as well as trade” held at GBPUAT, Pantnagar from 9th to 11th February 2017. <p>Conference/Seminars/Trainings/Workshops attended:</p> <ul style="list-style-type: none"> Attended a two day ‘International Workshop on Dog medicine, Behaviour, and Population Management of Dogs’ by Kerala Veterinary and Animal Sciences in collaboration with the Jeanne Marchig International Centre for Animal Welfare Education of The Royal(Dick) School of Veterinary Studies, University of Edinburgh, Easter Bush, Scotland, UK, on 28th to 29th of November, 2016, at University Veterinary Hospital, Kokkalai. Attended one day International Workshop applying welfare measures to improve sustainability of small holder Dairy production in Kerala at Flora Airport Hotel, Kochi on 16.12.2016 in association with University of Bristol-KVASU project funded by BBSRC
<p>Dr. Syam K.Venugopal Professor and Head</p>	<p>Papers presented at seminars:</p> <ul style="list-style-type: none"> Presented a lead paper on “Bone Grafts & Graft Substitutes - current Concepts & Future Trends” in the XIV Annual Convention of the Indian Society for Advancement of Canine Practice and National Symposium on “Newer approaches in management of canine health and rewarding clinical practice as well as trade” held at GBPUAT, Pantnagar from 9th to 11th February 2017. <p>Conference/Seminars/Trainings/Workshops attended:</p> <ul style="list-style-type: none"> Attended XIII Annual Convention of the Indian Society for Advancement of Canine Practice and National Symposium on “Concepts of One-Health in Canine Health Care Management” held at CVAS, Pookode, Wayanad from 27th to 29th April, 2016. Attended an International Workshop in collaboration with The Jeanne Marchig International Centre for Animal Welfare Education of The Royal(Dick) School of Veterinary Studies, University of Edinburgh, Easter Bush, Scotland, UK, on <i>Dog medicine, Behaviour, and Population Management of Dogs</i> by Kerala Veterinary and Animal Sciences University, on 28th to 29th of November, 2016 Attended XIV Annual Convention of the Indian Society for Advancement of Canine Practice and symposium on Newer approaches in management of canine health and rewarding clinical practice as well as trade” held at GBPUAT, Pantnagar from 9th to 11th February, 2017

12. RESEARCH / INFRASTRUCTURE PROJECTS

a. Funded

Sl. No.	Name of the Project	Outlay (Lakh)	Amount Received (Lakh)	Amount Utilized (Lakh)	Source
1	Strengthening of Veterinary Hospital	08.00	8.00	1.96	State Plan Projects 2016-17
2.	Investigation and management of companion animal fertility	16.00	7.00	2.93	-do-
3.	Developing a protocol for evaluation and management of veterinary trauma patients and establishment of Veterinary Trauma Care Centre	10.00	6.00	2.14	-do-

b. Departmental projects : NIL

13. PUBLICATIONS (mention publications in recent 3 years)

a. Journals

Name of the Incumbent	Details of Article Published
Dr. C. Jayakumar Assistant Professor	<ul style="list-style-type: none"> • UNILATERAL BARTHOLIN'S GLAND CYST IN A DOG (2017). Jayakumar. C., Sudha C.M., Niyaz. E., and Naveenkumar. R.H. <i>Indian Journal of Animal Reproduction</i> 38 (1): 74-75. • ULTRASONOGRAPHIC DIAGNOSIS AND TREATMENT OF HYDROMETRA IN JAMNAPARI GOATS (2017). Jayakumar, C., Sudha, G., Kantharaj, S. and Lakshmikanth, K. <i>Indian Journal of Animal Reproduction</i> 38 (1): 72-73. • CLINICAL ASSESSMENT, ULTRASONOGRAPHIC DIAGNOSIS AND MANAGEMENT OF BENIGN PROSTATE HYPERPLASIA (BPH) IN DOGS. (2016). C. Jayakumar, G. Sudha and A. Krishnaswamy. <i>Intas Polivet, Vol. 17 (I): 148-150</i> • ENBLOC OVARIOHYSTERECTOMY AS A TREATMENT FOR FETAL CAUSE OF DYSTOCIA IN A CAT- A CASE REPORT (2016). Chinnu. P.V., Jayakumar. C., Smitty, J. and Martin, K.D. <i>Indian Journal of Canine Practice</i>, 8 (2): 147-148 • FEATHERING RESPONSE AS A PROGNOSTIC INDICATOR TO MEDICAL MANAGEMENT OF UTERINE INERTIA IN DOGS (2016). C. Jayakumar, A. Krishnaswamy and G. Sudha. <i>Indian Journal of Canine Practice</i>, 8 (1): 33-37. • ASSESSMENT OF CANINE NEWBORN VIABILITY BY UMBILICAL VEIN LACTATE EVALUATION AND ITS PROGNOSTIC VALUE IN SHORT TERM NEONATAL SURVIVAL (2016). C. Jayakumar, A. Krishnaswamy, G. Sudha and T.G. Honnappa. <i>Indian Journal of Animal Reproduction</i> 37 (1): 27-29. • BLOOD GLUCOSE AND TOTAL CALCIUM CONCENTRATION IN OBSTETRICAL EMERGENCIES IN DOGS (2016). C. Jayakumar, A. Krishnaswamy, G. Sudha and T.G. Honnappa. <i>Indian Journal of Canine Practice</i>, 8 (1): 25-29. • A RARE CASE OF COMPLETE VAGINAL PROLAPSE IN AN ADVANCED PREGNANT BITCH (2016). C. Jayakumar, G. Sudha, S. Kantharaj and G. Imam Hussain <i>Indian Journal of Animal Reproduction</i> 37 (1): 59-60 • TRUE PROLAPSE OF GRAVID UTERUS, BLADDER AND INTESTINES THROUGH VAGINAL TEAR IN A GOAT (2016) S. Praveen, C. Jayakumar, Amritha Aravind and R.S. Abhilash <i>Indian Journal of Animal Reproduction</i> 37 (1): 63-64

Dr. Syam K. Venugopal Professor and Head	<ul style="list-style-type: none"> Varghese, S. M., Syam K. Venugopal, Devanand, C.B, Narayanan M. K., Ashok, N and Divakaran nair, N 2016. Minimally invasive interlocking nail fixation in a Labrador dog with oblique tibial fracture. <i>Indian J. CaninePract.</i> 8. 51-54. Anuraj, K. R., Dinesh, P. T., Sooryadas, S., George Chandy, Sujith, S and Syam K. Venugopal. 2016. Effects of oral premedication with risperidone and tramadol in dogs. <i>Indian J. CaninePract.</i> 8. 66 -67. Maruthi, S. T., George Chandy, Syam K. Venugopal, Sooryadas, S., Lucy, K. M and Sunanda, C. 2017. <u>Occurrence</u> of hip dysplasia in dogs: A retrospective study. <i>Indian J. CaninePract.</i> 9. 67 -69.
Dr. Laiju M. Philip	<ul style="list-style-type: none"> Laiju M. Philip, C. Ramani, B. Justin Williams And S Ushakumari 2017. Ultrasonographic anatomy and biometry of eye in calves and goats. <i>Indian J. Anim Sci</i>, 87. 175-177. M. Laiju Philip, A.M. Adarsh and S.M. Varghese. 2016. Surgical Management of Oesophageal Foreign Body Obstruction in a Cat. <i>Intas Polivet</i> 17: 613-614. S. Anoop, Laiju M Philip, C.B. Devanand and S. Ajithkumar . 2016. <u>Spontaneous Urinary Bladder Perforations and its Successful Surgical Management in a Dog</u>, <i>Indian vet. J.</i> 93. 20-21.
Dr. Dhanush Krishna, B Assistant Professor	<ul style="list-style-type: none"> R. Sovan, K. Krithiga, K.B. Dhanush, M.J. Abraham, A.J. George, N. Vijayan, C.B. Manomohan. (2017). Bronchogenic adenocarcinoma of lung with metastasis in a rabbit-a case report. <i>Indian J. Vet. Pathol.</i> 41(1):73-74.

b. Books :

Sl. No.	Title	Authors / Department	Language
1.	Practical manual for the Stipendiary Training on Veterinary Nursing, Pharmacy and Laboratory Techniques	Dr. Syam K. Venugopal Professor and Head, Dr. Laiju M Philip, Dr. K. Jayakumar and Dr. K. Syamala Assistant Professors	English
2.	Compendium of International Workshop on Dog medicine, Behaviour, and Population Management of Dogs	Dr. Syam K. Venugopal & Dr. Laiju M Philip	English

14. AWARDS/ HONOURS AND OTHER PERSONAL ACHIEVEMENTS

Dr. C. Jayakumar

- Karnataka Veterinary, Animal & Fisheries Sciences University Gold Medal for having secured highest OGPA during Ph. D degree programme
- Best article published in Intas Polivet Vol.17 (2016) No: 1 under category 'clinical article' – Clinical assessment, ultrasonographic diagnosis and management of Benign Prostatic Hyperplasia in dogs
- ISACP award for best article on Canine Reproduction and Breeding in Indian journal of canine practice 2016

Projects undertaken:

- Co-investigator for state plan project on 'Promotion of milk security in Kerala through better reproductive practices' being implemented during 2016-17.
- Principal investigator for state plan project on "Investigation and management of companion animal fertility" being implemented during 2016-17.

Dr. Dhanush Krishna. B

- Principal investigator for the state plan project (RSP/16-17/VII -2) on “*Application of modern diagnostic methods for early tumor detection and its management in veterinary practice*” being implemented during 2016-17.
- Principal investigator for the state plan project (RSP/16-17/VI -18) on “*Strengthening of immunohistochemistry facility as a diagnostic tool in clinical veterinary practice*” being implemented during 2016-17.

15. EXTENSION ACTIVITIES

By the Institution

1. Free Anti rabies Vaccination camp on 06.07.2016
2. Sales outlet of KVASU Products started from 02/05/2016 and was inaugurated by Dr. Joseph Mathew, Registrar, KVASU.

By Incumbents

Name of Incumbent	Extension activity
Dr. Dhanush Krishna Asst. Professor	<ul style="list-style-type: none">• Handled classes to farmers under NSS programme• Handled classes to farmers on “Eco-friendly livestock farming techniques” under revolving fund project on 24-10-2016, 27-10-2016 and 23-11-2016 at CV&AS, Mannuthy.• Provide report on histopathological interpretation of PhD research work in pathological studies to outside faculty.
Dr. C. Jayakumar Asst. Professor	<ul style="list-style-type: none">• Training class at Goat and Sheep farm, Mannuthy on “Reproductive Management of goats” as a part of skill development training on “Commercial Goat Rearing” for farmers on 19th April 2017.• Attended as subject expert for infertility camp organized at Pullazhy in connection with ‘Start up village project in cole lands of Thrissur district’ on 6th September 2016.• Training class at Extension Training Centre, Mannuthy on “Reproduction and infertility in Dogs” on 12th April 2016 for self-help groups.
Dr. Laiju M. Philip Asst. Professor	<ul style="list-style-type: none">• One day seminar on “Healthy Hoof in Dairy Cattle for Production Benefits” at University Livestock Farm , Mannuthy on 28.6.2016• Awareness Class and Demonstration on “Healthy Hoof in Dairy Cattle for Production Benefits” at Villadam APCOS on 31.7.2016• Awareness Class and Demonstration on “Healthy Hoof in Dairy Cattle for Production Benefits” at Cherumkuzhy APCOS on 2.8.2016• One day seminar on “Healthy Hoof in Dairy Cattle for Production Benefits” at Livestock Research Station Thiruvizhamkunnu on 11.8.2016
Dr. Syam K. Venugopal Professor and Head	<ul style="list-style-type: none">• Organising Secretary for the XIII Annual Convention of the Indian Society for Advancement of Canine Practice and National Symposium on “Concepts of One-Health in Canine Health Care Management” held at CVAS, Pookode, Wayanad from 27th to 29th April, 2016.• Workshop Co-ordinator for the International Workshop on Dog medicine, Behaviour, and Population Management of Dogs by Kerala Veterinary and Animal Sciences in collaboration with the Jeanne Marchig International Centre for Animal Welfare Education of The Royal(Dick) School of Veterinary Studies, University of Edinburgh, Easter Bush, Scotland, UK, on 28th to 29th of November, 2016

16. ADMINISTRATIVE, EDUCATIONAL, RESEARCH AND OTHER ASSIGNMENTS

- e-Vetconnect Hospital Management System is functional in the hospital.
- Biomedical waste management is being carried out in affiliation with IMAGE-IMA

17. SIGNIFICANT EVENTS IN THE DEPARTMENT

Senior Veterinary Nursing faculty, Ms. Hayley Walters from the University of Edinburgh visited the hospital on 10/03/2017 for continuing discussions on finalizing the syllabus for Veterinary Nursing programme.

18. STAFF DETAILS:

Sl. no	Name	Designation
Head of station		
1	Dr. Syam K. Venugopal	Professor and head
Teaching faculty		
2.	Dr.Dhanush Krishna B	Assistant Professor
3.	Dr. C. Jayakumar	Assistant Professor
4.	Dr. Laiju M. Philip	Assistant Professor
Technical staff		
5	Smt. Manjith Kumar T.R	Farm Supervisor, Gr. I
6.	Smt. Biji K. R	Farm Supervisor, Gr. II
7.	Smt. SuniM	Radiographer (Contract appointment)
Administrative Staff		
8.	Sri. Mohammed Mosadique	Section Officer
9.	Smt. Raseena A	Assistant
10.	Sri. Ramakrishnan S C	Class IV
11.	Sri. Arunkumar, C. U	Class IV (Contract appointment)

TEACHING VETERINARY CLINICAL COMPLEX, POOKODE

MAJOR ACTIVITIES

Teaching Veterinary Clinical Complex functions in three streams viz., the hospital at Pookode, Farm Clinics at Sugandagiri and the Multidisciplinary Specialty Hospital at Meenangadi. It caters the need of farmers from Vythiri, Meenangadi and nearby panchayats. It also conducts undergraduate clinical teaching and provides facilities for postgraduate researches. Through this TVCC, the students of the university get a wider perspective on topics like handling of animals, anamnesis, diagnosis of disease, medical and surgical management of cases, prescription writing, formulation and dispensing of drugs, record keeping, maintenance and extension activities.

	TVCC, Pookode	MSH, Meenangadi	Farm Clinics Sugandhagiri
Total No. of cases treated	4814	4949	2370

THRUST AREA OF RESEARCH (in bullet form)

- Through its facilities TVCC support the research projects of the clinical and non-clinical departments on various aspects involving disease diagnosis and management in pet and farm animals.
- Septic arthritis in calves
- Brucella abortion in goats

SALIENT RESEARCH FINDINGS / ACCOMPLISHMENTS (in bullet form)

- There is a steady increase in the number of cases presented at both hospitals.
- During the last financial year (2016-2017), plan fund was utilized for strengthening of existing facility in both the institutions

STAFF DETAILS

Sl. No.	Designation	No. of Posts	In position	Vacant
	Professor	1	0	1
	Associate Professor	1	1 (on working arrangement)	1
	Assistant Professors	5	5 (on working arrangement)	5
	Assistant	1	1	0
	Farm assistant Gr. I	1	0	1
	Pharmacist	1	0	1
	Radiographer	1	0	1
	LMV Driver	1	0	1
	Class IV	1	0	1

PROJECTS

Sl No.	Project Title	Financial year	Investigators (Name of PI followed by Co Pis)	Financial Outlay (in lakhs)	Status (completed/ Ongoing)
	Clinico- therapeutic studies on joint ill in calves	2016-17	Dr. Jineshkumar N S, Assistant Professpr	10.5	Ongoing
	A surveillance study on brucella mediated abortion in small ruminants of wayanad district	2016-17	Head of the Department	7.0	Ongoing

Centre for Advanced Studies in Poultry Science

Centre for Advanced Studies in Poultry Science (CASPS) was established in 1985 as recognition for its contribution in various fields of activities. Establishment of AICRP on Poultry improvement, Release of crossbred chicken for backyard- Gramasree & Gramalakshmi, release of high yielding ILM-90, ICAR Revolving Fund poultry project, NATP project on Ducks and successful conduct of IV World Water Fowl conference, RKVY project etc. are the significant milestones of the Centre

SECTION - II

MAJOR ACTIVITIES

Mandate

- 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

Research activities

- Conservation of poultry germplasm
- Selection and breeding for egg production
- Evolving of birds for backyard rearing
- Nutritional requirement studies of poultry species
- Management studies on chicken, duck, quails and turkeys

SECTION - III

PROJECTS CONTINUING THROUGH THE YEAR

Revolving Fund Poultry Project

This is a successful model of Revolving Fund Project operating in the Animal Husbandry Sector in the country which is under the administrative control of CASPS. The project started in 1998 with Rs. 25 lakhs as one time grant from ICAR. During the year the major activity under the Revolving Fund Poultry Project is production and supply of balanced poultry and livestock feeds to cater the requirements of farms under the University and Animal Husbandry Department of Government of Kerala. In 2016-17, 3208 MT of feed was produced and supplied to various farms. Apart from this, poultry feed in 5 kg and 4Kg packets were also supplied to farmers to promote backyard poultry production.

Sl No	Title of the Scheme	Name of the funding agency	Name of the PIs and Co-PIs	Outlay
1	Revolving Fund Poultry Project	KVASU	PI Dr.P.Anitha Co-PIs Dr.Binoj Chacko Dr.Harikrishnan S Dr.Sankaralingam Dr.Suja C.S	50 lakhs

State Plan Projects (continuing)

- Conservation, characterization and popularization and of native chicken varieties in Kerala – 15 lakhs
- Pullet production to support self help groups in backyard poultry rearing – 10 lakhs
- Hatchery waste disposal and its effective utilization – 10 lakhs
- Centre for Advanced Studies in Poultry Science (Advanced Studies mycotoxin testing facilities for Poultry Feed – 10 lakhs

TECHNOLOGY DEVELOPED AND TRANSFERRED

Consultancy

Type of consultancy	Client details	Revenue generated
Counseling	Farmers	Nil

SECTION – VIII

SUPPORT SERVICES

Seminar / Workshop / Summer Institute / Symposium / WinterSchool / Training Programme / Short Courses / Any other programme organized

Name of the Department: CAS in Poultry Science

Sl. No.	Title of the Programme	Place	Duration		Name of the sponsoring agency	No. of Participants	No. of Papers presented	Approx. cost involved
			From	To				
1	Training on Egger nursery and poultry farming for farmers	CAS in Poultry Science, Mannuthy	05-09-2016	06-09-2016		13 nos		9,100/-
2	Training on Current trends in Quail farming for Farmers	CAS in Poultry Science, Mannuthy	20-03-2017	21-03-2017		14 nos		9,800/-
3	Training on Egger nursery and poultry farming for farmers	CAS in Poultry Science, Mannuthy	24-03-2017	25-03-2017		14 nos		9,800/-
3	Training on Broiler production and management for farmers	CAS in Poultry Science, Mannuthy	29-03-2017	30-03-2017		11 nos		7,700/-

5. Activities of the Laboratory:

Mycotoxin Lab

All ingredients purchased for feed production and the compounded feed produced in RFPP under CASPS were screened for aflatoxin level using ELISA reader.

Avian Biotechnology Lab

Equipments and research materials used for molecular biology were purchased under state plan

project for avian biotechnology laboratory. PCR and gel electrophoresis were performed for SNP analysis of White leghorn and native chicken.

SECTION - IX

AWARDS AND HONOURS

Dr. PKothandaraman memorial award for best paper presentation for the work entitled “Effect of dietary supplementation of Marigold petals, Red amaranth leaves, Curry leaves and Turmeric powder on egg yolk pigmentation in Native and White Leghorn layers” authored by **Suja C. S., Binoj Chacko, P. Anitha** and Greeshma Girijan during IPSACON 2016 held at AAU, Khanapara, Guwahati, Assam

MATERIAL RESOURCE

Sl. No.	Name of the equipment	Year of purchase	Cost of equipment	Company / make	Utility of the equipment in brief
1	Machine grinder	2016-17	500000/-	Suchitha	To process hatchery waste
2	Solar panel	2016-17	600000/-	Megabyte Technologies	
3	ELISA Reader		295000/-	Bio Rad	For reading aflatoxin level in feed sample
4	UV Transilluminator		61123/-	Tarsons	To detect fluorescent bands or nucleic acid bands
5	Electrophoresis unit with power pack		147900/-	Genei	Electrophoresis of nucleic acids
6	T100 Thermal cycler with UPS		256000/-	Bio Rad	Polymerase chain reaction
7	Spin win Ml-03 Micro centrifuge		65985/-	Eppendorf	Centrifugation

PUBLICATIONS

1. Binoj Chacko, C. S. Suja and **P. Anitha** (2016). Comparative production performance of long- term selected pure White Leghorn strains .Proceedings of XXXXIII IPSACON, Guwahati, Assam
2. Binoj Chacko, C. S. Suja and **P. Anitha** (2016). Heritability and correlation for egg production and other traits in Long term selected population of White Leghorn. Proceedings of XXXXIII IPSACON, Guwahati, Assam
3. Suja C. S., Binoj Chacko, **P. Anitha** and Greeshma Girijan (2016). Effect of dietary supplementation of Marigold petals, Red amaranth leaves, Curry leaves and Turmeric powder on egg yolk pigmentation in Native and White Leghorn layers. Proceedings of XXXXIII IPSACON, Guwahati, Assam.

FACULTY DETAILS

Sl. No.	Name and designation of the Teaching Staff	Discipline	Residential address	Email ID	Contact No.	
					Land line (Residence)	Mobile
1	Dr. Leo Joseph, Director (Retd.)	Poultry Science	Thekkel House, Mannuthy	leo@kvasu.ac.in		9447006663

2	Dr.P.Anitha, Director	Poultry Science	Nandanam, Koorkanchery, Thrissur-7	anitha@kvasu.ac.in		9447006663 (official)
3	Dr.Beena C Joseph*, Assistant Professor	Poultry Science	Erinjery House, Mannuthy	beenajoseph@kvasu.ac.in		9447235947

Cattle breeding farm Thumburmuzhy

Faculty : Veterinary & Animal Sciences

3. Name of Head of the Station : Dr. Suraj.P.T, Asst.Professor (Prof i/c)
Up to 15.06.2016
Dr.A. Prasasd, Asst.Professor (Prof i/c)
From 15.06.2016

4. Staff strength as on 31.3.2017

Designation	No of Posts				Remarks
	Sanctioned	In Position	Name of the incumbent	Vacant	
Scientific					
Professor	1	-	-	1	
Asst. Professor	2	3	Dr.Prasad. A		Head i/c
			Dr. Justin Davis		
			Dr. Deepak Mathew. D.K		On deputation - study leave for Ph. D
Administrative & Supporting Staff					
Administrative Assistant	1	1	Thilakan. T.A	Nil	
Assistant	2	2	Geethu. R Sreedevi.P.R	Nil	
Computer Assistant	1	1	Anooj. P.G	Nil	
Para- Technical Staff					
Senior Farm Supervisor	1	1	Polson Varghese	Nil	
Farm Supervisor / Farm Asst. (Vety.)	4	3	Manjith Kumar T R Daniel T. Y Thilakan .P.S	1	
LDV Driver	1	-	--	1	
Pump Operator	1	--	--	1	
Class IV	5	5	K.R.Valsala Prasad.K.B Mohanana. P.K Wilson.K.T Johnson.V.A	Nil	

5. Faculty improvement programme

a. Deputation of Scientists for Seminars/Workshops/Symposia: 2

Training Classes conducted in 2 trainings - Dr. A. Prasad

Particulars	Topic	Venue	Date
National Seminar	Newer approaches in cow comfort systems for better productivity	Hotel Pearl Regency Thrissur	25.06.2016
National Training	Training Programme on Farm Management for Officers of AHD	SAMETI, Thiruvananthapuram	24.10.2016

b. Deputation of Scientists for Summer school : Nil

c. Details of Seminars/Workshops/Symposia conducted at the Station : 1

One day Training on Hoof Trimming Hoof care and control of Laminitis - 29.09.2016



d. Awards/Scholarships to staff : Nil

Financial Details

Expenditure -- Rs. 235.83 Lakhs

Revenue -- Rs. 115.04 Lakhs

No. of animals - Crossbred Cattle

Sl No	Item	Number/Quantity
1	Total number of animals	228
2	Adult males	0
3	Non pregnant females	40

4	Milch animals	72
5	Dry non pregnant cows	37
6	Dry pregnant cows	28
7	Heifers below 18 month of age	47
8	Calves (below 12 months)	44

Production details

Parameters	Quantity	Amount
Milk production	301670 Kg	7526870
Fodder production	2263215 Kg	219645
No. of calving	82	
Sale of animals	58	Rs 1450000
Death of animals	12	
Sale of cow dung (wet)	215025 kg	172020

Production details

Birth weight	32.5 kg
Yearling weight	117 kg
Age at first calving	2.8 years
Lactation length	310 days
Lactation milk yield	3540 kg
Peak yield	26.5 kg
Average milk yield/cow	12.5 kg
Calving interval	395 days
Conception rate(AI/conception)	2.80

Extension/ Entrepreneurial activities

4. Established the *University Sales Counter*
5. Established the *University Canteen* operated by self help groups - Kudumbasree Pariyaram Panchayath
6. Fodder replanting in the farm with MNREGA - Pariyaram panchayath
7. Supply of 6 lakhs fodder slips to farmers
8. Farmers training program in collaboration with Bank of India

വിശിഷ്ടാതിഥി	: ഡോ. ജോസഫ് മാത്യു (ജെന്റ്രാർ, KVASU)
ആദരസുകൾ	: ശ്രീ. വിജയകുമാർ എ. ബി. (നാഷണൽ ബാങ്കിംഗ് സൊല്യൂഷൻസ്, ബാങ്ക് ഓഫ് ഇന്ത്യ കേരള ബ്രാഞ്ച്)
	: ശ്രീമതി മനീഷ ജോബി (സിനിയർ ബ്രാഞ്ച് മാനേജർ, സി.പി.സി.ബി.യു. ബാങ്ക് ഓഫ് ഇന്ത്യ)
	: ഡോ. എ. പ്രസാദ് (ഹെഡ് കന്നുകാലി പ്രജനന കേന്ദ്രം, തുമ്പൂർമുഴി)
	: ഡോ. കെ. പി. ശ്രീകുമാർ (പ്രൊഫസർ RC, KVASU)
	: ഡോ. ജി. ശിരീഷ് വർമ്മ (ഡീൻ, CDST)
നന്ദി	: ശ്രീ. ഷാജി ജോസഫ് (വികസനകാര്യ സാനിറ്റേഷൻ കമ്മിറ്റി ചെയർമാൻ, പരിയാരം പഞ്ചായത്ത്)
	: ഡോ. ടി.പി. മാത്യു (അസി. പ്രൊഫസർ കന്നുകാലി പ്രജനന കേന്ദ്രം, തുമ്പൂർമുഴി)
സെമിനാറുകൾ	
10.30am -11am	: ബാങ്ക് ഓഫ് ഇന്ത്യയിലെ കാർഷികവായ്പാ പദ്ധതികൾ : ശ്രീമതി മനീഷ ജോബി (സിനിയർ ബ്രാഞ്ച് മാനേജർ സി.പി.സി. തൃശ്ശൂർ ബാങ്ക് ഓഫ് ഇന്ത്യ)
11.15 am -11.45am	: കാലാവസ്ഥാവിപ്ലവവും മൃഗസംരക്ഷണവും : ഡോ. ജി.എസ്.എസ്.വി.എച്ച്. പ്രസാദ് റാവു (കൺസൾറ്റന്റ് പ്രൊഫസർ CAADECCS)
12 noon -12.30pm	: ഭാഗ്യപ്രതിഭാധനവും മാലിന്യ സംസ്കരണവും : ഡോ. ടി.പി. മാത്യു (അസി.പ്രൊഫസർ കന്നുകാലി പ്രജനന കേന്ദ്രം, തുമ്പൂർമുഴി)
തുലാമുഖം	
ഡോ. ബീനാ വി (ഇപ്പീജെസ് ഓഫീസർ CAADECCS)	
ഡോ. കെ. കാർത്തായിനി	




ബാങ്ക് ഓഫ് ഇന്ത്യ, CBF തുമ്പൂർമുഴി, CAADECCS (കേരള വെറ്ററിനറി സർവ്വകലാശാല) സംയുക്തമായി സംഘടിപ്പിക്കുന്ന

കർഷകരിനാഘോഷവും സെമിനാറും

2016 ജൂലായ് 22 വെള്ളിയാഴ്ച രാവിലെ 10ന് പരിയാരം പഞ്ചായത്ത് കമ്മ്യൂണിറ്റി ഹാളിൽ

സുഹൃത്തേ,

ഇന്ത്യയിലെ പ്രമുഖ ഔദ്യോഗിക ബാങ്കായ ബാങ്ക് ഓഫ് ഇന്ത്യ പരിയാരം രാജ 30 വർഷത്തോളമായി പരിയാരത്ത് പ്രവർത്തിച്ചുവരുന്നു. ബാങ്ക് ഇന്ത്യ നാളിതുവരെ വിവിധ വായ്പാ പദ്ധതികളിലൂടെ കർഷകരെ തിരികെപ്പോലിക്കാൻ ശ്രമിച്ചിട്ടുണ്ട്. ഇതിന് പരിയാരം പഞ്ചായത്തിലെ നല്ല നാട്ടുകാരുടെ സഹകരണം എല്ലാത്തരത്തിലും ലഭിച്ചിട്ടുണ്ട്.

വെറ്ററിനറി സർവ്വകലാശാലയുടെ കീഴിലുള്ള കന്നുകാലി പ്ര. കേന്ദ്രം തുമ്പൂർമുഴി കന്നുകാലികളുടെ പ്രജനനം, പുനഃകൃഷി, ജൈവ മൃഗസംസ്കരണം കന്നുകാലികളുടെ സംരക്ഷണം എന്നിവയിൽ തദ്ദേശവാസികൾക്ക് സഹായം നൽകുന്നു.

കാലാവസ്ഥാ വിപ്ലവം പഠനകേന്ദ്രം, കാലാവസ്ഥാ വിപ്ലവം മൃഗങ്ങൾക്ക് സംരക്ഷിക്കുന്ന പ്രദേശങ്ങളെക്കുറിച്ചും അതിനെ അതിജീവിക്കാൻ കരുതലുകളെക്കുറിച്ചും തദ്ദേശവാസികൾക്ക്, അധ്യാപനം, വിജ്ഞാനവ്യാപനം എന്നിവ നൽകുന്ന, സർവ്വകലാശാലയുടെ കീഴിലുള്ള സ്ഥാപനമാണ്.

പരിയാരം പഞ്ചായത്തിലെ കർഷകർക്കെതിരെ ഉൾപ്പെടുത്തിക്കൊണ്ട് കർഷകരിനാഘോഷത്തിലേക്ക് ഏവരെയും ക്ഷണിച്ചുകൊള്ളുന്നു.

സംഘാടകസമിതി

കാര്യപരിപാടി

സ്വാഗതം	: ശ്രീ. സജീവ് കെ. ആർ.
അദ്ധ്യക്ഷ	: (ഹെഡ് ക്വാർട്ടേഴ്സ്, ബാങ്ക് ഓഫ് ഇന്ത്യ, പരിയാരം രാജ)
ഉദ്ഘാടനം	: ശ്രീമതി സൗമ്യ ജോർജ്ജ് (ബ്രാഞ്ച് മാനേജർ, ബാങ്ക് ഓഫ് ഇന്ത്യ, പരിയാരം രാജ)
	: ശ്രീ. ജോർജ്ജ് പി. ജോസ് (പ്രൊഫസർ, കന്നുകാലി പ്രജനന കേന്ദ്രം, തുമ്പൂർമുഴി)

Completed State Plan Projects 2015-16

Project No.1

Sl.No	Item	Details
1	No. of the project	RSP/15-16/II-3
2	Name	Conservation of local cattle of Kerala
3	Head of Account	129-69-0010-6248
4	Department/station/college	Cattle Breeding Farm Thumburmuzhy
5	Whether new or continuing	Continuing
6	objectives	1. Conservation of local cattle of Kerala
7	Technical programme	Vechur cattle is recognised native cattle breed of Kerala. 14 numbers of Vechur cattle produced in the farm were conserved and two animals were inseminated with vechur bull semen from Mannuthy farm. Further multiplication and genetic improvement of the stock attempted Scientific feeding of vechur cows with ad libitum green fodder followed. Feed required for the Vechur cattle were purchased and wages of labours were given.

8	Results		Two more calves born. Overall health status of the vechur cows improved. 346 Visitors were given awareness on importance of local cattle conservation during the period.					
9	Achievements/ Deliverables in bullet points		Elite germplasm of vechur cows conserved.					
10	Physical achievements (Constructions, modifications, furniture procured, equipments purchased etc)		Vechur shed maintenance work done. Dung pit was protected with permanent roofing.					
11	Financial achievement	Sl. No	Components	Outlay (lakhs)	Expenditure Rs	Balance	% expenditure	Remarks
		1	Consumables	10	971415	28585	97	Amount calculated after abatements
		2	Wages	3	299612	388	99	
		3	Other items	2	194091	5909	97	
		Total		15.0	14,65,118	34882	97.7	

Shed to Store Dung of Vechur Cattle



Project No.2

Sl.No	Item		Details					
1	No. of the project		RSP/15-16/I-1					
2	Name		Strategies for Improving the Fodder Production of Kerala State					
	HEAD OF ACCOUNT		129-69-0010-6245					
3	Department/station/ college		Cattle Breeding Farm Thumburmuzhy					
4	Whether new or continuing		CONTINUING					
5	objectives		1. To strengthen the fodder bank at Cattle Breeding Farm, Thumburmuzhy. 2. To supply good quality fodder planting materials to farmers. 3. To utilize the facilities created for demonstration and training of farmers					
6	Technical programme		The fodder land available in CBF Thumburmuzhy was effectively utilized for seed, slip and fodder production. In areas where there was need for replanting, it was done on a priority basis in 10 acres of land. Scientific manuring was ensured for optimizing the production.					
7	Results		Produced 1300 T of fodder during the period. Two satellite fodder units were established by farmers for supplying fodder to other dairy farmers. CO III was propagated and CO IV fodder cultivation practices were standardised.					
8	Achievements/ Deliverables in bullet points		Supplied fodder slips 6, 00,000 during 2015-16. Supplied 30,000 kg fodder to farmers, especially during summer months. Electric fencing was done around the fodder plots. Chaff Cutter					
9	Physical achievements (Constructions, modifications, furniture procured, equipments purchased etc)		Electric fencing of fodder plots Purchased disc mower					
10	Financial achievement	Sl. No	Compo- nents	Outlay (lakhs)	Expendi- ture	Balance	% expen- diture	Remarks
		1	Wages	11,00,000	11,00,000	0	100	Check the amounts. Otherwise just give outlay, fund received, expenditure and % of expenditure alone.
		2	Consum- ables	8,50,000	6,50,330	1,99,670	76.5	
		3	Other items	50,000	39,759	10,241	79.5	
		Total		20,00,000	17,90,089	2,09,911	89.5	

Chaff Cutter

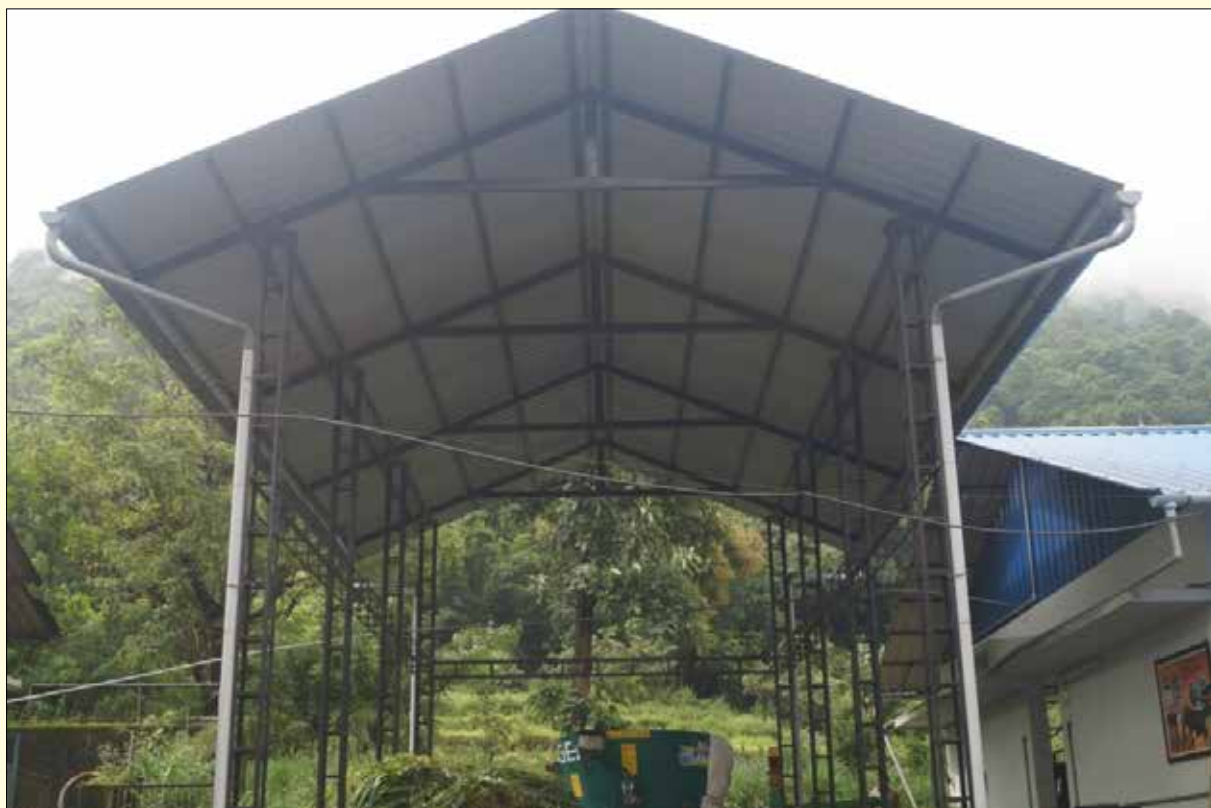


Project No.3

Sl. No	Item		Details
1	No. of the project		RSP/15-16/I-4
2	Name		Improving nutritional base through TMR technology
	HEAD OF ACCOUNT		129-69-0010-6376
3	Department/station/ college		Cattle Breeding Farm Thumburmuzhy
4	Whether new or continuing		New Project
5	objectives		1.To purchase and make functional a tractor attachable TMR wagon
6	Technical programme		Purchase TMR wagon and Chaff cutter with all accessories construct shed for producing TMR conduct experiment on TMR
7	Results		Introduced TMR technology
8	Achievements/ Deliverables in bullet points		Improved infrastructure
9	Physical achievements (Constructions, modifications, furniture procured, equipments purchased etc)		TMR Wagon 3.5 m ³ , Shed for TMR wagon and chaff cutter

		Sl. No	Components	Outlay (lakhs)	Expenditure (lakhs)	Balance	% expenditure	Remarks
10	Financial achievement	1	Wage	2,00,000	0	2,00,000	0	
		2	Equipments	14,00,000	10,58,740	3,41,260	75.6	Instead of 5 m ³ TMR wagon a 3.5 m ³ wagon was purchased because the existing tractor in the farm could operate only 3.5 m ³ wagon
		3	Consumables	3,50,000	3,49,417	583	99.8	
		4	TA/DA	50,000	50,000	0	100	
		Total		20,00,000	14,58,157	5,41,843	72.9	

TMR Wagon and Shed for Producing TMR

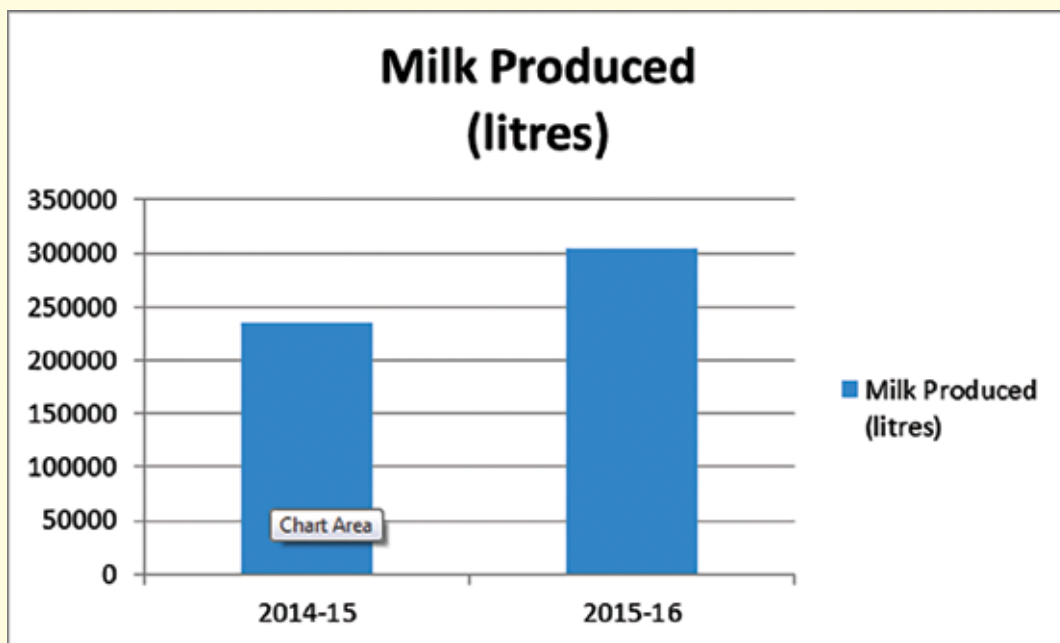




Project No.4

Sl. No	Item		Details
1	No. of the project		FSP/15-16-II
2	Name		Strengthening of Cattle Breeding Farm,Thumburmuzhy
	HEAD OF ACCOUNT		129-69-0010-6229
3	Department/station/ college		Cattle Breeding Farm Thumburmuzhy
4	Whether new or continuing		Continuing
5	objectives		1. To improve productivity of the farm 2. To find out effect of optimized feeding and management in health and production of cross breed heifers and dairy farm
6	Technical programme		Calves ,milch and heifers in CBF were given calf starters concentrate feed supplement and fodder to observe growth rated reproductive parameters and occurrence diseases
7	Results		Production potential of the animals were realized
8	Achievements/ Deliverables in bullet points		Total of 103 cattle's were born and 73 cattle's were sold to farmers during this FY. 304885 litres of milk produced . Total amount realized- Rs 94,55,658
9	Physical achievements (Constructions, modifications, furniture procured, equipments purchased etc)		Roof top tress work for laboratory and feeds store .

		Sl. No	Components	Outlay (lakhs)	Expenditure (lakhs)	Balance	% expenditure	Remarks
10	Financial achievement	1	Wage	20,00,000	20,00,000	0	100	
		2	Equipments	8,00,000	7,94,388	5612	99	
		3	Consumables	26,00,000	25,99,836	164	99.9	
		4	Other items	1,00,000	99,683	317	100	
		Total		55,00,000	54,93,907	6093	99.88	



Project No.5

Sl. No	Item		Details
1	No. of the project		
2	Name		University Information Centre and Sales centre
	HEAD OF ACCOUNT		129-69-0010-6485
3	Department/station/college		Cattle Breeding Farm Thumburmuzhy
4	Whether new or continuing		New
5	objectives		1. To improve farmers and trainees amenities attached to information centres

6	Technical programme		Pre Fabricated Multipurpose Buildings were established					
7	Results		Improvement of trainees facilities					
8	Achievements/ Deliverables in bullet points							
9	Physical achievements (Constructions, modifications, furniture procured, equipments purchased etc)		3 Pre Fabricated Multipurpose Buildings					
10	Financial achievement	Sl. No	Components	Out-lay(lakhs)	Expenditure (lakhs)	Balance	% expenditure	Remarks
		1	Consumables	10,00,000	10,00,000	0	100	
		Total		10,00,000	10,00,000	0	100	

On-going State Plan Projects 2016-17

	RSP/16-17/I- 1	Strategies for Improving the Fodder Production of Kerala State	30.0	Cattle Breeding Farm, Thumburmuzhy	Head, CBF, Thumburmuzhy
	RSP/16-17/ II - 2	Conservation of local cattle of Kerala	8.0	Cattle Breeding Farm, Thumburmuzhy	Head, CBF, Thumburmuzhy
	RSP/16-17/ III-8	Establishment of KVASU Dairy benchmark system.	7.0	Cattle Breeding Farm, Thumburmuzhy	Head, CBF, Thumburmuzhy.
	FSP/16-17/-3	Strengthening of Cattle Breeding Farm ,Thumburmuzhy	60.0	Cattle Breeding Farm ,Thumburmuzhy	Head, Cattle Breeding Farm ,Thumburmuzhy

CENTRE FOR SMALL LABORATORY ANIMAL PRODUCTION, CVAS MANNUTHY

1. BACKGROUND INFORMATION OF THE SCHOOL

The use of laboratory animals in scientific research is inevitable as it is essential in the advancement of medicine, development of drugs, diagnostics and production of biologicals for alleviating sufferings of both human and animals. There is a great demand for laboratory animals from the different medical and paramedical colleges as well as biotechnology institutes of our state and also of neighboring states. So it is the need of the hour to construct a station with modern facilities for enhancing production and to generate more revenue.

The new centre will be functioning in the proposed building after completing the construction. Till that time the centre will function in the small animal breeding station at Mannuthy campus

2. EDUCATIONAL COURSES

a. Training – Proposal given

KVASU Plan Projects

Name of the Project	Funding agency	Name of PI	Name of Co-PI
Improvement of newer schools CSLAP	KVASU-plan project	Dr. Ally K	

Revolving Fund Project (Ongoing)

Name of the Project	Funding agency	
Revolving fund on “Supply of feed for various classes of laboratory animals	KVASU	This is a RF under Department of Animal Nutrition, using facilities at CSLAP

5. PUBLICATIONS : Attached along with Annual Report of ANIMAL Nutrition

6. AWARDS/ HONOURS AND OTHER PERSONAL ACHIEVEMENTS

7. EXTENSION ACTIVITIES

Serves as a source of laboratory animals to SABS and other institutions

8. ADMINISTRATIVE, EDUCATIONAL, RESEARCH AND OTHER ASSIGNMENTS

Name	Administrative, Educational, Research and other assignments
Dr. Ally K	Deputy Quality Manager Laboratory NABL, Implementing Officer of School of Animal Nutrition and Feed Technology (SANFT) and Centre for Small Laboratory animal Production (CSLAP) PI of 2 research projects, Major Advisor of 3 MVSc Students

19. SIGNIFICANT EVENTS

Production and supply of feed for lab. animals feed mill started

20. STAFF DETAILS:

Sl No.	Name	Designation	Phone No
1	Dr. Ally K	Professor & IO	94474 76508

CENTRAL INSTRUMENTATION FACILITY, COVAS POOKODE –RIDF NABARD

The central instrumentation facility functions as the nerve centre of all modern research work taken up in the Pookode campus. The main objectives of this centre are, to provide state of the art facilities for diagnosis of various infectious and non- infectious diseases, to carry out residue analysis of drugs, xenobiotics and pesticides in milk, animal products and by products, feed and environmental samples and to establish a regulatory monitoring programme and evaluation of associated health risk, to carry out analysis of conventional and non-conventional feeds/ formulated feeds, for the identification and validation of ethno-veterinary practices in Kerala and isolation of patentable phytochemical molecules of commercial importance and study their toxicities. This will facilitate pharmacological evaluation of various compounds available in the area of biochemistry and biology for the pharmaceutical sector. In this centre, state of the art facilities has been established under Rural Infrastructure Development Fund (RIDF-NABARD) and houses LC-MSMS system equipped with ESI and APCI ionization mode, GCMS instrument coupled with head phase unit, High Pressure Liquid Chromatography (HPLC) with various detector, Semi-preparative HPLC system, Flash Chromatography system attached with auto collector, HPTLC system attached with automatic spot developer and scanner, UV/VIS Spectrophotometer, Ultra microbalance, Real Time PCR, Flow cytometer, biosafety cabinet, Co₂ incubator, centrifuges, freezers etc. Facilities / services of the centre are also extended to other institutes, within and outside state.

Faculty details

Sl. No.	Name and designation of the Teaching Staff	Discipline	Email ID	Contact No.	
				Land line (Office)	Mobile
1	Dr. Sanis Juliet Implementing Officer	Veterinary Pharmacology and Toxicology	sanis@kvasu.ac.in sanisjuliet@gmail.com	04936 256958	9446259510

Important materials/ resources acquired

I No	EQUIPMENT NAME	Name of the firm	AMOUNT IN FOREIGN CURRENCY	Units	Utility
1	GC with three detectors and injectors	Bruker Daltonics INC.,40 USA	30,350.00.USD	One	For analysis of pesticides and xenobiotics
2	Preparative cum analytical HPLC system	Shimadzu (Asia Pacific) Pte Ltd 79, Singapore 118 264	35,000.00.USD	One	For separation of plant/ herbal extracts
3	LCMSMS	Shimadzu (Asia Pacific) Pte Ltd 79, Singapore 118 264	1,51,860.00. USD	One	Analysis of For analysis of pesticides and xenobiotics
4	Gas chromatograph MS	Shimadzu (Asia Pacific) Pte Ltd 79, Singapore 118 264	80170.00.USD	One	For analysis of pesticides and xenobiotics
5	Flow cytometer	Becton Dickinson Holdings Pte Ltd, Singapore	95000.00.USD	one	For cytotoxicity studies
6	Flash Chromatography	BUCHI Labortechnik AG, Switzerland.	29670.00. CHF	one	For separation of plant/ herbal extracts

7	Ultramicrocentrifuge	Thermo Electron Ltd Germany	27,771.00.USD	one	Separation of microsomes and lysosomes by centrifugation at higher g
8	Real time PCR	Life Technologies Holdings Pte Ltd Singapore	20,000.00.USD	one	Quantification studies
9	Automatic tissue processor and stainer	Leica Mikrosysteme Germany.	12,138.00 Euro	one	Processing of tissue samples
10	Refrigerated micro centrifuge	Eppendorf AG Germany.	6515.00. Euro	one	Separation of samples by centrifugation at higher g
11	Gel documentation system	'SYNOPTICS LTD.', UK	5825.00.Pound sterlings	one	Visualization of gel products
12	-20 deep freezer Vertical	Thermo Fisher Scientific Asheville LLC Limited U. S.A	4621.00.USD	one	Storage of samples
13	Biosafety cabinet Type B2 Class II	Esco Micro Pte. Ltd., 21 Singapore 486 777	10,406.00.USD	one	Molecular and cell culture works
14	Nanodrop spectrophotometer	Thermo Fisher Scientific,USA	11726.5 USD	One	quantification
15	CO2 incubator	Thermo Fisher Scientific, USA	5664 USD	One	For cell culture studies
16	High precision water bath	Thermo Fisher Scientific, USA	4037.3	one	For biochemical and molecular studies
17	Deep freezer (-80)	Thermo Fisher Scientific Asheville LLC U. S.A	11253 USD	one	Storage of diagnostics, molecular reagents and standards
18	HPTLC and all accessories	M/s CAMAG, Sonnemattstrasse 11, CH 4132, Muttentz, Switzerland	CHF68000	one	Finger print profiling of plant extracts, screening of matrices for xenobiotics
19	POLYTRON Tissue Homogenizer	M/s KINEMATICA AG, Post Box No.446, Luzernerstrasse 147a, CH-6014 Littau-Lucerne, Switzerland	CHF 7040	one	Homogenization of tissue samples
20	CARL ZEISS inverted microscope model"Axio Vert. A1 FL-LED" with accessories	M/s Carl Zeiss Microscopy GmbH, Koenigsallee 9-21, 37081 Goettingen, Germany	EURO 20718	one	for the transmitted light bright field LED, phase contrast, fluorescence studies
21	Ultra Micro Balance With Vibration Table	M/s Sartorius Weighing technology GmbH Weender Landstr. 94-108 37075 Geottingen, Germany	EURO 17430	one	High precision weighing of standards

Distinguished visitors to the facility:

Sl. No.	Name and address of the visitor	Date of visit	Place of visit	Purpose of the visit	Remarks by the visitor
1	Dr Nishi Ann, Assistant Professor, Department of Zoology and team of postgraduate students from Providence Women's College , Calicut	01.04.2016	Analytical Chromatography laboratories	Study purpose	Would like to take up collaborative project works with the department
2	Dr. Anuj K and Dr. Neeraj, Assistant Professors, Mathura Veterinary College and Students	23.06.2016	Analytical Chromatography laboratories	Study purpose	Appreciated the facilities
3	Dr. Betsy Paul Assistant Professor, St James College of Nursing, Chalakudy and students	16.07.2016	Analytical Chromatography laboratories	Study purpose	Appreciated the facilities
4.	NABARD Team of Officers	14.07.2017	Analytical Chromatography laboratories	Official	Appreciated the facilities
4.	ICAR Oversight Committee	22.07.2017	Analytical Chromatography laboratories	Official	Appreciated the facilities
5	Trainees (Assistant Directors) Department of Animal Husbandry	24.07.2017	Analytical Chromatography laboratories	Study purpose	Appreciated the facilities

Research activities utilizing the equipments at the facility during the period

A) Projects Implemented (Externally Aided)

- 1) "Chemical, structural and functional characterization of identified anti-tick lead phytochemicals and optimization of delivery matrix for effective application of natural formulation for the control of acaricide resistant ticks")

B) Plan projects

- 1) Isolation and structural elucidation of bioactive terpenoids isolated from *Clerodendron phillipinum* and *Tetrasigma leucostaphylum* by mass and NMR spectroscopic techniques
- 2) "Screening and LCMS confirmation of antibiotic residues in milk samples

B) Post graduate research works of students, CVAS, Pookode

Analytical Chromatography Laboratory III



High Performance Thin Layer Chromatography and Millipore water purification and Flash Chromatography System

School of Bio Energy Studies and Farm Waste Management

School of Bio Energy Studies and Farm Waste Management established as a unique venture clubbing Livestock systems ,Farm Wastes and Ecological significance of the different components of Livestock Farming, could achieve the laid down objectives during the reported year. Energy from organics is an emerging scientific thought process in the Indian scenario. The objectives of the School at inception were :

- Establishing a Livestock Bio-energy Research Center
- Biodiesel from Animal fat-feasible models
- Consolidated Waste Management Units for Farms of KVASU
- Evaluation and Certification of organic manure
- Training Programmes
- Certificate course in Livestock Waste Management

Members in the SOBESFWM

1. Dr. Deepak Mathew, Implementing Officer
2. Dr. John Abraham, Assistant Professor
3. Dr. Joseph Mathew, Registrar

Equipments Purchased

1. Bio diesel plant at Pookode in the financial year 2013-14
2. Hunter colour lab in the financial year 2013-14
3. Exhaust Gas Analyser in the financial year 2014-15
4. Brook's Field Viscometer in the financial year 2014-15
5. Multigas analyser in the financial year - 2015-16

Bio Diesel from Livestock waste:

School of Bio Energy Studies and Farm waste Management during the reported year worked on renewable energy green fuel from waste, the School had earlier installed a pilot plant at Pookode at the cost of 12 Lakhs and has started producing biodiesel. Under the leadership of Dr John Abraham, of the School, the process parameters like methanol molar ratio, catalyst concentration, reaction temperature and reaction time was meticulously standardised to convert 91.52% of Rendered Chicken Oil to biodiesel. After deionised water washing of the crude biodiesel, a final yield of pure biodiesel was 82% of the raw oil.



Biodiesel Pilot Plant of SOBESFWM at Pookode



Biodiesel Produced at Pilot Plant of SOBEFWM at Pookode

State Plan Project

A new plan project “Sustainable and Healthy Livestock Waste Management in a Developing Scenario in Kerala” for the year 2014-15 for the School of Bio energy Studies and Farm Waste Management for a total outlay of Rs.20 lakhs was sanctioned under the school in the current year. The project is to assess existing non green livestock waste management models and livestock waste practices in Livestock farms and to evolve green waste management models, evaluate scientifically and to popularize them. The Farm visiting started to collect the data from the farms of various parts of Kerala.

Technical support

The School had 60 visitors during 2016-17 with queries related to Farming and waste management. Technical help was extended with regard to waste handling and management to the different farm units in KVASU campus. Several Panchayaths and municipalities of the state consulted the School of Bioenergy studies and farm waste management for technical support in scientifically managing solid waste.

Research and Studies carried out utilizing the facilities of SBEFWM

MVSc. Projects

Sl No	Name of Student	Year	Affiliation	Project
1.	Dr.Chintalapati Gowtham Varma	2016	College of Veterinary And Animal Sciences, Mannuthy Kerala Veterinary And Animal Sciences, University	Enhancing biogas production by co-digestion of livestock manures
2.	Dr. Jyothi Gowda	2016	College of Veterinary And Animal Sciences, Pookode Kerala Veterinary And Animal Sciences, University	Evaluation and comparison of four different type of biogas plants with livestock waste

M.tech Projects

Sl. No	Name of Student	Year	Affiliation	Project
1.	Rajkiran T.R	2017	Mechanical Engineering Dept, Model Engineering College, Thrikakkara, Ernakulam	Trans esterification of Rendered Chicken Oil Using Calcium Oxide Catalyst
2.	Justin Jacob Thomas	2016	Internal Combustion Engineering Division, Dept. of Mechanical Engineering, Anna University, Chennai	Reactivity controlled compression ignition combustion using alternate fuel blend
3.	Shaeen. M	2016	Manufacturing Engineering, KMCT College of Engineering, Kozhikode	Utilization of biodiesel in different engine systems

B.Tech Student Projects

Sl. No	Name of Student	Year	Affiliation	Project
1.	R. S. Deepak B. Sriram T. Jeya Murugn P. Selva Kumar	2017	8 th Sem, Mechanical Engineering Kumarasamy College of Engineering, Karur, Tamil Nadu	I.C Engine performance using chicken oil Biodiesel
2.	Adarsh M.P Adhvaid J Aijin K. A Ajmal Hussain K Akashnadh N. V	2016	8 th Sem, Mechanical Engineering Govt. Engineering College, Thrissur	A study on engine performance, combustion , emission of various biodiesel blends
3.	Vishist P.V Dhanumol Vidya sree Subrahmanian K	2016	8 th Sem, Mechanical Engineering M.E.S. College of Engineering, Kuttipuram	A study of Engine testing using different biodiesel blends
4.	Fahad C.I Geethu M Gopika S. Kumar Greeshma. S	2016	8 th Sem, Chemical Engineering, Govt. Engineering College, Kozhikode	Production of biodiesel from chicken waste
5.	R. Praveen V. Prasanth B. Nanthakumar M. Naveen kumar	2016	8 th Sem, Mechanical Engineering Selvam College of Technology, Namakkal, Tamil Nadu	A study on combustion emission characteristics of various biodiesel

Industrial Visit

Sl. No	Name of Student	Year	Affiliation	Project
1.	Midun E Mohammed Suhail U Mohammed Mustafa C.P Si;feekar Ali	2017	B.Tech, Mechanical Engineering, College of Engineering, Thruvananthapuram	Industrial Visit
2.	Abhilash. S Ajith P.	2017	M-4 Thermal Sciences, M.Tech, College of Engineering, Thruvananthapuram.	Industrial Visit

Documentary Production

Sl. No	Name of Student	Year	Affiliation	Project
1.	Lionard Mathew	2016	Final Year, Journalism Student S.E.S College, Sreekantapuram, Kannur	Documentary Production

State Plan Project -2015-16

Model Dung Drying Unit at Pookode (Pookode)- 10 lakh

Waste Processing Consultancy and biodiesel processing consultancy given to 55 beneficiaries

Commercialisation project in pipe line

Till Now produced 162.4 litres of biodiesel from which 102.4 litter was used in Armada jeep of the institution whose engine efficiency increased with 50% reduction in exhaust emission

Text Book Chapter Published

1. John Abraham & Ramesh Saravanakumar (2016) Chapter Title: Bio-fuel from Animal Fat Book Title: Frontiers in Bio-energy& Bio-fuel, Publisher: Intech-2016. Pp 5509 – 110371, ISBN 978-953-51-5024-4.

Papers Published

1. Rajkiran. T. R. Sreenivas, P and John Abraham (2017) Production of Biodiesel from Bio-Waste. International Journal of Innovative Research in Science, Engineering and Technology, Vol. 6: Issue 6. 169-174.

Awards

Dr. John Abraham was the DST-Lockheed Martin-India Innovation Growth Programme-2016 winner for the invention “Renewable bio-fuel production from chicken slaughter waste”.

Center for One Health Education, Advocacy, Research and Training (COHEART)

Center for One Health Education, Advocacy, Research and Training (COHEART) was established to expand the concept of “One Health” in India as well as to create a nidus for encouraging Global One Health activities. 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

21. COURSES OFFERED BY COHEART

- PG Diploma in One Health- One Year
- PG Cert. in One Health Surveillance- 6 Months
- PG Cert. in Community Based Disaster Management- 6 Months

22. STAFF DETAILS:

- Dr. Prejit: Officer-In-Charge, COHEART, 9497679630
- Dr. Vinod VK: Co-ordinator, COHEART, 9447677539

23. CURRENT RUNNING PROJECTS(2016-17)

- Study on the nasal carriage of Methicillin resistant *Staphylococcus aureus* among dogs *Funded by Kerala Govt. State Plan- 2016-17*
- Assessment of the microbiological quality of air in the health care settings of various hospitals located in Wayanad district. *Funded by Kerala Govt. State Plan- 2016-17*
- Establishing Zoonotic disease referral extension unit under COHEART. *Funded by Kerala Govt. State Plan- 2016-17*
- Initiating One Health approach for prevention of major zoonotic diseases in Wayanad district. *Funded by Kerala Govt. State Plan- 2016-17*
- Establishment of students One Health club - An interactive platform for veterinary, medical and allied health science students enrolled in selected educational institutions of Kerala. *Funded by Kerala Govt. State Plan- 2016-17*

24. AWARDS/ HONOURS AND OTHER PERSONAL ACHIEVEMENTS(2016-17)

- Dr. Prejit was selected as Spokesperson for the Asian Region to commemorate the first official One Health day on November 3, 2016 organized by One Health Commission, USA in order
- Dr. Prejit delivered an invited talk for 2nd International Who's Who in One Health Webinar held on November 4, 2016.
- Tessy D.L., PG Diploma student of One Health was honoured for her Best Dissertation Award with a cash award and citation
- Dr. Prejit, Officer-In-Charge, COHEART received travel grant and invitation from Center for Molecular Dynamics Nepal to act as resource person for the three day **workshop on Zoonotic Disease Pandemic Preparedness for South Asia, Using One Health Platform** from March 13 - March 15, 2017 at Hotel Annapurna Kathmandu, Nepal. The goal of the event was to bring experts, stakeholders and decision-makers together to share best practices of emerging zoonotic diseases pandemic preparedness. Representatives from major organization of Bangladesh, Bhutan, India, Nepal, USA participated the workshop. Dr. Prejit received special appreciation certificate for the discussion on Roles and responsibilities of stakeholders in the region-One Health perspective.

25. ACTIVITIES

A. TRAINING ORGANISED BY COHEART (2016-17)

- COHEART had organized one day training on molecular biology for PG students at CVAS, Pookode on 19/08/2016. The topic was on **Molecular Diagnostic protocol for Leptospira and Vibrio cholera**. The resource person was Dr. Ponnappa KC, Ph.D., LL.B, Sr. Field Application Scientist, Life Science Solutions, Thermo Fisher Scientific, Bangalore-56

B. SEMINARS ORGANISED BY COHEART (2016-17)

- COHEART had co-organized an educational initiative called **INSIGHT** at Kannur district from 4-5TH April 2016. This was a three day residential camp for post SSLC students. Various eminent experts took motivational and success oriented sessions plus practical demonstration through documentary films.
- COHEART co-organized **National Seminar on Sustainable Rabies Control at KVASU, Pookode** to commemorate World Rabies Day on September 28, 2016. The seminar was inaugurated by Smt.

Ushakumari T., Wayanad District Panchayat President. Theme orientation was delivered by Dr. Kiran Bhilegaongar, Principal Scientist from IVRI. The seminar sessions included presentation on 'Implementing Rabies Control Program - Current Strategies, Gaps and Challenges, by Dr. Rajendra Singh, Head, Division of Pathology, IVRI, Izatnagar. The Director of International Veterinary Training-WVS, Ms Ilona Otter, handled a session on 'Sustainable Rabies Control and Animal Welfare,'. Dr. Jithesh V., Asst. Director, Health Services Department spoke on 'Epidemiology of Human Rabies in Kerala and need for collaborative approach'. Dr. Baby K.K., Senior Veterinary Surgeon, Kozhikode Cooperation discussed the Legal Implication on Stray Dog Control. The seminar concluded with the talk on Waste management to prevent stray dog menace by Dr. Deepak Mathew, Assistant Professor KVASU. The seminar was attended by around 250 participants including faculty, veterinarians, medical professionals, post-graduate students and under-graduate students

C. COMPETITIONS ORGANISED BY COHEART (2016-17)

- o **Quiz competitions** for BVSc students were held as a part of commemoration of World Environment Day 2016. Febin Stephan and Waseem, of 2013 batch stood as the winners
- o On the eve of World Milk Day (June 1st), an **Essay competition** on the topic 'Strength, Weakness and Challenges faced by Indian dairy industry", was held. Mementos and certificates were distributed to the winners.

D. IMPORTANT DAY COMMEMORATION ORGANISED BY COHEART (2016-17)

- COHEART organized an **Environmental Health Educational week** in association with Student's council. The event comprised of week long programme on Environmental Health Education under the theme "Go Green and Clean". The programme consists of planting more than 100 tree saplings on various locations of the college campus with aim of "One tree per student", who will be committed to take care of the tree. The Dean, Prof. (Dr.) K. Vijayakumar launched the One Health student initiative venture in this occasion. The programme marked the beginning of symbol of gesture to conserve the eco-environment of Pookode. The week long programme comprises of series of awareness classes on environment, short films on Global climate change and One health, essay and quiz competitions, clean campus drive, dry day for vector control etc.
- **COHEART commemorated World Milk Day- June 1st** -by organizing various programmes in association with the College of Dairy Science and Technology (CDST), Pookode. An interface meet on dairying as food business was held. Mrs Lilly Mathew, the recipient of Best Woman Entrepreneur Award of The Year 2016 inaugurated the programme and acted as the resource person. Smt Lilly Mathew shared her experiences as an entrepreneur in dairy farming with the students. More than 70 members attended the programme. Payasam was distributed to all the teaching and non-teaching staffs.
- The centre organised **farmers-Scientist-interface meet** at Pulpally society on June 1st, 2016 under the co-operation of Pulpally Ksheera Sahakarana Sanghom. The programme was inaugurated by Bindhu Prakash, President Pulpally Panchayath. Formal message was delivered by Krishna Kumar, Dairy farm instructor Panamaram. Dr. Subin K.Mohan, Assistant Professor, KVASU and staffs from COHEART were the resource persons. The sessions handled were on clean milk production (management aspects) and Milk borne disease.
- COHEART associated with Kerala Government Veterinary Officers Association in commemorating **World Veterinary Day- 2016** at Bolgatty Palace, Ernakulam. The seminar was on the theme topic "**Continuing Veterinary Education with a One Health Focus**" on 30th April, 2016 at Bolgatty Palace Resorts, Ernakulam. The commemorations were inaugurated by Hon'ble Justice Mr. Kemal Pasha of High Court of Kerala and Shri. Rajamanikyam IAS, District Collector, Ernakulam delivered the key note address. Dr. Vinod V.K. and Dr. Jess Vergis represented COHEART and handled a session

on “One Health: History, needs and Indian Perspective” and have also briefed about COHEART activities.

- **COHEART commemorated World Zoonoses Day- July 6th.** The centre organized Cholera awareness camps at Sugandhagiri village. Team of COHEART and Health department under the leadership of Dr. Vinod V.K, visited Sugandhagiri village. The houses were selected based on pets and livestock they owned. The visit comprised of health appraisal, awareness class, water testing for potability and presence of harmful pathogens like *Vibrio cholerae* etc.
- COHEART conducted a special talk on Zoonoses for the students of Wayanad Muslim Orphanage Higher Secondary School (WMO HSS) on 14th June 2016. Various health issues were discussed under this topic followed by demonstration of animated video on Kysanur Forest Disease (developed by COHEART) to incite the cognizance and responsibility to spread awareness amongst their home communities. The Veterinarian Dr. Geetha also took part in this initiative.

E. CAMPS ORGANISED BY COHEART (2016-17)

- COHEART organized **anti-rabies titre assessment camp** on the eve of World Rabies Day for veterinarians of Kerala. The titre was evaluated for free and results was conveyed to individual doctors by email. The titre assessment camp is also envisaged to continue for the next year (2017).

F. AWARENESS CLASSES ORGANISED BY COHEART (2016-17)

- **Organized Zoonoses awareness classes at WMO HSS:** Centre for One Health conducted **awareness camps** on Zoonoses for the students of Wayanad Muslim Orphanage Higher Secondary School (WMO HSS) on 15th June 2016. Various health issues were discussed under this topic followed by a video on Kysanur Forest Disease video was shown to incite the cognizance and responsibility to spread awareness amongst their home communities. Dr. Geetha, who is also a Veterinarian, also took part in this initiative.
- COHEART organized Zoonoses **awareness classes** for the students of VAKERY HSS on 9/06/2016. All the students were sensitized about zoonotic diseases as well as importance of health and hygiene.
- Team members of COHEART visited Gundlupet a town in the Chamarajanagar district of Karnataka state famous for cultivation of fruits and vegetables which are also marketed in Kerala especially border areas like Wayanad. Farmers engaged in watermelon cultivation and selling their products by roadside shops were interviewed and were alerted about hazards due to excess usage of pesticides during various stages of production and how to practice good agricultural practices. Team members of COHEART stressed about the use of bio pesticides and bio control agents

G. INTERFACE MEET ORGANISED BY COHEART (2016-17)

- **COHEART organized One Day Interface meet on “Rain Water Harvesting and Water Conservation” at Pookode** on 24th May. Mr. Fritz Poerschke, from WISY ACT (an Indo-German Trade name for Emerging / Modern Rainwater Harvesting Systems) was the resource person who has dedicated more than 30 years with Rain Water Harvesting Concepts from Germany. In his talk, Mr. Fritz stressed that rainwater harvesting is the process of augmenting the natural filtration of rainwater in to the underground formation by some artificial methods. Such a conscious collection and storage of rainwater to cater to demands of water is the need of the hour. The Managing Director of WISY ACT, Mr. Anzar Azad also shared his innovative concepts on Rain Water harvest technology. The participants of the workshop include engineers from water authority, agricultural and allied department, local self-government institutions, Scientists, progressive farmers and establishment/ resort owners. The experts visited various units of college and installed

Garden Rain Water Collector at Goat farm, CVAS, Pookode (as a complement)

- **COHEART organized Veterinary doctor-Faculty-Scientists- Students interface meet** on September 27-28, 2016. Scientists from Indian Veterinary Research Institute (IVRI) gave insight on latest research and entrepreneurial opportunities in veterinary science during the interface meet jointly organized by COHEART and IVRI, at Pookode. A total of 150 delegates comprising of faculties, students and veterinary surgeons from Kerala interacted with Scientists from IVRI. The Principal Scientist and Head of various divisions of IVRI handled the session meet. This included key personalities like, Dr. Mahesh Chander who briefed that the veterinarians can channel their inner entrepreneurial capability for their success by stepping outside their comfort zone and getting involved in local community or civic groups, meet new farmers and understand their problems and come with some concrete development plans. Dr R.P Singh, Head of Biological Products Division elaborated need based research towards technology development in order to reach the end users viz., farmers. “The world of animal medicine has seen drastic technological advances in the last few years and the new surgical tools and diagnostic procedures adopted from human medical practice are now used in veterinary practice too”, said Dr. Amarpal, Principal Scientist and Head, Division of Surgery. The program was inaugurated by Dr. K. Devada, Director of Academics, KVASU. During the inauguration, the teaser of “Health Forecast by Dr. COHEART”, an educational animated video series on public health threats was released by Dr. Mahesh Chander, Head of Division of Extension, IVRI.

A. RESEARCH HIGHLIGHT (2016-17) (For detail findings contact coheart@kvasu.ac.in)

- Cholera is the major public health disease condition in Kerala. The centre isolated, identified and characterized *Vibrio cholerae* from various sources of water collected from outbreak areas of Palakkad and Malappuram District of Kerala.
- Detection of heavy metal contamination in drinking water sources of Wayanad district revealed the presence of heavy metals such as Iron, Lead, and Nickel above the permitted level in few areas examined. The results obtained were compared with BIS standards for drinking water.
- The sero-prevalence of three common zoonotic diseases - brucellosis, leptospirosis and bovine tuberculosis - in cattle population of Kanchiyar grama panchayath, Idukki district, Kerala was studied. Forty eight serum samples, collected randomly from crossbred cow above three years of age from the panchayath, were subjected to various tests for estimating the sero-prevalence of above zoonotic pathogens
- The knowledge assessment on cattle zoonotic diseases in perambalur district (tamil nadu) dairy farmers was carried out by surveying 100 dairy farmers in the Perambalur district of Tamil Nadu State. The results of the study is published in International Journal of Current Microbiology and Applied Sciences (IJCMS)” NAAS :5.38
- A study was conducted to know the prevalence of dental caries among school children and also to evaluate the factors associated with dental caries among study subjects. One of the findings suggests that higher the qualification decreases the rate of dental caries in their children
- A study was conducted to analyse the effects of mass drug administration (MDA) of diethyl carbamazine (DEC) tablets, knowledge and information about LF amongst health workers and community members.

- A study of pet owners for their knowledge and attitude towards snake envenomation in their dogs by questionnaire survey was carried out. The study included the both viperine and elapine bitten dogs. Majority of pet owners lacked in knowledge regarding identification of venomous snake, common signs exhibited, availability of antisnake venom and the need to visit veterinary hospital immediately
- The centre assessed the e-waste purchasing and managing patterns among people living in Calicut city in Kerala through personal interviews with families. The major factors that influence the purchase of the electronic gadgets are necessity, new features, status symbol, higher incomes and advertisements. Personal computers and mobiles are considered as an essential requirement of every household.
- A study was designed to develop an application to aid in the diagnoses of the zoonotic diseases along with providing information on their management in humans and animals. This expert system can be also used to create awareness in common people about the zoonotic diseases with their peculiar symptoms. This is developed using Python 2.7 and the Flask web framework.
- A Web based expert system Vetsign Pro was designed and developed with the purpose of providing an effective symptom based diagnostic tool for diagnosing diseases of cattle, goats and poultry. This system would assist veterinarians in disease diagnosis and is useful for veterinary students and animal health assistants as a tool for continuing veterinary education at field level.
- The five major tribes namely Kurichia, Kuruma, Katunaika, Adiyan and Paniya residing at Bathery, Vythiri, Mananthavady taluk were interviewed to rejuvenate the knowledge of traditional medicine which can have applications for ectoparasites, foot and mouth disease, mastitis, stomach disorders, redness of eye, skin diseases, maggot wound, body pain and wound.
- Milk samples were screened for the presence of tetracycline residues by High Performance Thin Layer Chromatography (HPTLC). High performance thin layer chromatographic method was developed and validated with respect to linearity, sensitivity, precision and accuracy for determination of tetracycline in raw milk.
- The study entitled “Clinico-biochemical and diagnostic imaging studies in renal failure dogs” was conducted to determine the occurrence of renal disorders in dogs, evaluate the Clinico-biochemical changes associated with renal disorders and ultrasonographic changes in renal disorders in dogs.
- Investigation on the prevalence of gastrointestinal nematodes of ruminants in Thrissur district was carried out by detecting faecal eggs after coprological examination. The technique of Egg Hatch Test (EHT) and Faecal Egg Count Reduction Test (FECRT) was employed to detect the occurrence of resistance among these helminths against commonly used anthelmintic agents.

B. TECHNOLOGY GENERATED BY COHEART- 2016-17

- **COHEART signed agreement with Curofy to act as knowledge partner of Veterinary Doctors app-** CUROFY is a mobile app that offers doctors a spam-free and secure environment to communicate with each other. Doctors can provide referrals, share cases, call other doctors without saving numbers and have access to most recent, specialty-wise developments taking place in their field. CUROFY has partnered with COHEART

by signing a partnership agreement on 23/05/2016. Dr. T. P. Sethumadhavan, Director of Entrepreneurship launched the app during “Campus placement 2016” event organized by Director of Entrepreneurship at College of Veterinary and Animal Sciences, Mannuthy, Thrissur.

- **COHEART launched Vets Info-** Vets Info is an online newsletter for Veterinary doctors published by COHEART on quarterly basis. This news port is developed with a short mission “*Be the most Informed Veterinary Doctor*”. This is available at <http://vetsweekly.coheart.ac.in/> . The articles were shared to 1000+ veterinary doctors, who shall have the provision for commenting and discussing about the news being posted.
- **COHEART launched WISDOM -** Similar to Vets Info, COHEART also launched various online quarterly news portals such as WISDOM- Worldwide information sharing domain for One Health movements and Food Safety Knowledge Connect etc.
- COHEART also launched various online portals such as **Vet Sign Pro Symptom analyser-** which describes the disease based on symptoms being input on to the software.
- **Health forecast and ZoonoTips-** The animated video focuses on the animated character called Dr. COHEART who is a virtual character created to disseminate knowledge on zoonotic diseases, veterinary science and other public health related topics to everybody or to specific target audiences.

