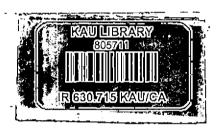
CALENDAR OF TRAINING PROGRAMMES

2009-10



CENTRAL TRAINING INSTITUTE



KERALA AGRICULTURAL UNIVERSITY DIRECTORATE OF EXTENSION

Mannuthy 680 651, Thrissur, Kerala

English

CALENDAR OF TRAINING PROGRAMMES 2009-10

June 2009

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CENTRAL TRAINING INSTITUTE

The Central Training Institute was established at Mannuthy in 1986 with its sub-unit at Vellayani as a special sub-project under National Agricultural Extension Project (NAEP).

This Institute imparts different categories of training programmes such as In-service, Vocational, Stipendiary & HRD for various client/target groups. The client organizations of this institute are Department of Agriculture, Animal Husbandry, Fisheries, Dairy Development, Forestry, Commodity Boards, Nationalised Banks, Local bodies etc. Stipendiary training programmes are also conducted on subjects related to Meat and Dairy technology. Training of pre-release defence personal in Dairying is yet another regular training activity undertaken as a commitment to the nation. Training is also imparted to less privileged sections of the society like unemployed youth rural, housewives, etc. The institute has been recognised by the Government of India as a centre for National Training in specialised areas of late the Central Training Institute has also ventured out to conduct International Training Programmes.

The Kerala Agricultural University has a strong faculty for conducting the various training programmes in the disciplines of Agriculture, Animal Husbandry, Dairying, Fisheries, Agricultural Engineering, Co-operation, Home Science, Forestry, etc. For certain topics, the services of experts outside Kerala Agricultural University are also made use of in training courses.

The Training Calendar for 2009-10 is prepared on the basis of the proposals received. These training programmes will take place if the required course fee is paid by the sponsoring agency or participating trainees. In addition to these training programmes, additional programmes can be conducted on request subject to the approval.

For further information please contact

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Foreword

In today's competitive global business climate, every organization is looking to improve gross margin, enhance productivity and is pushing for ways to boost employee performance and effectiveness. Skill development and training programs, often a target of budget cuts, may help organizations achieve these objectives and augment their overall organizational culture.

While, intuitively, many at the helm of affairs understand the value of a skilled workforce, many fail to realize the benefits that minimal improvements in employee skills can make in an organization. Further, they lack an understanding of the areas which are directly impacted by employee skills and knowledge. Worse, many at the helm underestimate the high cost of not training. Untrained or poorly trained personnel will cost significantly more to support than well-trained workers. Knowledge and skills development are vital to the health of an organization and arguably there is no saturation point in learning.

To fully capture the value that training can provide, organizations should develop a training plan that matches user preferences to training modalities and training needs. The benefits of training will be seen in productivity gains, improved customer service, increased employee morale and ultimately in revenue gains which hitherto had been the exclusive concern of the corporate world, but which, of late has started impacting the agriculture and allied sectors as well.

I commend the training activity undertaken through the Central Training Institute, Mannuthy and will do all that is possible to further its vision including venturing out into international training programmes.

K. R. Viswambharan

Vice Chancellor

As is quite evident from this Training Calendar, the Kerala Agricultural University has been undertaking several training programmes for functionaries from various departments and agencies. Having had the privilege to listen to the trainee feedback at valedictory sessions, I would like to mention that training doesn't end with the training programme but must be followed up if the fruit of training is to blossom. Managers need to work with training attendees before and after training so that the training will make a difference at the worksplace. Training must be linked to both individual and organizational needs, and barriers to application of learning must be removed. Often it is the manager that makes the difference between whether training would end up being a sabatical, or an intervention that really brings about the anticipated benefits.

It is therefore suggested that the sponsoring agencies should meet with the trainee for a debriefing session before and after the training to discuss and consider how they expect the training attendee to apply what he/she has learned, facilitate sharing what has been learned with other members of the organization and to know what the trainee needs so that learning can be applied.

All too often, managers do not take an active role in the decision-making and follow-up necessary to allow training to add value to the organization. As a result, resources may be wasted, and frustration can result.

Prior to training, sponsoring organizations need to make sure that the infrastructure is in place so that trainees will be able to apply what they have learned as soon as they return to the workplace. A good question to ask: "Is there anything that will impede the person's ability to apply what has been learned?"

It is only when training is accompanied by such effective follow up the fruit of training will begin to show.

Dr. M. K. Sheela Director of Extension

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GUIDELINES FOR THE CONDUCT OF TRAINING PROGRAMMES

GUIDELINES FOR THE CONDUCT OF TRAINING PROGRAMMES

- Sanction Orders for the conduct of a training programme will be issued
 after receipt of the course fee and the remittance particulars have been
 communicated to the Central Training Institute, Mannuthy.
- 2. The Course Fee is calculated as estimated expenditure plus 20% institutional overheads. In some cases, where the Course Fee per participant has already been determined, the expenditure will be limited to 80 % of the Course Fee actually received.
- 3. The Course Director may propose a mutually convenient date for the conduct of the training programme. However, the Course Director may make changes in the dates of conduct of the training programme in concurrence with the sponsoring agency and the Central Training Institute, Mannuthy if the situation so warrants.
- 4. Based on the sanction order an advance may be drawn and disbursed to the course director directly or the funds will be placed at the disposal of the Head of the Institution concerned who can obtain the same from the Comptroller by sending demand.
- 5. Expenditure should be limited to the advance amount sanctioned.
- 6. A minimum of Rs.1000 per day may be levied as rent for physical facilities, power and logistics
- 7. Purchase of equipment if necessary for the effective conduct of the training may be included in the training proposal
- 8. Permanent stock items if any may be transferred to other stock registers of the instuition before submitting the 'Nil' Stock Register for settlement of advance
- Total anticipated expenditure for transportation utilising vehicles outside the Kerala Agricultural University pool may be included under POL charges

- 10. The honorarium payable to teachers of KAU for handling one hour of theory or two hours of practical will be Rs.250 or as agreed to by the sponsoring agency. The honorarium payable to experts from outside KAU will be Rs.500 or as agreed to by the sponsoring agency per one hour session plus TA at admissible rates.
- 12. Leave availed by the trainees during training period has to be reported to the sponsoring agency. No leave other than medical leave should be granted to the trainees during the training period.
- 13. Based on the evaluation, a certificate duly signed by the Course Director, Dean/Head of the Institution concerned and Director of Extension will be issued to the candidates who have successfully completed the course. Blank certificates can be obtained from the Central Training Institute by a responsible person only on submitting a request with list of trainees for whom the certificates are to be issued. The certificate number issued to each trainee should be recorded.
- 14. The Course Director will submit two copies each of the following documents to the Professor of Extension, Central Training Institute, Mannuthy immediately after the training: report of training, list of trainees with official address, cell number and email ID, schedule of sessions and resource persons, lecture notes/course material and feedback/evaluation report.
- 15. The Course Director will also ensure that the statement of expenditure along with bills and stock book are submitted without delay to enable adjustment of the advance and/or realisation of fees.

Sd/-Director of Extension



BEST COURSE DIRECTOR AWARD

BEST COURSE DIRECTOR AWARD

The Central Training Institute, Mannuthy is the nodal point of Kerala Agricultural University's training activity and decided to duly recognize the Training Course Directors who have contributed significantly to the training activities of the university in terms of performance, quality and revenue generation through trainings. The Best Course Award was commenced in the year 2002-2003. The committee constituted by the Honourable Vice Chancellor to select the Best Course Director has approved the criteria fixed for evaluating the training programmes. The criteria for selection of Best Course Director are as follows:

Criteria

- 1. Number of training course proposed
- Number of training course actually conducted New training
 Old training
- 3. Duration
- Overhead charges, Revenue generated
- 5. Number of classes handled by Course Director theory or practical
- 6. Training notes/resource material etc.,
- 7. National level training/State level training
- 8. Feed back of the participants

Utility of training

Conduct of the training

Effectiveness of the training

Subject matter coverage

Timeliness of the training

Subject matter coverage

Timeliness of the training

Future scope for development

9. Presentation of bill settlement of advance

The above criteria was evaluated and finalized by the committee and approved by the Honourable Vice-Chancellor.

Sd/-Director of Extention



PROPOSAL FORMAT FOR TRAINING PROGRAMME

PROPOSAL FORMAT FOR TRAINING PROGRAMME

Category of Training Proposal: Tick option A, B or C

- A. In service or Sponsored Training: training cost i.e. actual expenditure plus 20% institution overheads would have to be borne by the sponsoring Agency/ Department.
- B. Vocational Training: Training Expenditure will be limited to 80% of the course fee received. The overhead charges need to be remitted to comptroller's Account.
- C. Stipendiary Training: In cases where the KAU stands to benefit from the services of the trainees a monthly stipend sanctioned by the Vice Chancellor is paid to the trainees. Sufficient funds should be available with the institution proposing stipendiary trainings under the head of account 842 Stipend. 1. Title of the Training Programme: 2. Category of personnel to be trained: 3. No. of batches: 4. No. of trainees per batch: 5. Duration: 6. Proposed Period: 7. Venue: 8. Course Director: Name and Designation: 9. No. of lecture sessions: 10. No. of practical sessions: 11. Expenditure: ☐ Honorarium @ not exceeding Rs.250 for 1 hour of lecture and Rs.250 for 2 hours of practical □ Teaching aids & Stationery ☐ Physical Facilities, Equipment and Logistics Publicity and Documentation □ POL charges, if any □ Other items (to be specified) ☐ Total: □ 20% Over Head Charges: ☐ Course Fee for the entire training: ☐ Course Fee per participant (In case of Vocational Training):

Practical Utility and Training Syllabus should be attached herewith

	Signature:
Date :	Name:
Station:	Designation:



PROPOSAL FOR INTERNATIONAL TRAINING INSTITUTE FOR HUMAN RESOURCES IN FARM SCIENCES

Proposal for the establishment of International Research and Development Institute for Human Resources in Farm Sciences

Background

Training is an important statutory function of the Kerala Agricultural University (KAU). Although the University was conducting training programmes ever since its inception in 1972, the training activities were brought under one umbrella with the establishment of the Central Training Institute (CTI) in 1986. Started with financial assistance of the World Bank as a sub-project of the National Agricultural Extension Project (NAEP), CTI has now become the nodal point of KAUs training activity.

A Paradigm Shift

The sweeping changes consequent on globalisation and liberalisation are giving violent jolts to the national economy and any organisation reluctant to shake out of its lethargic slumber is likely to be doomed. KAU is no exception to this general phenomenon. Resources management, activity prioritization, monitoring and evaluation would have to undergo thorough overhauling. The pace of personnel, administrative and financial reforms will also have to be accelerated. Therefore a paradigm shift aimed at the following is definitely the need of the hour and will have to be immediately looked into.

- Reprioritization, redeployment, consolidation and strengthening in most relevant areas and shedding of programmes in non-priority areas or which have outlived their utility.
- Activity to be demand driven, eco-friendly, resource-use efficient and scientifically sound.
- Mobilization of resources both internally as well as through external sources through regional and international linkages.
- Improving work-environment through modernization, knowledge and information management, incentives and adequate operating funds.
- Development of human resources, particularly in frontier areas of science and technology.

Obviously, the greater challenge lies before trainers and efforts have to be reoriented to address these paradigms.

Following are some of the knowledge areas where the KAU possesses core competencies, which can be profitably marketed to reap in resources and induce greater levels of sustainability.

- Agricultural Journalism
- 2. Application of Radio Tracer Techniques in Agrl. Research
- 3. Tropical Vegetables
- 4. Commercial Floriculture
- 5. Meat Technology
- 6. Plantation Crop Production
- 7. Plantation Crop Management
- 8. Spices and condiments
- 9. Aromatic and Medicinal Plants
- 10. Precision Farming and Use of Plastics in Agriculture
- Rice based Cropping Systems
- 12. Coconut based Cropping Systems
- 13. Organic Farming and Sustainable Agriculture
- 14. Biotechnology and Molecular Biology
- 15. Cashew Production Technology
- 16. Integrated Pest and Disease Management

Programmes perspective

In addition the following programmes may be taken up on a long term basis to make the institute sustainable and a major source of revenue for KAU in the coming years.

- 1. International training courses of 3 to 9 months duration for scientists and technicians from abroad, particularly from Third World Countries.
- 2. National training programmes of one to three months duration for prospective clients from public and private sectors across the country.
- **3.** Training evaluation projects and HRD interventions on turn key basis on demand.
 - 4. Training consultancy on design and deliver basis.

New Facility Envisaged:

It is proposed to establish a full fledged training institute of international standards under the name 'International Research and Development

Institute for Human Resources in Farm Sciences' with the following facilities

- Accommodation with en suite facilities (120) in clusters of eight single rooms per floor
- Two classrooms for 35 participants each
- One classroom for 70 persons
- State of the art technology/equipment
- Breakout rooms for group activity, workshop
- Multipurpose Hall to sit 200 persons
- A restaurant/dining area for 150 persons
- · A specialized library with work tables
- Internet Café and personal computers
- Central audio-visual control room
- Head Office for administrative staff
- Car park bays and loading dock
- Gymnasium and recreational areas
- Laundry and Drying rooms
- Wide and open lounge areas
- Meditation and Yoga Room
- Sensitivity Training Laboratory
- Vehicles for multiple training activity

Location:

At the Kerala Agricultural University main campus, Vellanikkara, Thrissur which is just 1½ hours drive from the International Airport, Kochi. This would be accessible from the NH 47 and the Thrissur Railway station is only 10 km away. Land opposite the KVK, Thrissur may be used for the purpose.

Estimated Budget:

Basic Infrastructure (Building and Furnishing) : 10 crore

Vehicles, Equipment and Installation : 4 crore

Recurring Expenditure : 2 crore

Total Estimate : 16 crore

Estimated returns

The course fee for training programmes per participant would be worked out using the formula:

Course fee per participant =

Actual training expenditure + 20% Institutional overheads + 20% profit

Number of participants actually attending the Training

This ensures 20% profit margin over and above the 20% institutional overheads.

Conclusion

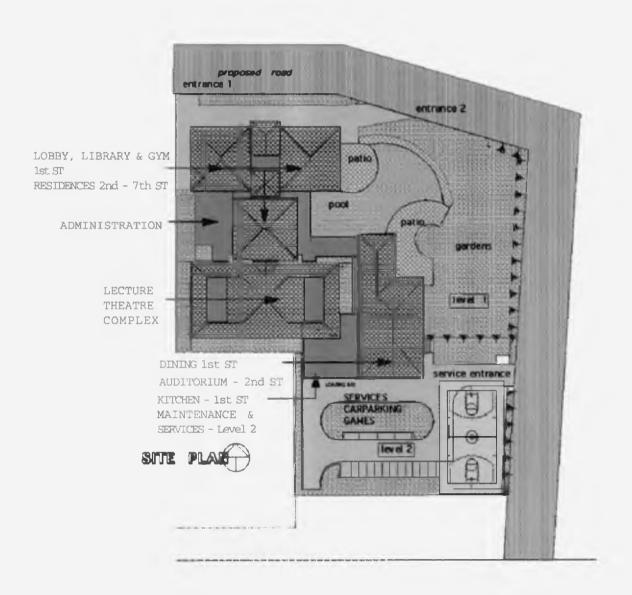
The International Research and Development Institute for Human **Resources in Farm Sciences** will be involved in providing consultancy services to various state departments, autonomous organisations in public and private sectors besides meeting international demand particularly from Third World Countries regarding training management. Efforts will be made to integrate various management tools, techniques and concepts related to training management, to develop need-based consultancy and training programmes for clientele organizations. The International Research and Development Institute for Human Resources in Farm Sciences will also develop an information base on training management and disseminate information in this regard through some of its publications. The International Research and Development Institute for Human Resources in Farm Sciences envisages building up its own strength through strong linkages with institutions of academic excellence around the world. Within a decade, the International Research and Development Institute for Human Resources in Farm Sciences would have made a concerted effort to forge linkages with national and international institutions concerned with training and agricultural development.

It is International Research and Development Institute for Human Resources in Farm Sciences' vision to be counted among the nation's most pioneering, innovative, user friendly and self-supporting training institutions. We shall strive to facilitate the acquisition of managerial and technical skills by extension workers, managers, scientists and administrators in all sectors of agricultural economy to enable them to provide the most effective support and service to the farming community for practicing sustainable agriculture.

This proposal is submitted by the Central Training Institute, Directorate of Extension, Kerala Agricultural University, Mannuthy P.O., Thrissur 680651, Kerala. Phone: 0487-2371104. Email: cti@kau.in



Artists Projection of the proposed
International Research and Development Institute
for Human Resources in Farm Sciences





TRAINING PROGRAMMES PROPOSED: 2009-10

In service

1. ADVANCES IN THE DIAGNOSIS, TREATMENT AND CONTROL OF INFECTIOUS DISEASES OF CANINES

Duration: 4 days

Dates : 16th to 19th June -2009, 10th to 13 th August -

2009

Venue : Department of Veterinary Epidemiology &

Preventive Medicine

No. of Batch : 2

Trainees: Veterinary Surgeons of Animal Husbandry

No. of Trainees/batch : 10

Course Director: Dr. M.R.Saseendranath, Professor & Head

Syllabus

This course covers etiology, epidemiology, pathogenesis, diagnosis, treatment and control of Rabies, Canine distember, Canine parvo viral infection, Canine hepatitis, Canine ehrlichiosis, Canine microfilariasis, Canine trypanosomosis and Canine babesiosis.

Practical utility

As the dog breeding is yielding much income many progressive farmers are coming to this field. As a result population of costly canine breeds are increasing in Kerala. Along with the rise in population newer diseases are also emerging among pups, growing and adults dogs resulting in heavy economic loss to the dog breeders. This course will specifically help our field veterinarians to update their knowledge on these diseases and in turn for effective diagnosis, treatment and control of infectious diseases of canine.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture : Rs. 3000
@ Rs.250/- per 2 hour of practical : Rs. 1000
Teaching aids & Stationery : Rs. 2000
POL charges, if any : Rs. Nil

Other items

(Chemicals , Diagnostic kits and Biologicals) : Rs. 4000
Total : Rs.10000
20% Over Head charges : Rs. 2000
Course fee per batch : Rs.12000

2. CURRENT CONCEPTS IN THE THERAPEUTIC MANAGEMENT, PREVENTION AND CONTROL OF MASTITIS

Duration: 3 days

Dates : 17th to 19th September -2009, 29th to 31th

October-2009

Venue : Department of Preventive Medicine

College of Veterinary & Animal Sciences,

Mannuthy.

No. of Batch : 2

Trainees : Veterinarians

No. of Trainees/batch :

Course Director : Dr.K.Vijayakumar, Associate Professor, Department of Preventive Medicine,

CV &AS, Mannuthy.

Syllabus

Theory sessions

Mastitis complex-Factors involved and techno-economics

Functional anatomy of mammary gland

Physiology of lactation

Defence mechanisms of mammary gland

Bovine mastitis-Etiology and Epidemiology

Pathogenesis of mastitis

Diagnosis of bovine mastitis

Treatment and control of mastitis

Mastitis in other domesticated animals

Practical sessions

Isolation and identification of bacteria-Antibiotic sensitivity test

Tests for detection of mastitis

Staining techniques in mastitis

Practical utility

Mastitis is one of the most important diseases affecting livestock production. The disease is complex having multivarious etiology, different degrees of intensity with variation in course of disease and residual effects. Mastitis in dairy cow can be brought under reasonable control through application of knowledge currently available. Efforts and interest to improve milk quality through early mastitis detection and control programmes has gained tremendous impetus during the past four decades. A common source of information on the many varies aspects of the bovine mastitis complex is the need of the hour in order to provide answers to the pertinent questions that arise while formulating a national programme for mastitis detection and control. It is earnestly hoped that this training programme would provide pertinent information in control and prevention of this baffling problem affecting the developing tropics.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture : Rs. 2250

@ Rs.250/- per 2hour of practical : Rs. 750

Teaching aids & Stationery, Printing
 Rs. 5000

Chemicals, Reagents, Kits : Rs. 2000

POL charges, if any
 : Rs. Nil

• Other items : Rs. Nil

• Total : Rs.10000

• 20% Over Head charges : Rs. 2000

3. ADVANCES IN PIG FARMING AND MANAGEMENT

Duration : 5 days

Dates: 2009-2010

Venue: Centre for Pig Production and Research
No. of Batch: 1/year

Trainees: Veterinarians and Scientists

No. of Trainees/batch : 6/batch

Course Director: Dr.P.T.Philomina, Professor and Head,

CPPR, Mannuthy

Syllabus

Introduction – swine production, Present status and future prospects in India – Pig farm location, fundamentals of housing – Breeding, common breeds and characters, selection of breeding stock, mating methods, genetic parameters, economically important traits and culling, Recent advances in pig breeding – Care and management of pregnant females, new born, pre and post weaning piglets – Feeding of pigs, preparation of concentrate feed, by product utilization, swill feeding, Ration for different age group – Identification and maintenance of records – Common diseases of pigs, treatment and control – Preparation of bankable projects and other financial aspects – Waste disposal and management.

Practical utility

To sensitize the Veterinarians about the recent advances in pig production and management. Disseminate recent scientific technologies in swine breeding, feeding and health care for profitable pig rearing.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 5000

Teaching aids & Stationery@ Rs. 500 per head (6nos) : Rs. 3000

• POL charges, if any : Rs. 600

Other items (Field Visit)
Total
Rs. 1500
Rs. 10100

• 20% Over Head charges : Rs. 2020

4. CURRENT CONCEPTS IN DIAGNOSIS AND MANAGEMENT OF SKIN DISORDERS

Duration : 6 days

Dates : 18.5.09 to 23.5.09 and 16.11.09 to 21.11.09

Venue: Dept. of Clinical Veterinary Medicine,

College of Veterinary & Animal Science,

Mannuthy

No. of Batch :

Trainees: Veterinary Surgeons / Assistant Directors

No. of Trainees/batch : 5/batch

Course Director : Dr. K. M. Jayakumar,

Associate Professor and Head, Dept. of Clinical Veterinary Medicine,

College of Veterinary & Animal Science,

Mannuthy

Syllabus

Anatomical and physiological basis of dermatology

Djagnostic approach in skin diseases

Management of Allergic or Auto-immune and Immune mediated skin problems

Management of bacterial / fungal/ parasitic skin diseases

Management of endocrine alopecia

Management of nutritional deficiency disorders associated with skin diseases

Management of cutaneous mainfestation of systematic diseases

Therapeutic aspects related to cutaneous neoplasms

Practical utility

Incidences of dermatological problem in animal have increased considerably in recent years. Diagnosis and management of these problems are often challenging for the practicing veterinarian. Present training programme will be of immense use in the diagnosis and management of dermatological disorders.

Expenditure

• Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs.4500

Teaching aids & Stationery : Rs.3000

POL charges, if any
 Rs. Nil

• Other items (Lab items) : Rs. 500

• Total : Rs.8000

20% Over Head charges : Rs.1600

5. EMERGENCIES AND CRITICAL CARE IN VETERINARY PRACTICE

No. of Trainees/batch:

Duration: 6 days

Dates : 20.4.09 to 25.4.09 and 19.10.09 to 24.10.09

Venue : Dept. of Clinical Veterinary Medicine,

College of Veterinary & Animal Sciences,

Mannuthy

No. of Batch : 2

Trainees: Veterinary Surgeons / Assistant Directors

5/batch

Course Director : Dr.S.Ajithkumar,

Associate Professor and Head, Dept. of Clinical Veterinary Medicine, College of Veterinary & Animal Sciences,

Mannuthy

Syllabus

Introduction: Basic concepts

Setting up of a critical care unit

ECG and cardiac arrhythmias

Management of common poisonings

Cardiac, respiratory, gastro-intestinal, neurological and occular emergencies

Shock and its management

Blood transfusion

Ultrasonography, Endoscopy, oxygen therapy procedures for the emergency patient

Surgical emergencies

Practical utility

Costly animals including pet animals are at a risk of many diseases of sudden occurrence. Most of the cases require immediate and correct diagnosis and prompt treatment. For this purpose use of modern instruments are required. Also the use of modern medicines has to be practiced by Veterinarians in order to save the life of costly animals. So it is the need of the hour to impart such a training to field Veterinarians to equip themselves to tackle the situations of emergencies and critical care

Expenditure

· Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 3000

• Teaching aids & Stationery : Rs. 3000

• POL charges, if any : Nil

Other items (Emergency medicines,

Disposable items, ECG paper, gel &other

contingencies) : Rs. 3000

• Total : Rs. 9000

20% Over Head charges : Rs. 1800

6. ADVANCED THERAPEUTIC PROCEDURES IN VETERINARY PRACTICE

Duration: 6 days

Dates :13.7.09 to 18.7.09 and 11.1.2010 to 16.1.2010

Venue : Dept. of Clinical Veterinary Medicine,

College of Veterinary & Animal Sciences,

Mannuthy

No. of Batch:

Trainees: Veterinary Surgeons / Assistant Directors

No. of Trainees/batch : 5/batch

Course Director : Dr. Usha Narayana Pillai,

Associate Professor and Head,

Dept. of Clinical Veterinary Medicine, College of Veterinary & Animal Sciences,

Mannuthy

Syllabus

Recent advances in the management of bacterial diseases, viral diseases and parasitic fungal diseases - Target oriented drug therapy - Advanced therapeutics of neoplastic disease - Radiation therapy - Management of critical ill patient - Fluid therapy - Blood transfusion - Oxygen therapy - Haemodialysis and peritoneal dialysis - Management of autoimmune diseases - Recent advances in the management of cardiac emergencies- Recent advances in the management of occular diseases.

Practical utility

Proper diagnosis and treatment of diseases are corner steps in the success of Veterinary practice. Recent advances in the therapeutic procedures like haemodialysis, peritoneal dialysis, blood transfusion, cardiopulmonary resuscitation etc. are very much essential for the proper management of critically ill patient. The technique and clinical procedure learned from this training will form a strong foundation for their successful clinical practice.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 6000

• Teaching aids & Stationery : Rs. 3000

POL charges, if any : Rs. 1000

Other items (Refreshment and &other

Contingencies) : Rs. 1000

• Total : Rs. 11000

• 20% Over Head charges : Rs. 2200

7. DIAGNOSTIC ULTRASOUND IN VETERINARY PRACTICE

Duration: 6 days

Dates: 22.6.09 to 27.6.09 and 14.12.09 to 19.12.09
Venue: Dept. of Clinical Veterinary Medicine,

Venue: Dept. of Clinical Veterinary Medicine, College of Veterinary & Animal Sciences,

Mannuthy

No. of Batch:

Trainees: Veterinary Surgeons / Assistant Directors

No. of Trainees/batch : 5/batch

Course Director : Dr.Premni Elias, Assistant Professor Dept. of Clinical Veterinary Medicine,

College of Veterinary & Animal Sciences,

Mannuthy

Syllabus

General principles-selection of probes-abdominal ultrasonography-Echocardiography-urogenital ultrasonography in large and small animal practice –ultrasound guided needle biopsy including aspiration – doppler ultrasonography – awareness to other medical imaging techniques. Practical training on the application of ultrasonography in clinical cases.

Practical utility

Ultrasonography is an economical and safe imaging technique having wide application in the field of cardiology, urology, hepatology, animal reproduction and for taking biopsies from animals with minimum injury. It involves no risk of radiation exposure during imaging procedure and hence considered as a modality for paediatric patients and in obstetrics.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 5000

Teaching aids & Stationery : Rs. 3000

POL charges, if any
 Rs. Nil

Other items (Disposable items, gel,

Refreshments and other contingencies) : Rs. 4000

• Total : Rs. 12000

20% Over Head charges : Rs. 2400

Course Fee Per Batch : Rs. 14400

8. ADVANCED DIAGNOSTIC PROCEDURES IN VETERINARY PRACTICE

Duration: 6 days

Dates :17.8.09 to 22.8.09 and 15.2.2010 to 20.2.2010

Venue : Dept. of Clinical Veterinary Medicine,

College of Veterinary & Animal Sciences,

Mannuthy

No. of Batch :

Trainees: Veterinary Surgeons / Assistant Directors

No. of Trainees/batch : 5/batch

Course Director: Dr.N.Madhavan Unny, Assistant Professor,

Dept. of Clinical Veterinary Medicine,

College of Veterinary & Animal Sciences,

Mannuthy

Syllabus

Introduction to the course Principles and practice of ECG

Ultrasonography: Basic concepts and interpretation

Echocardiography in veterinary practice

Blood transfusion

Emergency procedures in veterinary practice

Radiology and Endoscopy in veterinary practice

Basic concepts: CT, MRI, and its applications

Practical utility

Veterinary practice to a great extent is now dependent on use of advanced diagnostic procedures. This is especially so in referred and complicated cases. Knowledge of basic principles of advanced diagnostic aids and procedure is absolutely essential to further the cause of clinical diagnosis. This training aims to facilitate an understanding of the principles and usage of modern diagnostic facilities to field veterinarians.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical

: Rs. 5000

Teaching aids & Stationery

: Rs. 3000

POL charges, if any

: Rs. 1000

Other items (EGC paper, gel , vDisposable

: Rs. 3000

and Refreshment)

Total

Rs.12000

20% Over Head charges

Rs. 2400

Course fee per batch

Rs.14400

9. ADVANCES IN RUMINANT MEDICINE

Duration: 6 days

Dates: 14.9.09 to 19.9.09 and 15.3.2010 to 20.3.2010 Venue: Dept. of Clinical Veterinary Medicine, College

of Veterinary & Animal Science, Mannuthy

No. of Batch : 2

Trainees: Veterinary Surgeons / Assistant Directors

No. of Trainees/batch : 5/batch

Course Director : Dr.Biju P.Habeeb, Assistant Professor,

Dept. of Clinical Veterinary Medicine, College of Veterinary & Animal Sciences,

Mannuthy

Syllabus

Anatomy of ruminants and its applications in clinics, Clinical examination procedures, Metabolic Diseases, Rumen Fluid collection and examination, Digestive Disorders, Liver Diseases, Liver Biopsy, Acute Abdomen, Ultrasonography and Electrocardiography of ruminants, Mastitis, Surgical Management of rumen disorders, Calf hood diseases, Fluid therapy, Blood transfusion, Reproductive disorders affecting ruminants, Ruminant toxicology, Newer concepts in ruminant therapy:

Practical utility

Frequent hands on training are essential in the management of diseases of ruminants. Well trained clinicians can properly diagnose the disease which will help in an earlier cure of diseases and reduction in cost of treatment. Updating on the modern diagnostic aids and therapeutic protocol will enable the Veterinarians to deliver a high quality service in the field. Interactions between the Veterinarians and scientists will pave way to find solution to field level problems through research work.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 5000

Teaching aids & Stationery : Rs. 3000

POL charges, if any
 Rs. 200

Other items

(Medicines, Equipments, laboratory wares,

Disposable items, refreshments & other

Contingencies) : Rs . 4000

• Total : Rs.12200

20% Over Head charges : Rs. 2440

UNIT OPERATION IN MILK PROCESSING

10 days Duration:

November/December-2009 Dates: KAU Dairy Plant, Mannuthy Venue:

No. of Batch:

Students of Vocational Higher Secondary Trainees:

School (Dairying)

No. of Trainees/batch: To be decided

Dr.P.I.Geevarghese, Course Director: Professor and Head

Dairy plant

Syllabus

Introduction-Importance of milk and milk products – Personal hygiene – cleaning and sanitation Quality control of milk and milk products

"Learn while you work"

Milk testing

Milk processing operation such as Pasteurization, Cream separation, Homogenization etc and equipments related to this

Preparation of various milk products such as khoa, curd, lassi, sambharam, paneer, ice cream, rassogolla, . gulabjamun, srikhand, yoghurt, whey drink etc

Packaging of milk and milk products

Practical utility

To familiarize with the processing and packing of milk and to give practical training in the preparation of various milk products. This will enable them to have practical knowledge of the theory portions studied in schools.

Expenditure

Honorarium @ not exceeding

20% Over Head charges

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical Rs.2500 Rs.2500 Teaching aids & Stationery

Rs. Nil POL charges, if any

Other items Rs. 500

Rs.5500 Total Rs.1100

Rs.6600 Course fee per batch

12. ENTREPRENEURSHIP DEVELOPMENT IN RICE PROCESSING INDUSTRY

Duration: 3 days

Dates: April-2009, August-2010

Venue : Kelappaji College of Agricultural Engineering and

Technology, Tavanur

No. of Batch : 2

Trainees : Prospective Entrepreneur and Candidates deputed

by

Voluntary organizations/NGO's.

No. of Trainees/batch : 20

Course Director : Dr.K.P.Sudheer, Assistant Professor (SS),

Dept.of Post Harvest Technology & Agricultural

Processing, KCAET, Tavanur

Syllabus

Scope and importance of food processing – rice production and processing – principles and methods of rice processing – Location selection criteria for rice mill, selection of process, rice mills – types – modern rice mill-unit operation in rice milling – selection of equipments – Huller – Rubber roll sheller – Polisher – Paddy separators- graders- Sortex rice-Processing of speciality rice-Parboiling methods – Products and by-product utilization from rice mill industry-Bran and its utilization – husk and its utilization – plant capacity – project design, process and controls, handling equipments, plant lay out, requirement of plant building and its components, labour requirement, plant installation, power requirement, sanitation. Cost analysis, preparation of rice mill project-visit to modern rice mill.

Practical utility

It has been observed that the location of rice mill are confined to a few selected production centres. Their development as a village level agro-processing unit is yet to take a proper shape. In the absence of village level rice milling unit, the farmers have to travel great distance for milling the rice. This leads to increased transportation and handling losses. Thus there is a need to develop improved rice mills as a village level agro processing unit for bringing about technical up gradation and development of the sector. Value addition and generation of gainful and sustainable employment opportunities are the other possible benefits arising out of this agro processing Industry. It is, therefore, essential to make aware of the rice processing technologies to Prospective Entrepreneurs through training. The training will also focus on various products and bi-products from rice processing industry.

Expenditure

Honorarium @ not exceeding Re 2507, res 15 and 61 arters		
@ Rs.250/- per 1 hour of lecture@ Rs.250/- per 2 hour of practical	:	Rs. 2000
• Teaching aids & Stationery (100x20)		Rs. 2000
POL charges, (For field visit to model rice mill)	:	Rs. 5000
Other items		
1. Food & Refreshment (100x20x3)	:	Rs. 6000
2. Accommodation (30x20x2)	:	Rs. 1200
3. TA for participants(100x20; to be paid as per actual expenditure, TA/DA of driver is included)	:	Rs. 2000
4. Training manual to participants(100x20)	:	Rs. 2000
5. Miscellaneous & Contingent Expenditure	:	Rs. 1200
6. Documentation Charges	:	Rs. 2000
Total	:	Rs.23400
20% Over Head charges	:	Rs. 4680
Course fee per batch	:	Rs.28080
Total expenditure for all the 2 batches	:	Rs.56160

13. FOOD SAFETY AND QUALITY MANAGEMENT IN FOOD INDUSTRIES

Duration: 2 days

June-2009, October-2010 Dates Kelappaji College of Agricultual Engineering Venue :

and Technology, Tavanur

No. of Batch:

Agriculture Officers/Agricultural Trainees:

> Assistants of Department of Agriculture, Kerala State/Representatives from NGO's

No. of Trainees/batch:

Course Director Dr.K.P.Sudheer, Assistant Professor (SS),

> Dept. of Post Harvest Technology & Agricultural Processing, KCAET, Tavanur

> > Rs. 2000

Syllabus

Importance of food safety and food quality, Quality attributes of food in the production chain, Factors affecting quality, Quality management activities with respect to safe food chain, Food safety - Biological hazards, chemical hazards, physical hazards, and miscellaneous hazards in food, Types and mean of Biological, physical and chemical contamination, Concept of quality assurance systems and food safety, Principles of quality assurance, TQM, GMP, Principles of ISO, HACCP - Principles- application of HACCP in food industries, Traceability in food supply chains, relationship between quality systems and traceability in food chains, Consumer perception of food safety, Organic food production-quality and safety aspects-factors

Practical utility

The state of Kerala could not take full advantage of the emerging opportunities in processing industry mainly for want of domestic supply of raw material of desired quality. This was due to unscientific application of basic inputs and poor post harvest handling practices. Improper storage practices, handling procedures, leading to increased fugal/mould growth, etc. are some of the examples for these unscientific practices. Unhygienic processing methods aggravated the situation. A through understanding and application of good production and manufacturing practices can improve the safety and quality of food produce and their value added products. This will ensure higher returns and improve the economic security of farmers and processing entrepreneurs of the State.

Expenditure

_	Honorarium	(0) not	OVCOORING
•	HUUUUIAHUHI	w. HUL	CYCCCUITS

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical Rs. 1500 Teaching aids & Stationery (100x20)

Rs. 1000 POL charges

Other items

1. Food & Refreshment (100x20x2) Rs. 4000

600 2. Accommodation (30x20x1) Rs.

3. TA for participants(100x20; to be paid as per actual

expenditure, TA/DA of driver is included Rs. 2000

4. Training manual to participants(100x20) Rs. 2000

Rs. 1000 Miscellaneous & Contingent Expenditure

Rs. 2000 6. Documentation Charges

Rs.16100 Total

Rs. 3220 20% Over Head charges

Rs.19320 Course Fee Per Batch

Total expenditure for all the 2 batches Rs.38640

14. ADVANCES IN FOOD PROCESSING - AN OPPORTUNITY FOR ENTREPRENEURSHIP DEVELOPMENT

Duration: 2 days

Dates: May-2009, September-2009

Venue : Kelappaji College of Agricultural Engineering

and Technology, Tavanur

No. of Batch : 2

Trainees: Agriculture Officers/

Agricultural Assistants of Department of

Agriculture,

Kerala state/Representatives from NGO's

No. of Trainees/batch : 20

Course Director: Dr.K.P.Sudheer, Assistant Professor (SS),

Dept.of Post Harvest Technology & Agricultural Processing, KCAET, Tavanur

Syllabus

Scope and importance of food processing, post harvest losses, principles and methods of food processing, Strategies to increase food processing sector, Research and Development, extension needs to enhance this sector. Entrepreneurship development in rice processing – rice mills – types-modern rice mill-unit operation – selection of equipments, Entrepreneurship development in fruits and vegetables processing – cold storage – products-Entrepreneurship development in spices and plantation crops – advances in food processing – products and bi-product utilization from food Industry- plant lay out, requirements of plant building and its components, cost analysis.

Practical utility

India has attained self sufficiency in food with sectoral surpluses emerging from production. Surpluses have led to localized marketing difficulties and at times a fall in prices with consequent impacts on farmer incomes. Govt. India is taking a lot of effort to boost the food processing sector through Ministry of food Processing Industries. It is, therefore, essential to make aware of the advanced food processing technologies to various implementing officers and agricultural extension functionaries viz; Agricultural engineers, Agricultural officers, Agricultural assistants, and prospective Entrepreneurs through training programmes. The training focus on various products and bi-product from major crops viz; rice, fruits, vegetable's, milk, spices and plantation crops.

Expenditure

Honorarium @ not exceeding

•	@ Rs.250/- per 1 hour of lecture		•
	@ Rs.250/- per 2hour of practical	:	Rs. 1500
•	Teaching aids & Stationery (100x20)	:	Rs. 2000
•	POL charges	:	Rs. 1000
•	Other items		
	1. Food & Refreshment (100x20x2)	:	Rs. 4000
	2. Accommodation (30x20x1)	:	Rs. 600
	3. TA for participants(100x20; to be paid as per actual		
	expenditure, TA/DA of driver is included	:	Rs. 2000
	4. Training manual to participants(100x20)	:	Rs. 2000
	5. Miscellaneous & Contingent Expenditure	:	Rs. 1000
	6. Documentation Charges	:	Rs. 2000
•	Total	:	Rs.16100
•	20% Over Head charges	:	Rs. 3220
•	Course fee per batch	:	Rs.19320
	Total expenditure for all the 2 batches	:	Rs.38640

15. HEALTHCARE MANAGEMENT AND CHEMICAL IMMOBILISATION OF CAPTIVE FLEPHANTS

Duration: 6 days

Dates : 11.1.2010 to 16.1.2010

Venue : Elephant Study Centre,

College of Veterinary & Animal Sciences,

Mannuthy

No. of Batch : 1

Trainees : Veterinary Surgeon

No. of Trainees/batch :

Course Director : Dr.P.C.Alex, Professor & ADR

Syllabus

General management practices—Training and Restraint—Nutrition—Diseases and treatment—operation techniques—musth—chemical immobilisation—handling of dart equipments—visit to elephant camp-post mortem procedure-captive elephant rules.

Practical utility

The training will facilitate the veterinarians to have a first hand knowledge on healthcare and chemical immobilisation of elephants.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 8000

Teaching aids & Stationery : Rs.20000

POL charges/TA for external experts
 Rs.10000

• Other items (Refreshment) : Rs. 2000

• Total : Rs.40000

20% Over Head charges : Rs. 8000

16. RECENT ADVANCES IN DIAGNOSIS, CONTROL AND PREVENTION OF INFECTIOUS AND CONTAGIOUS DISEASES

Duration: 10 days

Dates : 2009-2010

Venue : College of Veterinary and Animal Sciences,

Pookot, Wayanad

No. of Batch:

Trainees: Officers of Animal Husbandry Department

No. of Trainees/batch:

Course Director : Dr.N.Gopakumar, Professor & Head,

Dept. of Pharmacology and Toxicology

COVAS, Pookot, Wayanad

Syllabus

Training syllabus is prepared giving emphasis on updating the knowledge on diagnostic procedures; use of modern equipments for clinical and toxicological diagnosis of diseases and infertility; epidemiological studies control and prevention of infectious diseases. The proposed syllabus encompasses the various aspects of recent trends in diagnosis of emerging animal diseases using immunological, biochemical, haematological, molecular and interventional techniques. in addition, epidemiological study and surveillance of diseases of zoonotic importance will be emphasized. The use of advanced imaging techniques in veterinary practice, recent trends in augmenting fertility will be also discussed. The detailed training module is as follows.

Department	No. of days	Sessions
Veterinary Parasitology,	Days 1, 2,3 and 4	Diagnosis and control of emerging parasitic diseases (neosporosis,cryptosporidiosis,toxoplasmosis) Haemoprotozoan and haemorickettsial diseases. Anthelminthic resistance, vaccines, biocides and Insect growth regulators
Veterinary Microbiology Pharmacology and Toxicology & Veterinary public health		Diagnosis of Helminthosis by faecal sedimentation and floatation techniques, EPC, blood smear and lymph node biopsy, Special staining, Acridine orange staining, modified Acid Fast staining, Polymerase Chain Reaction etc.
		Diagnosis and control of toxicities of insecticides, plants and drugs with special reference to collection, preservation and despatch of clinical materials. Detection of toxicities using TLC, column chromatography and HPLC and Atomic Absorption Spectrometer.
		Diagnostic techniques for bacterial, viral and fungal diseases with special reference to collection, preservation and despatch of clinic almaterials, staining procedures, media preparation, Antibiotic sensitivity test, Serological diagnosis with special reference to EUSA and PCR. Zoonotic diseases, their diagnosis and control. Control of bacterial, viral and fungal diseases.

Veterinary Pathology & Biochemistry	Day 5 & 6	Introduction to molecular diagnostic techniques like DNA, isolation from different samples. Clinical enzymology- Estimation of ALT, AST, ALP, CPK, GGT, and Trypsin.
	·	Hormone assay by enzyme linked methods. Interpretation of biochemical values
		Biochemical & haematological techniques for disease diagnosis
	-	Histo-pathological and post-mortem diagnostic techniques for diagnosis of diseases
Veterinary Surgery & Animal Reproduction G & O	Day 7 & 8	Fluoroscopy & Inhalant anaesthesia Advanced anaesthesia monitoring techniques, X-ray and its diagnostic uses.
		Hormonal assay and recent concepts in treatment of infertility in animals. Semen collection and evaluation of male fertility.
		Vaginal cytology
		Modern techniques for the diagnosis of infertility in animals, recent trends to augment fertility in animals, use of ultrasonography in animals reproduction and pregnancy diagnosis. Canine breeding management.
Veterinary Clinical Medicine Dept. of Veterinary	Day 9 & 10	Emergency & Critical care, field level diagnosis and treatment of infectious and non infectious diseases. and Electrocardiography, Echocardiography and Endoscopy.
Epidemology and Preventive medicine		Diagnosis of diseases PPR, Canine distemper, Canine parvo, canine corona, bovine tuberculosis using pen-side diagnostic kits & their interpretation.

Practical utility

The animal population are under constant threat from various diseases, which result in significant economic loss in our country. To increase livestock production, timely and specified detection of pathogens and better health management practices are important. In the recent past, there have been tremendous development in the area of disease diagnosis and prophylaxis. Progress in molecular biology has made it possible to detect pathogens in all kind of samples and it is also possible to characterize the organism/animal at genomic level, which is not only useful for disease management, but also important for 'conservation of various breeds. Hence this training is intended to update the recent concepts in the diagnosis, treatment control and prevention of diseases. The programme envisage imparting knowledge on clinical, microbiological, serological, pathological, toxicological and molecular diagnosis of diseases including simple field level diagnostic and therapeutic equipments; user of veterinary imaging techniques and ultrasonography in disease diagnosis and reproduction. Discussion on emerging zoonotic infections, post-mortem techniques, antimicrobial, anthelmintic resistance and current trends in diagnosis and treatment of infertility will be extremely useful for veterinarians.

Expenditure

•	Honorarium @ not exceeding		
	@ Rs.250/- per 1 hour of lecture	:	Rs. 12000
	@ Rs.250/- per 1 hour of lecture@ Rs.250/- per 2 hour of practical	:	Rs. 3000
•	Teaching aids & Stationery		
	Rs.5000x3 daysx4 batches	:	Rs. 60000
•	POL charges	:	Rs. 5000
•	Other items (Contingencies)	:	Rs. 20000
•	Total	:	Rs.100000
•	20% Over Head charges	:	Rs. 2000
•	Course fee per batch	:	Rs.120000

17. TRAINING ON ROUTINE LABORATORY PRACTICES FOR ASSISTING **DISEASE DIAGNOSIS**

5 days Duration:

2009-2010 Dates:

Venue : College of Vety. and Ani. Sci, Pookot, Wayanad

No. of Batch:

Para-veterinary staff of Animal Husbandry Trainees:

Department

No. of Trainees/batch:

Dr.N.Gopakumar, Professor & Head, Course Director :

Dept. of Pharmacology and Toxicology

COVAS, Pookot, Wayanad

Syllabus

Department	No. of days	Sessions
Department of Clinical Medicines/ surgery.	1	Collection and preservation of clinical materials, routine laboratory procedures, mastitis test, Handling of modern equipment for disease diagnosis. Collection of food, preparation of blood smear, staining of blood smear, Sterilization of equipments and surgical instruments, preparation of surgical pack.
Dept. of Veterinary Microbiology.	1	Handling of microscopes, Preparation of glassware and media, operation of hot air oven & autoclave, staining techniques, operation of common equipments in Microbiology.
Dept. of Veterinary Pathology/ Department of Biochemistry/ Dept. of Pharmacology & Toxicology	1	Post-mortem techniques, collection, preservation and fixation of tissue for histopathology, collection, preservation and despatch of clinical materials suspected of poisoning to any Toxicology laboratory. Techniques for haematological examination, ESR, PCV, RBC, WBC, Urinalysis.
Dept. of Veterinary Parasitology	1.	Collection, preservation and despatch of clinical samples for laboratory examinations, collection, preservation and dispatch of nematodes, cestodes, trematodes and ectoparasites.
Department of Animal Reproduction		Collection and despatch of materials from animals with reproductive problems, hygienic practices for successful A.I programme, Sterilization of equipments, Handling of modern equipments for diagnosis.

Practical utility

Routine laboratory practices form an integral part of disease diagnosis. Scientific methods of collection, preservation and dispatch of clinical materials are highly essential for arriving at an accurate diagnosis. This training programme will help the Para veterinarians to acquire the necessary skills to assist the veterinary clinicians in a better way for diagnosis of infectious and contagious diseases. The objective of the programme is to impart hands on training on routine laboratory practices including care and handling of equipments for disease diagnosis.

Expenditure

•	Honorarium	@	not exceeding	
			. 41	

@ Rs.250/- per 1 hour of lecture Rs. 5000 @ Rs.250/- per 2hour of practical 2500 Teaching aids & Stationery Rs. 33000 POL charges Nil

Other items 1. Food per batch Rs. 10000 2. Accomodation per batch Rs. 10000 3. Travelling Allowance Rs. 27000 Total Rs. 87500 20% Over Head charges Rs. 17500

Course Fee per batch Rs.105000

Total expenditure for all the batches $Rs.105000 \times 4 = Rs.4,20,000/$

18. HAEMATOLOGY AND HAEMOPARASITES

Duration: 5 days

Dates: June to December 2009 Venue: College of Veterinary and Animal Sciences,

Pookot, Wayanad

No. of Batch:

Trainees: Veterinary Officers of the Animal

Husbandry Department

No. of Trainees/batch : 10

Course Director : Dr.K.Devada, Professor & Head,

Department of Veterinary Parasitolog,

COVAS, Pookot, Wayanad

Syllabus

The proposed syllabus encompasses the updated views on the epidemiology, transmission, pathogenesis and prophylaxis of important haemoparasitic diseases. There will be detailed discussion on normal haemogram and altered haemogram. Lectures will cover collection of food samples from various species of animals, different type of anemias like acute and chronic blood loss anemia, iron deficiency anemia, haemolytic anemia etc. There will be classes on tick borne protozoan and rickettsial diseases and the current strategies in the treatment and control measures of such haemoparasitic diseases.

The practical session will include demonstration of etiological agents, Vector identification, blood staining techniques for filarial and malarial organisms, haematological parameters, microscopic detection of normal/abnormal constituents of blood and demonstration of polymerase chain as a diagnostic tool.

Day	9-10 am	10-11 am	11-1 pm	1-2 pm	. 2-4 рт
Day 1	Blood and its constituents	Serum biochemistry	Interpretation of haematology	Lunch	Interpretation of Serum biochemistry
Day 2	Abnormalities in blood constituents	Anemia	Abnormal erythrocytes	-do-	Conventional techniques for detection of hemoparasites (Stains, Knott's method)
Day 3	Haemoprotozoa	Haemoprotozoa (Contd)	Modern techniques in the detection of blood parasites(PCR, histochemical staining)	-do-	Modern techniques in the detection of blood parasites (PCR,histochemical staining)
Day 4	Filariosis	Haemorickettsial	Detection of haemoprotozoans	-do-	Detection of diseases heamorickettsials
Day 5	Latest concepts in the therapy and the control of haemo parasites	Blood transfusion	Identification of vectors transmitting haemoparasites	-do-	Presentation by trainees

Practical utility

Blood is a fluid tissue that circulates trough the vascular channels carrying the necessities of life for the cells of the body and receiving the waste products of metabolism for transport to organs of excretion. Blood constitutes a very important clinical sample and is examined for various reasons-as a screening procedure to assess the health status of animals, to diagnose disease conditions, to evaluate the immune status and is also the progress of treatment.

Variation in the blood and its constituents indicate various disease conditions, specific and non specific. Besides, haemoparasitic and haemo organisms have proved to be grave to the health of livestock. Recent investigation have revealed devastating effects of such organisms on the economy of livestock production. Subsequent impact will definitely alter the national and social environment. Hence it is indeed essential to understand and to make one so in depth the multitude of haemoparasites affecting livestock, consequent changes in the blood constituents and blood parameters and the blow of such disease conditions in the livestock sector.

This training is mainly intended for the veterinary officers working in the clinical and diagnostic labs of the Animal Husbandry Department. Knowledge on the normal haemogram, alteration in the haematology and detection haemoparasites/organisms will in fact help the specialists concerned to become well equipped and well versed in the diagnosis and thereby control of diseases affecting livestock.

Expenditure

•	Honorarium @ not exceeding	
	@ Rs.250/- per 1 hour of lecture	: Rs. 2500
	@ Rs.250/- per 2hour of practical	: Rs. 2500
•	Teaching aids & Stationery & Chemicals	: Rs.40000
•	POL charges	: Rs. 1500
•	Other items	
	1. Food @ Rs.130/- per day	: Rs. 6500
	2. Accommodation @Rs.100/- per day	: Rs. 5000
	3. Travelling Expenses	: Rs.25000
•	Total	: Rs.83000
•	20% Over Head charges	: Rs.16600
•	Course Fee Per Batch	: Rs.99600

DISEASES OF ZOONOTIC IMPORTANCE WITH SPECIAL EMPHASIS ON PARASITIC DISEASES

Duration: 5 days

Dates : June to December 2009

Venue : College of Veterinary and Animal Sciences,

Pookot, Wayanad

No. of Batch:

Trainees: Veterinary Officers of the Animal

Husbandry Department

No. of Trainees/batch:

Course Director : Dr.K.Devada, Professor & Head,

Department of Veterinary Parasitology, COVAS, Pookot, Wayanad

Syllabus

The proposed syllabus encompasses the updated views on the epidemiology, transmission, pathogenesis and prophylaxis of important zoonotic diseases. There will be detailed discussion on diseases like neurocysticercosis, hydatidosis, rabies, brucellosis etc. Lectures will cover the role of vectors in the transmission of vector borne diseases and the current strategies in the treatment and control measures of meat borne diseases. The training schedule also aims to create awareness of the risk of Toxoplasma, Cryptosporidium and FMD among veterinarians.

The practical sessions will include demonstration of etiological agents, Vector identification, detection of cryptosporidium oocysts in faecal samples, immunological techniques for bacterial/viral organisms and demonstration of polymerase chain reaction as a diagnostic tool.

Day	9-10 am	10-11 am	11-1 pm	1-2 pm	2-4 pm
Day 1	Introduction on zoonotic diseases	Protozoan zoonoses	Projection of slides on parasitic zoonoses for laboratory	Lunch	Collection preservation and despatch of samples
Day 2	Cestode zoonoses	Nematode zoonoses	Knott's technique, his tochemical staining for the detection of microfilaria	-do-	Blood/Lymph node smear examination, Cryptosporidium staining
Day 3	Viral zoonoses	Tick borne Rickettsiosis	Identification of vectors	-do-	Diagnosis of Rabies
Day 4	Trematode zoonoses	Bacterial zoonoses	Polymerase chain reaction	-do-	PCR contd
Day 5	Latest concepts in control of parasitic zoonoses	Control of microbial zoonoses	Diagnostic tools for Brucellosis	-do-	Laboratory diagnosis of avian influenza

Practical utility

Man has been associated with animals since time immemorial. Often we forget that exposure and access to animals paves way to disease conditions due to several etiological agents. The seriousness is neglected at times leading to incurable and horrific disease conditions in man. Hence it is time to be aware and to create awareness of diseases transmissible between man and animals. This insight will help the veterinary officers to safeguard themselves as well as livestock from various diseases owing to parasites, bacteria and viruses. They will also be able to impart the knowledge so gained to the society, which will indeed vitalize the society towards better hygienic maintenance and sustenance.

Expenditure

•	Honorarium @ not exceeding	
	@ Rs.250/- per 1hour of lecture	: Rs. 2500
	@ Rs.250/- per 2hour of practical	: Rs. 2500
•	Teaching aids & Stationery & Chemical	: Rs.40000
•	POL charges, if any	: Rs. 1500
•	Other items	
	1) Food @ Rs130/- per day	: Rs. 6500
	2) Accommodation @ Rs100/- per day	: Rs. 5000
	3) Travelling Expenses	: Rs.25000
•	Total	: Rs.83000
•	20% Over Head charges	: Rs.16600
•	Course Fee for Entire training	: Rs.99600

20. DIAGNOSTIC RADIOLOGY

Duration 6 days

Dates 11.01.2010 to 16.01.2010

Department of Veterinary and Radiology, Venue

College of Veterinary and Animal Sciences,

Mannuthy

No. of Batch:

Trainees Veterinary Surgeon/Assistant Director,

Department of Animal Husbandry,

Kerala

No. of Trainees/batch 10

Dr.C.B.Devanand, Associate Professor, Course Director

Department of Veterinary Surgery and Radiology,

: Rs. 2000

CV & AS, Mannuthy

Syllabus

Introduction to radiology-X-ray generation principles and radiation physics-X-ray generating unit and accessories-Radiographic positioning-Radiographic technique-Processing of X-ray film and dark procedure-Radiographic qualities-Interpretation of radiographic lesions-Radiographic pathologies of GI tract, bones and joints, head, neck and thorax-Contrast techniques and contrast media-contrast radiography of alimentary tract, urogenital system, spinal cord, ear canal-Radiation hazards and prevention-Establishment of a radiology unit.

Practical utility

The number of X-ray units in the field hospitals is increasing in number and farmers are becoming more and more demanding. So it is essential for the field veterinarian to know about the fundamentals of X-ray generation, various radiographic techniques and radiographic interpretation.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 5500

Teaching aids & Stationery : Rs. 2000

POL charges, if any : Rs. 500

Other items

1) Anaesthetic : Rs. 500

2) Disposables and Acessories : Rs. 1500

3) X-Ray 4) Contrast material : Rs. 3000

Total : Rs.15000

20% Over Head charges : Rs. 3000

Course fee per batch : Rs.18000

21. TRAINING ON UROGENITAL SURGERY

Duration: 6 days (Including holidays)

Dates: 14.12.2009 to 19.12.2009
Venue: Dept. of Veterinary Surgery and Radiology,

College of Veterinary and Animal Sciences,

Mannuthy and Surgery units of

Vety. Hospitals, Mannuthy and Kokkalai

No. of Batch:

Trainees: Veterinary Surgeon/Senior Veterinary

Surgeons/Assistant Directors sponsored by Department of Animal Husbandry, Kerala

No. of Trainees/batch : 10

Course Director: Dr.S.Anoop, Assistant Professor,

Department of Veterinary Surgery and Radiology, CV & AS, Mannuthy

Syllabus

Anatomical and physiological considerations in uro-genital surgery - Equipments and theatre techniques in uro-genital surgery - Sterilization and management of instruments-patient evaluation and pre and post operative considerations - Anaesthetic management (local, regional and general) - Diagnostic techniques in genitor-urinary tract disorders - Surgical diseases of urinary systems, symptoms, diagnosis and treatment - Surgical diseases of female genital system and their management - Urolithiasis-radiographic and ultrasonographic evaluation, medical and surgical management - Surgical conditions of male genital system and their management - congenital and other conditions affecting urogential system - clinical surgery.

Practical utility

The training will equip the veterinarians with the basic knowledge on the diagnosis and management of urogential conditions in animals such as Urolithiasis, cystitis, urethral diverticulam, previous urachus caesarean section, pyometra, prepucial affections and tumours in both small and large animals.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 5500

Teaching aids & Stationery : Rs. 6000

POL charges/TA to experts : Rs. 3500

• Other items : Rs. Nil

• Total : Rs.15000

20% Over Head charges : Rs. 3000

Course fee per batch : Rs.18000

22. TRAINING ON SMALL ANIMAL ANAESTHESIA AND OPERATION THEATRE MANAGEMENT

Duration: 6 days (Including holidays)

Dates : 26.10.2009 to 31.10.2009

Venue: Department of Veterinary Surgery and

Radiology, College of Veterinary and Animal Sciences, Mannuthy and Surgery units of Veterinary Hospitals,

Mannuthy and Kokkalai

No. of Batch:

Trainees : Veterinary Surgeon/Senior Veterinary

Surgeons/Assistant Directors sponsored by Department of Animal Husbandry, Kerala

No. of Trainees/batch :

Course Director : Dr.K.D.John Martin,

Assistant Professor(Sr. Sl),

Department of Veterinary Surgery and Radiology, CV & AS, Mannuthy

Syllabus

Planning and designing modern small operation theatre – Equipping modern small animal OT – Cleaning and sterilization of OT – Preparation of surgical team – Preparation of patient and patient stabilization – monitoring of surgical patient – Operation room emergencies and their management – Post-operative care of patients – Methods of anaesthesia – Anaesthetics and their pharmacology – Inhalant anaesthesia delivery systems – anaesthetic monitoring – Various anaesthetic protocols including injectable and inhalant – patient ventilation – Surgical instruments (general and special) – Handling care and sterilization of surgical instruments – Operative techniques – Electrosurgery, cryosurgery – suture materials and suture patterns – bandages and drains – Familiarization with general and special surgical procedures.

Practical utility

This training will enable the participants to keep abreast with the modern methods of anaesthesia and surgical techniques in small animals and operation theatre management.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 6000

Teaching aids & Stationery : Rs. 5000

POL charges/TA to experts : Rs. 4000

• Other items : Rs. Nil

• Total : Rs.15000

20% Over Head charges : Rs. 3000

• Course fee per batch : Rs.18000

23. BASIC COURSE IN VETERINARY ORTHOPAEDIC SURGERY

Duration : 10 days

Dates : 1.12.2009 to 10.12.2009

Venue : Department of Veterinary Surgery and Radiology College of Veterinary and Animal Sciences.

Radiology, College of Veterinary and Animal Sciences, Mannuthy

No. of Batch :

Trainees : Veterinary Surgeon sponsored by

Department of Animal Husbandry, Kerala

No. of Trainees/batch : 10

Course Director : Dr.Syam K.Venugopal,
Associate Professor

Syllabus

- Basic anatomy
- Basics of radiographic anatomy & radiographic positioning
- 3. Radiographic interpretation
- 4. Orthopaedic examination of patients
- 5. Diseases of muscles and ligaments
- 6. Diseases of bones
- 7. Diseases of joints
- 8. Diseases of tendons
- 9. Metabolic & nutritional diseases of bones
- 10. Spinal diseases
- 11. Basic fracture biomechanics
- 12. Types of fracture diagnosis
- 13. AO/ASIF Principles of fracture treatment
- 14. Preliminary stabilization of trauma patients
- 15. Monitoring and management of polytrauma patients
- 16. Fracture treatment by coaptation techniques
- 17. Fracture treatment by external skeletal fixation
- 18. Internal fixation of fractures
- 19. Modern trends in fracture fixation
- 20. Physiotherapy

Practical utility

The training will facilitate the Veterinarians to have a basic knowledge on modern veterinary orthopaedic principles and techniques.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 10000

• Teaching aids & Stationery : Rs. 10000

POL charges/TA to experts : Rs. 10000
 Other items : Rs. Nil

• Total : Rs. 30000

20% Over Head charges : Rs. 6000

Course fee per batch : Rs. 36000

24. VIRUS INDEXÍNG OF HORTICULTURAL CROPS

Duration: 10 days

Dates: July-December 2009

Venue : Dept. of Plant Pathology, College of

Agriculture, Vellayani

No. of Batch: Six

Trainees: Agricultural Officers/ College teachers,

PG students in Agriculture,

Biotechnology/ Microbiology/ Botany/ Zoology

No. of Trainees/batch :

10

Course Director

Dr.Uma Maheswaran, Professor

Syllabus

(Training programme include both theory and practical. Emphasis will be given to hands on training)

- 1. Importance of detection of Plant Pathogens
- 2. Symptomatology
- 3. Transmission of plant Viruses and plant virus induced inclusions
- 4. Biological detection of Plant viruses
- 5. Principles of Serology
- 6. Introduction to immunoassay
- 7. Immune response in animals
- 8. Preparation of antigen
- 9. Production of antibodies
- 10. Ouchterlony's agar gel double diffusion test
- 11. Enzyme-linked immunosorbent assay (ELISA)
- 12. Dot-blot immuno-binding assay (DIBA)

Practical utility

Viruses are usually spread in nature by specific vectors. An additional and some times major means of spread is through vegetative planting materials and tissue culture plants. When planting materials becomes virus-infected. Symptomatology is unreliable as the sole means of virus detection and identification. Serological tests are very sensitive methods of rapid diagnostic tests for plant viruses. Among them Enzyme Linked Immunosorbent Assay is a highly sensitive test for the early detection of plant viruses, even at very low concentration. The proposed training programme on "Virus indexing of Horticultural Crops" will include a range of techniques that can be used to detect and identify plant viruses. Early detection of viruses in planting materials would help in indexing before distribution to the farmers. Virus indexing technology is an essential component for virus free seeding production. The programme aims to train workers in the field of Agriculture, Research and Academic staff members.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 7500

Teaching Aids & Stationary : Rs. 5000POL charges, if any : Rs. 1200

Other items (to be specified)

Chemical, Glass wears, Plastic wears, etc : Rs. 11000

Total : Rs. 24700
 20% Over Head charges : Rs. 4940

Course fee per batch : Rs. 30000

25. MANAGEMENT OF INFERTILITY IN CROSSBRED CATTLE OF KERALA

Duration: 3 days

Dates : August 2009, September 2009
Venue : Department of Animal Reproduction,

Gynaecology and Obstetrics,

CoV & AS, Mannuthy :

No. of Batch :

Trainees: Veterinary Officers of Animal Husbandry

Department

No. of Trainees/batch : 10

Course Director : Dr.K.N.Aravinda Ghosh, Professor & Head,

Veterinary Hospital, Mannuthy

Syllabus

- 1. Nutritional infertility
- Repeat breeding
- 3. Functional infertility
- 4. Infectious form of infertility
- 5. Hormonal imbalances
- 6. Post partum complications
- 7. Role of insulin and insulin like growth factors in reproduction
- 8. Role of antioxidants in reproduction
- 9. Metabolic disorders and infertility
- 10. Effect of dietary PUFA (poly unsaturated fatty acids)
- 11. Obstetrical interventions
- 12. Evaluation of frozen semen quality

Practical utility

In the recent years, the state has been facing a serious decline in milk production. This has resulted in a situation where in the milk security of the state has been compromised. The total cattle population of Kerala as per the 2003 livestock census was 21 lakhs which showed a drastic decline of 14.79% from the last census.

The need of the hours is to increase the production potential of available cattle and buffaloes. The ideal intercalving for optimum production is 12 months where as the state average is 19-21 months and the age at first calving in heifers in the state is 48 months as against the ideal figure of 24 months. It has been estimated that yearly calvers produce 30% more milk when compared to a cow calving at an interval of one and a half year. Thus, a good reproduce management strategy for the state can increase the daily milk production in the state by approximately 9 to 10 lakhs litres.

Hence the present project envisages the most commonly encountered problems in the field and various measures to alleviate the same.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture
@ Rs.250/- per 2hour of practical
Teaching Aids & Stationary
POL charges, if any
: Rs. 6000
: Rs. 1500
: Rs. 10000
: Rs. 3000

Other items (to be specified)

Chemical, Equipment and reagents : Rs. 14000
Food, Refreshment & Accommodation
Total : Rs. 40500
20% Over Head charges : Rs. 8100

• Course fee per batch : Rs. 48600

26. ARTIFICIAL INSEMINATION AND PREGNANCY DIAGNOSIS IN GOATS

Duration: 3 days

Dates: August 2009, September 2009
Venue: Department of Animal Reproduction,

Gypacology and Obstetrics

Gynaecology and Obstetrics, CoV & AS, Mannuthy

No. of Batch : 2

Trainees: Veterinary Officers of Animal Husbandry

Department

No. of Trainees/batch : 10

Course Director: Dr. Metilda Joseph, Associate Professor,

Dept. of Animal Reproduction, Gynaecology and Obstetrics

Syllabus

Reproductive anatomy and neuro endocrine control of reproduction in Goats

Semen collection, evaluation and processing

- Methods of heat detection and Artificial insemination
 - o Cervical
 - o Transcervical
 - o Intrauterine
 - o lapararoscopic insemination
- Different methods of Pregnancy Diagnosis
 - o Physical
 - Chemical
 - o Hormonal
- Ultrasonographic methods

Practical utility

Recently, goat farming is gaining significantly more importance among farmers in Kerala. Also Animal Husbandry Department has started implementation of Al programme in goats in a massive scale in Kerala. The training of veterinary officers of the State Animal Husbandry Department will help in enhancing reproductive efficiency and genetic potential of goat population in the state so that the farming community will be benefited by increased milk and meat production from goats and thus contributing to food security in the state.

Expenditure

•	Honorarium	@ no	ot exceeding

@ Rs.250/- per 1hour of lecture
@ Rs.250/- per 2hour of practical
Teaching Aids & Stationary
POL charges, if any
Rs. 3000
Rs. 750
Rs. 5000
Rs. 1500

Other items (to be specified)

A.I Gun, Liquid Nitrogen, Portable liquid

Nitrogen container with shoulder bag : Rs. 7000 Food, Refreshment and Accommodation : Rs. 3000

TA/DA as admissible may be sanctioned

Total : Rs.20250
 20% Over Head charges : Rs. 4050
 Course Fee for per batch : Rs.24300

Course Fee for two batches : Rs.48600

27. OPTIMISING REPRODUCTIVE EFFICIENCY IN CANINES

Duration: 3 days

Dates : April 2009, February 2010

Venue : Department of Animal Reproduction and

Obstetrics, CV & AS,

MannuthyUniversity VH, Mannuthy & Kokkalai

No. of Batch : 2

Trainees: Veterinary Surgeons/practitioners of Animal

Husbandry Department

No. of Trainees/batch : 10

Course Director : Dr. Shibu Simon
Assistant Professor

Syllabus

Reproductive biology
Breeding management and sexual behaviour
Exfoliative vaginal cytology
Hormonal assays
Vaginoscopy

Pregnancy diagnosis using abdominal palpation, acute phase protein, relaxin estimation etc

Ultrasonography Oestrus detection

Contraceptives

New approaches of medical management of cystic endometrial hyperplasia-pyometra complex

Semen collection

Artificial Insemination

Practical Utility

Commercial dog breeding is gaining increased momentum due to the very high demand for good quality pups. Veterinarians cities as well as villages are often consulted by dog breeders for breeding management, care of pregnant animals, management of whelping, obstetrical interventions etc. The researches in these areas in the last three decades have unravelled many aspects of reproductive biology of canines. Tremendous changes in the management of fertility, gynaecological and obstetrical interventions have developed in the recent years. This training programme envisages application of these developments in the field and helping the practising veterinarians to keep themselves abreast with these latest development.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture : Rs. 2250

@ Rs.250/- per 2hour of practical : Rs. 1500

• Teaching Aids & Stationary : Rs. 15000

• POL charges, if any (Expenses for

transport of animals from owners residence

to KAU Hospital batch) : Rs. 2500

Other items (to be specified)

Food, Refreshment & Accommodation -

TA/DA as admissible may be sanctioned : Rs. 6000

Total : Rs. 27250

20% Over Head charges : Rs. 5450

• Course Fee Per batch : Rs. 32700

• Course Fee for two batches : Rs. 65400

28. RECENT TRENDS IN DIAGNOSIS OF INFECTIOUS DISEASES

Duration: 3 days

Dates : May 11-13, May 14-16.

May 18-20 & May 21-23

Venue: Department of Veterinary Microbiology

CV & AS, Mannuthy

No. of Batch :

Trainees: Veterinary Surgeons in AHD

No. of Trainees/batch:

Course Director : Dr. G. Krishnan Nair

Professor and Head

Department of Veterinary Microbiology

CV & AS, Mannuthy

Practical utility & Training syllabus

The training will he based on the recent trends in molecular laboratory diagnostics like PCR, Restriction Endo-nuclease analysis, SDS-PAGE and Western Blot for the diagnosis of animal diseases. They will be given hands on training on collection of samples, preservation, despatch, cold chain maintenance, handling of laboratory equipments, cultures, medias and to perform various molecular diagnosis tests. This in turn will equip them to develop their institutions for the outbreak management of contagious and infectious disease like, Avian Influenza, Anthrax, Hemorrhagic Septicaemia, Leptospirosis and Foot & Mouth diseases.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture : Rs. 12000
 @ Rs.250/- per 2 hour of practical : Rs. 3000

Teaching aids & Stationery

(Rs.5000/day x 3days x 4batches) : Rs. 60000 POL charges, : Rs. 5000

• Other items : Rs. 20000

• Total : Rs. 100000

20% Over Head charges : Rs. 20000Course Fee per batch : Rs. 120000

29. GOOD MICROBIOLOGICAL TECHNIQUES

Duration: 3 days

Dates : April 15-17, April 20-22, April 23-25 &

April 27-29

Venue: Department of Veterinary Microbiology,

CV & AS, Mannuthy

No. of Batch : 4

Trainees: Livestock Inspectors in AHD

No. of Trainees/batch : 10

Course Director : Dr. G. Krishnan Nair,

Professor and Head,

Department of Veterinary Microbiology,

CV & AS, Mannuthy

Practical utility and Training syllabus

The training will give emphasis on the procedures to be employed in a microbiology lab. They will be given hands on training on the collection of samples, preservation, despatch, cold chain maintenance, handling of laboratory equipments, cultures, media and diagnostics. This in turn will equip them to adopt appropriate measures for the outbreak management of contagious and infectious diseases like, Avian Influenza, Anthrax, Hemorrhagic Septicaemia, Leptospirosis and Foot & Mouth diseases.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture - : Rs. 12000

@ Rs.250/- per 2hour of practical : Rs. 3000

Teaching aids & Stationery : Rs. 60000

• POL charges, : Rs. 5000

• Other items : Rs. 20000

• Total : Rs. 100000

• 20% Over Head charges : Rs. 20000

• Course Fee for per batch : Rs. 100000

30. HANDS ON EXPERIENCE IN AGRICULTURAL DATA ANALYSIS

Duration: 21 days

Dates : August, October & February

Venue : Department of Agricultural Statistics,

College of Agriculture, Vellayani

No. of Batch : 3 batches per year

Trainees: Scientists and Teachers of ICAR/SAU

No. of Trainees/batch : 20

Course Director : Dr. Vijayaraghava Kumar,

Professor & Head (Agricultural Statistics)

Syllabus

Day. No.	Topic*	Theory sessions	Practical sessions
1	Introduction-Overview of Statistical softwares	1	1
1	Introduction to Basic Statistics-Graphical and diagrammatic representation of data	1	1
2	Skew ness, Kurtosis and Normally testing	2	2
3 & 4	Correlation and Regression(Simple & Multiple)	4	4
5 & 6	Testing of hypothesisSpecific problems of Participants & Group discussion	31	31
7	Fundamentals of Design of Experiments Analysis of variance	11	2
8	Combined analysis of dataNon parametric analyses	11	11
9	Factorial experiments, Split-plot, strip plot etc	2	2
10	Covariance Analysis, Nearest Neighbour effects, Response surfaces	11	11
11	Incomplete blocks &Non orthogonal data analysis	11	11
12	Probit AnalysisConstruction and management of data bases	11	11
13 & 14	Fundamentals of Survey samplingSurvey data Analysis, Econometric methods, Time series analysis	13	4
15 & 16	Principal components, Factors analysis-Analysisof specific problems of Participants	31	31
17	Principal co-ordinates, canonical correlationsSpecific design of plant breeders	11	11
18	Similarity and Clustering methods and trees, Dendrogram	2	. 2
19	Genetic analysis, Biotechnology analysis	2	2
20	Bio-informatics data handling	2	2
21	Solutions to specific problems of Participants, Group discussion and Evaluation	2	2
Total	21 days	42	42

^{(*} There may be minor differences depending on the availability of softwares)

Practical utility

Developments in the field of Biological science played a key role in the improved and extensive use of statistical methods. As in the case of all other fields, the recent developments in Statistics also is enormous-in data collection, summarization, appropriate analysis, inferential procedures and finally in drawing the collection

Many research journals are now insist on using the recent advances in Statistical methodologies than the simple traditional analysis (for accepting articles etc). Extensive use of statistical softwares and more complex analysis are expected from the researchers. The inferences based on a refined method of analysis are always of value than the ordinary methods of analysis and simple graphic presentations.

The present training is proposed in this context to give adequate training to scientists in the recent developments in statistical data mining. An exposure to Statistical softwares will help them in the management of their data-in summarization, proper analysis and in the most effective interpretation and presentations which they have not received during their academic life.

(Ours may be the only Agricultural University in India still using some old programmers and packages for the Statistical analysis of data. Through the initial expenditure in procuring the computers and softwares is little high, it is helpful in equipping the staff and students of our University and is of great worth in the long run for giving training to a number of batches.)

Expenditure

•					
1.	Expenditure for equipments (Common for all batches):				
	Computers 20 nos with peripheral				
	UPS, Printer/Scanner) etc	: Rs.1000000			
2.	Softwares Statistical Software				
	SPSS/SYSTAT/MS-ACCESS/EXCEL/MINITAB	: Rs.1000000			
3.	Recurring/Annual operational expenses				
	Servicing/Maintenance charges of computers	: Rs. 100000			
	Annual Renewal charges of softwares	: Rs. 100000			
	Total	: Rs.2200000			
	 Honorarium @ not exceeding 	¥			
	@ Rs.250/- per 1 hour of lecture	: Rs. 10500			
٠	@ Rs.250/- per 2hour of practical	: Rs. 10500			
	 Teaching aids & Stationery 	: Rs. 10000			
	 POL charges, 				
	TA for invited faculty:15 person @ Rs.2000	: Rs. 30000			
	Other items				
	 Food, Accommodation, Travel, Office 				
	Arrangement etc	: Rs. 25000			
	• Total	: Rs.2286000			
	 20% Over Head charges 	: Rs. 457200			
	 Course Fee per batch 	: Rs.2743200			
	 Course Fee per participant 	: Rs. 3000			

31. HOSPITAL MANAGEMENT, MODERN DIANOSTIC AND THERAPEUTICS

Duration: 4 days

Dates: 3rd week of January 2010.

Venue: University Veterinary Hospital,

Kokalai & Elite Mission Hospital, Koorkencherry

No. of Batch :

Trainees: Veterinary Surgeons in Animal Husbandry

Department

No. of Trainees/batch : 5

Course Director : Dr.M.K.Narayanan,
Assistant Professor

Syllabus Surgery

- 1) Setting up of X-ray unit
- 2) Radiographic Positioning
- 3) Processing of X-ray film
- 4) Radiographic interpretation
- 5) Establishment of small animal surgery unit
- 6) Familiarization of otoscopic and Ophthalmologic examination
- 7) Electrosurgery
- 8) Cryosurgery
- 9) Physiotherapy Short wave diathery, electro diagnosis & electro therapy, ultra sound therapy
- 10) Exposure to surgical cases
- 11) Exposure to Inhallation and Injectable Anaesthesia
- 12) Patient Monitoring
- 13) Veterinary Dentistry.

Medicine

- 1) Veterinary Medical record keeping and hospital Management
- 2) Special Diagnostic technique like ECG, ultrasonography etc
- 3) Special therapeutic procedure
- 4) Advanced epidemiological investigations, vaccination schedule, serological investigation etc. Attending to medical cases.

Gynaecology:

- Diagnosis and treatment of infertility in bovines
- 2) Examination of genitalia collected from slaughter house.
- 3) Diagnosis of Sub Clinical endometritis (white side test)
- 4) Common obstetrical procedures including obstetrical suturing
- 5) Handling of gestational accidents- abortion, torsion of uterus, prolapse of genital organs, hydrops of fetal membranes etc.,
- 6) Handling of Post mortem complications
- 7) Al in goats and pregnancy diagnosis
- 8) Handling of cases of infertility in bitches
- 9) Management of Pyometra and Psuedopregnancy
- 10) Study of vaginal Cytology in bitches.

Practical utility

To create awareness about the latest developments in the fields of Medicines, Surgery & Gynaecology and to give hands on training on certain aspects of disease diagnosis and therapeutics.

Expenditure

Honorarium @ not exceeding

@ Rs,250/- per 1 hour of lecture

© Rs.250/- per 2hour of practical : Rs.10000
Teaching aids & Stationery : Rs. 3500
TA/POL charges to experts : Rs. 500

Other items

1. Accommodation @ Rs.200/day/Participant : Rs. 4000

2. Food @ Rs.150/day/Participant : Rs. 3000
Total : Rs.21000
20% Over Head charges : Rs. 4200
Course Fee Per batch : Rs.25200

ANAESTHESIA AND OPERATION THEATRE MANAGEMENT 32.

4 days Duration:

August 2009 to February 2010. Dates: University Veterinary Hospital, Kokkalai Venue:

No. of Batch:

Veterinary Surgeons in Animal Husbandry Trainees:

Department

No. of Trainees/batch :

Course Director:

Dr.M.K.Narayanan, Assistant Professor

Syllabus

Planning and designing of small animal operation theatre. Equipment Acquisition, Maintenance, Clearance etc Sterilization of operation theatre, Inhalation and Injectable anaesthesia of small animals for surgery Pre- operative evaluation - Monitoring of surgical patients, surgical emergencies and resuscitation Post- operative care of the patients Different anaesthetic protocols and anaesthetic drugs

Practical utility

To create awareness about the latest developments in the field of Anaesthesia, Surgery & Modern Theatre Management and to give hands on training on various aspects of patient monitoring.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 5000 : Rs. 2500 Teaching aids & Stationery : Rs. 500

TA/POL charges

Other items

: Rs. 4000 1. Accommodation @ Rs.200/day/participant : Rs. 3000 2 .Food@ Rs.150/day/participant : Rs.15000 Total

20% Over Head charges

(waived as per the project on Anaesthesia and Operation Theatre Management funded by

: Rs. Nil A.H.Dept) : Rs.15000 Course Fee Per Batch

33. BASIC COURSE IN VETERINARY ORTHOPAEDIC SURGERY

Duration: 10 days

Dates: 19.10.2009 to 28.10.2009. Venue: Department of Veterinary Surgery & Radiology,

College of Veterinary and Animal Sciences,

Mannuthy

No. of Batch :

Trainees: Kerala State Veterinary

Council, Thruvananthapuram

No. of Trainees/batch : 10

Course Director : Dr.Syam K. Venugopal , Associate Professor

Syllabus

- 1. Basic anatomy
- 2. Basics of radiographic anatomy & radiographic positioning
- 3. Radiographic interpretation
- 4. Orthopaedic examination of patients
- 5. Diseases of muscles and ligaments
- 6. Diseases of bones
- 7. Diseases of joints
- 8. Diseases of tendons
- 9. Metabolic & nutritional diseases of bones
- 10. Spinal diseases
- 11. Basic fracture biomechanics
- 12. Types of fracture diagnosis
- 13. AO/ASIF Principles of fracture treatment
- 14. Preliminary stabilization of trauma patients
- 15. Monitoring and management of polytrauma patients
- 16. Fracture treatment by co-optation techniques
- 17. Fracture treatment by external skeletal fixation
- 18. Internal fixation of fractures
- 19. Modern trends in fracture fixation
- 20. Physiotherapy

Practical utility

The training will facilitate the Veterinarians to have a basic knowledge on modern veterinary orthopaedic principles and techniques.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs.10000

• Teaching aids & Stationery : Rs.10000

• TA/POL charges to expert : Rs. 5000

• Other items

1. Accommodation @ Rs.200/day/participant : Rs.20000

2. Food @ Rs.150/day/participant : Rs.15000

Total : Rs.60000

20% Over Head charges : Rs.12000

• Course Fee Per Batch : Rs.72000

34. ADVANCED CLINICAL TRAINING

Duration : 3 Months

Dates : 1.10.2009 to 31.12.2009.

Venue : College of Veterinary & Animal Sciences,

Mannuthy

No. of Batch :

Trainees : Assistant Directors, Dept of Animal

Husbandry, Kerala

No. of Trainees/batch:

Course Director: Dr.C.B. Devanand, Associate Professor

Dept of Veterinary Surgery & Radiology,

CV & AS, Mannuthy

Syllabus

- 1. Management of surgical patients in pre and post operative period. Advances in anaesthetic and surgical techniques, imaging procedures, endoscopy, laparoscopy in diagnosis and treatment of diseases. Advanced surgical treatment of diseases in small and large animals.
- 2. Fluid therapy and anti-bacterial therapy. Clinical pharmacology. Manifestations of diseases and diagnostic strategies. Critical care is veterinary practise, disease of organ systems. Therapeutic consideration in medicine, collection of samples and interpretation of lab tests, poisoning in domestic animals, metabolic disorders and their management, Diseases of zoo animals, elephants, ornamental birds and fishes.
- 3. Recent development in diagnosis, treatment, prohpylaxis and control of infectious diseases of domestic and wild animals and birds. Disease investigation and handling of infectious disease outbreaks. Epidemological surveillance and techno economics of animal disease control.
- 4. Infertility in female/male animals, diagnosis and treatment. Obstetrical manoeuvres in domestic animals. Sexual health control programme in male and female animals
- 5. Examination of clinical materials for disease diagnosis, immunodiagnostic procedures and post mortem techniques, advanced parasitic diagnosis and treatment.

Practical utility

To train officers from the Department of Animal Husbandry on advances in various clinical procedures, diagnostic techniques and therapy so that their proficiency and practical expertise would be improved for adopting these advanced procedures in the clinics in the state.

Expenditure

· Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 65000

Teaching aids & Stationery
TA/POL charges to local visit
Rs. 20000
Rs. 10000

Other items

Diagnostics, Lab reagents, Chemicals,

Drugs, Surgical : Rs. 190000

• Total : Rs. 285000

20% Over Head charges : Rs. 57000
 Course Fee for Entire training : Rs. 342000

35. TRAINING FOR PIG FARM OFFICERS

Duration: 2 Days

Dates : June to August 2009. Venue : Dept. of Livestock Production Management,

COVAS, Mannuthy.

No. of Batch :

Trainees: Veterinary Surgeons of AHD, Kerala

No. of Trainees/batch :

Course Director : Dr.P.C.Saseendran,
Professor and Head

Syllabus

Training Syllabus

1st day Theory Lecture

- · 1. Nutritional requirements of swine at different stages.
- 2. Computation of ration based on conventional feed and un-conventional feed.
- 3. Economic traits of pigs
- 4. Selection of best ration for maximizing economy of swine enterprise.

1st Day Practical

1. Computation of feed and Economic analysis of different ration.

2nd Day Theory Lecture

- 1. Reproductive parameters of swine.
- 2. Selection and breeding of swine
- 3. Evaluation of breeding performance of swine
- 4. Project preparation for commercial units.

2nd Day Practical

1. Breeding and its evaluation

Practical utility

The most important requirement for commercial pig farming is the availability of good quality piglets. Animal Husbandry Department has got required infrastructure and qualified Veterinarians to produce good number of piglets. The training of farm officers would provide sufficient impetus for the pig production programme for the state.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture : Rs.2000
 @ Rs.250/- per 2 hour of practical : Rs.1000
 Teaching aids & Stationery : Rs.2000
 TA/POL charges : Rs.Nil

Other items

(Chemicals and Reagents for Semen and

 Tea & Snacks
 : Rs. 500

 Total
 : Rs. 8500

 20% Over Head charges
 : Rs. 1700

• Course Fee Per Batch : Rs.10200

36. EPIDEMIOLOGICAL INVESTIGATIONS FOR VETERINARIANS.

Duration: 2 Days

Dates: 22.9.2009 & 23.9.200913.10.2009 &

14.10.2009

Venue: Dept.of Veterinary Epidemiology & Preventive

Medicine, COVAS, Mannuthy.

No. of Batch:

Trainees: Veterinary Surgeons of AHD, Kerala

No. of Trainees/batch:

Course Director: Dr.M.R.Saseendranath,

Professor and Head, Dept. of Veterinary Epidemiology & Preventive Medicine,

COVAS, Mannuthy

Syllabus

Training Syllabus

Epidemiological terms-components of epidemiology – types of epidemiology-descriptive epidemiology-disease outbreak investigation- formulation of hypothesis- analytical epidemiology-testing of hypothesis- disease prevention and control.

Practical utility

Knowledge of the epidemiology is very essential for disease outbreak investigation. Field veterinarians are asked to investigate disease outbreak frequently. This training will help them to update their knowledge in epidemiological investigation of disease outbreak so that they can do the investigation in an efficient manner.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture (250x12) : Rs.3000
@ Rs.250/- per 2 hour of practical (250x40) : Rs.1000
Teaching aids & Stationery : Rs.4000
TA/POL charges : Rs.Nil

Other items

Diagnostics, Lab reagents, Chemical &

Miscellaneous : Rs. 5000
Total : Rs.13000
20% Over Head charges : Rs. 2600
Course Fee for Entire training : Rs.15600

37. MODERNISATION IN PRACTISE, FARM AND HOSPITAL MANAGEMENT

5 week days Duration

8.6.2009 & 12.6.200914.9.2009 & 18.9.2009 Dates Venue

College of Veterinary and Animal Sciences,

Mannuthy, K.A.U Farms and Hospitals.

No. of Batch

Veterinary Surgeons/Assistant Directors of Trainees

Department of Animal Husbandry.

No. of Trainees/batch Course Director

Dr.K.M. Jayakumar, Head,

Department of Clinical Veterinary Medicine.

Syllabus

Training Syllabus

Advanced diagnostic procedures in Medical, Surgical and Gynaecological problems-Recent concepts in the management of animal diseases (Medical, surgical and Animal Reproduction) Management of critically ill animal patients and emergencies, I.C.U.

Introduction to hospital management -Veterinary Medical recording with computer application -Hospital architecture, planning, design and maintenance-Clinical and support service -health related laws and ethics.

Modernisation of animal and poultry farm. Recent management techniques in livestock and poultry farm.

Practical utility

1) To update the technical skill and expertise of practicing veterinarians on recent developments in the diagnostic and therapeutic procedures including hospital management.

To improve the management practices of animal farms for better and economical production of livestock and poultry product in the state to meet the demands and deficits during the coming years.

Expenditure

Honorarium @ not exceeding

: Rs. 3750 @ Rs.250/- per 1 hour of lecture (250x15)

: Rs. 1250 @ Rs.250/- per 2hour of practical (250x5)

: Rs. 4500 Teaching aids & Stationery

: Rs. 3000 TA/POL charges

Other items

: Rs. 2500 Lab. Items

: Rs.15000 Total

: Rs. 3000. 20% Over Head charges

: Rs.18000 Course Fee Per Batch

38. PROJECT FORMULATION

Duration: 3 WD

Dates : 3.08.2009 to 5.08.2009

Venue : Seminar Hall, College of Veterinary & Animal

Sciences.

No. of Batch : 2

Trainees: Veterinary Surgeons/Assistant

Directors of Animal Husbandry.

Professor (Research Co-ordination)

No. of Trainees/batch : 15

Course Director : Dr. A. D. Joy

Syllabus

Training Syllabus

Types of project proposals- Extension /Research projects , Projects proposal outline -Title Introduction, Objectives, Practical utility ,Review of Literature , Methodology, Time frame Budget, Summary references. Use of library -Collection of literature /documentation ,Data Collection, Analysis, Tabulation and Presentation. Funding Agencies ,Scholarship in India & Abroad , Audio-Visual aids, Oral & Poster Presentation .Citation and listing of References . Abbreviations and Achonyms in Animal Husbandry and related fields.

Practical utility:

To make the Veterinary Surgeon /Assistant Director Proficient in preparation the project proposal to obtain funds from funding agencies VIZ.STEC, ICAR Central/ State Government, R&D Wing of Pharmaceuticals etc.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture : Rs. 3000

@ Rs.250/- per 2hour of practical : Rs. 750

• Teaching aids & Stationery : Rs. 3000

• TA/POL charges : Rs. Nil

Other items

CD³, OHP sheets : Rs. 250

• Total: : Rs. 7000

20% Over Head charges : Rs. 1400

Course Fee for Entire training : Rs. 8400

39. FOOD SAFETY AND QUALITY ASSURANCE

Duration : 3 Days

Dates : 25.6.09 to 27.6.09

Venue : Dept of Veterinary Public Health

College of Veterinary and Animal Sciences,

Mannuthy.

No. of Batch : One

Trainees : Veterinary Surgeons/Senior Veterinary

Surgeons

No. of Trainees/batch : 20
Course Director : Dr. B. Sunil

Course Director : Dr. B. Sunii
Associate Professor

Syllabus

Training Syllabus

- 1. Introduction to food standards
- 2. The Kerala Panchayat Act, Kerala Panchayat Rules
- 3. Kerala Municipality Act
- 4. Travancore Cochin Public Health Act
- 5. Kerala Livestock Importation Act.
- 6. The Kerala Livestock (Import) Rules
- The Kerala Livestock (Import) Quarantine Rules.
- 8. ISO standards and food safety
- 9. Codex Alimentarius
- 10. Sanitary and Phytosanitary measures
- 11. Regulations are use of veterinary drugs
- 12. BIS
- 13. Ethics for international trade in food
- 14. Quarantine measures
- 15. Food safety and Standard Act, 2006
- 16. Regulations for ensuring safety milk and milk products
- 17. PFA, AGMARK, MMPO
- 18. Slaughter and livestock products regulations
- 19. MFPO
- 20. Risk Based approach to food safety
- 21. Quality control tests for livestock products
- 22. HACCP and quality management systems
- 23. Detection of food and water borne pathogens
- 24. Chemical analysis of drinking water.

Practical utility

The training will facilitate the veterinarians to have basic knowledge of the rules and regulations in the changing global scenario of food safety management and quality assurance. It will help veterinarians to take leadership role in auditing and certification of foods of animal origin.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture @ Rs.250/- per 2hour of practical

: Rs. 4000

 Teaching aids & Stationery and Compendium

: Rs.14000

TA/POL charges to expertsOther itemsRs. 2000Rs. Nil

Total : Rs.20000
 20% Over Head charges : Rs. 4000

• Course Fee per batch : Rs.24000

ORNAMENTAL FISH CULTURE 40.

5Days Duration :

26.10.09 to 30.10.09 Dates:

College of Fisheries, Panangad, Kochi. Venue: One No. of Batch:

Fishery Officer for neighbouring states Trainees:

No. of Trainees/batch Dr. T.V. Anna Mercy, Professor Course Director

Syllabus

Scope & Global scenario of ornamental fish keeping 1.

Introduction of Aquarium keeping 2.

Important ornamental fishes 3.

Important ornamental fishes-Practical 4.

Breeding of freshwater ornamental fishes -Theory 5.

Breeding of freshwater ornamental fishes- Practical 6.

Construction of Aquarium tank/setting/maintenance of aquarium Theory &Practical 7.

8. Aquatic plants

Marine ornamental fishes 9.

Setting up of Marine ornamental aquarium 10.

Diseases of aquarium fishes and remedies -Theory 11.

Diseases of aquarium fishes and remedies -Practical *12.*

Food & Feeding of aquarium fishes, feed preparation, live feed culture- Theory & Practical 13.

Economics of farming/how to start a house hold/farm unit 14.

Funding schemes for ornamental fish culture 15.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

: Rs. 11500 @ Rs.250/- per 2hour of practical

Teaching aids & Stationery and

Nil : Rs. Compendium

Nil TA/POL charges to experts : Rs.

Other items

1. TA for participants from their residence to

College of fisheries @3500 x20 : Rs. 70000

2. DA for Participant @1000 x 20 x5 days : Rs. 150000

3. Training kit@ Rs.200 x20 (includes

: Rs. 4000 Training manual)

4. Field visit : Rs. 3500

5. Refreshments

: Rs. 10000

4000 : Rs. 6. Miscellaneous

: Rs. 253000 Total

: Rs. 50600 20% Over Head charges

: Rs. 303600 Course Fee per batch

41. FRESH WATER PRAWN CULTURE

 Duration :
 7 Days

 Dates :
 17.11.09 to 23.11.09

 Venue :
 KVK Kumarakom.

No. of Batch:

Trainees: Fishery Officer for neighbouring states

No. of Trainees/batch:

Course Director: Dr. K.L.Salin, Assistant Professor

Syllabus

- 1. Freshwater prawn culture -Global status
- 2. Freshwater prawn culture- Concepts
- 3. Monoculture & Poly culture
- 4. Monosex culture
- 5. Feed feeding in freshwater prawn culture
- 6. Modern trends in freshwater prawn culture
- 7. Organic farming
- 8. Paddy cum fresh water prawn culture
- 9. Freshwater prawn culture in Padasekharam
- 10. Economics of culture operations
- 11. On farm handling and pre-processing at farm site
- 12. Marketing
- 13. Value addition
- 14. Sharing of experience with successful farmers
- 15. Fields visits and practicals.

Expenditure

- Honorarium @ not exceeding
 - @ Rs.250/- per 1 hour of lecture
 - @ Rs.250/- per 2hour of practical : Rs. 11500
- Teaching aids & Stationery and
 - Compendium : Rs. Nil
- TA/POL charges to experts : Rs. Nil
- Other items
 - 1. TA for participants from their residence to

College of fisheries @3500 x20 : Rs. 70000 2. DA for Participant @200 x 20 x 7 days : Rs. 140000

3. Training kit @ Rs.200 x20 (including

Training manual) : Rs. 4000

4. Field visit : Rs. 5000

5. Refreshments : Rs. 10000

6. Miscellaneous : Rs. 4000

Total : Rs. 244500

20% Over Head charges : Rs. 48900

Course Fee per batch : Rs. 293400

Sponsored

1. ADVANCE IN PIG BREEDING AND MANAGEMENT

Duration: 5 days

Dates : 2009-2010

Venue : Centre for Pig Production and Research

No. of Batch : 4/year Trainees : Veterinarians

No. of Trainees/batch : Vetermanans 6/batch

Course Director : Dr.R.Thirupathy Venkatachalapathy,

Associate Professor, CPPR, Mannuthy

Syllabus

Introduction – Swine production, Present status and prospects – Housing of pigs, location, fundamentals of housing, construction of eco-friendly low cost pig pens, types of pens, plan and designing – Breeding, common breeds and characters, selection of breeding stock, mating methods, economically important characters and culling – Care and management of pregnant females, new born, pre and post wearing piglets-Feeding of pigs, preparation of concentrate feed, by product utilization, swill feeding, Ration for different age group – Identification and maintenance of records – Common disease of pigs, treatment and control – Preparation of bankable projects and other financials aspects – waste disposal and management.

Practical utility

To sensitize the Veterinarians about the recent advances in swine production. Disseminate the recent scientific technologies in swine breeding, feeding and health care for profitable pig rearing.

Expenditure

Honorarium @ not exceeding

Rs.250/- per 1hour lecture

Rs.250/- for 2hours of practical : Rs. 5000

Teaching Aid &Stationary

@ Rs.300 per head (6nos) : Rs. 1800

• POL charges, : Rs. 200

• Other items (Field Visit) : Rs. 1500

• Total : Rs. 8500

• 20% Over Head charges : Rs. 1700

Course Fee Per Batch : Rs.10200

2. OPERATION AND MAINTENANCE OF TRACTORS AND TILLERS

Duration: 10 days

Dates : March-December,2009 Venue : RARS, Pattambi

No. of Batch : KARS, Fattamor

Trainees : Men

No. of Trainees/batch : 10

Course Director : Dr.Jayan.P.R,

Associate Professor (FPM), Dept.of Agril.Engg.RARS, Pattambi

Syllabus

IC engines - types and working principles

4-strock and 2-strock engines-its operating principles

Common tractor and power tiller engines

Cooling, lubricating, fuel systems

Power transmission systems-clutch, gear box, differential and final drive

Brake and hydraulic systems

Manufacturers of tractors and power tillers in India

Attached implements-Primary and secondary tillage implements – MB plough, disk plough, rotavator, Chisel plough, subsoiler, harrows, bund former, ridger, sweep type cultivator-Brief description

Practical utility

The training will provide theoretical and practical background of the important engine systems attached to the tractors and power tillers. Hands on training will be provided with driving practice and repair and maintenance of attached machinery. The training will equip the unemployed youth of getting self confidence in driving tractors and power tillers. Also, training will be given for proper hitching of farm implements to tractors and power tillers and its operation.

Expenditure

Honorarium @ not exceeding

Rs.250/- per 1hour lecture

Rs.250/- for 2hours of practical : Rs.10000

• Teaching Aid &Stationary : Rs. 3500

POL charges

Maintenance work necessary to make

Machinery fit for training : Rs.10000

Other items

Food & Accommodation charges : Rs.55000 Miscellaneous items : Rs. 1500

• Total : Rs.80000

20% Over Head charges : Rs.16000

Course Fee per batch : Rs.96000

3. ORIENTATION TRAINING IN DAIRY FARMING

Duration: 5 days

Dates : October 2009, November 2009

Venue: U.L.F, Mannuthy
No. of Batch: 2

Trainees : Self Help Group Members

No. of Trainees/batch :

Course Director : Dr. V. Prasad, Professor & Head, U.L.F,

Mannuthy

Syllabus

Theory:-

Selection of a good Dairy animal-Their housing & management-Summer management of dairy cattle-Importance of Artificial Insemination-Scientific feeding methods-Importance of fodder cultivation-Hygienic milk production-Common diseases affecting cattle-control measures-Value addition of milk-Marketing of products-Role of banking institutions in entrepreneurship development-Maintenance of accounts & registers.

Practical:-

Familiarize with crossbred cattle suitable to Kerala-Scientific way of housing, feeding & breeding-Practices in routine farm activities-Keeping hygiene in cattle shed, Different methods of milking-Introducing milking machine-Rearing of male calves-Utilization of farm yard manure-Wormy composting-Biogas plant-Preparation of various value added dairy products

Practical utility

In this Training Programme Self Help Group members will be educated about scientific methods of Dairy farming. They will be trained in scientific housing, feeding breeding & manage mental practices. Various diseases affecting cattle & their preventive measures are also deal with This knowledge will help them to minimize losses associated with under managed health, nutrition, reproduction & disease condition. By attending routine farm activities of U.L.F, they can acquire practical knowledge also. This training will provide sufficient knowledge & skill to the trainees to adopt Dairy Farming as a profitable self employment venture.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture : Rs. 2000

@ Rs.250/- per 2hour practical : Rs. 2500

Teaching aids & Stationery : Rs. 3000

POL charges : Rs.Nil

Other Items

1. Refreshment charges : Rs. 1000

2. Miscellaneous items : Rs. 2000

Total : Rs.10500

20% Over Head charges : Rs. 2100

Course Fee Per Batch : Rs.12600

4. CLEAN MILK PRODUCTION & QUALITY ASSESSMENT OF MILK

Duration 4 days August 2009, September 2009 Dates

Dairy science Department, CV & AS, Venue:

Mannuthy

No. of Batch: 2

Trainees: **Employees of Dairy co-operative societies**

: Rs. 1000

engaged in milk testing

No. of Trainees/batch: 10

Course Director: Dr.K.Radha, Assistant Professor,

Department of Dairy Science

Syllabus

Theory:-

Composition of milk-PFA standards for milk-Major milk components-Factors affecting compositions of milk-Milk & public health-Clean milk production-Source of contamination-Practice of raw milk handling-Microbiology of milk-Mastitic milk-BIS specifications for milk-Rapid platform tests for milk-Adulterants, neutralizers & preservatives of milk-Cleaning & sanitization of Dairy Equipments

Practical:-

Sampling of milk-Important quality control tests adopted at milk reception site-Determination of specific gravity of milk-Estimation of flat % in milk-Estimation of total solids & SNF-Estimation of chloride content in milk-Detection of mastitis-Detection of adulterants, neutralizers & preservatives in milk-Judging & Grading of milk.

Practical utility

The training programme will impart awareness among the trainees, the optimal practices for improving the quality of milk 7 various Quality control tests used in Dairy industry. Methods of estimation of various quality parameters of milk & milk products by legally approved methods are covered in the training programme. The trainees will be trained in estimating the major milk components and detection of adulterants, preservatives & neutralizers in milk. The training programme will create awareness among them about the importance of clean milk production, so that they can educate farmers how to improve the milking procedures at farm levels & they can adopt clean procedures while collecting milk at society. More over they can assess the quality of milk received in a more accurate way.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture : Rs. 1500

@ Rs.250/- per 2hour practical : Rs. 3000

 Teaching aids & Stationery POL charges Nil : Rs.

Other items

: Rs. 1000 Chemicals/Glassware

500 Refreshment charges : Rs. 3. Miscellaneous items : Rs. 2000

 Total : Rs. 9000

 20% Over Head charges : Rs. 1800

 Course Fee per batch : Rs.10800

5. QUALITY ASSURANCE OF MILK

Duration: 4 days

Dates : May 2009, June 2009

Venue: Dairy science Department, CV & AS,

Mannuthy

No. of Batch : 2

Trainees: Dairy farm Instructors

No. of Trainees/batch : 10

Course Director: Dr.R.Geetha, Assistant Professor
Department of Dairy Science

Syllabus

Theory:-

Composition of milk-PFA standards for milk-Major milk components-Factors affecting composition of milk-Hygienic milk production-Microbiology of milk-Diseases transmissible through milk-Safeguarding milk supply-Chemical & microbiological aspects of mastitic milk-BTS specifications for milk-Rapid platform tests for milk-Adulterants, neutralizers & preservatives of milk-Antibiotic residues, pesticide residues & heavy metals in milk-Detecting the efficiency of pasteurization of milk-Packaging of milk-Judging & Grading of milk-Importance of cleaning & sanitization of Dairy Equipments.

Practical:-

Sampling of Milk-Determination of specific gravity of milk-Estimation of fat % in milk-Estimation of total solids & SNF-Estimation of protein & lactose-Rapid platform tests for milk-Estimation of chloride content in milk—Detection of mastitis-Detection of adulterants, neutralizers & preservatives in mill-Detection of efficiency of pasteurization- Microbiological analysis of milk-SPC, DMC, Coliform count.

· Practical utility

The training programme will impart awareness among the trainees about various Quality control tests used in Dairy industry. Methods of estimation of various quality parameters of milk & milk products by legally approved methods are covered in the training programme. The trainees will be trained in estimating the major milk components and detection of adulterants, preservatives & neutralizers in milk. Onfarm milk safety & best manage mental practice for hygienic milk production is also dealt with. The training programme will create awareness among them about the importance of clean milk production, so that they can assure the chemical and microbiological quality of milk supplied at co-operative societies in a more effective way

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture : Rs. 1500

@ Rs.250/- per 2hour practical : Rs. 2000

• Teaching aids & Stationery : Rs. 3000

• POL charges : Rs. Nil

Other items

1. Chemicals/Glassware : Rs. 3000

2. Refreshment charges : Rs. 1000

3. Miscellaneous items : Rs. 2000

• Total : Rs.12500

20% Over Head charges : Rs. 2500

• Course Fee per batch : Rs.15000

6. TRAINING ON PREPARATION OF VALUE ADDED PRODUCTS FROM MEAT

Duration: 4 week days

Dates :October 2009, December 2009, February 2010

Venue : Dept. of Livestock Products Technology,

COVAS, Pookot

No. of Batch : 3

Trainees: Members of Self-help group/unemployed

youth/entrepreneurs

No. of Trainees/batch : 10 ladies from self help group

Course Director : Dr. C.T. Sathian, Associate Professor,

Dept. of Livestock Products Technology,

COVAS, Pookot

Syllabus

Hygienic slaughter and dressing of chicken – value addition in meat sector – Quality assurance – Preparation of Cutlet, meat rolls, pickle, burger, chicken tandoori, soup etc – Marketing of meat products – Design of food kiosk/stalls

Practical utility

There is good demand for value added meat products especially in urban areas and tourist locations. This training will help beneficiaries especially ladies to prepare such products hygienically and market them locally with proper standardization.

Expenditure

SI. No.	Items of Expenditure	Amount
1.	Meat Purchase	1500
2.	Consumable & Fuel	1500
3.	Course Material/Hand out	2000
4.	Food & Refreshment	4000
5.	Accommodation	2000
6.	Teaching Aids/Equipments	3000
7.	Honorarium	4750
8.	Propulsion Charges	2000
9.	Institutional Charges @ 20%	4150
	Grand Total	24900

TRAINING ON PREPARATION OF VALUE ADDED PRODUCTS FROM MILK 7.

4 week days Duration:

September 2009, November 2009, Dates:

January 2010

Dept. of Livestock Products Technology, Venue:

COVAS, Pookot

No. of Batch:

Members of Self-help group/

Trainees:

unemployed youth/entrepreneurs

No. of Trainees/batch:

Course Director:

Dr. C.T. Sathian, Associate Professor, Dept. of Livestock Products Technology,

COVAS, Pookot

Syllabus

Quality assurance of milk - value addition in dairy sector - Cream separation - Ghee making - Preparation of Paneer, dahi, Sip up, flavoured milk, Gulab jamun, Carrot halwa & channa podo etc.

Practical utility

Present crisis of dairy sector in Kerala is mainly contributed by low procurement price of milk along with hike in the prise of cattle feed and other inputs. This makes many dairy farmers to quit this enterprise. To improve the return value addition on milk is a must. This training programme makes entrepreneurs self sufficient in preparation and marketing of value added dairy products.

Expenditure

SI. No.	Items of Expenditure	Amount	
1.	Milk Purchase	1000	
2.	Consumable & Fuel	2000	
3.	Course Material/Hand out	2000	
4.	Food & Refreshment	4000	
5.	Accommodation	2000	
6.	Teaching Aids/Equipments	3000_	
7.	Honorari um	4750	
8.	8. Propulsion Charges		
9.	Institutional Charges @ 20%	4150	
,	Grand Total	24900	

8. REGULATIONS AND REQUIREMENTS IN THE TRADE OF FOOD OF ANIMAL **ORGIN**

Duration: 3 Days

Dates: August & October

Meat Technology Unit, Mannuthy Venue : No. of Batch:

Officers of State Animal Husbandry Trainees:

Department. No. of Trainees/batch:

Course Director: Dr.P.Kuttinarayanan, Professor & Head

Syllabus

Rules, regulations, various acts relating to food production especially wholesome meat products. Orders-MFPO, MMPO, Code of practices, organization and agencies, Domestic and foreign trade.

Practical utility

The Veterinarians play an important role in the wholesome meat production. As such there is no agency to impart training in statutory and non statutory requirements in the trade of food of animal origin other than Kerala Agricultural University, where both theoretical and practical know-how can be imparted. Trained man power can definitely act as master trainees in future in this aspect.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour practical : Rs. 3750

Teaching aids & Stationery : Rs. 6250

POL charges : Rs. Nil

Other items : Rs. Nil

: Rs.10000 Total

20% Over Head charges : Rs. 2000

Course Fee per batch : Rs.12000

9. DAIRY CATTLE MANAGEMENT

Duration: 3 days

Dates: 3 days in June 09

Venue: Dept.of Animal Husbandry, COA, Vellayani

No. of Batch : 2

Trainees : Dairy Farmers

No. of Trainees/batch : 1

Course Director : Dr.R.Vijayan. Prof &Head Dept. of Animal Husbandry

CoA, Vellayani

Syllabus

Theory

- 1. Problems and prospects of diary sector in Kerala.
- 2. Calf and Heifer management.
- 3. Feeding and Diary Cattle.
- 4. Disease of Diary Cattle.
- 5. First aid and ethno veterinary practices.
- 6. Reproduction in dairy cattle
- 7. Insemination and heat Detection in diary cattle.
- 8. Clean milk production and detection of adulteration of milk.

Practical

- 1. Milk of animals-Hand milking and Machine milking
- 2. Dehorning, Ageing, California mastitis Test (CMT), Routine farm practices including feeding, breeding, first –aid etc.

Practical utility

Progressive farmers involved in diary farming from the Pathanamthitta District (ATMA sponsored training) are the intended beneficiary of this training programme. This training will enable the participants to acquire practical knowledge in profitable diary cattle management and capacity building to implement current development in the diary sector in their day to day farming practice.

Expenditure

- Honorarium @ not exceeding
 - @ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour practical : Rs.5000

Teaching aids & Stationery : Rs.2000

POL charges : Rs. Nil

• Other items (Un foreseen) : Rs.1000

• Total ; Rs.8000

20% Over Head charges : Rs.1600

Course Fee per batch : Rs.9600

Vocational

1. PROFITABLE PIG REARING

Duration: 5 days

Dates : 2009-2010

Venue : Centre for Pig Production and Research

No. of Batch : 4/year

Trainees: Farmers/self help group/unemployed youth/

women

No. of Trainees/batch : 12/batch

Course Director : Dr. Syam Mohan, Associate Professor

CPPR, Mannuthy

Syllabus

Introduction – Pig farming, status and prospects – Housing of pigs, location, fundamentals of housing, construction of eco-friendly low cost pig pens – Breeding, common breeds and characters, selection of breeding stock, matting, economic ally important characters and culling-Care and management of pregnant females, new born pre and post weaning piglets-Feeding of pigs, preparation of concentrate feed, by product utilization, swill feeding, Ration for different age group, marketing-Common problems in pig farming-Financial aspectswaste management.

Practical utility

Create awareness among farmers about recent scientific advances in pig rearing. Help to enhance the socio—economic status of farmers and unemployed youth. To increase the profit margin by adopting integrated organic farming practices and waste utilization.

Expenditure

· Honorarium @ not exceeding

Rs.250/- per 1 hour lecture

Rs.250/- for 2hours of practical : Rs. 5000

Teaching Aid &Stationary

@ Rs.200 per head (12nos) : Rs. 2400

POL charges : Rs. 600

Other items (Field Visit) : Rs. 1500

• Total : Rs. 9500

20% Over Head charges : Rs. 1900

Course fee per batch : Rs.11400

2. ON-FARM PROCESSING OF FRUITS-PINEAPPLE, JACK AND MANGO

Duration: 3 days

Dates : January-May

Venue: Pineapple Research Centre, Vellanikkara
No. of Batch: 10

Trainees: Farm women/unemployed youth/

SHG groups/ Entrepreneurs

No. of Trainees/batch : 20

Course Director: Meagle Joseph, Asst.Professor (Seln.Gr.)
Pineapple Research Centre, Vellanikkara

Syllabus

Prospects of fruit preservation-Tips on cultivation, harvesting and post-harvest handling of fruits for processing-Primary processing of Pineapple, jack and Mango-Culinary products of unripened fruits of pineapple, jack and mango-Preparation of beverages-Jam, Squash, crush, preserve-Preparation of Fruit bar, Halwa-Pickles, dehydrated products, sauce, Ketchup-Utilization of discarded fruit waste.

Practical utility

Going in line with the food security programme of the state several agencies are trying to empower women by giving guidance in entrepreneurship development through training programmes. Know how on reducing farm waste and increasing the consumption of home-made toxic free food items is the need of the hour. This training envisages providing basic information in on-farm processing of common fruits grown in Kerala homesteads.

Expenditure

Honorarium @ not exceeding

Rs.250/- per 1hour lecture : Rs. 2250 Rs.250/- for 2hours of practical : Rs. 750

Teaching Aids (Skilled Assistance)and

Stationary : Rs. 1200 POL charges, if any : Rs. 200

Other items (Food for 3WD @ 60/- per day) : Rs. 3600

• Total : Rs. 8000

20% Over Head charges : Rs. 2000Course Fee per batch : Rs.10000

Course Fee per participant : Rs. 500

3. MUSHROOM SPAWN PRODUCTION PROGRAMME

Duration: 2 days

Dates : June, August, October-2009, January-2010
Venue : Regional Agricultural Research Station,

Kumarakom

No. of Batch :

Trainees: Unemployed youth and women

No. of Trainees/batch : 10

Course Director: Dr.A.V.Mathew, Professor (Plant Pathology)

Syllabus |

First day

10 am - 1 pm - Theory - setting up of a small-scale laboratory, media preparation, sterilization, spawn production etc.

2 am - 4 pm - Practical on media preparation and sterilization

4 pm -5 pm - Theory - Tissue culture techniques

Second day

10 am to 12 Noon - Tissue culture and serial transfer methods (practical)

12 - 1 pm - Commercial spawn production - Theory

2 pm - 4 pm - Mother spawn production and serial transfer methods (practical)

4 pm-6 pm-Question-answers and concluding session.

Practical utility

More and more people are interested in mushroom farming nowadays. It is a viable proposition for unemployed youth and women. But the major lacuna in Mushroom farming is the non – availability of quality spawns at the right time. Mushroom farming will be successful only if the grower himself produces the spawn for which a scientific and systematic training is essential. The scientists in the plant Pathology Department, Regional Agriculture Research Station, Kumarakom have standardized a low cost spawn production technology for ordinary growers.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture
@ Rs.250/- per 2hour practical
Teaching aids & Stationery
POL charges
: Rs. 1500
: Rs. 750
: Rs. 500
: Rs. 1000

Other items (to be specified)

Lab chemicals, PP cover etc) : Rs. 1000

• Total : Rs. 4750

20% Over Head charges : Rs. 1250Course Fee Per Batch : Rs. 5000

Course Fee per participant : Rs. 500

4. HANDS ON TRAINING IN THE PREPARATION OF MILK PRODUCTS

Duration: 2 days

Dates : July-2009 (tentative)

Venue : KAU Dairy Plant, Mannuthy

No. of Batch : 1
Trainees : Prospective entrepreneurs and candidates

rrainees : Prospective entrepreneurs and candidates

deputed by voluntary organizations/NGO" s

Course Director : Dr.P.I.Geevarghese, Professor and Head

Dairy plant

Syllabus

Introduction-importance of milk and milk products-cleaning and sanitations

No. of Trainees/batch

Familiarization of various milk testing techniques and quality control of milk and milk products

Familiarization to various milk processing operations

Preparation of various milk products such as khoa, curd, lassi, sambharam, paneer, ice cream, rassogolla, gulab jamun, yoghurt, whey drink etc

Selection of equipments for mini milk products manufacturing units-preparation of project report

Practical utility

To familiarize the processing of milk and give training in the preparation of various milk products. This will enable them to start mini milk products manufacturing units.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour practical : Rs.2000

Teaching aids & Stationery : Rs.1500

• POL charges if any : Rs. Nil

• Other items : Rs.1100

• Total : Rs.4600

• 20% Over Head charges : Rs. 920

• Course Fee per batch : Rs.5520

Course Fee Per Trainee : Rs. 220

5. TRAINING ON ENTREPRENEURSHIP DEVELOPMENT IN DAIRY PROCESSING INDUSTRY

Duration: 3 days

Dates: May2009

Venue: KAU Dairy Plant, Mannuthy No. of Batch: 1

. Trainees : Prospective entrepreneurs

No. of Trainees/batch : 10

Course Director : Dr.P.Sudheer Babu, Assistant Professor,

KAU Dairy plant

Syllabus

Market Milk Industry in India – distinctive-features

Reception and processing of milk. Practices followed such as HTST pasteurization, UHT processing etc. Indigenous milk products product description an methods of manufacture Ice creams and Frozen Deserts – Technological aspects of ice-cream manufacture

Other major dairy products – cheese, condensed milk, dried milk etc. – Manufacturing techniques Project preparation – Scheduling of information for the installation of a dairy plant Marketing Management – Demand estimation and analysis – forecasting of market potentials.

Practical utility

To provide adequate technical know how to the new entrepreneurs in the field of dairy processing industry. Basic details regarding various technical aspects of fluid milk processing and milk product manufacturing will be included in the programme. Legal and commercial aspects of dairy industry will be dealt with. These exposures will help new entrepreneurs to, set up dairy processing facilities in the rural areas of the state

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour practical : Rs. 3000

Teaching aids & Stationery : Rs. 1000
POL charges if any : Rs. Nil

• Other items : Rs. 500

• Total : Rs. 4500

20% Over Head charges : Rs. 900

• Course fee per batch : Rs. 5400

TRAINING ON OPERATION AND MAINTENANCE OF DAIRY PROCESS 6. **EQUIPMENTS**

3 days Duration:

April 2009 Dates:

KAU Dairy Plant, Mannuthy Venue: No. of Batch:

Graduates of science or diploma holders in Trainees:

Engineering

10 No. of Trainees/batch:

P.Sudheer Babu, Assistant Professor, KAU Course Director :

Dairy Plant

Syllabus

Introduction-Importance of milk and milk products-HTST pasteurization-Milk pasteurization- Milk packing and storage equipments - Steam production and refrigeration section in a dairy plant

Quality control

"Learn while you work"

Milk processing operations such as Pasteurization, Cream separation, Homogenization etc and equipments related to this

Preparation of various milk products such as khoa, curd, lassi, sambharam, paneer, ice cream, rassogolla, gulabjamun, srikhand etc

Packaging of milk and milk products.

Practical utility

To familiarize with the processing and packing of milk and to give practical training in the preparation of various milk products. To familiarize with the operation and maintenance of various dairy process equipments

Expenditure .

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

: Rs. 2000 @ Rs.250/- per 2hour practical

Teaching aids & Stationery : Rs. 1500

: Rs. Nil POL charges if any

500 : Rs. Other items

: Rs. 4000 Total

: Rs. 800 20% Over Head charges

: Rs. 4800 Course Fee per batch

7. TRAINING ON THE PREPARATION OF BIOFORMULATIONS

Duration: 2 days

Dates: October-December 2009

Venue: Farming Systems Research Station,

Sadanandapuram

No. of Batch :

Trainees: Farmers/Rural Youth

No. of Trainees/batch : 10

Course Director: Dr. B. Aparna,

Assistant Professor (SS & Ag. chem.)

Syllabus

Theory:-

Introduction to different bio formulations-Neem oil garlic emulsion, Neem Kernal suspension-Tobacco decoction-Kerosene emulsion-Kiriyath emulsion-Bordeaux mixture-Bordeaux paste-Pseudomonas-Trichoderma-Jaivamirtham-insecticidal properties-specific pests that are controlled-ITK-sprayers

Practicals:-

Methods of preparating Neem oil garlic emulsion, Neem Kernal suspension-Tobacco decoction-Kerosene emulsion-Kiriyath emulsion-Bordeaux mixture-Bordeaux paste-Pseudomonas-Trichoderma-Jaivamirtham-Methods of spraying the bioformulations.

Practical utility

Excessive use of chemicals in the form of insecticides and fungicides pose a serious threat to the environment because of their persistence in nature leading to soil, water and ecosystems degeneration. So there is a dire need to shift to organic mode of pest and disease control like the exploitation of botanicals and organics that have insecticidal and fungicidal property. These bioformulations are not only cost effective but also serve as a means of ecofriendly agriculture. Moreover the method of preparing the bioformulations are user friendly and are safer. These products not only controls the pests and disease but also promote the growth of the plant through the hormones, growth promoters that are inherently present. Resistance and resurgence to these formulations will be lesser compared to the chemicals. The training of this nature will help to develop the technical knowledge of the farmers and will be acquainted with the techniques of preparing the bioformulations.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 500

Teaching aids & Stationery

(chemical & biologicals) : Rs.1500

POL charges, if any : Rs. Nil

• Other items : Rs. Nil

• Total : Rs.2000

20% Over Head charges : Rs. 200

Course fee per batch : Rs.2200

8. TRAINING ON OPERATION OF COCONUT TREE CLIMBING DEVICE

Duration: 1 day
Dates: April- May 2009

Venue: Farming Systems Research Station,

Sadanandapuram

No. of Batch:

Trainees: Unemployed Youth

No. of Trainees/batch : 10

Course Director : Dr. Bini Sam, Associate Professor

(Farm Machinery)

Syllabus

Introduction-Different climbing devices-Features of new coconut tree climbing device-advantages and drawbacks; Components of climbing device, Safe operation of climbing device, Repair and Maintenance of climbing device.

Practical

Identification of different components of climbing device, Dismantling and mounting of climbing device to the coconut tree, training on use of climbing device for harvesting nuts.

Practical utility

For harvesting the nuts, removing the dried palms, and for spraying and applying insecticides on the crown, skilled labourers have to climb manually up the tree. Such a process looks easy, in really it is a laborious and dangerous task. It requires skill to climb a coconut tree. Skilled coconut tree climbers have become scarce and farmers are finding it difficult to harvest the nuts. The zonal Research Centre of Tamil Nadu Agricultural University (TNAU), Coimbatore has developed a new coconut climber which ensures cent per cent safety to the tree climber. The "seat type" climber complete with a rexene sheet that acts as a perch for the user consist of two parallel rectangular iron frames separated by an adjustable belt that assists in manoeuvring the frames while ascending or descending a tree. The climber is manoeuvred up and down using feet locked into the lower frame. The frames too can be adjusted depending on the girth of the coconut palm and are fastened to the tree using rubber bushes. It is quite convenient and with practice a farmer can climb a medium size tree in less than three minutes. Hence it is proposed to give training on operation and maintenance of coconut tree climber for farmers.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. Nil

• Teaching aids & Stationery : Rs. 150

POL charges, if any : Rs. Nil

• Other items : Rs. 250

• Total : Rs. 400

• 20% Over Head charges : 'Rs. 80

Course fee per batch : Rs. 480

Course fee per participant : Rs. 500

12 OPERATION AND MAINTENANCE OF POWER TILLERS

Course Director :

Duration: 3 days
Dates: August 2009

Venue: Farming Systems Research Station,

Sadanandapuram

No. of Batch :

Trainees: Unemployed Youth

No. of Trainees/batch : 10

Dr. Bini Sam, Associate Professor (Farm Machinery)

Syllabus

Theory:-

Introduction-classification of power tillers; Features of power tillers-advantages and drawbacks; Construction of power tillers-Engine, power transmission systems-types of power transmission systems-simple power transmission systems and compound power transmission system, transmission of power to rotary tiller; Clutchtypes of clutches; Brake and steering system, Control mechanism, Types of levers and their functions-main clutch lever, main speed change lever, blade speed change lever, auxiliary handle, decompression lever; Chassis or frame; Wheels-drive wheel and tail wheel; Power outlets and Balancing; Rotavator-working of rotavator, Mounting of rotary tines-centre drive type and side drive type; Important points to be noted before starting the power tiller, while starting, after starting and while the tiller is working. Introduction to different matching equipment to power tiller; Repair and maintenance of power tillers; Indigenous production of power tillers.

Practical :-

Identification of different components of power tillers, Dismantling and mounting of rotary tynes, starting of power tiller, training on field operation using rotavator, training on hitching of power tiller to trailer, training on transportation of power tiller with trailer attachment.

Practical Utility

Power tiller is a multi purpose hand tractor designed primarily for rotary tilling and other farm operations. Now it has become a versatile power source in small and medium size farms in India owing to the development of a variety matching equipment. Popularity of power tillers in Kerala during last few years has improved a great deal due to subsidy on power tillers by Govt. However lack of technical knowledge in operation and maintenance of power tiller is one of the major constraints faced by the farmers for using a power tiller. Hence it is proposed to give training on operation and maintenance of power tillers for farmers.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. Nil

Teaching aids & Stationery : Rs. 100POL charges, if any : Rs. Nil

Other items

(Cost of Diesel, Lubricating oil etc) : Rs. 340 (Power tiller operator charges) : Rs. 600

• Total : Rs.1040

• 20% Over Head charges : Rs. 208

Course fee per batch : Rs.1248

10. NURSERY MANAGEMENT AND PLANT PROPAGATION TECHNIQUES

Duration: 20 days

Dates : May, June, July, August, September 2009

Venue: Farming Systems Research Station
Sadanandapuram

No. of Batch :

Trainees : Unemployed Youth

No. of Trainees/batch :

Course Director : Dr. Aparna B,

Assistant Professor (SS, Ag. chem.)

Syllabus

Introduction to Nursery Management-Scope and prospects of an Ag. Nursery as an enterprise, Essential requirements-Visit to nursery and identification of plants-potting Mixture-Common potting mixtures and their preparation-Techniques of vegetative propagation-Cutting, Layering, Budding-Filling polythene covers and planting cuttings (Ornamentals, pepper etc)-Common fertilizers and manure-Application techniques-Soil test based fertilizer application-Techniques of vegetative propagation-Wedge grafting/V grafting in cashew-Inarching/ Side grafting-Different types of organic fertilizers-ordinary compost, NADEP compost, vermicompost-Preparation of vermicompost-common pests and diseases infesting nursery plants-Care and management-Preparation of biopesticides-Shade nets and special structures for nursery and ornamental gardening-Orchids and anthurium-multiplication and planting-Common farm implements & machinery-sprayers-operation and maintenance-Banana suckers-selection of sucker-collection, preparation etc. Raising a coconut nursery-Selection of seeds nuts-Sowing-Care and maintenance-Nursery of forest plants-Concept & Importance of agroforestry in integrated farming-Biofertilisers-Enrichment of organic manures-Preparation of enriched compost-Vegetable seeds-Familiarization with important vegetables, KAU varieties, seeds production techniques.

Practical utility

The most important mandate of the research station is Homestead farming with other activities such as production and sales of vegetable seeds and planting materials, nursery management, and farm advisory services as auxiliary mandates. The station has a good progeny orchard with a collection of more than 20 varieties of mango, two popular varieties of jack, sapota, guava and minor fruits. It also maintains a scion bank of cashew of all the improved varieties

At present the station is severely constrained in its activities by the shortage of labour force. Plant propagation works used to be carried out by persons skilled for the same from outside the university by inviting quotations. However in recent years no person has given quotations for the work. This reflects upon the shortage of skilled man power in the locality with respect to plant propagations, seed production and other related works. This creates considerable difficulties to the station in achieving the set target with regard to seed and seeding production. Under the above circumstances proposals for conducting vocational training on "Nursery Management and Plant Propagation Techniques" is proposed with the objectives of training the local youth in plant propagation, nursery management, vegetable seed production techniques etc. The trained persons can start self employment ventures in the respective fields. Their services can also be used by the station as well as the sister concerns in and around Kottarakkara. This may help to generate more income to the farm through the sales of quality seeds and propagates.

Expenditure:

Sl. No.	Particul a r	Expenditure/Batch (Rs)	Gross Expenditure	
1.	Stipend to trainees @ Rs.75/day	7,500/-	22,500/-	
	Total	7,500/-	22,500/-	

11. COMPUTATIONAL METHODS IN SEQUENCE ANALYSIS

Duration : 1 Week

Dates : 13 th – 18 th July 2009

Venue: Bioinformatics Centre, IT-BT Complex,

KAU, Vellanikkara, Thrissur

No. of Batch: One/ As per demand

Trainees: Students/Research Fellows pursuing/completed

Post graduation in Bioscience.

No. of Trainees/batch : 5

Course Director : Dr.R.Keshavachandran,

Professor & Coordinator

Syllabus

Introduction to Bioinformatics, Biological Databases: sequence, structure and specialized database, data retrieval, data formats, sequence submission methods, Bioinformatics tools for DNA & protein sequence analysis: sequence alignment techniques, pairwise & multiple sequence comparison, proteomics, pattern searching, motif & domain recognition, phylogenetic analysis, genome annotations: concepts, gene prediction and applications of Bioinformatics.

Practical utility

This training is being organized for Post graduate in Biosciences discipline to get familiarized with Biological Databases and to educate participants regarding the basics of Bioinformatics tools and their applications in data analysis of Gene Proteins.

Expenditure:

A fee of Rs.5000/- per trainee will be collected. Overhead charges will be deducted from the total course fee at the rate of 20% of actual expenditure. The remaining will be utilized for conducting the training, to meet expenditure with regards to honorarium at University approved rates, procurement of teaching aids, Stationary, Lab equipments, Class room arrangements etc. Sanction may be accorded to engage Teaching Assistants if the situation so warrants at the rate of Rs.170/- per day.

12. STRUCTURAL BIOINFORMATICS EXPLORING MACROMOLECULAR STRUCTURES

Duration: 1 Week

Dates : 10 th – 14 th August 2009

Venue : Bioinformatics Centre, IT-BT Complex,

KAU, Vellanikkara, Thrissur

No. of Batch : One/ As per demand

Trainees: Students/Research Fellows pursuing/

completed Post graduation in Bioscience.

No. of Trainees/batch : 5

Course Director : Dr.R.Keshavachandran,

Professor & Coordinator

Syllabus

Defining Bioinformatics and Structural Bioinformatics, introduction to macromolecular structures, database searching, secondary structure calculations, comparative modelling: concepts, applications, related software, structure alignment methods, molecular visualization software, molecular docking and related software packages.

Practical Utility

This training is being organized for Post graduate in Biosciences discipline to get exposed to various computational methods to analyze and predict the conformations of biological macromolecules and to study relationship between macromolecular structure and functions.

Expenditure:

A fee of Rs.5000/- per trainee will be collected. Overhead charges will be deducted from the total course fee at the rate of 20% of actual expenditure. The remaining will be utilized for conducting the training, to meet expenditure with regards to honorarium at University approved rates, procurement of teaching aids, Stationary, Lab equipments, Class room arrangements etc. Sanction may be accorded to engage Teaching Assistants if the situation so warrants at the rate of Rs.170/- per day.

13. BIOINFORMATICS IN GENOME AND PROTEOME ANALYSIS

Duration: 1 Month

Dates : September 2009

Venue: Bioinformatics Centre, IT-BT Complex,

KAU, Vellanikkara, Thrissur

No. of Batch : One/ As per demand
Trainees : Students/Research Fellows pursuing/

completed Post graduation in Bioscience.

No. of Trainees/batch : 3

Course Director : Dr.R.Keshavachandran,

Professor & Coordinator

Syllabus

Introduction to Computational Molecular Biology, Origin of biological data: data formats, properties and relevance of biological database, database ID & accessions, sequence alignment & database searching: Pairwise sequence comparisons: relevance of pair wise sequence comparisons, concept of identity and similarity, substitution matrices, search tools, multiple sequence comparison, evolutionary analysis. Protein sequence analysis & predictions: motifs: protein families, structure and semantic of biological motifs, motif data bases and search tools, pattern writing. Genome annotations: concepts and gene prediction. Structured data storage and retrieval: macro molecular structures, molecular visualizations, protein structure prediction and folding, docking studies, Application and scope of Bioinformatics.

Practical utility

This training is being organized for Post graduates in Biosciences discipline to introduce the key concepts of bioinformatics, creates awareness regarding biological database, data storage and bioinformatics approaches which are being used to analysis DNA, and protein sequences. The course is intended to cover all major concepts of bioinformatics through guided practical training.

Expenditure:

A fee of Rs.5000/- per trainee will be collected. Overhead charges will be deducted from the total course fee at the rate of 20% of actual expenditure. The remaining will be utilized for conducting the training, to meet expenditure with regards to honorarium at University approved rates, procurement of teaching aids, Stationary, Lab equipments, Class room arrangements etc. Sanction may be accorded to engage Teaching Assistants if the situation so warrants at the rate of Rs.170/- per day.

14. TECHNIQUES IN MICROBIOLOGY

Duration: 2 Weeks

Dates : 18 th May 09 to 30 th May 2009

Venue : Dept. of Plant Pathology,

College of Horticulture, Vellanikkara,

Thrissur

No. of Batch : One

Trainees: Under Graduate Students

No. of Trainees/batch : Ten (minimum six)

Course Director : Dr. K. Surendra Gopal,

Associate Professor

Syllabus

Laboratory rules- Familiarization of lab equipments and glass wares-Microscopy- types and use, Micrometry, Sterilization – Physical and chemical methods, Preparation of culture media, Isolation and Purification of important micro organisms with emphasis on beneficial micro organisms in agriculture, Enumeration of micro organisms, Staining methods, Biochemical test for micro organisms-Amylase test, Starch hydrolysis, Carbohydrate fermentation test, Hydrogen sulphide test, etc.

Practical utility

Many colleges in Kerala are offering U.G/P.G courses in Microbiology but the students are not getting enough hands —on training in basic techniques in Microbiology particularly at under graduate levels. Some students have requested to expose them to basic techniques in Microbiology to gain practical experience. The Department is equipped with all infrastructure and human resource facilities to impart such training. Through this training, it is intended to impart hands on training on basic techniques involved in Microbiology research.

Expenditure:

· Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 7500

• Teaching aids & Stationery : Rs. 3000

POL charges, if any : Rs. Nil
 Other items (Media, chemicals, etc) : Rs.29500

• Total : Rs.

• 20% Over Head charges : Rs.10000

• Course Fee Per Batch : Rs.39500

15. TRAINING PROGRAMME ON MUSHROOM AND SPAWN PRODUCTION

Duration: 2 Days

Dates: October/November 2009
Venue: Dept. of Plant Pathology, College of

Horticulture, Vellanikkara, Thrissur

No. of Batch : Five

Trainees: Unemployed youth/women/farmers

No. of Trainees/batch : 20

Course Director : Dr. T. Sheela Paul, Professor, Dept. of Plant Pathology.

Syllabus

Isolation and culturing of mushroom spawn production, cultivation of oyster mushroom and milky mushroom, preservation and storage of mushroom, economics of mushroom cultivation

Practical utility

To provide practical know how on mushroom spawn production and different aspects of mushroom cultivation.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture -

@ Rs.250/- per 2hour of practical : Rs.2250

Teaching aids & Stationery : Rs.1600

POL charges, if any : Rs. 150

• Other items : Rs.1000

• Total : Rs.5000

20% Over Head charges : Rs.1000

• Course Fee Per Batch : Rs.6000

16. PLANT PROTECTION FOR HOMESTEAD CROPS

Duration: 3 Days

Dates : September/October 2009

Venue : Dept. of Plant Pathology, College of

Agriculture, Vellayani

No. of Batch : One

Trainees: Unemployed youth/women

No. of Trainees/batch : 30

Course Director : Dr.V.K.Girija, Professor

Syllabus

Theory

1. Introduction-general information on pests/ pathogens of homestead crops

2. General symptoms

Major symptoms-mode of spread and management of diseases of coconut

- 3. Symptoms, mode of spread and survival management of pest and disease of vegetable crops
- 4. Symptoms-mode of spread and management of ornamental crops symptoms-mode of spread and survival of fruit crops
- 5. Common fungicides and their targets pathogens and methods of application
- 6. Bio control of plant disease
- 7. Indigenous practices for disease management
- 8. Solarization and its use in many disease management
- 9. Major pests and management strategies for homestead crops

Practical

- 1. Diagnosis of plant disease and observation of plant pathogens
- 2. Familiarization with fungicides
- 3. Preparation of Bordeaux mixture and cheshunt compound
- 4. Methods of preparation and application of fungicides
- 5. Solarization
- 6. Mass multiplication of Trichoderma and its use in plant disease control
- 7. Use of P.fluorescens in disease control
- 8. Bacterial diseases and detection of bacteria by ooze test
- 9. Viral disease and serological methods for detection of plant viruses
- 10. Preparation of biopesticides and neem based insecticides

Practical utility

Many of the disease can be managed if they are diagnosed / detected early and timely plant protection measures are adopted. The training is intended to create an awareness of the present disease / pest scenario in homestead crops to enable city dwellers to identify the problems and to know the methods for tacking them. Emphasis will be given to judicious and correct usage of plant protection chemical and to non-chemical/biological methods of management.

Expenditure

- Honorarium @ not exceeding
 - @ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs.3500

Teaching Aids & Stationary : Rs.4000

POL charges, if any : 'Rs. Nil

Other items (to be specified) : Rs. Nil

• Total : Rs.7500

20% Over Head charges : Rs.1500

• Course fee per batch : Rs.9000

17. SOIL TESTING AND FERTILIZER RECOMMENDATION

Duration: 2 Days

Dates: October 2009

Venue : Dept. of Soil Science & Agrl. Chemistry,

College of Agriculture, Vellayani

No. of Batch : One Trainees : Farmers

Trainees : Farmers

No. of Trainees/batch : 20

Course Director : Dr. Sumam Susan Varghese, Professor & Dr. P. B. Usha, Professor

Syllabus

Need for soil sampling – Method of collecting soil samples – processing-labelling – packing – familiarization of soil samples information sheet- details on soil parameters to be tested – familiarization with soil test fertilizer recommendation report – reading of soil fertility map – time and method of fertilizer application – integrated nutrient management system – organic farming – vermicomposting – fertilizer and manure application for major crops of Kerala.

Practical utility

Based on soil test values only, judicious application of fertilizers and manures can be done for different crops. Indiscriminate application of fertilizers and manures will result in low yield, low quality procedure and environmental pollution. So all farmers must be aware of soil testing. Collection of soil samples for soil testing should be done on scientific basics, hence to give an awareness on soil sampling and fertilizer application, the present training is being proposed.

Expenditure

• Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 1500

Teaching Aids & Stationary : Rs. 750POL charges, if any : Rs. Nil

• Other items (Refreshment) : Rs. 600

• Total : Rs. 2850

• 20% Over Head charges : Rs. 570

Course fee per batch : Rs. 3420

18. SOIL HEALTH MANAGEMENT

Duration: 2 Days

Dates : August 2009

Venue : College of Agriculture, Vellayani
No. of Batch : One

Trainees: Farmers 20

No. of Trainees/batch : 20
Course Director : Dr.C.R.Sudharmaidevi, Professor &

Dr.R.S. Shehana, Professor

Syllabus

Soil as a medium for plant growth – components of soil – soil texture and its importance – soil structure – different types of structures – importance of structure – physical, chemical and biological properties of soil – soil organic matter and its relation to soil health – composting vermicomposting – indicators soil health – biological activity – store house of nutrients – soil pH and its importance – liming availability of nutrients in soil – factors of nutrient availability – soil fertility – methods for improving soil fertility – soil conservation – mulching – moisture conservation – pesticide residues in soil bio pesticides – pollution problems – importance of soil testing – integrated nutrient management and its importance for sustaining productivity.

Practical Utility

Soil is a dynamic, living, non renewable resource whose condition is vital to both the production of food and fibre and to global balance and ecosystem function. Due to over exploitation as a result of population pressure, majority of this precious resource are in an advanced stage of degradation. If soil is impoverished, its productivity will be low and the farmer will remain poor and any plan of poverty alleviation without addressing the inherent and induced problems of soil related constraints will be in vain. Maintenance of soil quality or health becomes utmost importance at this juncture for sustaining productivity environmental quality and plant and animal health.

Expenditure

• Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 1000

Teaching Aids & Stationery : Rs. 600
 POL charges if any : Rs. Nil

POL charges, if any : Rs. Nil
 Other items (Refreshment) : Rs. 600

• Total : Rs. 2200

• 20% Over Head charges : Rs. 440

• Course fee per batch : Rs. 2640

TRAINING ON TECHNIQUES FOR PRODUCTION OF NUTRIENT ENRICHED RURAL COMPOST

Duration: 2 days

Dates : October 2009

Venue : Dept. of Soil Science & Agrl. Chemistry

College of Agriculture, Vellayani

No. of Batch : One

Trainees: Women/Unemployed youth/Farmers

No. of Trainees/batch : 20
Course Director : Dr.: Sumam George, Professor &

: Dr. Sumam George, Professor & Dr. K.C. Manorama Thampattil, Professor

Syllabus

Composting – Necessity and scope – different wastes – crop residues – animal wastes – house wastes – market wastes – street garbage – agro industrial wastes – their characterization and availability – different techniques – ordinary composting – vermin composting – coir pitch composting – reinforced composts – compost accelerators – bio activators – compost maturity – quality indices – standardization techniques – suitability to different soils and crops – establishment of commercial units – product marketing.

Practical utility

Waste generation and improper methods of its disposal are major concerns facing our society. These wastes include crop residues, animal street, market and agro industrial wastes. Composting has been the age old method in practice for abating these problems, serving the dual role of disposal and recycling. The training aims to impact skill to the trainees on the scientific techniques of composting for the rapid production of nutrient enriched, cost effective and environmentally friendly composts.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs.1000

Teaching Aids & Stationery : Rs. 600POL charges, if any : Rs. Nil

• Other items (Refreshment) : Rs. 600

• Total : Rs.2200

• 20% Over Head charges : Rs. 440

Course fee per batch : Rs.2640

20. SPAWN PRODUCTION AND CULTIVATION TECHNOLOGY OF TROPICAL MUSHROOM

Duration: 2 days

Dates: June, September, December 2009,

March 2010

Venue : College of Agriculture, Vellayani

No. of Batch :

Trainees: Unemployed youth/Farmers

No. of Trainees/batch : 30

Course Director : Dr.M.Suharban, Professor &

Head, Plant Pathology

Syllabus

Theory

- 1. Introduction to the world of Mushroom
- 2. Cultivation of Oyster Mushroom
- 3. Poisonous and edible Mushroom
- 4. Cultivation of Milky Mushroom
- 5. Pests and disease of Mushroom
- 6. Mushroom home design
- 7. Nutrition value of Mushroom

Practical utility .

Mushroom an protein rich food material. The cultivation of the same is gaining importance recently. Unemployed youth and farmers are to be familiarized with the spawn production and cultivation technology.

Expenditure

Honorarium @ not exceeding

@ Rs.250/- per 1hour of lecture

@ Rs.250/- per 2hour of practical : Rs. 3000Teaching Aids & Stationery : Rs. 4200

POL charges, if any : Rs. Nil

• Other items : Rs. Nil

• Total : Rs. 7200

• 20% Over Head charges : Rs. 1800

• Course Fee Per Batch : Rs. 9000

21. POULTRY FARMING

Duration: 3 days

Dates : Aug-2009, Sep-2009

Venue : Centre For Advanced Studies in Poultry

Science, Mannuthy

No. of Batch:

Trainees: Unemployed youth/Women/Farmers

No. of Trainees/batch : 15

Course Director : Dr. A. Jalaludeen, Director

Syllabus

Theory

Status of Poultry-sytems of rearing-Rural poultry production and its significance in Kerala. Feed formulation, construction of poultry houses, diseases and vaccination. Incubation and hatchery management—Management of chicks, growers, layers, breeders and broilers. Bio security measure in poultry farming.

Practical

- 1. Farm operations
- 2. Hatchery practices
- 3. Vaccination
- 4. Feed formulation tips.

Practical utility

Poultry farming is the only sector of agriculture which can be bring about a change in rural economy of farmers. Comprehensive knowledge about the management, housing, feeding and disease control is essential for efficient management of poultry farm. This training will impart new concepts of scientific management of Poultry. Emphasis will be given for backyard poultry faming.

Expenditure:

Honorarium @ not exceeding

Rs.250/- per 1hour lecture : Rs. 3000 Rs.250/- per 2hour of practical : Rs. 750 Teaching aids & Stationery : Rs. 1750 POL charges, if any : Rs. Nil Other items (Tea & Snacks) : Rs. 750 Total : Rs. 6250 20% Over Head charges : Rs. 1250 Course Fee Per Batch : Rs. 7500

22. QUAIL FARMING

Duration: 3 days

Dates : July-2009, Aug-2009

Venue : Centre For Advanced Studies in Poultry

Science, Mannuthy

No. of Batch :

Trainees: Unemployed Youth/Women/Farmers

No. of Trainees/batch : 15

Course Director : Dr. A. Jalaludeen, Director

Syllabus

Theory

- 1. Introduction to quail production
- 2. Breeding of quails
- 3. Incubation and hatchery management of quails
- 4. Management of growers, layers and breeder quails
- 5. Feeding of quails
- 6. Composition of quail eggs and meat
- 7. Processing of quails
- 8. Preparation of quail egg and meat pickle
- 9. Economics of quail production

Practical

- 1. Attending routine work of farm
- 2. Attending Hatch day operation
- 3. Quail Management

Practical Utility

Because of high production cost and unsteady market, the broiler farmer of Kerala are switched over to quail farming. The main attraction to the quail farming is less initial investment, more disease resistance so no need of routine vaccination, less feed requirement, more nutritive egg and meat, less floor space requirement. Since quails are reared under cage system of management. More birds can be reared in limited space. Unemployed youth/women can easily manage 500 quails without affecting their normal routine work.

Expenditure:

Honorarium @ not exceeding

@ Rs.250/- per 1 hour of lecture : Rs.3000
@ Rs.250/- per 2 hour of practical : Rs. 750
Teaching Aids & Stationery : Rs.1750
POL charges, if any : Rs. Nil
Other items (Tea & Snacks) : Rs. 750
Total : Rs.6250
20% Over Head charges : Rs.1250

• Course fee per batch Rs 7500

Stipendiary

1. APPRENTICE TRAINING IN THE PREPARATION AND QUALITY ASSURANCE OF MILK AND MILK PRODUCTS

Duration: 1 year

Dates: 1.11.2009 to 31.10.2010 Venue: KAU Dairy Plant, Mannuthy

No. of Batch :

Trainees: VHSE certificate holders in Dairying/

Livestock Management(Dairy Husbandry)

No. of Trainees/batch : 2

Course Director : Dr. P. I. Geevarghese

Professor and Head, Dairy plant

Syllabus

Introduction - Importance of milk and milk products - cleaning and sanitization-personal hygiene-duties and responsibilities

Preparation of reagents for the testing of milk and milk products

Introduction to various unit operations in milk processing

Reception of milk - platform tests, detection of adulterants, preservatives and neutralizers

Testing of milk - estimation of fat, acidity, SNF, total solids

Analysis of pasteurized and sterilized milk

Preparation of various milk products such as khoa, paneer, Curd, sambharam, ghee, flavoured milk, whey drink, yoghurt etc

Analysis of milk products for acidity, fat, total solids and comparison of constituents of the products with the legal standards

Packaging of milk and milk products-milk distribution pattern

Legal standards for the milk and milk products

Practical utility

To give training in various quality control practices followed in dairy plant for milk and milk products. This will enable them to seek job in commercial dairy plant or start independent product manufacturing units.

Expenditure

Stipend @ Rs.1440/- per month (As per the Govt, of India Apprentice Act)

2. TRAINING IN OPERATION AND MAINTENANCE OF DAIRY EQUIPMENTS

Duration: 1. year

Dates : 1.11.2009 to 31.10.2010
Venue : KAU Dairy Plant, Mannuthy

No. of Batch : KAO Daily Flant, Mathiduty

Trainees: ITI/VHSE/KGCE certificate holders in

Electrical/MRAC Trades

No. of Trainees/batch :

Course Director : Dr. P.1. Geevarghese

Professor and Head, Dairy plant

Syllabus

Introduction – Importance of milk and milk products-cleaning and sanitization-familiarization with unit operation in Dairy Plant

Reception of milk - sampling - chilling - storage - distribution

Pasteurization of milk-HTST method -operation of pasteurizer - maintenance of pasteurizer

Packaging of milk - operation of Automatic milk packing machine - care and maintenance of packing machine

Cream separator – operation and maintenance Homogenizer and Ice –cream freezer – operation and maintenance

Butter churn-operation and maintenance

CIP cleaning of pipe lines and storage tanks

Operation of product manufacturing equipment such continuous Khoa making machine and ghee kettle

Milk condensing equipments-operation of vacuum evaporator -maintenance of evaporator

Milk drying equipments-Roller drier and Spray drier - operation and maintenance

Boilers - Hot water boiler and Steam boiler - operation and maintenance

Refrigeration plant-Ammonia compressor – operation and maintenance-cleaning and maintenance of condenser – cooling tower – maintenance of evaporator-operation of valves and controls in the systems

Diesel generator - operation and maintenance

Practical utility

To give practical training in the operation and maintenance of various milk processing equipments and also to familiarize with the preservation, processing and packaging of milk and milk products.

Expenditure

Stipend @ Rs.1440/- per month (Trade Apprentice Act)

3. TRAINING IN HYGIENIC PRACTICES IN DAIRY PLANT AND PROCESSING OF MILK FOR PREPARATION OF MILK PRODUCTS

Duration: 1 year

Dates: 1.11.2009 to 31.10.2010
Venue: KAU Dairy Plant, Mannuthy

No. of Batch :

Trainees: Unemployed Youths

No. of Trainees/batch :

Course Director: Dr.P.I.Geevarghese

Professor and Head, Dairy plant

Syllabus

1. Introduction - Importance of milk and milk products - cleaning and sanitization-personal hygiene

- 2. Handling of milk in the raw milk reception dock-cleaning of floors-cleaning agents used-Washing and sterilization of cans
- 3. Importance of chilling milk and milk chillers
- 4. Cleaning of dairy equipments, pipe lines and maintenance of sanitary condition in the dairy plant
- 5. Pasteurization of milk its importance operation and cleaning of pasteurizer
- 6. Sampling techniques for drawing milk sample from milk storage tank, pasteurizer and packing machine
- 7. Familiarization of various unit operation such as cream separation, homogenization etc
- 8. Preparation of various milk products such as Ice cream, khoa, curd, lassi, sambharam, paneer, butter, ghee, channa, rassogolla, gulabjamun, yoghurt etc.
- 9. Packaging of milk and various milk products
- 10. Utilization of by-products-whey-butter milk
- 11. Familiarization of various milk testing techniques and maintenance of quality control lab

Practical utility

To familiarize with the hygienic practices followed in a dairy plant during handling, processing and storage of milk and give training in the preparation of various milk products. This will enable them to seek job in commercial dairy plant or start independent product manufacturing units.

Expenditure

Stipend @ Rs.1000/- per month

4. TRAINING ON INSTRUMENTATION AND QUALITY CONTROL IN DAIRY INDUSTRY

Duration: 1 year

Dates: 1.11.2009 to 31.10.2010
Venue: KAU Dairy Plant, Mannuthy

No. of Batch :

Trainees: Graduates in Chemistry/Microbiology/

Bio technology

No. of Trainees/batch :

Course Director : Dr.P.I.Geevarghese

Professor and Head, Dairy plant

Syllabus

Introduction – milk – definition and composition of milk BIS, PFA and Agmark standards for milk and milk products. Hygienic practices in dairy processing. Chemical analysis of milk and milk product – Total solids and SNF – platform tests – Determination of adulterants and preservatives in milk – handling of dairy processing equipments and instrumental methods of analysis. Microbiological analysis of milk and milk products-isolation and identification of spoilage organisms in milk and milk products-propagation and maintenance of starter culture-preparation of fermented milk and milk products like Dahi-yoghurt etc. Selection of equipments for mini milk product manufacturing units-preparation of project report.

Practical utility

To familiarize with composition of milk, chemical and microbiological analysis, microbiology of milk and milk products, preparation of fermented milk products, culture propagation, detection of adulterants and preservatives in milk.

Expenditure

Other items - Stipend @ Rs. 1850/- per month.

5. TRAINING ON HATCHERY MANAGEMENT

Duration: 1 year

Dates : August 2009

Venue : Centre for Advanced Studies in Poultry

Science, Mannuthy

No. of Batch : 1

Trainees : VHSE Certificate holders in Poultry Science

No. of Trainees/batch :

Course Director : Dr. A. Jalaludeen, Director

Syllabus & Practical Utility

Hatchery-Layout-Incubator-Setter-Hatcher-Incubation-Period of eggs of difference species-Physical conditions of incubator-Selection of hatching eggs- Handling of hatching eggs-Settings of eggs- Candling of eggs-Disinfection of hatchery-Hatchery equipments-Fumigation-Management of Hatchery-Records Keeping-Hatch Day Operations-Calculation of hatchability percentage-Management of layer, Broiler and Quails-Economics.

Expenditure

Honorarium @ Rs.1000/- per month per candidate the expenditure will be met from the RF project operated in the CAP in Poultry Science.

6. TRAINING ON VETERINARY LABORATORY TECHNIQUES, PHARMACY AND NURSING

Duration : 6 Months

Dates: August 2009

Venue : University Veterinary Hospital,

Kokkalai, Thrissur.
No. of Batch : 2

Trainees: VHSE Certificate holders (Dairying & A.H)

No. of Trainees/batch : 5

Course Director : Dr. K. V. Athman Professor & Head

Syllabus

Elementary knowledge on Anatomy & Physiology of domestic animals. Collection and preservation of clinical materials — Routine laboratory procedures-Pharmacy-Feeding and management of domestic animals-Basic knowledge on disease of animal and birds-Sterilisation of instruments- Restraint of animals - Veterinary first aid and Nursing — General evaluation of breeding soundness- Maintenance of records & registers.

Practical utility

VHSE certificate holders in Dairying/Animal Husbandry is having only limited exposure to the activities of Veterinary Hospital, during their course of study. At present they are eligible for the post of Livestock Inspectors in A.H Dept. A training imparted in the Veterinary Hospital may make them more suitable to apply for this post. Besides this, the functioning of the UVH can be improved by their presence.

Expenditure

Course Fee per batch : Rs. 60000

Proposals for National Model Training Courses

1 Techniques and Applications of Biotechnology in Agriculture

Venue Centre for Plant Biotechnology & Molecular Biology,

College of Horticulture, Kerala Agricultural University,

Thrissur, Kerala 680656

Course Director

Dr. P.A. Nazeem,

Address

Professor & Head,

Centre for Plant Biotechnology & Molecular Biology,

College of Horticulture, Kerala Agricultural University, Thrissur,

Kerala 680656 Email Id: nazeem35@hotmail.com cpbmb@rediffmail.com

Phone No: 0487 2371994 (O), Mob.: 09447126917

Fax No. : 0487 2371994

2 Pheromone technology and Microbial pesticides in the Management

of key pests in coconut, rice, vegetable and mango production

systems(Hands on Training and technological Back up)

Venue CTI, Mannuthy and College of Horticulture, Vellanikkara

Course Director

Dr. Jim Thomas,

Address

Professor, Department of Entomology,

College of Horticulture, KAU, Vellanikkara, Thrissur, Kerala

Phone No: 0487-2370822 (Ext.318), 0480 2706685 Mobile: 9495783190

3 National Training Course on Developing Ecosystem based IPM models

for food security and family security of Rural India

Venue College of Horticulture, Kerala Agricultural University, Thrissur, Kerala 680 656

Course Director Dr. A.M. Ranjith,

Address Professor, Department of Entomology, College of Horticulture, Vellanikkara

4 National Model Training Course on 'Commercial Production of Tropical

Vegetable crops'

Venue Department of Olericulture, College of Horticulture, Vellanikkara

Course Director Dr. K.K. Krishnakumary,

Address Department of Olericulture, College of Horticulture,

KAU, Vellanikkara, Thrissur, Kerala Email Id: krishnakothottil@rediffmail.com

Phone Number: 0487-2371918 (O)0487-2282425 (R)

5 'Strategic Extension Campaign for Technology Transfer'

Venue Department of Agrl. Extension, College of Agriculture, Vellayani

Course Director Dr. R. Prakash,

Address Professor, College of Agriculture, KAU, Vellayani, Trivandrum-695 522

Phone Number: 0471 2384625 (O) 94463318925 (M)

6 National Model Course on Rice-cum-Prawn/Fish culture Techniques in

Acid Saline Soil

Venue Rice Research Station, Vyttila, Kochi-19, Pin: 682 019

Course Director Dr. K. Anilakumar,

Address Professor (SS&AC), Rice Research Station,

Kerala Agricultural University, Vyttila, Kochi-19, Pin:682 019, Kerala

Phone No. Off: 0484 2809963, Resi: 0484 2762164 Mob: 9447464863E- Mail: kanilakumar@rediffmail.com 7 National Model Course on Recent Advances in cultivation and utilization

of Medicinal and Aromatic Plants

Venue Aromatic and Medicinal Plants Research Station, Odakkali

Course Director Dr. Baby P. Skaria,

Address Professor & Head, Aromatic and Medicinal Plants Research Station,

Odakkali, Asamannoor P.O., Pin-683549, Ernakulam Dt., Kerala

Phone (off.) :0484-2658221, Mobile : 09447873922 Fax : 0484-2659881Email :amprs@satyam.net.in

8 Extension Strategies for Organic Agricultural Management

Venue Training Service Scheme, College of Agriculture, Vellayani

Course Director Dr. A.K. Sherief.

Address Associate Professor & Head Training Service Scheme, College of Agriculture,

Vellayani P.O., Kerala pin-695 522

Phone : 0471 2383254 (O)/9447429615 (M) E mail: aksherief@gmail.com

9 Organic Farming in Rice-Strategies & Practices

Venue Regional Agricultural Research Station, Kerala Agricultural University, Pattambi,

Palakkad Dt., Kerala - 679 306

Course Director Dr. P.V. Balachandran,

Address Associate Director of Research, Regional Agricultural Research Station,

Kerala Agricultural University, Pattambi, Palakkad Dt., Kerala – 679 306

Phone: 0466 2212275 Fax: 0466 2212228 Cell: 0944765698E

mail: pvbalu2004@yahoo.com pvbalu@gmail.com

10 Biointensive Management of Pests and Diseases in Rice

Dates November 2008

Venue Regional Agricultural Research Station, Pattambi

Course Director Dr. P. Raji,

Address Assistant Professor SS (Plant Pathology), Regional Agricultural Research Station,

Pattambi Phone: 04662212228 (O) 04662344123 (R) Cell : 9447880208email: puzhakkalraji@gmail.com

11 National Model Training course on Recent Advances in Diagnosis and

Surgical Management of diseases of companion animals

Venue University Veterinary Hospital, Kokkalai

Course Director Dr. M.K. Narayanan,

Address Assistant Professor, Kokkalai, Thrissur, Kerala

Phone: 04872423415 (O), 04872440022 (R)Mobile: 09447019009

Email: dntsr@yahoo.com

12 National Model Training Course on Healthcare Management and

Chemical Immobilization of Asian Elephants

Venue Elephant Study Centre, College of Veterinary and Animal Sciences, Mannuthy

Course Director Dr. P.C Alex,

Address Professor & Project Co-ordinator, Elephant Study Centre,

University Veterinary Hospital, Thrissur, Kerala

Phone: 04872423415 (O) 04872371785 (R)Mob: 09387102538

Email: alexpchandy@gmail.com



TRAINING REPORT 2008-09

TRAINING PROGRAMMES CONDUTED THROUGH THE CENTRAL TRAINING INSTITUTE, MANNUTHY 1st April 2008 to 30 th March 2009

In service

SI. No.	Dates	Title of Training	No. of Trainees	Venue	Course Director
1	April 2008	Training on Gardening & Beautification	7	Dept. of Pomology, COA, Vellayani	Dr.C.S. Jayachandran Nair,Professor
2	20.10.08 to 25.10.08 25.10.08 & 16.2.09 to 21.2.09	Training on Diagnostic Ultrasound in Veterinary Practice	5	College of Vety.& Animal Sciences, Mannuthy	Dr.Premni Elias, Professor
3.	Sep-Oct 2008	Training on Routine Laboratory Practices for Assisting Disease Diagnosis	60	College of Vety.& Animal Sciences, Mannuthy	Dr.Metilda Joseph, Professor
4.	Aug 08 to Nov 08	Training on Modern Techniques for disease diagnosis with special emphasis on the Control of infectious and contagious disease	. 60	College of Vety.& Animal Sciences, Mannuthy	Dr.Metilda Joseph, Professor
5.	7.11.08 to 22.11.08	Training on Current Concept of Diagnosis& Management of skin disorders	10	Dept of Clinical Medicine, CV & AS, Mannuthy	.Dr.K.M Jayakumar, Associate. Professor
6.	12.1.09 to 17.1.09	Training on Health care Management & Chemical Immobilisation of Captive Elephants	10	College of Vety.& Animal Sciences, Mannuthy	Dr.P.C.Alex, Professor
7.	19.1.09 to 24.1.09	Training on Techniques in Veterinary Diagnostic Radiology	5	Dept of Veterinary Surgery & Radiology, CV & AS Mannuthy	Dr.C.B.Devanand, Associate Professor
8.	19.2.09 to 28.2.09	Training on Basic Course in Veterinary Orthopaedic Surgery	10	Dept of Veterinary Surgery & Radiology, CV & AS,Mannuthy	Dr. Syam.K.Venugopal, Professor
9.	3WD	Training on Recent Trends in Anaesthesiology	20	C.V. & A.S, Pookot	Dr.N.Gopakumar, Professor & Head

10.	10WD	Training on Recent Trends in Clinical Veterinary Pharmacology	20	C.V. & A.S, Pookot	Dr.N.Gopakumar , Professor & Head
11.	16.2.09 to 21.2.09	Training on Refresher Course for Veterinary	10	Dept of Clinical Medicine	Dr. Premni Alias, Associate Professor
-	2 nd Batch	Surgeon & Asst. Director on Diagnostic Ultrasound in Veterinary Practise.		C.V & A.S Mannuthy	
Sponso	red				
1.	March 2008	Training on Bush Jasmine Cultivation	40	TSS, COA, Vellayani	Dr.S.Shailaja, Professor
2.	April 2008	Training on Utilization of Cashew Apple and its by- products	15	CRS, Madakkathara KAU	Dr.Jose Mathew, Professor & Head
3.	20 th to 24 th May 2008	Training on Horticulture Extension Management	30	CTI, Mannuthy	Dr.Joy Mathew, Professor Dr.Alexander George, Professor
4.	1 year	Training on Supervisors on Organic Agriculture	25	TSS, COA, Vellayani	Dr.A.K.Sherief, Professor
5.	3 Days	Training on Farmers on Organic Agriculture –Certification and Inspection	125	TSS, COA, Vellayani	Dr.A.K.Sherief, Professor
6.	1 year	Training on Supervisors on Crop Production Enhancement of Productivity, Value Addition and Marketing of Horticultural Crops	25	Dept. of Processing Technology	Dr.K. Vasanthakumar, Professor
7.	3 year	Training on Precision Farming in Commercial Mediculture	30	IF, COA, Vellayani	Dr.A.S.Anilkumar
8.	1 Day	AICRP Plan Scheme- Scaling up of water Productivity in Agriculture for livelihood through Teaching-cum-demonstration	25	ARS, Chalakkudy	Dr.K.P. Prameela, Nodal Officer
9.	15.12.082 months	Training on Agri Clinics & Agri business	21	TSS, COA, Vellayani	Dr.A.K.Sherief, Professor, COA, Vellayani
10.	Sep-Oct 08	Training on Agri.related Microbiological Enterprises	30	TSS, COA, Vellayani	Dr.A.Sakeer Hussan, Assistant. Professor, TSS
11.	28th & 29th Oct 08	Training on Training need Assessment (Work shop)	30	COA,Vellayani	R.Prakash, Professor, COA, Vellayani

12.	31.10.08 to 12.11.08	Training on Field Training	51	RARS, Pilicode	Dr.A.K.Baby Latha, Professor
13.	30 th Oct 08	Training Programme on Mushroom Cultivation	25	RRS, Mancompu Alleppy	Dr.Reeny Mary Zachariya
14.	17.11.08 to 26.11.08	Training Programme in Practical Applicationin Processing of milk & Preparation of MilkProducts	4	KAU, Dairy Plant	Dr.P.1. Geevarghese, Professor
15.		Training Programme on Use of Mechanical Coconut Climber	40	ARS, Mannuthy	Dr.U Jaikumaran, , Professor & Head, ARS, Mannuthy
16.	5 th & 6 th Dec 08	Training on Landscape Designing & Micro- irrigation	30	KCAET,Tavanur	Dr.E.K. Mathew, Professor
17.		Field Training for VHSE Students	25	RARS, Pilicode	Dr.A.K.Baby Latha, Professor
18.	2 nd week of May & Dec 08	Electrocardiography Diagnosis of Cardiac Disorders & its Management in Dogs	10 .	CV & AS, Mannuthy	Dr.Usha Narayana Pillai Associate Professor
19.	15.12.08 to 19.12.08	Training Programme on Analysis of Milk & Milk Products	4	CV & AS, Mannuthy	Dr.V.Prasad, Professor
20.	-	Training Programme on Preparation of Value Added Products from Rabbit Meat	10	CV & AS, Pookot	Dr.C.T.Sathyan, Associate Professor
21.	Dec 08 to Jan 09	Training Programme on Instructional Technology and Personality Development	150	TSS,Vellayani(3 batch), CTI, Mannuthy (2 batch)	Dr.R.Prakash, Dr.B.Seema, Dr.N.Kishore Kumar (TSS, Vellayani) Dr. Alexander George, Professor (CTI)
22.	17 th to 21 st Feb 09	Training Programme on Team Building & Goal Setting	25	CTI, Mannuthy	Dr.Alexander George, Professor
23.	March 09 to Dec 09.	Training Programme on Operation & Maintenance of Tractors & Power Tillers	50	RARS, Pattambi	Dr. Jayan.P.V, Associate Professor
24.	12.3.09 to 18.3.09	Training on Skill Training Cum – Demonstration on Cashew Apple Processing	10	RARS, Pattambi	Dr.A.K.Baby Latha, Professor
25.	20.3.09 to 9.4.2009	Training Programme on Field Experience	6	COA,Vellayani	Dr.A.K.Sherief, Professor, Dr.A.Sakeer Hussan, Assistant Professor
26.	27 th March 2009	Training Programme on Commodity Futures	80	COH, Vellanikkara	Dr.Joy Mathew, Professor Dr.Alexander George, Professor

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27.	2008 to 2012	Training Programme on ICAR	39	ARS, Mannuthy	Dr. Deva Das
28.	March 09 to Dec 09	Training Programme on Operation & Maintenance of Tractor & Power Tiller	50	KCAET, Tavanur	Dr.Jayan P.R Associate Professor
29.	30.3.09 to 31.3.09	Training Programme on Empowerment and Personnel Excellence	20	CTI, Mannuthy	Dr.Alexander George, Professor
30.	31.3.09	Training Programme on Rabbit Rearing	60	Dept of A.B and Genetics, C.V. & A.S Mannuthy	Dr.K.A.Bindhu, Associate Professor
31.	30.3.09 to 31.3.09	Training Need Assessment Workshop	30	Animation Centre Vellayambalam, Tvm.	Dr.R.Prakash, Professor, COA,Vellayani
32.	28 th Oct to 30 th Oct	Training on Link workers under women in Agriculture Programmes.	25	Central Training Institute Mannuthy	Dr.Alexander George , Professor, CTI
Stipe	ndiary			-	
1.	May-June 2008	Training on Commercial Nursery Production	15	ARS, Mannuthy	Dr.C.Narayanankutty, Professor
2.	April-June, July-Sept, Oct-Dec, Jan-March	Training on farm training for starting Goat Breeding	20	CAS MAGB, Mannuthy	Dr.K.C. Raghavan, Director
3.	April 2008 to March 2009	Training on 'Hatchery Management'	4	CAS in Poultry Science, Mannuthy	Dr.A.Jalaludheen, Director
4.		Training on Nursery Production and Management	4	CRS, Anakkayam	Dr.P. Rajendran, Professor
5.	June 2008 to May 2009	Training on Operation Maintenance and Servicing of Farm Machinery	15	ARS, Mannuthy	Dr. Suma Nair
6.	May 08 to April 09	Training on Veterinary Pharmacy and Artificial Insemination	10	Vety.Hospital, Mannuthy	Dr.P.C. Alex, Professor
7.	1.9.08 to 31.8.09	Training on the preparation & quality assurance of milk & milk products	2	Dairy Plant, Mannuthy	Dr.P.I. Geevarghese, Professor
8.	1.9.08 to 31.8.09	Training on operation & maintanance of dairy equipments	4	Dairy Plant, Mannuthy	Dr.P.I. Geevarghese, Professor
9.	1.11.08 to 31.10.09	Training on hygienic practices in handling & processing of milk & milk products	4	Dairy Plant, Mannuthy	Dr.P.I. Geevarghese, Professor

10.	Feb 09	Training on meat plant operation & maintanance	4	MTU, Mannuthy	Dr.P.Kuttinarayanan, Professor & Head
11.	Feb 08	Training on meat processing technology & wholesale meat production	8	MTU, Mannuthy	Dr.P.Kuttinarayanan, Professor & Head
12.	1.11.08 to 30.10.09	Training on instrumentation & quality control in dairy industry	2	Dairy Plant, Mannuthy	Dr.P.I. Geevarghese, Professor
13.	Feb 09	Training on meat processing cum plant operation	3	MTU, Mannuthy	Dr.P.Kuttinarayanan, Professor & Head
14.	2008-2009	Programme on large scale planting material & seed production in horticulture crops	40	RARS,Ambalavayal	Dr.V.V.Devadas, A.D.R,RARS,Ambalavayal
15.	April 08 to March 09	Making & Dairy Farm Practices	10	ULF & FRDS, Mannuthy	Dr.V.Prasad, Professor
16.	Oct, Nov & Dec 08 & Jan 09	Quality Seed Production Techniques In Vegetables	5	FSRS, Sadanandapuram	Dr.S.Rageena, Professor
17.	Nov & Dec 08 & Jan 09	Training on nursery Management & Plant Propagation Techniques	5	FSRS, Sadanandapuram	Dr.S.Rageena, Professor
18.	1.11.08 to 31.10.09	Training on Preparation & Packing of Indigenous Milk Products	4	Dairy Plant, Mannuthy	Dr.P.I. Geevarghese, Professor
Voca	tional 🔍				
1.	March 2008	Mechanized Coconut climbing	18	1F, COA, Vellayani	Dr.G.Sobhana, Professor
2.	May-June 2008	Techniques & Application of Plant Tissue Culture	20	CPBMB, COH, Vellanikkara	Dr.P.A. Nazeem, Professor
3.	19 th to 31 st May 2008 & 15 th to 27 th Sept 2008	Techniques in Plant Biotechnology	20	CPBMB, COH, Vellanikkara	Dr.D. Girija, Professor
4.	April – May 2008	Vegetable cultivation on House Terrace in Urban area	20	COA, Vellayani	Dr.V.B.Padmanabhan, Professor
5.	May-June 2008	Operation and Basic Maintenance of Power Tillers and Power Reapers	7	ARS, Mannuthy	Dr.Suma Nair, Agri.Engg.
6.	15th to 16th May 2008	Operation and Maintenance of Power Tillers	5	ARS, Mannuthy	Dr.Suma Nair, Agri.Engg.
7.	May-June 2008	On farm Processing of Jack fruit	375	ARS, Mannuthy	Dr.P.B.Pushpalatha, Associate.Professor

8.	26 th May 2008 to 7 th June 2008	Techniques in Microbiology	6	CPBMB, COH, Vellanikkara	Dr.K.Surendragopal, Associate Professor
9.	23 rd & 24 th May	Hygienic Processing of Poultry	5	CAS in Poultry Science, Mannuthy	Dr.A.Jalaludheen, Professor
10.	28.1.08 onwards	Mechanized Paddy Transplantation	20	ARS, Mannuthy	Dr.U.Jaikumaran, Professor
11.	April 2008	Development of Expertise in Plant Propagation Techniques commonly employed for production of Fruit plants & Ornamental Plants	20	IF, COA,Vellayani	Dr.Kamala Nair, Professor
12.	28th to 29th May 2008	Preparation of Indigenous Milk Products	28	Dairy Plant, Mannuthy	Dr.P.I. Geevarghese, Professor
13.	May-Feb 2009	Precision Farming Techniques with emphasis on Micro irrigation and protected cultivation for the farmers	420	KCAET, Tavanur	Dr.E.K. Mathew, Professor
14.	May-Sept 2008	Precision Farming Techniques with Emphasis on Micro Irrigation and Protected Cultivation for Agril. Assistants	420	KCAET, Tavanur	Dr.E.K. Mathew, Professor
15.	September 08	Precision Farming Techniques with Emphasis on Micro irrigation and Protected Cultivation for NGO's	60	KCAET, Tavanur	Dr.E.K. Mathew, Professor
16.	13 th May 2008	Cultivation Technology of tropical mushroom	150	COA, Vellayani	Dr.M.Suharban
1 <i>7</i> .	25 th & 26 th of June 2008	Intercropping of Vegetables	70	COH, Vellanikkara	Dr.Salikutty Joseph,Professor
18.	July 2008 to Sept 2008	Integrated Pest Management in Cashew	1	CRS, Anakkayam	Dr.P.Rajendran, Assoc.Professor
19.	July 2008	Computational Methods in Structural Biology	1	IT/BT Complex, Vellanikkara	Dr.R.Kesavachandran,Professor
20.	July-Dec 08	Sasyaphala Samskaranam	50	Dept.of H.S.,COA, Vellayani	Dr.Mary Ukkuru, Professor
21.	July-Dec 08- Feb 09	Dairy Farm Management	30	ULF &FRDS, Mannuthy	Dr.V.Prasad, Professor
22.	June-Oct 08-Jan 09	Dairy Cattle Rearing	10	ULF &FRDS Mannuthy	Dr.V.Prasad, Professor
23.	1st to 20th Sep 08	Mechanized Paddy Transplanting	27	Parlikad, Thrissur	Dr.U.Jaikumaran, Professor

24.	Sept 2008.	Use of Mechanized Coconut Climber	40	ARS, Mannuthy	Dr.U.Jaikumaran, Professor,ARS, Mannuthy,
25.	17 th to 30 th Sep	Technique in Plant Biotechnology	20	CPBMB,Vellanikkara	Dr.D.Girija,Professor, CPBMB,Vellanikkara
26.	Sep-Oct 08	Training on job training in Plant Protection	30	COA,Vellayani	Dr.C.Nandakumar, ProfessorVellayani
27.	Sep-Oct 08	Training on Nursery management & Ornamental Gardening	90	I.F,COA,Vellayani	Dr.G.Sobhana, Professor
28.	Oct-Dec 08	Training on Seed Production, Processing & Storage in Veg Seeds	30	COH, Vellanikkara	Dr.K.Krishnakumary Associate Professor Dept of Olericulture,Vellanikara
29.	Oct-Dec 08	Training on Vegetable Cultivation in Homesteads	60	College of Horticulture	Dr.K.Krishnakumary Associate Professor Dept of Olericulture, Vellanikara
30.	6th Oct to 6th Nov 08	Training on Bioinformatics, Approach & Applications	3	IT/BT Complex, Vellanikkara	Dr.R.Kesavachandran, Professor
31.	11 th to 21 st Nov 08	Training on Job Training in Fruits & Vegetables	30	I.F,COA,Vellayani	Dr.G.Sobhana, Professor
32.	Nov-Dec 08	Training on Mushroom & Spawn Production	100	Dept of Plant Pathology, COH, Vellanikkara	Dr.T.Sheela Paul, Professor
33.	3 rd to 20 th Nov 08	Training on Techniques & Application of Tissue Culture	5	RARS,Kayamkulam	Dr.M.R.Bindhu, Associate Professor
34.	15.11.08 to 19.11.08	Training on Protected Cultivation	80	ARS,Chalakudy	Dr.P.Suseela, Dr Prameela,
35.	1st & 2 nd Nov 08 & 3 rd Dec 08	Training on SGSY-Kollam Jilla Panchayat on goat Rearing	75	KVK,Sadanandapurram	Dr.Bindhu Podikunju, Assistant Professor
36.	Dec 08	Training Programme on Skill Up gradation of Swarozgaris of Kollam Dist. in Agri & Allied activities.	25	KVK, Sadanandapuram	Dr.Sheeba Rébecca, Associate Professor
37.	Dec 08	Nursery Management	25	KVK, Sadanandapuram	Dr.Sheeba Rebecca, Associate Professor
38.	Dec 08	Training on Mushroom & Spawn Production	130	Dept of Plant Pathology COH,Vellanikkara	, Dr.T.Sheela Paul, Professor

39.	Dec 08	Training Programme on Skill(SGSY)- Goat Rearing	25	KVK, Sadanandapuram	Dr.Sheeba Rebecca, Associate Professor
40.	Dec 08.	Training on Scaling of water productivity in Agriculture. For livelihoods through Teaching cum demonstration	32	ARS,Chalakudy	·
41.	6 th & 7 th Dec 08	Training on Survey of Resources for Samagra Matsya Gramam	20	COF, Panangad	Dr.C.Mohanakumaran Nair
42.	3 WD	Training on Use of Mechanical Coconut Climber	20	ARS,Mannuthy	Dr.U.Jaikumaran, Professor, ARS, Mannuthy,
43.	Dec 08	Training on Techniques & Application of Tissue Culture for Women	1	RARS,Pattambi	Dr.M.L.Jyothi, Assistant Professor
44.	Dec-08	Training Programme on Skill Upgrading in Dairy Farming	30	CV & AS,Pookot	Dr.C.T.Sathyan, Associate .Professor
45.	Dec-08	Training Programme on Introduction to Fabric Painting	28	College of Agriculture, Vellayani	Dr.Suma Divakar, Assistant Professor
46.	Jan-09	Training Programme on Techniques & Application of Tissue Culture	2	ORARS,Kayamkulam	Dr.M.R.Bindhu, Associate Professor
47.	Jan-09	Training Programme on Techniques & Application of Tissue Culture	3	ORARS,Kayamkulam	Dr.M.R.Bindhu, Associate .Professor
48.	Jan/Feb 09	Training Programme on Operation of Paddy Reapers, Threshers, Winnowers & Weeders	6	ARS,Mannuthy	Dr.Suma Nair, Agri.Engg.
49.	Dec 08 & Jan 09	Training Programme on Job Training on Livestock Management	90	COA, Vellayani	Dr.R.Vijayan, Professor
50	10.12.08 to 18 WD	Training Programme on Mechanized Paddy Transplanting	20	ARS,Mannuthy	Dr.U.Jaikumaran, Professor
51	16.2.09 to 2.3.09	Training Programme on Mechanized Paddy Transplanting	15	ARS,Mannuthy	Dr.U.Jaikumaran, Professor
52	from 16.2.09	Training Programme on Mechanized Paddy Transplanting	15	ARS,Mannuthy	Dr.U.Jaikumaran, Professor
53	25.2.09 to 28.2.09	Training Programme on Bio informatics for Genome & Protein Analysis	1	Bio Informatics Centre, IT/BT Complex, Vellanikkara	Dr.R.Kesavachandran, Professor

54	10.3.09 to13.3.09	Training Programme on Computational Methods and Structural Bio Informatics	1	I.T- BT CPBMB Vellanikkara	Dr.R.Kesavachandran, Professor
55	17.3.09 to 21.3.09	Training Programme on Preparation of Milk Products	15	KAU Diary Plant Mannuthy	Dr.P.I.Geevarghese
56	12 WD March 2009	Training Programme on Mechanized Paddy Transplanting	20	ARS Mannuthy	Dr.U.Jaikumaran Professor & Head
5 <i>7</i>	20 WD March 2009	Training Programme on Paddy Mechanisation	25	ARS Mannuthy	Dr.U.Jaikumaran Professor & Head
58	6 WD March 2009	Training Programme on Skill Up gradation on Goat Rearing.	50	KVK Sadanandapuram	Dr.Bindhu Podikunju, Assistant Professor
59	1WD February 2009	Training Programme on Mushroom Spawn Production Technology	20	Dept of Plant Pathology, COH,Vellanikkara	Dr.M.Suharban, Professor & Head
60	26.3.09	Training Programme on Familiarisation with Operation of different Paddy Mechanization	22	ARS Mannuthy	Dr.U.Jaikumaran Professor
61	21 st July to 2 nd August	Technique in plant biotechnology	10	CPBMB I.T –BT KAU, Vellanikkara	Dr.Girija. D
62	May –June 2008	Training on Technique & Application of a Plant Tissue Culture	10	CPBMB I.T –BT KAU, Vellanikkara	Dr.P.A Nazeem , Professor & Head
INTER	NATIONAL				
1.	24 th to 28 th Feb 09	Training on development of High yielding Varieties, Production of Elite Planting Material & Cashew Apple Processing	4	CRS, Madakkathara	Dr. Jose Mathew, Professor & Dr. A. Sobhana



IMPORTANT ADDRESSES

Address List

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The Principal Agricultural Officer Kollam 0474-2795082 pmlagiofficer@sancharnet.in

The Principal Agricultural Officer Kissan Jyothi, Perunthanni,Thiruvananthapuram Ph: 0471-2471434 (Tel/Fax) Email: paotvm@hotmail.com

State Departments, Govt. of Kerala

The Director,

Department of Agriculture,

Vikas Bhavan P.O., Thiruvananthapuram

The Director of Animal Husbandry, Department of Animal Husbandry, Vikas Bhavan P.O., Thiruvananthapuram

The Addl. Chief Secretary, Coastal Shipping and Inland Navigation Department, Vikas Bhavan P.O.,Thiruvananthapuram The Director,
Project Planning & Monitoring Cell (PPM Cell)
Ministry of Agriculture,
Govt. Secretariat, Thiruvananthapuram

The Secretary,
Cúltural Affairs Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Principal Secretary,
Co-operation Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Chief Electoral Officer & Principal Secretary, Election Department, Vikas Bhavan P.O., Thiruvananthapuram

The Secretary,
Consumer Affairs Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Additional Chief Secretary, Finance Department, Vikas Bhavan P.O., Thiruvananthapuram

The Secretary,
Environment Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Secretary, Food and Civil Supplies Department, Vikas Bhavan P.O., Thiruvananthapuram

The Principal Secretary,
Fisheries and Ports Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Principal Secretary, General Administration Department, Vikas Bhavan P.O., Thiruvananthapuram

The Secretary,
Forest and Wild Life Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Secretary, Health and Family Welfare Department, Vikas Bhavan P.O., Thiruvananthapuram

The Secretary,
General Education Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Addl. Chief Secretary,
Home Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Secretary,
Higher Education Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Principal Secretary, Industries Department, Vikas Bhavan P.O., Thiruvananthapuram

The Secretary, Housing Department, Vikas Bhavan P.O., Thiruvananthapuram The Secretary, Information Technology Department, Vikas Bhavan P.O., Thiruvananthapuram

The Secretary, Information and Public Relations Department, Vikas Bhavan P.O.,Thiruvananthapuram

The Principal Secretary, Local Self Government Department, Vikas Bhavan P.O., Thiruvananthapuram

The Secretary, Labour and Rehabilitation Department, Vikas Bhavan P.O.,Thiruvananthapuram.

The Secretary,
Planning & Economic Affairs Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Principal Secretary, Personnel & Administrative Reforms Department, Vikas Bhavan P.O,Thiruvananthapuram

The Secretary,
Public Works Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Secretary,
Power Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Principal Secretary, Scheduled Castes and Scheduled Tribes Development Department, Vikas Bhavan P.O., Thiruvananthapuram

The Principal Secretary,
Revenue Department, Vikas Bhavan
P.O., Thiruvananthapuram

The Secretary,
Social Welfare Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Principal Secretary,
Science and Technology Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Secretary,
Taxes Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Secretary, Stores Purchase Department, Vikas Bhavan P.O., Thiruvananthapuram The Additional Chief Secretary, Transport Department, Vikas Bhavan P.O., Thiruvananthapuram

The Secretary,
Tourism Department,
Vikas Bhavan P.O., Thiruvananthapuram

The Officer in Charge,
Police Department
Police Headquarters, Thiruvananthapuram

The Director of Vocational Higher Secondary Education
Directorate of Vocational Higher Secondary Education,
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The Director
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National Development Boards/Corporations/Directorates

The Director,
National Oilseeds and Vegetable Oils
Development Board,
86 Sector 18, Gurgaon, Haryana -122001

The Director,
National Seeds Corporation,
Beej Bhawan, Pusa Complex,
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The Director,
National Institute of Agricultural Marketing,
(A Govt.of India Organisation,
Kota Road, Bambala), (Near Sanganer),
Jaipur -303906.

The Director,
National Horticulture Board,
85, Sector 18, Institutional Area,
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The Director,
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and Credit Society Ltd.,
B-14, 3rd Floor, Naraina Shopping Complex,
Naraina Vihar, New Delhi -110028

The Director,
National Agricultural Cooperative Marketing
Federation of India Ltd.,
NAFED House, Sidhartha Enclave,
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The Director,
Coconut Development Board,
Mahatma Gandhi Road, Ernakulam,
Cochin 682011

The Director,
Directorate of Tobacco Development,
26, Haddows Road, 3rd Floor, Shastri Bhavan
Annexe, Chennai -600006. Tamil Nadu

The Director,
Directorate of Cocoa,
Arecanut and Spices Development,
Cannanore Road, Calicut – 673005

The Director,
Kerala Institute for Research Training and
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Scheduled Tribes (KIRTADS),
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The Director of Extension Education,
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The Director of Extension Education Birsa Agricultural University, Kanke, Ranchi-834006 (Bihar)

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The Director of Extension Education, Rajasthan Agril. University, Udaipur-313001 (Rajasthan)

The Director of Extension Education, G.B. Pant University of Agri. & Technology, Distt- Nainital, Pantnagar-263145 (U.P). The Director of Extension Education Orissa University of Agri.&Tech., Bhubaneshwar- 751003 (Orissa)

The Director of Extension Education N.D University of Agri. & Tech., Narendranagar, Kumargani, Faizabad-224229 (U.P)

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The Director of Extension Education, J.N.Krishi Vishwa Vidyalaya, Jabalpur-482004 (M.P)

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Directors State Department of Agriculture/Horticulture

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The Director of Agriculture Govt. of Goa Department of Agriculture, Panjim- 403001

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The Director of Agriculture Govt. of Arunachal Pradesh New Itanagar, Arunachal Pradesh

The Director of Agriculture Govt. of Pondicherry Pondicherry-605001

The Director of Agriculture Govt. of Tripura, Agartala (West Tripura)

The Director of Agriculture Govt. of Andaman & Nicobar Port Blair-744101

The Director of Agriculture Govt. of Sikkim, Gangtok-7371010 (Sikkim) The Director of Agriculture Govt. of Mizoram , Aizwal (Mizoram)

The Director of Agriculture
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Daman

The Director of Agriculture Dadra & Nagar Haveli, Silvasa

The Director of Agriculture Administration of the Union Territory of Lakshadweep, Kavaratti, Island -60255.

The Director of Agriculture Govt. of Uttaranchal, Dehradun (Uttaranchal)

The Director of Agriculture Directorate of Agriculture Govt. of Chattisgarh, Raipur (Chattisgarh,)

The Director of Agriculture Govt. of Jharkhand, Ranchi.(Jharkhand)

The Director of Agriculture Govt. of Jammu and Kashmir Talab Tillo, Jammu Division, Jammu (J & K)

The Director of Horticulture Govt. of Madhya Pradesh, Bhopal (Madhya Pradesh)

The Addl. Director of Horticulture, Public Gardens, Hyderabad, Andhra Pradesh

The Director of Horticulture Govt. of Sikkim, Gangtok, Sikkim

The Director of Horticulture, Naharlagun, Arunachal Pradesh

The Director of Horticulture Govt. of Punjab, S.C.O. 843-44, Sector 22 A Chandigarh (Punjab)

The Director of Horticulture,
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The Director of Horticulture Govt. of Orissa, Ekamra karan Bhubaneswar, Orissa

The Director of Horticulture, Project Director Dr. Kudehadarkar Building Near Neptune Hotel, Panaji, Goa.

The Joint Director of Horticulture Deptt. of Agriculture, Govt. of Nagaland, Kohima -797001 Nagaland

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The Director of Horticulture & Soil Conservation Govt. of Manipur, Imphal. Manipur

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Directors State Departments of Animal Husbandry

The Director of Animal Husbandry Govt. of Andhra Pradesh, Hyderabad

The Director of Animal Husbandry & Veterinary Science Govt. of Karnataka Bangalore, Karnataka

The Director of Veterinary & Animal Husbandry Govt. of Assam, Guwahati, Assam.

The Director of Animal Husbandry Govt. of Himachal Pradesh Simla, (Himachal Pradesh)

The Director of Animal Husbandry Govt. of Bihar, Patna (Bihar)

The Director of Animal Husbandry Govt. of Manipur, Imphal (Manipur)

The Director of Animal Husbandry Govt. of Jammu & Kashmir, Srinagar (J & K)

The Director of Animal Husbandry Govt. of Tripura, Agartala (Tripura)

The Director of Veterinary & Animal Husbandry Govt. of Maharashtra, Poona (Maharashtra)

The Director of Animal Husbandry Govt. of Pondicherry, Pondicherry

The Director of Animal Husbandry & Veterinary Service
Govt. of M.P , Bhopal (M.P)

The Director of Animal Husbandry Govt. of Punjab, Chandigarh (Punjab)

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The Director of Animal Husbandry & Veterinary Service Govt. of Orissa ,Cuttack. (Orissa)

The Director of Animal Husbandry & Veterinary Govt. of Nagaland, Kohima (Nagaland)

The Director of Animal Husbandry, Govt. of Uttar Pradesh, Lucknow (U.P)

The Director of Animal Husbandry Arunachal Pradesh Administration New Itanagar (Andhra Pradesh)

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The Director of Animal Husbandry Govt. of Mizoram, Aizwal (Mizoram)

The Director of Animal Husbandry Govt. of Gujarat, Ahmedabad, Gujarat

The Director of Animal Husbandry Govt. of Meghalaya Shillong (Meghalaya)

The Director of Animal Husbandry Delhi Administration, Khyber Pass, Delhi-6

The Director of Animal Husbandry Govt. of Goa , Daman & Diu, Panaji (Goa)

The Director of Animal Husbandry Govt. of Kerala, Thiruvananthapuram

The Director of Animal Husbandry Govt. of Sikkim, Gangtok, Sikkim

The Director of Dairy Development & Animal Husbandry ,N.S. Building Govt. of West Bengal, Calcutta (West Bengal)

Directors State Departments of Fisheries

The Director of Fisheries Govt. of Andhra Pradesh Hyderabad

The Director of Fisheries Govt. of Uttar Pradesh Lucknow

The Director of Fisheries Govt. of Assam Dispur

The Director of Fisheries Govt. of West Bengal Calcutta

The Director of Fisheries Govt. of Bihar Patna

The Director of Fisheries Govt. of Arunachal Pradesh New Itanagar

The Director of Fisheries Govt. of Haryana Chandigarh - 160001

The Director of Fisheries Govt. of Andaman & Nicobar Admn. Port Blair

The Director of Fisheries Govt. of Gujarat Gandhinagar

The Director of Fisheries Govt. of Goa ,Daman & Diu Panaji

The Director of Fisheries Govt. of Himachal Pradesh, Simla

The Director Fisheries Govt. of Manipur, Imphal

The Director of Fisheries Govt. of Jammu & Kashmir Srinagar

The Director of Fisheries Govt. of Nagaland Kohima

The Director of Fisheries Govt. of Karnataka Bangalore The Director of Fisheries Govt. of Meghalaya Shillong

The Director of Fisheries Govt. of Kerała Thiruvananthapuram

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The Director of Fisheries Govt. of TamilNadu Chennai

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Commodity Boards/Institutes, Kerala State

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The Director

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The Vice Chancellor Marathwada Agricultural University Parbhani – 431 402 Maharashtra

The Vice Chancellor Anand Agricultural University, Anand, Gujarat – 388 110

The Vice Chancellor
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The Vice Chancellor Assam Agricultural University Jorhat, Assam -785 013

The Vice Chancellor Navsari Agricultural University Navsari – 396 450 Gujarat

The Vice Chancellor Bidhan Chandra Krishi Viswavidyalaya Mohanpur, Nadia, West Bengal – 741 252

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The Vice Chancellor Birsa Agricultural University Kanke, Ranchi, Jharkhand – 834 006

The Vice Chancellor Punjab Agricultural University Ludhiana – 141 004 Punjab The Vice Chancellor Central Agricultural UniversityP.O. Box 23, Imphal,Manipur – 795 004.

The Vice Chancellor Rajasthan Agricultural University Bikaner – 334 006 Rajasthan

The Vice Chancellor Chandra Shekar Azad University of Agriculture & Technology Kanpur – 208 002 Uttar Pradesh

The Vice Chancellor Rajendra Agricultural University Pusa, Samastipur -848 125

The Vice Chancellor Chaudhary Charan Singh Haryana Agricultural University Hisar – 125 004 Haryana

The Vice Chancellor
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