

COURSES OF M.Sc. ANIMAL HUSBANDRY

(Approved by AC/18 – 2008 / 06 Communicated by R/AC-18A/2008 dated 28/04/2008)

Semester - I

V.Sc.-603	(D)	Livestock Production and Management	2 + 2 = 03
V.Sc.-605	(D)	Animal Production and Mgmt. (APM)	2 + 2 = 03
MAS-711		Statistics – I	2 + 2 = 03
APM-708		Principles of Dairy Farm Mgmt. (PDFM)	2 + 2 = 03
APM-709		Practices of Dairy Cattle Mgmt. (PDCM)	2 + 2 = 03

Semester - II

V.Sc.-604	(D)	Animals Health and Hygiene (AHH)	1 + 2 = 03
Comp-705		Computer Orientation (Comp.)	2 + 2 = 03
MAS-715		Statistics – II	2 + 2 = 03
AH - 704		Breeding Reproduction Mgmt. (BRM)	2 + 2 = 03
AN - 717		Animal Physiology	2 + 2 = 03
AH - 720		Milk Production Management	2 + 2 = 03
AH - 719		Livestock and Poultry Nutrition	2 + 2 = 03

Semester - III

APM - 823		Goat and Sheep Management	2 + 2 = 03
APM - 825		Swine Production Management	2 + 2 = 03
AN - 827		Non-Ruminant Nutrition	2 + 2 = 03
PP - 822		Poultry Farm Management	2 + 2 = 03
Econ - 705		Research Methodology	2 + 2 = 03
AH - 880		Seminar	0 + 4 = 02

Semester - IV

AH - 899		Dissertation	0 + 30 = 15
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Syllabus of M. Sc. Animal Husbandry

Deficiency Courses: (V.Sc.-603, V.Sc.-604 and V.Sc.-605)

V. Sc.-603 LIVESTOCK PRODUCTION MANAGEMENT (LPM) Credit 2 + 2 = 3
Common terms, Livestock and milk production statistics, Importance of Livestock, Important breeds of cattle and buffaloes, Care and management of dairy calves, heifers, bulls and cows Dairy farm buildings – objectives advantages, factors affecting location and grouping. Design of barns, clean milk production, dairy farm records, Classification of feeds and fodders, agro-industrial byproducts, Management practices in feeding, soiling, ensiling hay making, pasturing, developing practical and economical rations, planning supply of green fodder throughout the year, Digestive system, Digestive traits. Methods and systems of breeding, Detection of Oestrus and pregnancy, Hormones and their role in production and reproduction. Reproductive organs of cows and bull, A.I. sterility and its causes.

V. Sc. 605 ANIMAL PRODUCTION AND MANAGEMENT (APM) Credit 2 + 2 = 3

1. Goat:
Common terms, Importance, Important breeds, Breeding, Feeding, Care of kids, Management practices: tethering, age determination, disbudding, castration, hoof trimming, Goat housing, preventive measures of diseases and vaccination, Goat milk and meat, Pashmina and Mohair.

2. Sheep:
Common terms, Importance, Important breeds, Breeding, Feeding, Management practices – lambing, care of ewe at and after lambing, care of lamb, Docking, Castration, Dipping Shearing. Observation regarding sick vs. healthy animals, wool – related terms, wool yield, grading parameters for judging wool quality.

3. Pigs:
Common terms, Importance, Important breeds, Feeding, Management of piglets, Sow and Boar, Breeding, Housing, Pig fenders, Selection of hogs for slaughter and methods of slaughter and health care.

4. Poultry:
Common terms, Importance of poultry industry, layers feeding and management, broiler management, Grading of eggs, Selection of eggs for hatching, Egg preservation, Culling of layers.

MAS-711 (Statistics - I) Credit 2 + 2 = 3

APM-708 PRINCIPLES OF DAIRY FARM MGMT. (PDFM) Credit 2 + 2 = 3

Development of dairy industry in India, comparison of dairy farming in India with advanced centers, Livestock statistics, causes of low productivity of dairy animals. Types of dairy farming, Economic dairy farming, Starting a dairy farm, capital and land requirement, Dairy farm organization, Procurement of goods, opportunities in dairy farming, factors determining efficiency of dairy animals, Adaptation, Ventilation and lighting on dairy buildings, Principles of good milking, Personnel management.

APM-709 DAIRY FARM MANAGEMENT PRACTICES (DFMP) Credit 2 + 2 = 3
Breed selection and Breeding, Breeding policy, Management of dairy bull and training for A.1. Detection of heat in dairy animals, Pregnancy diagnosis, Care of dry cows, Care of cows at and after calving, Care of lactating animals, Raising dairy calves, Care and management of heifers, Maintenance of fertility in herd, Culling sterile cows, Supply of greens all year round, General management practices – judging, milking methods, sanitary milk production, herd recording. Evaluation of dairy in open market, Transportation.

V. Sc.-604 ANIMAL HEALTH AND HYGIENE (AHH) Credit 1 + 2 = 2 (D)
Basic herd health programme, Sanitation of herd, Dipping and shearing of animals. Diagnosis of diseases, Classifications of diseases, Signs of ill health and preventive measures. Principles of immunization and vaccination schedule for various farm animals. Important diseases of dairy animals, goat, sheep, pig and poultry, their etiology, symptoms, pathogenesis, treatment, prevention and cure.

- a) Mastitis and its control
- b) Prevention and control of F.M.D., R.P., Rabies' and brucellosis
- c) Prevention and cure of Coccidiosis, Ranikhet and Salmonellosis.

Euthanasia of animals – conditions and various drugs used for euthenizing the animals.
Anesthesia of animals – various sedatives and tranquilizers used in farm animals.

Comp-705 (Computer Orientation) Credit 2 + 2 = 3
MAS-715 (Statistics – II) Credit 2 + 2 = 3

AH – 704 BREEDING REPRODUCTION MANAGEMENT Credit 2 + 2 = 3
Functional morphology of male and female reproductive organs of farm animals. Heat detection methods associated problems and their management. Oestrus synchronization needs, methods and limitations. Artificial breeding and its economic importance. Post A.1. Management. Pregnancy development and diagnosis, Factors influencing reproductive efficiency in crossbred cattle and buffaloes. Management of dystokia, Prolaps and retained of placenta. Quality semen production, Processing and preservation of semen. Basic principles of inheritance. Concept of heritability, repeatability and selection. Important methods of selection and system of breeding in farm animals and birds.

AH – 720 MILK PRODUCTION MANAGEMENT Credit 2 + 2 = 3
Contribution of livestock, farm budgeting, cost of milk production, Pricing policy, storage of milk, maintenance of records on dairy farm, control of reproductive diseases, feeding practices. Developing practical economical rations, formulation of least cost ration, feeding regimes for dairy animals, Dairy Cattle Housing and layout of dairy farms, Technological development in milking barn and parlour, water supply, utilization of solid and liquid wastes. Biogas Technology, Scoring management, Economics of dairy farming and project formulation.

A.N.-719 LIVESTOCK AND POULTRY NUTRITION (LPN) Credit 2 + 2 = 3
Classification and role of nutrients. Digestion, absorption and metabolism of nutrients. Estimation of digestibility, coefficients, Nutrient requirements of animals for growth,

production and reproduction. Nutritional imbalances and anti-quality factors. Non-nutritive feed additives, methods/systems of feeding sheep, goats, pigs, cattle and poultry.

Practical: Identification and classification of feeding stuffs, Proximate analysis of feeds/fodders. Mixing of feeds. Formulation of rations for goats, sheep, cattle, buffaloes and poultry.

APM-823 GOAT AND SHEEP PRODUCTION

Credit 2 + 2 = 3

Present status and contribution of goat and sheep industry in India. Constraints in sheep and goat development programmes and suggestions to overcome. Breeds of goats and sheep, breeding management of goat and sheep, feeding of goat and sheep, management practices and housing. Health care management, sheep and goat and goat products, Milk chevon wool, mutton, skin etc. Wool vs. Hair grading and evaluation. Judging quality of chevon and mutton, Record maintenance on goat and sheep farm, Economics of goat and sheep farming.

APM-825 SWINE PRODUCTION MANAGEMENT

Credit 2 + 2 = 3

Present status and contribution of swine industry, reasons for poor growth of hog industry; Breeds and Breeding management of pigs, Feeding different categories of pigs, management practices and housing of pigs, maintenance of records, Health care management on pig farm, slaughter of pigs, Pork and pork products; curing and smoking of pork, Economics of pig farming and project formulation.

Practical: Judging of layers and broilers. Poultry farm equipments and their specifications. Layout plans for commercial poultry farms. Grading of birds for meat vaccination, deforming and debeaking. Disinfection of poultry houses. Analysis of farm records. Visits to commercial poultry farms and a dressing plant.

AN-827 NON-RUMINANT NUTRITION (NRN)

Credit 2 + 2 = 3

Development of digestive system. Nutrient requirements, feeding of poultry, starters, growers, layers; meat type-starters and finishers, creep ration, feeding of piglets, weaners, fatteners, breeding stock, Nutrition of rabbits, ducks and quail.

Practical: Feeding experiments and formulation of rations for different categories of birds and swine.

P.P.-822 POULTRY FARM MANAGEMENT

Credit 2 + 2 = 3

Development of poultry industry. Characteristics of a good poultry farm. Comparative performance of the available commercial stock requirements and procurement of poultry farm inputs. Labour requirement and its management. Principles and systems of poultry housing and lighting programmes in poultry houses. Poultry farm equipments. Environmental control of poultry houses. Feeding practices for egg type starters, growers and layers, broilers and breeders. Clean egg production. Management practices for prevention of diseases. Management of poultry farm waste. Control of rodents and pests. Prevention of egg quality. Poultry project formulation.