कृषि पशु पालन - (5)

The meeting of Board of Studies (BoS) of Department of Animal husbandry and Dairying was held on dated 21.05.2021 at 11.00 AM via online mode (ZOOM App) to consider and approve the Curricula & Syllabus developed as per New Education Policy (NEP) 2020.

Dr. Rajesh kumar pal Assistant Professor TD College Jaunpur(Convener) Dr. Manoj kumar TD College Jaunpur

Dr. Ramji gupta CSA Kanpur and Dr.Umesh shukla chitrkut MP were External Member. were attended the abovesaid meeting.

The BoS have unanimously approved the proposed syllabus for the Department of Animal husbandry and Dairying under B.Sc. (Hons.) Agriculture Programme and recommended that it may be implemented from the Academic Year 2021-22 onwards.

NEW SYLLABUS AS NEW EDUCATION POLICY
(NEP) 2020 (NEW AND RESTRUCTURED)

UNDER GRADUATE CURRICULA & SYLLABUS

B.Sc. (Hons.) Agriculture

Semester System as per ICAR V-Deans Committee Report

DEPARTMENT OF ANIMAL HUSBANDRY AND DAIRYING

Submitted by:

The Board of Studies (BoS),

Animal husbandry and Dairying

Veer Bahadur Singh Purvanchal University, Jaunpur (U.P.)

Minutes of Board of Studies (*BoS*) held on 21.05.2021

A meeting of Board of Studies *(BoS)* of Animal husbandry and Dariying was held on dated 21.05.2021 at 11.00 AM via online mode (ZOOM App).

The following members were present:

1. Dr Rajesh kumar pal Assistant Professor (Animal husbandry and Dairying) T D College, Jaunpur

2. Dr Manoj kumar Assistant Professor (Animal husbandry and Dairying) T D College, Jaunpur
3.Dr Ramji gupta Professor (Animal husbandry and Dairying) CSA Kanpur
4.Dr.Umesh shukla Assistant Professor (Animal husbandry and Dairying) Gramoday university chitrkut,satna,MP

Faculty of Agriculture Member

The abovesaid meeting of Board of Studies (BoS) of Animal husbandry and Dairying was organized to consider and approve the Curricula & Syllabus developed as per *New Education Policy (NEP) 2020* (available at https://uphed.gov.in/page/council/en/nep-2020) for the ***Department of*** Animal husbandry and Dairying under B.Sc. (Hons.) Agriculture Programme in compliance of letter संख्या-1065/सत्तर-3-2021-16(26)/2011, दिनांक 20.04.2021 and संख्या-1073/सत्तर-3-2021-8(20)/2020, दिनांक 30.04.2021. oped as per *New Education Policy (NEP) 2020* for the ***Department of*** Animal husbandry and Dairying under B.Sc. (Hons.) Agriculture Programme have unanimously approved and recommended to be implemented from the Academic Year 2021-22 onwards.

DEPARTMENT OF ANIMAL HUSBANDRY AND DAIRY SCIENCE

Course Code	Course Title	Credit Hours
AG-107	Introductory Animal husbandry	2(1+1)
AG-209	Livestock production & Management	3(2+1)
AG-311	Dairy Science	2(1+1)
AG-411	Poultry production and management	3(2+1)
AG-510	Principles of Food Science and Nutrition	2(1+1)
AG-609	Dairy Processing and Safety Issues	3(2+1)

ANIMAL HUSBANDRY AND DAIRY SCIENCE

1. Introductory Animal husbandry 2(1+1) AG-107

GENERAL : Importance of livestock in Agriculture and Economy. Dairying under specialized and mixed farming. Livestock and milk production statistics.

DAIRY CATTLE AND BUFFALOES MANAGEMENT : Cattle and buffalo Breeds. Breeding methods & systems, Care and Management of pregnant and milch cow, Raising of calves, Management of heifers and bulls. Maintenance of livestock records, Milking methods and principles, Clean milk production, Feeds and feeding, Conservation of fodder, Housing for dairy animals.

PIG MANAGEMENT : Importance, Important breeds, Raising of piglets up to age of slaughter, General aspects of breeding, Care of sow and boar.

SHEEP AND GOAT MANAGEMENT : Importance, Important breeds, Raising of kids and lambs, Breeding, Feeding of goats and sheep.

HEALTH MANAGEMENT : Common animal diseases of cattle, buffalo, goat, sheep and swine viz. Anthrax. BQ, HS, Brucellosis, Mastitis, Milk fever. Bloat. Swine fever and Enterotoximea, Vaccination schedule.

Practical

Study of external body parts, Study of phenotypic and physiological difference between cow and buffaloes. Estimation of body weight by measurements, Identification of animals. Castration, Dehorning, Estimation of cost of milk production, Problems on computation of ration, casting and throwing, Grooming, Scheme of fodder production round the year, Recording temperature, pulse rate and respiration rate of animals.

2. Livestock Production and Management 3 (2+1) AG-209

Theory

Animal breeding and artificial insemination:Animal breeding-concepts and their application, breed improvement. Aims of breeder, Mendelian rules and its importance in livestock improvement, Heredity and variation, Elementary idea of essential and accessory organs of male and femalere productive system in different farm animals, Mechanism of gametogenesis and oestrus in farm animals, Artificial Insemination (A.I.), their techniques and its importance in improvement of farm animals, Selection Methods, Sire indexing, cattle breeding problems in India and work so far done in this direction.

Animal feeding and fodder conservation: Proximate principles offeed and feeding. Nutrients and their functions. Feed ingredients for ration for livestock. Feed supplements and feed additives, conservation of fodder. Customized feeds. Feed
formulation and standardization. Elementary idea of digestive system of ruminant and non ruminant farm animals, Animal feeds & their classification, Evolution of feeding standards, Modern feeding standards, their merits and demerits and applicability under Indian conditions, Ration and its kind, principles of rationing, characteristics of ideal ration, food requirements for growth, reproduction, pregnancy, milk, work and wool production in farm animals, computation of ration.. Principles and methods of fodder preservation, Hay and Silage Making.

Dairy farm management and health care:Building, Location, Housing principles, space requirements for different species of livestock,various dairy farm buildings.
Animal Health & Hygiene:Health and diseases management policy for livestock. Symptoms of ill health principles of immunzition, first aid in farm animals. Sterility in farm animals simple obstetrics in farm animals such as abonormal pasturisation, Retention of placenta, prolapse of uterus, milk fever, tymphanitis, impaction of rumen. Elementary idea about poisoning in farm animals. General measure for prevention and control of infectious and contagious diseases, care of down calvers and newly born calf.

Practical

External body parts of cattle, buffalo, sheep, goat, swine . Handling and restrainingof livestock. Identification methods of farm animals. Visit to IDF and IPF to studybreeds of livestock and daily routine farm operations and farm records. Judging ofcattle, buffalo . Culling of livestock . Planning and layout of housing fordifferent types of livestock. Computation of rations for livestock. Formulation of concentrate mixtures. Clean milk production, milking methods.
Management of livestock and vaccination. Economics of cattle, buffalo, sheep, goat and swine production.

3. DAIRY SCIENCE 2(1+1) AG-311

GENERAL : Concept of Dairying, Dairying in India, Dairy development in different five year plans. Dairy production statistics. Cleaning and sanitization of dairy equipment.

Dairy cooperatives, Functioning of dairy cooperatives societies, Functioning of Arland Pattern, White revolution, Objectives and achievements of operation flood. Milk and its secretion, Transportation and milk distribution, pricing policy of milk. platform tests, Filtration. Straining and Clarification of milk. Standardization, Milk adulteration and its detection. Legal standards of milk. Factors affecting the quality and quantity of milk, Nutritive value of milk and milk product. Physico-chemical properties of milk.

Basic principles of refrigeration and cold storage of milk and milk product. Common adulterants of ghee, khoa and their detection.

Practical

1. Sampling of milk.
2. C.O.B. Test
3. M.B.R. Test
4. Sediment test.
5. Problems on Standardization.
6. Detection of adulterants viz. water, starch, sucrose, urea, detergent and refined oil 7. Problems on adulteration.
8. Hansa Test.
9. Detection of preservatives.
10. Alcohol test.
11. Acidity of milk.

4. Poultry production and management 3(2+1) AG-411

GENERAL : Importance of poultry industry in India, Poultry production and marketing statistics of eggs and chicken. Historical development in poultry birds potential. **BREEDING** : Male and female reproductive system of chicken, Breeds and strains of broilers and layers of chicken. duck and quails, General aspects of breeding for better egg production and body weight gain. Selection and culling, Artificial insemination.

GENERAL MANAGEMENT : Establishment of poultry farm. Housing and equipment, incubation and hatching of eggs, Broiler and layer management. Lighting schedule for poultry.

FEEDS AND FEEDING : Digestion, Digestive system of chicken. Feed ingredients, Availability of CP and ME in ingredients. Feed processing. Formulation of feed viz. Starter. Grower, Layer, Finisher and Breeder ration, FCR, CP ratio, Nutritional deficiency conditions. **HEALTH MANAGEMENT :** Vaccination schedule for poultry, Common poultry diseases, i.e. Ranikhet, Marex, Chicken pox, Gumboro, Infectious bronchitis and CRD. Control of internal and external parasites.

POULTRY PRODUCTS : Preservation and storage of eggs, Grading of eggs, AGMARK standard of egg. Egg powder, Slaughtering and processing of chicken, Marketing of poultry products.

Practical

Neat and clean diagram of hen showing external body parts. structure of egg, Formulation of ration viz. Broiler starter ration, Broiler finisher ration. Chick starter ration, Grower ration, Layer ration and Breeder ration. Vaccination schedule for broiler and layers. Debeaking, Candling of eggs. Dissection of bird fir showing internal body parts.

5. Principles of Food Science and Nutrition 2(1+1) AG-510

GENERAL :

Definition of food and food science. Composition of food, Foods of animal origin, Function, Classification, Requirement, Availability and source of Carbohydrate, Fat, Proteins Mineral,Vitamins and Water. Functions and Nutritional deficiency disease of minerals and vitamins. Flavours and colours used in food. Food microbiology with special reference to milk, Physio Chemical properties of milk.

Composition and processing of egg, meat, Milk chicken, feed additives, antibiotics, enzymes and hormones. Role of food microbiology in nutritions.

Practical

1. Sampling of milk.
2. Specific gravity of milk by lactometer.
3. Water quality test.
4. Study of Nutritional deficientic conditions.
5. Study of Nutritional disorders.
6. Quality parameters for egg, meat and chicken.

7. Fat test by Gerber's method.

8. T.S. & S.N.F. percentage by Richmond's scale and formula.

6. Dairy Processing and Safety Issues 3(2+1) AG-609

GENERAL : Definition of food, Constituents of foods : Water, Carbohydrate, Fat, Protein, Vitamins and Minerals with reference to milk, Detailed composition of milk and colostrum. **FOOD PROCESSING :** Pasteurization, Sterilization, Bactofugation, Uperization, Stassanization. U.H.T. pasteurization and Homogenization of milk. Cooling and chilling of milk, Toned, double toned and flaboured milk.

Manufacturing of common dairy product viz. Cream, Butter, Ghee, Dahi, Yoghart, Shrikhand & Ice-cream.

Manufacturing of Khoa, , Paneer, Chhena, Cheddar cheese and. Mozzarella cheese (Pizza cheese). **FOOD SAFETY** : Definition, Importance, Scope, Hazards and risks. Food safety management, HACCP, ISO Series, TQM-Concept and need for quality component of TQM. Basic water tests.

Practical

1. Demostraction of Cream separation.

2. Preparation of indigenous dairy products viz. Dahi. Chhena. Khoa, Paneer, Cream, Ghee, shrikhand.

3. Water quality analysis.

4. Problem on neutralization of milk and cream.

5.problem on over run.

6. Calculation of Ice cream mix.

--Rajesh Pal is inviting you to a scheduled Zoom meeting.

Topic: Rajesh Pal's Zoom Meeting
Time: May 21, 2021 11:00 AM India

Join Zoom Meeting
https://us04web.zoom.us/j/9719064579?pwd=cGpCdXZaYlhla1lOYVRnT05Vc25CUT09

Meeting ID: 971 906 4579
Passcode: MdLx25

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