

INSTITUTE	FACULTY OF AGRICULTURE
PROGRAM	BACHELOR OF SCIENCE (Hons.) AGRICULTURE
SEMESTER	5
COURSE TITLE	RUMINANT PRODUCTION AND MANAGEMENT
COURSE CODE	16AS0510
COURSE CREDITS	3

Objective:

- 1 To impart knowledge of rearing, breeding, in farm facilities, vaccinations for poultry management.
- 2 To gain knowledge about livestock production and Poultry management.

Course Outcomes: After completion of this course, student will be able to:

- 1 Students will be able to apply management and technology oriented to the ruminant animal industry based on the concept of animal welfare.
- 2 Students will be able to examine the implications of the development or implementation of science and technology that consider and apply humanities values in accordance with their expertise based on scientific principles, procedures, and ethics to produce excellent solutions and ideas.
- 3 Students will be able cooperate effectively and carry out a self-evaluation process towards the workgroup under their responsibility.
- 4 Students will be able to analyze and develop the potential of the ruminant animal industry.

Pre-requisite of course: Students will gain knowledge about ruminant production and their management.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
2	0	2	50	30	20	25	25

Contents : Unit	Topics	Contact Hours
1	1 Role of livestock in the national economy. Reproduction in farm animals(Ruminants)	2
2	2 Housing principles, space requirements for different species of livestock (Ruminants)	2
3	3 Management of calves, growing heifers, dry and pregnant animals and milch animals	3

Contents : Unit	Topics	Contact Hours
4	4 Management of sheep, goat, Important Indian and exotic breeds of cattle, buffalo, sheep, goat	2
5	5 Improvement of farm animals(Ruminants)	2
6	6 Digestion in ruminants, Classification of feed stuffs	2
7	7 Proximate principles of feed. Nutrients and their functions	2
8	8 Feed ingredients and ration for livestock, Feed supplements and feed additives.	2
9	9 Feeding of livestock, Introduction of livestock diseases	3
10	10 Prevention (including vaccination schedule) and control of important diseases of livestock. Preparation of milk products	4
Total Hours		24

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	1 External body parts of cattle, buffalo, sheep, goat	2
2	2 Handling and restraining of livestock	2
3	3 Identification methods of farm animals	2
4	4 Visit to IDF to study breeds of livestock and daily routine farm operations and farm records	2
5	5 Judging of cattle, buffalo, Culling of livestock	2
6	6 Planning and layout of housing for different types of livestock	2
7	7 Computation of rations for livestock	2
8	8 Formulation of concentrate mixtures	2
9	9 Clean milk production, milking methods	2

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
10	10 Economics of cattle, buffalo, sheep, goat. Sampling and testing of milk	2
Total Hours		20

Textbook :

- 1 NA, NA, NA, NA

References:

- 1 Text Book of Large Ruminant Production and Management (Cattle and Buffalo), Text Book of Large Ruminant Production and Management (Cattle and Buffalo), Bhabesh Chandra Das, Niranjana Panda, Jagminder books, 2021
- 2 Livestock Production Management, Livestock Production Management, Ghosh Nilotpar, PHI LEARNING PVT. LTD., 2019
- 3 Trends In Small Ruminant Production Perspectives & Prospects, Trends In Small Ruminant Production Perspectives & Prospects, A. Sahoo, S.K. Sankhyan, S.A. Karim Et. Al., Satish Serial publishing house, 2023

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking
25.00	25.00	20.00	10.00	10.00	10.00

Instructional Method:

- 1 The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board may also use any of tools such as demonstration, role play, quiz, brainstorming, MOOCs etc.
- 2 The internal evaluation will be done on the basis of continuous evaluation of students in the class-room.
- 3 Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory.
- 4 Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.