



University of Kerala

Discipline	ZOOLOGY				
Course Code	UK4SECZOO201				
Course Title	Livestock Management				
Type of Course	SEC				
Semester	IV				
Academic Level	200 - 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours/Week
	3	2hours	-	2 hours	4
Pre-requisites	Pass in Class XII				
Course Summary	This course provides a comprehensive understanding of livestock management, covering aspects from breeding and nutrition to disease control, funding opportunities, and business ventures in the livestock industry. It emphasizes breeds of cattle, poultry, sheep, and goats, along with major diseases and preventive measures. Students are guided on training centres, national research institutes, registration, insurance, and commercialization opportunities. Emerging trends such as farm tourism and start-ups in livestock management are also highlighted, providing a comprehensive overview for aspiring livestock managers. It equips learners with practical knowledge and skills necessary for successful livestock farming and management.				

Detailed Syllabus

Module	Unit	Content	30 hrs
I	Introduction to Livestock		2
	1.1	Scope of Livestock Industry; Livestock- Dairy and Poultry; Value added products of Live stock	2
II	Nutritional requirements		5
	2.1	Dietary needs for Dairy and Poultry: Carbohydrates, Fats, Protein, Minerals, Vitamins and Water.	5

		Permitted feed additives and Advanced Ration Formulations for dairy and poultry (Brief description).	
III	Maintenance of Livestock		8
	3.1	Selection of Livestock (High quality milk and meat breeds of Cattle and Broilers and Layers of Poultry).	1
	3.2	Brief description of various breeds of poultry Fowl: Indigenous (Aseel, and Kadaknath) and Exotic breeds -Asiatic (Brahma), English (Orpington), Mediterranean (White Leghorn) and American class (Rhode Island Red). Duck: Nageswari, Kuttanad breed and Indian runner Turkey: Broad breasted Bronze Quails: Japanese breed	2
	3.3	Brief description of various breeds of cattle: Cow: Indigenous (Vechur cow, Kasaragod dwarf and Red Sindhi: Exotic (Jersey and Brown Swiss) Buffalo: Murah and Jaffarbadi Sheep: Barbari and Deccani. Goat: Malabari and Jamunapari.	2
	3.4	Breeding, Rearing and Housing of Cattle and Poultry.	3
IV	Livestock Diseases and Management		10
	4.1	Major Diseases of Poultry: (Coccidiosis, Pullorum, Fowl pox) and Cattle (Anthrax, Tuberculosis, Foot and Mouth Disease): Symptoms and Preventive measures (Mention-Vaccination and deworming programmes).	5
	4.2	Training Centres: Kerala Livestock Development Board, Indo-Swiss Farm -Mattupetti, Live -stock Research Station- Palakkad, KVASU -Wayanad, College of Veterinary and Animal Sciences (CVAS) - Mannuthy, Department of Animal Husbandry and College of Agriculture - Vellayani Central Poultry Development Organization and Training Institute-Bangalore (Brief description).	3
	4.3	National Research Institutes: NDRI, CIRC, CIRG, NIVEDI and CARL (Brief description).	2
V	Livestock Support, Registration, and Trends		5
	5.1	Funding agencies: Kerala State Start-up Mission, Government Agencies, Banks, Co-operative Societies, NGOs, NRLM, Ksheerasagaram and "Adu-gramam" and 'A-Help' Programme (Brief description).	1
	5.2	Registration and Insurance: (Purpose and Benefits): Department of Animal Husbandry and Dairying Development- Govt. of Kerala, National Livestock Mission, National Gokul Mission (Brief description).	2
	5.3	Commercialization of Livestock Products: KEPCO and MPI (Brief description)	1

References

1. Aruna T. Kumar (2008). Handbook of Animal Husbandry, published by ICAR.
2. Banerji, G.C. A text book of Animal husbandry, 1998. Oxford & IBH.
3. ICAR. Handbook of Animal Husbandry, 2013. Indian Council of Agriculture Research Krishi Bhavan.
4. Malti, S.K, Gendley. M.K, Shahaji Phand (2021). Approaches for improving Live Stock Productivity through Nutrition and animal Health Management. Jointly published by SAU-DSVCKV, Durg C.G and MANAGE, Hyderabad.
5. Peter D. Constable, Kenneth W. Hincheliff, and Stanley H. Done (2016).
6. Veterinary Medicine: A Textbook of the Diseases of Cattle, Sheep, Pigs, Goats and Horses
7. Richard.O.Kellims and David. C. Church (2009). Livestock Feeds and Feeding (6th Edition).
8. Sasthry N.S.R and C.K. Thomas (2019). Live Stock Production Management, Kalyani Publishers, New Delhi.
9. Taylor, R. E and Field, T.G. (2004). Scientific Farm Animal Production: An introduction to Animal Science. Prentice-Hall.

Web Resources:

1. <https://www.agriinfo.in/>
2. <https://icar.org.in/>
3. <https://www.iva.org.in/>
4. <https://www.ivri.nic.in/>
5. <https://krishikosh.egranth.ac.in/>
6. <https://www.manage.gov.in/>
7. <https://www.nddb.coop/>
8. <https://www.ndri.res.in/>
9. <https://www.nianp.res.in/>
10. <http://www.veterinaryindia.net/>

Practicum (30 hrs)

Sl. No.	Topic
1.	Identification of Indigenous and Exotics breeds of Live stocks- Construct a chart showing their characteristic features (Cattle-6 numbers, Poultry- 6 numbers)
2.	Estimation of Casein from milk
3.	Analysis of quality of Milk- Methylene Blue Reductase test.
4.	Survey on the Challenges faced by poultry and dairy farmers. OR Visit to a Farm Tourism Centre and submit a detailed report.
5.	Visit to Poultry farm /Dairy Centres and Submit a report with Photos OR Visit to Institutes / Labs (Any one) OR

	Visit to a nearby Milk Co-operative Society, prepare a Quality register by using lactometer
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Course Outcomes

No.	Upon completion of the course the graduate will be able to	Cognitive Level	PSO addressed
CO1	Comprehend the scope and significance of the livestock industry and gain knowledge about value-added products derived from livestock and their economic importance.	U, R, An, Ap, E, C	PSO1
CO 2	Understand the essential nutrients required for optimal growth and health in dairy and poultry animals including carbohydrates, fats, proteins, minerals and vitamins and analyse the importance of feed additives and advanced ration formulations in different livestock species and stages.	U, R, An, Ap, E, C	PSO2
CO3	Understand and evaluate the selection criteria for high-quality milch and meat breeds of livestock, along with proper facilities, equipment, and housing requirements.	U, R, An, Ap, E, C	PSO2
CO4	Gain insights into funding opportunities, training programs, registration, insurance options, and commercialization avenues related to livestock farming and start-ups like farm tourism.	R, U, An, Ap, E, C	PSO7
CO5	Serve as animal husbandry compendium for young entrepreneurs.	R, U, An, Ap, C, E	PSO6

R-Remember, U-Understand, Ap-Apply, An-Analyse, E-Evaluate, C-Create

Name of the Course: Live Stock Management

Credits: 2:0:1 (Lecture: Tutorial: Practical)

CO No.	CO	PO/PS O	Cognitive Level	Knowledge Category	Lecture (L)/Tutorial (T)	Practical (P)
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1	Comprehend the scope and significance of the livestock industry and gain knowledge about value-added products derived from livestock and their economic importance.	PO1/ PSO1	U	F	L	-
2	Identify the essential nutrients required for optimal growth and health in dairy and poultry animals including carbohydrates, fats, proteins, minerals and vitamins and analyse the importance of feed additives and advanced ration formulations in different livestock species and stages.	PO2, PO6/ PSO2	U, An	F, C	L	-
3	Understand and evaluate the selection criteria for high-quality milch and meat breeds of livestock, along with proper facilities, equipment, and housing requirements.	PO2, PO6/ PSO2, PSO5	U, E	C, P	L	-P
4	Gain insights into funding opportunities, training programs, registration, insurance options, and commercialization avenues related to livestock farming and start-ups like farm tourism.	PO5, PO6, / PSO7	U, Ap	P	-	P
5	Serve as animal husbandry compendium for young entrepreneurs.	PO5, PO6/ PSO6	U, C	P	-	P

F-Factual, C- Conceptual, P-Procedural, M-Metacognitive

Mapping of COs with PSOs and POs

	PS O1	PS O2	PS O3	PS O4	PS O5	PS O6	PS O7	PSO 8	PO 1	PO2	PO3	PO 4	PO 5	P O6	P O7	P O8
CO 1	1	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
CO 2	-	1	-	-	-	-	-	-	-	1	-	-	-	2	-	-
CO 3	-	1	-	-	-	-	-	-	-	2	-	-	-	3	-	-
CO 4	-	-	-	-	2		1	-	-	-	-	-	3	3	-	-
CO 5	-	-	-	-		2	1	-	-	-	-	-	2	3	-	-

Correlation Levels:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

Assessment Rubrics:

Assignment/ Seminar topics

1. Genetic breeds of Dairy.
2. Photography charts of Poultry.
3. Diseases of Dairy/ Poultry.
4. Incidence and effects of Bird flu in Kuttanadu.
5. Make a Short documentary on Farm Tourism.
6. Submission of any two-value added by -products.

Continuous Comprehensive Assessment

1. Quiz/ Debate
2. Assignment
3. Group discussion

4. Submission of Report
5. Test

End Semester assessment

1. Multiple choice questions
2. Very short answer questions
3. Short answer questions
4. Practical Exam.

Mapping of COs to Assessment Rubrics:

	Internal Exam	Assignment	Project Evaluation	End Semester Examinations
CO 1	✓			✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4		✓		✓
CO 5				