



DEPARTMENT OF LIVESTOCK PRODUCTION MANAGEMENT

About Department

The Department of Livestock Production and Management has been established recently as a part of the newly established Veterinary College in Bhuj, Kutch District, with a vision to develop a center of excellence in livestock education, research, and extension services in the region. The department is being developed in alignment with the guidelines of MSVE-2016, with an initial focus on establishing the minimum essential infrastructure, procurement of modern instruments, and development of farm facilities to support UG teaching and practical training. Considering the unique agro-climatic conditions of the Kutch region, which include arid climate, high salinity, and sparse vegetation, the department aims to focus its research efforts on key areas such as indigenous breed improvement, optimization of feed and fodder resources, and sustainable livestock disease management. Special emphasis will be placed on developing low-cost feeding strategies using locally available resources and promoting climate-resilient livestock practices. Research will also target efficient water management techniques, improving reproductive performance of local breeds, and socio-economic studies aimed at enhancing the livelihood of farmers in this harsh environment. Through a blend of education, research, and extension activities, the department will contribute to sustainable livestock production and rural development in the Kutch region.

Faculty Details

Name	Dr. Rakesh J. Modi		
Designation	Associate Professor & Head		
Qualification	Ph.D. (LPM)		
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Email ID	rjmodi@kamdhenuuni.edu.in hodlpmbhuj@kamdhenuuni.edu.in		
Joining at KU	12/04/2008		
Professional Experience	17 years		
Job profile	Teaching, Research, Extension		
Exams cleared	ICAR-NET, CCC+ (SPIPA, Surat), Post Graduate Diploma in Animal Welfare (PGDAW)		
Publications	Research Papers: 62	Booklet:5	
	Book: 3	Leaflet: 6	
	Abstracts: 20	Review articles:5	
	Popular Articles: 21	Chapters in Books:5	
Awards/recognition	3		
Member in advisory committee of PG students	Major Advisor: 3 Minor advisor/member: 5		
Research Projects	➤ Departmental projects: AS PI-01; As Co-PI-3		
Competence building	1. Training programmes organized as Organizer/co-organizer: 12 2. Seminar/Symposium/Conference/Webinar		

	attended: 24
Professional Membership	Gujarat Veterinary Council (GVC)
	Veterinary Council of India (VCI)
	Indian Society of Animal production & Management (ISAPM)
	The Indian Society for Sheep and Goat Production and Utilization (ISSGPU)
	The Indian Journal of Veterinary Sciences & Biotechnology (IJVSBT)
	Vets Alumni Association Sardarkrushinagar (VAAS)

Name	Dr. Jigarkumar V. Patel		
Designation	Assistant Professor		
Qualification	Ph.D. (LPM)		
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Joining at KU	November- 2023		
Professional Experience	2 Years		
Job profile	Teaching, Research, Extension		
Exams cleared	ICAR-NET, CCC+ (SPIPA, Surat), Post Graduate Diploma in Animal Welfare (PGDAW)		
Publications	Research Papers: 10	Booklet:2	
	Book: 1	Leaflet: 3	
	Abstracts: 7	Review articles:2	
	Popular Articles: 12	Chapters in Books:1	
Awards/recognition	8		
Member in advisory committee of PG students	Major Advisor: 0 Minor advisor/member: 1		
Research Projects	➤ Departmental projects: AS PI-01; As Co-PI-2 Externally funded project: Co-PI, 01		
Competence building	1. Training programmes organized as Organizer/co-organizer : 08 2. Seminar/Symposium/Conference/Webinar attended: 24		
Professional Membership	Gujarat Veterinary Council (GVC)		
	Veterinary Council of India (VCI)		
	Indian Society of Animal production & Management (ISAPM)		
	The Indian Society for Sheep and Goat Production and Utilization (ISSGPU)		
	The Indian Journal of Veterinary Sciences & Biotechnology (IJVSBT)		
	Vets Alumni Association Sardarkrushinagar (VAAS)		

Name	Dr. Nitinkumar K. Thakkar		
Designation	Assistant Professor		
Qualification	Ph.D. (LPM)		
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Joining at KU	May- 2025		
Professional Experience	2 Years		
Job profile	Teaching, Research, Extension		
Exams cleared	ICAR-NET		
Publications	Research Papers: 08	Booklet: 01	
	Book: 00	Leaflet: 02	
	Abstracts: 09	Review articles: 02	
	Popular Articles: 14	Chapters in Books: 00	
Awards/recognition	05		
Competence building	1. Training programmes organized as Organizer/co-organizer : -- 2. Seminar/Symposium/Conference/Webinar attended: 13		
Professional Membership	Gujarat Veterinary Council (GVC)		
	Vets Alumni Association Sardarkrushinagar (VAAS)		
	Indian Society of Animal production & Management (ISAPM)		
	Vigyan Gurjari, Vijnana Bharati- Gujarat Unit, Memb. No.: LM 918		

Name	Dr. K. A. Patel	
Designation	Assistant Professor	
Email	ketanpatel@kamdhenuuni.edu.in	
Phone No.	9974177486	
Joining Date	31-05-2025	
Qualification	M.V.Sc. (LPM)	
Experience	4 Months	

UG Academics

UG Course (As per VCI MSVE 2016 course curriculum)

Sr. No.	Course offered in Third Professional Year	Credits Hours
1	Livestock Production Management	4+2

UG Syllabus – Third Professional year

Theory

Unit	Contents
Unit 1	General Livestock Management Demographic distribution of livestock and role in Indian economy. Problems and prospects of livestock industry in India. Common animal husbandry terms. (glossary) Body conformation and identification. Transportation of livestock and wild or zoo animals. Common farm management practices including disinfection, isolation, quarantine and disposal of carcass. Introduction to

	methods of drug administration. Common vices of animals (Cattle, Buffalo, Sheep, Goat,), their prevention and care. Livestock production systems. Animal holding and land holding patterns in different agro-climatic zones. Organic livestock production. Judging and BCS for body parts of livestock. Preparation of animals for show. Culling of animals. Selection and purchase of livestock.
Unit 2	Fodder Production and Conservation Importance of grasslands and fodder in livestock production. Agronomical Practices for fodder production. Important leguminous and non-leguminous fodders in different seasons. Soil and Water conservation and drainage of water for fodder production. Fodder production for small livestock units. Structures for storage of feeds and fodders. Scarcity fodders and preservation of green fodder. Recycling of animal washings and wastes in fodders production and use of recycle waste.
Unit 3	Livestock Production Management-Ruminants Housing systems, layout and design of different buildings for animals. Selection of site. General principles affecting the design and construction of building for housing for various livestock species. Arrangements of the building with special reference to Indian conditions. Utilization of local materials. Building materials used for construction of wall, roof and floor of animal houses, their characteristics, merits and demerits. Breeds of cattle and buffalo and descriptions of important breeds. Economic traits of cattle and buffaloes. General management and feeding practices of calves, heifers, pregnant, lactating and dry animals, bulls and working animals. Draught ability of cattle and buffaloes. Raising of buffalo males for meat production. Routine animal farm operations and labour management. Animal farm accounts and records. Methods of milking and precautions. Factors affecting quality and quantity of milk production. Clean milk production. Breeds of sheep and goat and their descriptions. Important economic traits for meat, milk and fibre. General management and feeding practices during different stages of growth, development and production (milk, meat and wool). Breeding schedule and management of ram and buck. Weaning and fattening of lambs and kids.
Unit 4	Zoo Animals Production Management Taxonomy of important wild zoo animals. Status and conservation practices of wild life in India. Basic principles of habitat and housing of various classes of wild zoo animals. Size and space requirement (dimension) of cubicles, enclosures of important wild zoo animals. Management of livestock in fringe areas, in and surrounding the breeding areas. Feeding habits, feeds and feeding schedules of captive animals. Restraining, capture, handling, physical examination of captive animals. Classification of zoos, management of sanctuaries, national parks etc. Acts and Rules related to captive animals. National and international organization and institutions interlinked to captive animals role and functioning.
Unit 5	Animal Welfare Definition of animal welfare and ethics. Human and animal welfare in relation to ecosystem and environmental factors. Role of veterinarians in animal welfare. Animal welfare organizations, Animal Welfare Board of India - their role, functions and current status. Rules, regulations, laws on animal welfare. Prevention of Cruelty to Animals (PCA) Act, 1960 {59 of 1960). Role and function of Committee for the Purpose of Controlling and Supervising Experiments in Animals (CPCSEA). Protection of wild life in nature and captivity. Protection and welfare of performing animals. Welfare of animals during transportation. Animal welfare in commercial livestock farming practices. Protection and welfare of working animals. Pet and companion animal welfare. Animal welfare during natural calamities and disaster management. Legal duties of veterinarians, Common offences against animals and laws related to these offences. Provincial and Central Acts relating to animals. Laws relating to offences affecting Public Health. Livestock Importation Act Evidence, liability and insurance. Code of Conduct and Ethics for veterinarians - the Regulations made under the Act.
Unit 6	Poultry Production Management Indian poultry industry – Brief outline of the different segments – poultry statistics. Classification of poultry with respect to production characters, age and standards. Production characters of other avian species. Description of indigenous fowls and their value in rural farming. Specific strains developed for rural poultry production; their acceptability and

	importance in rural eco-system Brooding management – Types of brooders – preparation of shed – Importance of environmental factors. Housing – Types of poultry houses – space requirements. Recent advances in housing systems and rearing systems. Scavenging system of management – Low input technology – Backyard and semi-intensive units; their management and economic achievements. Deep litter management – control of litter-borne diseases and recycling of litter. Cage management –Different types; Advantages and disadvantages. Management of growers and layers. Management of broilers and breeders. Stress management. Feeding management– Classification of nutrients – Nutrient requirements and feed formulations. Feeding systems–Feed restrictions – phase feeding – Additives and supplements. Water management. Breeding systems and methods of mating. Selection and culling. Breeding for specific characters and for hybrid chicken production. Poultry judging. Egg structure – Physical and chemical composition. Bio-security and principles of disease prevention management. Health care for common poultry diseases – vaccination. General principles of poultry medication.
Unit 7	Diversified Poultry Production and Hatchery Management Principles of incubation and hatchery management practices. Factors affecting fertility and hatchability, selection and care of hatching eggs and hatchery hygiene. Candling, sexing, grading, packing and disposal of hatchery waste. Economics of hatchery business – Troubleshooting hatchery failures–Computer applications in hatchery management. Poultry waste management, pollution and environmental issues. Organic and hill farming. Mixed or integrated poultry farming Vertical & horizontal integration in commercial poultry production – Contract farming. Export or import of poultry produce and marketing. Management of ducks, geese, turkeys, Japanese quails, guinea fowls etc.
Unit 8	Laboratory Or Rabbit Or Pet Animal Production Management Importance and selection of laboratory animal, care and housing standards of mice, rats, hamster and guinea pigs. General considerations on feeding and breeding of laboratory animals. Concept of production of specific pathogen free and germ free laboratory animals. Scope of rabbit farming in the country, breeds and their distributions in India. Limitation of rabbit animal production, Selection, care and management of breeding stock for commercial purpose. Identification, care and management of kindling animals. Care of new born, growing stock. Breeding and selection techniques for optimal production of rabbit. Feeds and feeding for rabbit production. Hygienic care and Housing for rabbit production. Disposal, utilization and recycling of waste etc. Preparing projects for micro (Backyard), mini and major rabbit farms. Important breeds of dogs, cats and pet birds. Feeding of dogs, cats and pet birds. Dog show: preparation for show, kennel clubs, important characteristics for judgment. Utility of dogs- guarding, defense, patrolling, riot control, scouting, espionage, mine detection, tracking, guiding, hunting, races, retrieving rescue and other uses.
Unit 9	Swine Or Equine Or Camel, Yak And Mithun Production Management Introduction and scope of swine farming in the country. Demography of swine population. Selection and breeding techniques in swine. Important breeds (exotic and indigenous) & their characteristics. Housing and feeding of swine. Management of different categories of swine for optimal production: breeding and pregnant sows; sows at farrowing and after farrowing: pig-lets, growing stock, lactating sows, feedlot stock. Equine population of India. Horses, donkeys and mules and their utility. Colors and markings. Identification of breeds of horses. Dentition and ageing of horses. Care and routine management of equines including grooming, saddling and exercise. Stable and its management. Vices of horses. Foot care and shoeing care. Feeding routine for horse, donkeys and mules. Care of stallion. Mating of horses, brood mare and its care. Foaling and care of new born. Breeding mules. Care of race horses and preparing horses for show. Doping and its detection. Colic and its prevention. Common breeds of camel in India and their utility, peculiarities in camel. Feeding schedule of camel, rutting symptoms in camel, Vices of camel. Care of breeding in camel, pregnancy and parturition of camel. Population statistics and utility, peculiarities of yak. Feeding and breeding of Mithun or Yaks. Yak × cattle crossing, hybrids from Mithun or Yaks and their adaptation to high altitude, milk composition of Mithun or Yaks.

Practical

Unit	Contents
Unit 1	General Livestock Management General introduction of the Institute animal farm. Identification of common tools used on animal farm. Familiarization with body points of animals. Methods of identification (marking, tattooing, branding, tagging and electronic chip under pre emptive analgesia). Use of rope for knot and halter making. Dentition and ageing of animals. Preparation of animals for show and judging. Selection and culling of animals. Preparation of project proposal
Unit 2	Fodder Production and Conservation Visit to the fodder farm. Familiarization with the various types of fodders in the state and India. Familiarization with various fertilizers and manures. Collection, preservation and storage of feed and fodder; Damages or loss during transfer and storage; methods to prevent them. Cost of calculations of fodder production. Livestock waste utilization and recycling.
Unit 3	Livestock Production Management-Ruminants Layout plans for different livestock houses. Visit to different animal farms and Identification of various breeds of cattle, buffalo, sheep and Goat. Humane handling and restraining of cattle, buffalo, sheep and Goat. Clipping, shearing, dipping, spraying and spotting sick animals. Determination of body weight using different measurements. Familiarization with routine cattle, buffalo, sheep and goat farm operations. Milking of dairy animals. Shearing of sheep. Training of breeding males. Detection of heat. Identification and care of pregnant animals, care of neonatal and young stock. Economics of dairy, sheep or goat farm.
Unit 4	Zoo Animals Production Management Visit to nearby wildlife sanctuary, captive animals centres to study care and management of these animals. To study housing of captive animals. To study feeds and feeding schedule of captive animals. Hygienic preparation, preservation and storage of feeds of captive animals. Familiarization about restraining, handling and physical examination of captive Animals.
Unit 5	Poultry Production Management Common breeds of poultry, different classes, Indian chickens and other avian species breeds. Digestive and respiratory system of chicken. Male and female reproductive system–Quality changes in egg during storage. Economic traits of broilers. Economic traits of egg-type chicken and breeders. AI in poultry. Housing and design of a poultry farm. Poultry farm equipment and their classification. Brooding arrangement in broiler farms. Poultry feed ingredients and its quality assessment. Poultry feed preparations. Calculation of different economic indices of broiler farm. Calculation of economic indices of layer farm. Fundamentals in poultry Post-mortem examination for sample collection. Collection and dispatch of samples for PM examination. Management during Summer, Winter and Rainy season. Automization in poultry farms (EC house).
Unit 6	Diversified Poultry Production and Hatchery Management Hatchery layout and design. Project report for establishing a broiler farm. Project report for establishing a layer farm. Project report for establishing a breeder farm. Visit to commercial poultry farms or hatchery or feed mill. Visit to farms of other avian species.
Unit 7	Laboratory Or Rabbit Or Pet Animal Production Management Identification of body parts and handling, weighing, sexing and weaning of laboratory animals. Marking for identification of laboratory animals for purpose of their individual recording. Computation, feeding schedule of balanced diet for high breeding efficiency of laboratory animals. Maintenance of breeding records of laboratory animals. Prophylactic measures against common disease of laboratory animals. Hygienic care and control of parasites. Shearing of rabbit. Feeding and Housing requirement and equipment for rabbit. Projects report for establishing of rabbit farm. Handling and restraining of dog, cat and pet bird and equipment for pet animals and birds. Brushing or grooming and bathing of dogs and cats. Nail and tooth care, clipping of hairs for show purpose. Care of pups, kitten and weaning.
Unit 8	Swine Or Equine Or Camel, Yak And Mithun Production Management Handling, restraining of swine, equines, camel. Identification of pregnant animals, care during

	pregnancy, isolation and care of farrowing sows and piglets. Preparation of swine, equine for show and judging, Economics of pig. Routine inspection, tooth care and vaccination schedule. Horse riding: walking, trotting, cantering and galloping. Layout plans for sty, stables
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Syllabus Distribution for Annual Board Examination:

Examination	PAPERS	UNITS	MAXIMUM MARKS	WEIGHTAGE
Internal Assessment	First	30 % (Unit 1, 2 and 3)	40	10
	Second	60 % (Unit 4, 5 and 6)	40	10
	Third	90 % (Unit 7, 8 and 9)	40	10
Annual Board	THEORY			
	Paper-I	Unit 1,2,3 4 and 5	100	20
	Paper-II	Unit 6,7 ,8 and 9	100	20
	PRACTICAL			
	Paper-I	Unit 1,2,3 and 4	60	20
	Paper – II	Unit 5, 6,7 and 8	60	20

PG Academics

To be started in next academic year (2026-27)

PG Courses

Sr. No.	Code	Course title	Credits
1.	LPM 601	Cattle and buffalo production and management	2+1
2.	LPM 602	Sheep and goat production and management	2+1
3.	LPM 603	Swine production and management	1+1
4.	LPM 604	Climatology and Livestock Production	1+1
5.	LPM605	Behavior and Welfare of Farm Animals	1+1
6.	LPM 606	Equine production management	1+1
7.	LPM 607	Companion Animal Production Management	1+1
8.	LPM 608	Farm Hygiene and Waste Management	1+1
9.	LPM 609	Integrated livestock farming system	1+1
10.	LPM 610	Management and Conservation of Wild and Zoo Animals	1+1
11.	LPM 611	Laboratory Animal Production Management	1+1
12.	LPM 612	Livestock business management	1+1
13.	LPM 613	Livestock Farm Machinery Management	0+2
14.	LPM 614	Poultry Farm and Hatchery Management	1+1
15.	LPM 615	Regional Animal Production Management	1+1
16.	LPM 691	Seminar	1+0
17.	LPM 699	Research	30

Ph. D. Courses

Sr. No.	Code	Name of Course	Credits
1.	LPM 701	Recent Development in Large Ruminants Production Management	2+1
2.	LPM 702	Recent Development in Small Ruminants Production Management	2+1

3.	LPM 703	Recent Development in Swine production and management	1+1
4.	LPM 704	Livestock and Environment	1+0
5.	LPM 705	Organic Livestock Production	1+0
6.	LPM 706	Recent Development in Welfare of Farm Animals	1+0
7.	LPM 707	Entrepreneurship in Livestock Production	1+1
8.	LPM 708	Precision Livestock Farming	1+1
9.	LPM 709	Recent Development in Poultry Production Management	2+1
10.	LPM 791	Seminar -I	1+0
11.	LPM 792	Seminar -II	1+0
12.	LPM 799	Research	75

PG Examination Patterns

Sr. No.	Examination	Theory	Practical
1.	Self-study (Assignment/ Presentation)	20	-
2.	Internal tests:- First Test Mid Term Test	10 20	- 50
3.	Semester End Examination	50	50
Total Marks		100	100

Research Areas of the Department

• Effect of water restriction on Sheep and Goat
• Effect of different feeding practices on growth performance of Sheep and Goat
• Effect of different floor and housing facility on behaviour & growth performance of Sheep and Goat
• Effect of different feeds on performance of different livestock species
• Effect of newer feeds (<i>Moringa oleifera</i> , DDGS) and new feeding technologies and practices on growth performance of calves, lambs and kids.
• Muzzle Printometry in dairy cattle.
• Effect of water restriction on Sheep and Goat

Advanced Instrumentation Facilities

Sr. No.	Name of Instruments
1.	As per MSVE-2016, we have purchased the instruments mentioned in the list, and the procurement process for some additional instruments will be completed within this financial year

Contact details

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