

नयाँ संरचित

**NEW AND RESTRUCTURED  
POST GRADUATE CURRICULA AND SYLLABUS**

for

**Animal Husbandry and Dairying**

**Dr. Rammanohar Lohia Avadh University, Ayodhya (U.P.)**

**M.Sc. (Ag.) Animal Husbandry and Dairying**

**Fourth Semester**

(Semester System as per ICAR 5<sup>th</sup> Dean Committee Recommendations)

**w.e.f. 2020 - 2021**

*Submitted by :*

**Dean & Conveners, Board of Studies**

**Faculty of Agriculture**

**Dr. Rammanohar Lohia Avadh University, Ayodhya (U.P.)**

## M.Sc. (Ag.) Animal Husbandry & Dairying

First Semester			Evaluation Marks			
Code No.	Course Title	Credit Hours	Mid Term	End Term	Practical	Total
AHD. - 501	Production & Management of Dairy Animals	3(2+1)	20	50	30	100
AHD. - 502	Poultry Production & Management	3(2+1)	20	50	30	100
AHD. - 503	Market Milk Technology	3(2+1)	20	50	30	100
AS. - 501	Agricultural Statistics	3(2+1)	20	50	30	100
	<b>Total Credit</b>	12				
Second Semester			Evaluation Marks			
Code No.	Course Title	Credit Hours	Mid Term	End Term	Practical	Total
AHD. - 504	Fundamentals of Animal Nutrition	3(2+1)	20	50	30	100
AHD. - 505	Reproductive Physiology of Farm Animals	3(2+1)	20	50	30	100
AHD. - 506	Dairy Processing and Plant Management	3(2+1)	20	50	30	100
AHD. - 507	Feed Evaluation Techniques	3(2+1)	20	50	30	100
	<b>Total Credit</b>	12				
Third Semester			Evaluation Marks			
Code No.	Course Title	Credit Hours	Mid Term	End Term	Practical	Total
AHD. - 508	Microbiology of Milk & Milk Products	3(2+1)	20	50	30	100
AHD. - 509	Dairy Technology	3(2+1)	20	50	30	100
AHD. - 510	Fundamentals of Animal Breeding & Genetics	3(2+1)	20	50	30	100
CA. - 502	Computer Application in Agriculture	2(1+1)	20	50	30	100
PGS - 501	Library and Information Services (Non-Gradual Satisfactory/Unsatisfactory 50% Marks required for satisfactory Grade)	1(0+1)			100	100
	<b>Total Credit</b>	12				
Forth Semester			Evaluation Marks			
Code No.	Course Title	Credit Hours	Mid Term	End Term	Practical	Total
AHD. - 591	Master Seminar	1(0+1)				100
AHD. - 599	Master Research (Thesis)	20	Satisfactory/Unsatisfactory			
<b>OR</b>						
<b>Special Papers - (20 - Credit) Satisfactory/Unsatisfactory</b>						
AHD. - 511	Non-Ruminant Nutrition	4(3+1)	20	50	30	100
AHD. - 512	Dairy Farm Management	4(3+1)	20	50	30	100
AHD. - 513	Ruminant Nutrition	4(3+1)	20	50	30	100
AHD. - 514	Technology of Indian Dairy Products	4(3+1)	20	50	30	100
AHD. - 515	Production and Management of Sheep, Goat, Swine & Poultry	4(3+1)	20	50	30	100
	<b>Total Credit</b>	21				
	<b>Total Credit Hours</b>	57				

## M.Sc. (Ag.) Animal Husbandry & Dairying

### IVth Semester Curricula & Syllabus

S. No.	Course Code	Title of the Course	Credit
1	AHD. - 591	Master Seminar	1(0+1)
2	AHD. - 599	Master Research (Thesis)	20
OR			
Five Special Papers - (20 - Credit) Satisfactory/Unsatisfactory			
1	AHD. - 511	Non-Ruminant Nutrition	4(3+1)
2	AHD. - 512	Dairy Farm Management	4(3+1)
3	AHD. - 513	Ruminant Nutrition	4(3+1)
4	AHD. - 514	Technology of Indian Dairy Products	4(3+1)
5	AHD. - 515	Production and Management of Sheep, Goat, Swine & Poultry	4(3+1)
<b>Total Credit Hours</b>			<b>21</b>

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Dr. (S.P. Singh)

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## Forth Semester

### AHD - 511 NON-RUMINANT NUTRITION

4(3+1)

#### **Theory**

The role of non-ruminant animals, study of their digestive tract. Monogastric animal nutrition in a historical perspective, carbohydrate, lipid and protein nutrition. Translation of feeding standards into meal mixture. Physiological roles, deficiency symptoms and requirements of vitamins and minerals. Mode of action and effect of feed additives on animal performance.

Feeding standards, methods of measuring the nutrient needs and efficiency of feed utilization.

#### **Practical**

- Relevant to concerned theory topics.

### AHD - 512 DAIRY FARM MANAGEMENT

4(3+1)

Place of dairy farming in the national economy, consideration in establishment of a dairy farm enterprise, types and arrangements of dairy buildings, dairy housing and equipments.

Care and management of calves, heifers, lactating, dry and pregnant cows and buffaloes, dairy bulls and bullocks; forage production, feeding guides for various categories of dairy animals, tips of breeding efficiency management, herd health management, dairy record management and marketing by dairy animals and products.

#### **Practical**

- Relevant to concerned theory topics.

### AHD - 513 RUMINANT NUTRITION

4(3+1)

#### **Theory**

The role of ruminant animals, study of their digestive tract. Its development, rumen environment, ruminal movements, role of microbes and manipulation of rumen eco-system. Ingestion of food, passage of digestion through GIT, theories of regulation of feed intake digestion and metabolism of carbohydrates, nitrogenous compounds and lipids. Synthesis of lactose, glycerol, long chain fatty acids and non-essential amino-acids, composition of protein and its biological value. Study of problems associated with non-protein nitrogenous substances utilization. Water metabolism and requirements.

Energy nutrition of rumen micro-organisms, manipulation of rumen fermentation, energy metabolism of host animal, host animal control of microbial fermentation and utilization of the energy of absorbed nutrients. Vitamin and mineral nutrition, function, metabolism, deficiency symptoms and their sources, inter-relationships between vitamins and minerals.

#### **Practical**

- Relevant to concerned theory topics.

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**Theory**

Present trend of production of Indian dairy products. Comparison with Western dairy products. Concentrated products: definition, composition and method of preparation of khoa and rabri; Uses and keeping quality of khoa. Ghee composition, indigenous and improved practices of ghee making, grading of ghee under AG MARK. Coagulated milk products: definition, composition and methods of manufacture of chhena and paneer. Fermented milk products : definition, composition and method of preparation of Dahi, Srikhand, Yoghurt.

**Practical**

- Relevant to concerned theory topics.

**AHD - 515 PRODUCTION AND MANAGEMENT OF SHEEP, GOAT, SWINE & POULTRY** 4(3+1)

**Theory**

**Sheep & Goat** - important breeds of sheep & goat and their traits of economic importance, reproduction and breeding-system management in sheep & goat. Nutrients requirement and feeding practice for economic raising of sheep & goat. Routine operation, housing, care of kid & lamb, scope at intensive milk, meat, mutton & wool production. Low cost shalter management of sheep & goat. Health management package.

**Swine** - Piggery development programme in India. Characteristic of swine and their production. Breeds reproduction & their problems management, housing, nutrition, nutrients requirement and feeding of swine. Care & management of pregnant sow and unweaned piglet, future of pig production programme in India with special reference to weaker section of society.

**Poultry** - The digestive and reproductive system of fowl. Formation of eggs. Structure and nutritive value of egg. Egg producing carrier of a laying hen and factors affecting egg size. Abnormal eggs. Hatching of eggs. Management of incubator & light. Breeding & rearing management of chick in brooders. Housing equipments housing requirements. Housing system of poultry. Feeds. Method of feeding. Computation & mixing of ration. Use of agro-industrial by products in poultry feeding. Management of replacement pullets. Culling of laying flocks. Maintenance of farms records. Health & sanitation problem & their control. Stratege to promote back yard poultry farming commercial.

**Practical**

- Relevant to concerned theory topics.

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