

Curriculum For AI Technician Training

A. CLASS ROOM TRAINING (30 Days ULDB, Training Center, Pashulok, Rishikesh)

Topics to be Covered
1. Different Breeds of Cows and Buffaloes and Their Production and Reproduction Parameters.
2. Conservation and Development of Indigenous Breeds Through Selective Breeding.
3. Benefits of Crossbreeding and Genetic Improvement of Dairy Animals.
4. State Breeding Policies and Their Enforcement Specific to The State to Which Trainee Batch belong to.
5. Introduction to AI, History of AI, NS Vs AI, Advantages and Limitations.
6. External and Internal Body Parts of A Dairy Animal and their Function.
7. Male Reproductive Organs & Their Functions
8. Semen, Its Collection, Evaluation, Processing, Preservation - Different Types of Semen Packing, - Structure of Mini and Medium Straws - Information Printed on Straw and Its Importance - Breed Wise Straw Colour Codes.
9. Female Reproductive Organs & their Functions
10. Estrus Cycle & Heat : - Internal and External Symptoms at Different Stages of Heat Cycle - Correct Time of Insemination - Determinants of First AI In Heifers - Methods of Heat Detection In Cattle and Buffaloes.
11. Normal Reproductive Cycle.
12. Puberty, Maturity, Breeding, Fertilization, Implantation, Gestation, Calving.
13. Ideal Calving Cycle - Service Period, Dry Period and Inter-Calving Period.
14. Process of Insemination: I. Collecting History ii. Standard Operating Procedure (SOP)
15. Importance of: I. Proper Method of Semen Withdrawal From Container ii. Proper Thawing iii. Proper Preparation of AI Gun iv. Proper Site of Semen Deposition. V. Care of Animal During & After Insemination .
16. AI Equipment and Accessories & Their Care.
17. Liquid Nitrogen Handling: I. Structure of LN Container II. Handling & Care of LN Container III. Precaution In Handling of LN IV. Different Models of LN Containers V. Importance of Maintaining Cold Chain and LN Refilling Schedule. VI. Proper LN Level In Container & Its Checking. Evaporation Rates and Refilling Interval of Commonly Used Containers In The Field Under Normal Working Conditions. VII. LN Conservation Measures
18. Pregnancy Diagnosis
19. Methods of Calculating Conception Rates and Factors Affecting Conception Rates
20. Method of Drying of Animals on Completion of 7th Month Pregnancy.
21. Common Reproductive Disorders/ Diseases, Repeat Breeding, Causes of Abortion, Etc.
22. Measures to Obtain Maximum Fertility.
23. Ear Tagging , Importance of Record Keeping.
24. Recording Formats and Submission of Records Into the INAPH Application (Offline & Online Versions) Through. PDA / Net book /Desktop (Training in Data Entry with Dummy Data on Test Server), Different Flash Messages, Saving the Data, Synchronization of Data with the Server and using action Reports. In Day to Day Work.
25. Starting an AI Centre.
26. Method of Non-Surgical Castration.
27. Care and Management of New Born Calf And Heifers Till It Becomes Pregnant At Farmers Perception.
28. Care and Management of Dry Pregnant Animals.
29. Care and Management of Animals Before and After Calving, Precautions At The Time of Calving and Use of

Naval Kit for Disinfection of Naval Cord.
30. Importance of Animal Housing and General Management in Getting Full Expression of Genetic Capability.
31. Importance of Bio-Security Measures to be Adopted During AI.
32. Economically Important Diseases and Their Prevention Through Timely Vaccination; Various Available Vaccines; Vaccination Schedules; Importance of Maintaining Cold Chain.
33. Basic Aspects of Nutrition and Concept of Ration Balancing.
34. Importance of Proper Nutrition Including Feeding of Vitamins and Mineral Mixtures and Deworming In Fertility Management With Emphasis on The Adverse Impact of Macro and Micronutrients Deficiencies on Fertility Status/Reproductive Health of Animal.
35. Fodder - Varieties, Cultivation Practices; Preservation (Hay & Silage Preparation) and Enrichment of Straw. Densification And Enrichment of Fodder.
36. Taking AI as A Self Employed Enterprise.
37. Importance Of Animal Insurance; Various Insurance Schemes
38. Various Government Schemes In the Area of Animal Breeding
39. Role of Information and Communication Technology (ICT) In Artificial Insemination Programme for Bovines.
40. Different Terminology Used In Animal Breeding Programs.
41. ULDB Mobile App :- Procedure of Downloading Form ULDB Website, Method of Entry of Individual A.I., Monthly Progress Reports Etc.

B. CASE STUDIES (During Class Room Training)

Topics to be Covered	
1. Advantages of AI over natural service.	
2. Advantages of following SOP for AIT-better conception rate and its impact over a period of five years.	
3. Record keeping and using INAPH.	
4. Extension activities related to animal husbandry (activities on Breeding, Health and Nutrition).	
5. A farmer coming to AI Worker with an animal for insemination with following history of oestrus: a) 3rd day after heat, b) On the day of full moon c) Just on the time of starting of heat d) Animal with Pustular /Watery/Bloody Vaginal Discharge. e) Gestational heat f) Post partum heat after one month of calving. g) Heifer in heat with lower body weight.	
6. Care of young calves till its pregnancy.	
7. Effect/impact of good AI technician Vs inefficient AI technician.	
8. Superstitious believes Vs Scientific method of breeding.	

C. PRACTICAL TRAINING (15 Days Animal Breeding Farm Kalsi)

Topics to be Covered	
1. Identification of different female reproductive organs on morbid genitalia.	
2. Palpation of female genitalia in a Phantom box and passing of AI gun .	
3. Palpation of female genitalia in live animal .	
4. Passing of AI gun in live animals .	
4. Demonstration of - proper method for withdrawal of straw from containers - proper thawing procedure - proper preparation of gun - correct site of semen deposition .	
5. Pregnancy diagnosis at 90 days & beyond.	
6. Ear tagging .	
7. Structure of LN container – different models – handling & care – checking LN level.	
8. AI equipment & accessories – handling & care including sterilisation .	
9. Record keeping and INAPH.	

Cover during the
Semen Station / A.I
Centre Visit

D. STUDY VISITS :

Study visits to following.

- AI Centre of Animal Husbandry Department Uttarakhad.
- Dairy Farm Pashulok / Kalsi.
- Semen Station Shyampur Rishikesh.
- Fodder farm / Demonstration farms Kalsi.

E. PRACTICAL TRAINING IN THE FIELD: (74 Days)

- 1st :- 25 Days in Artificial Insemination Centre of Animal Husbandry Department.
- 2nd :- 25 Days in Artificial Insemination Centre of Animal Husbandry Department.
- 3rd :- 24 Days in Artificial Insemination Centre of Animal Husbandry Department.

F. TESTS DURING TRAINING

- Class Room Training:
- Fortnightly written test on topics covered.
- Final written test at the end.
- Final practical test for the evaluation the skills learnt. (During Practical Training)

G. DURATION OF TRAINING

AI basic training:-

- Class room training along with Practical training, Case study, Study visit : 46 days (Including Final Day)
- Practical training in the field with AI service provider: 74 days