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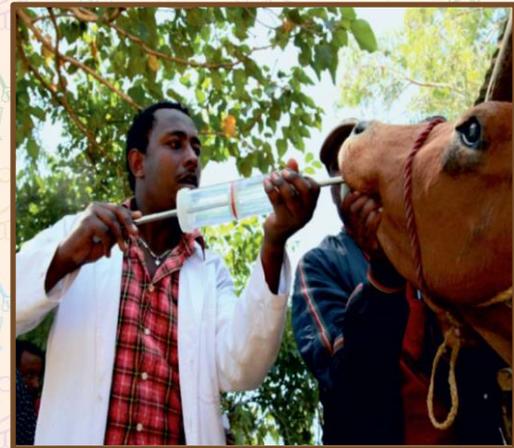
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ASCI

Agriculture Skill Council of India

Facilitator Guide



Sector
Agriculture

Sub-Sector
Animal Husbandry

Occupation
Livestock Health Management

Reference ID: **AGR/Q4803**, Version **3.0**
NSQF Level: **4**

Artificial Insemination Technician



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Shri Narendra Modi
Prime Minister of India

“ Skilling is building a better India.
If we have to move India towards
development then Skill Development
should be our mission. ”

Acknowledgements

We are thankful to all organizations and individuals who have helped us in preparation of this Facilitator Guide. We also wish to extend our gratitude to all those who reviewed the content and provided valuable inputs for improving quality, coherence and content presentation of chapters. This Facilitator Guide will lead to successful roll out of the skill development initiatives, helping greatly our stakeholders particularly trainees, trainers and assessors etc. We are thankful to our Subject Matter Expert for the content and helping us in preparation of this Facilitator Guide.

It is expected that this publication would meet the complete requirements of QP/NOS based training delivery. We welcome the suggestions from users, industry experts and other stakeholders for any improvement in future.

About this Guide

The objective of the guide is to provide an approach map for interacting with the trainees undergoing training on the job role. The aim of the course is to provide both theoretical and practical knowledge to the trainees, and provide them guidance.

The guide is neither a substitute nor complete road map, but an aid to help you to pass on the knowledge on all the aspects to the trainees in a systematic manner. It is expected that the trainer is fully conversant with all the contents of the handbook. The guide is just to indicate that how to proceed for covering a topic and includes some additional information that may be necessary for the trainer to develop better comprehension.

Facilitator with the help of this guide will be able to build among participants:

- **Knowledge and Understanding:** Satisfactory operational learning and comprehension to play out the required chore
- **Performance Criteria:** Pick up the required aptitudes through hands on preparing and play out the required operations inside the predetermined measures
- **Professional Skills:** Capacity to settle on operational choices relating to the zone of work

The job will also help them learn more by field visits and providing hands on training. It is expected that irrespective of the region, knowledge on all aspects of the job role will be imparted to trainees.

Symbols Used



Ask



Activity



Do



Demonstrate



Explain



Elaborate



Example



Exercise



Facilitation Notes



Field Visit



Learning Outcomes



Notes



Objectives



Practical



Resources



Role Play



Summarize



Say



Team Activity

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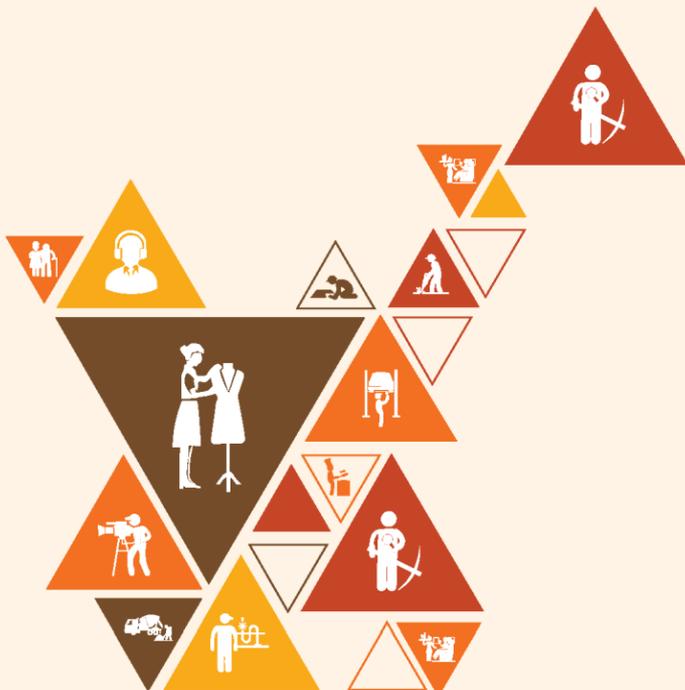
1. Introduction to the Role of an Artificial Insemination Technician

Unit 1.1 - General Discipline in the Classroom

Unit 1.2 - Understanding Livelihood and Livestock

Unit 1.3 - Importance and Role of Artificial Insemination Technician

Unit 1.4 - Continuous Learning and Support System



Bridge Module

Key Learning Outcomes



After the completion of this module, the participant will be able to:

1. Practice general discipline in the classroom (Do's & Don'ts) .
2. Recognize the importance of rural Livelihood and livestock farming.
3. Identify village institutions, list and assess resources for effective service delivery.
4. Recognize the scope and demand of veterinary service and animal husbandry extension.
5. Explain the likely career path of a Livestock Service Provider.
6. Describe and adhere to Laws/rules related to Minor Veterinary Practice / Drug dispensing and appreciate the importance of supervision by Veterinarians.
7. Summarise the role and responsibility of a Livestock Service Provider.
8. Appreciate the importance of continuous learning, skill acquisition, and use the support system for the referral.

UNIT 1.1: General Discipline in the Classroom

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Demonstrate general discipline in the classroom.
2. Explain the Relevant Organizational Policies and Procedures.

Resources to be Used

- Available objects such as a participant handbook, pens, sticky notes, computer, projector, white board, duster, markers, flip charts, pen, notebook, laser pointer etc.
- Power point slides or pictures or posters related to the topic.

Say

- Welcome the participants and thanks everyone for their participation in this training program.

Ask

- What can be considered good discipline in the classroom ?

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Classroom discipline
- Understand your job roles and responsibilities
- Understand the Relevant Organizational Policies and Procedures
- Ensure that health and safety instructions applicable to the workplace are being followed
- Ensure safe handling and disposal of waste and debris

Activity



Purpose : To enhance the knowledge.

Methodology: Pen and paper activity .

Tentative time : 15-20 minutes.

Material required: Checklist, notebook, pen/pencil

Procedure

- Ask the participants to list out basic Do's and Don't of maintaining classroom discipline.
- Ask any one of the participants to pin point the systems on white board.
- Ask the other participants to discuss amongst themselves and ask any queries realised to the topic.

Summarize



Sum up the session with appreciation for active and patient learning of the participants.

Notes for Facilitation



- Assist all groups to understand the topic clearly through visualization.
- Encourage the participants to maintain their own records.
- Keep some exercises handy for the activity.
- Constantly motivate each student to participate.
- Address the queries of the participants and clear all the doubts participants.

UNIT 1.2: Understanding Livelihood and Livestock

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Define the meaning of livelihood and relate it with dairy farming and related businesses.
2. Locate institutions and resources of your village.

Resources to be Used

- Available objects such as a participant handbook, pens, sticky notes, computer, projector, white board, duster, markers, flip charts, pen, notebook, laser pointer etc.
- Power point slides or pictures or posters that can depict contribution and types of people associated with dairy and animal sectors.
- Village map or map of service area of trainees.

Ask

- What do you understand by the word "Livelihood" ?
- Ask few participants to describe people/occupations who are directly dependent on dairy sector to earn living.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Understanding livelihood.
- Livestock's role in agriculture, National economy, and food security
- The livestock and livelihood
- Knowing your village

Team Activity

Purpose: To enhance the knowledge about your village.

Methodology : Group discussion and presentation

Tentative time : 1 hour

Procedure

Make students into two or three groups.

Ask participants to refer to the model village institution diagram given in participant handbook. Taking clue from the diagram, groups should discuss amongst themselves the functioning / administration of any nearby select village panchayat / village council. The group leaders should then prepare to briefly present key learning using flip chart.

Divide the class into 7 groups assign each group to collect information in any one of the following topics with respect to any selected village.

The group leader to make presentation on the same:

1. Village society, its composition, norms and beliefs.
2. Major economic activities within a village.
3. Common agricultural / livestock farming related practices.
4. Crop calendar and farming system.
5. Festivities with festival calendar (along with relationship with agriculture -if any)
6. Climate, environment related issues affecting the village.
7. Village resources.

Say

- Thank everyone for their participation.
- Describe the objective of all the above activities.
- Review presentation of each group and add your comment with additional information / corrections etc.

Notes for Facilitation

- Assist all groups to understand the topic clearly through visualization.
- Encourage the participants to maintain their own records.
- Keep some exercises handy for the activity.
- Constantly motivate each student to participate.
- Address the queries of the participants and clear all the doubts participants.

Exercise

Key Solutions to PHB Exercises

1. Learning by doing activity with the help of trainer.
2. Classroom discussion.

UNIT 1.3: Importance and Role of Artificial Insemination Technician

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Recognize your role and responsibilities as an Artificial Insemination Technician.
2. Recognize the scope and demand of veterinary service.
3. Explain the likely career opportunities of a Livestock Service Provider.

Resources to be Used

- Available objects such as a white board, duster, flip chart board / paper etc.
- Slides in power point presentation showing images of Artificial Insemination and its Technician

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- The nature and demand of veterinary services and animal extension
- Role and Responsibility of Livestock Service Provider
- Importance and role of Artificial Insemination Technicians
- Career opportunities for a livestock service provider
- Tools required for carrying out artificial insemination
- Rules related to Minor Veterinary Practice / Drug dispensing

Team Activity

Purpose: To enhance the knowledge on the role of Artificial Insemination Technician.

Methodology : Group discussion

Tentative time : 30-40 minutes

Procedure

- Divide the class into three teams. Give sufficient time for teams to refer to the text in participant manual related to roles of Artificial Insemination Technician. Facilitate team members to discuss amongst them.
- After this, each team will take their turn and sit in circle for a discussion on any one from amongst the following topics:
 1. Why it is important to deliver AI service at the doorstep of farmers ?
 2. How can Artificial Insemination help a dairy farmer improve his/her livelihood?
 3. What is an ideal job profile of an Artificial Insemination Technician ?
- Ensure that the other teams listen to any particular discussion and note down key points. No team should choose the same topic. At the end of three rounds of discussion ask each team to suggest other teams' pointers that they may have missed while discussing on their chosen topic.
- The group making maximum suggestions to others should be awarded as winner.

Say

- Thank everyone for their participation.
- Review presentation of each group and add your comment with additional information / corrections – etc.

Notes for Facilitation

- Encourage participants of group discussion to ask questions so that they can clear their doubts (if any) on future job role.
- Assist participants to stream line their thought process while discussing the above question.
- You can invite representative of any organization who employs Artificial Insemination Technician to speak on 'expectations from trainees'.
- Indicate briefly the option for career progression and career mobility of Artificial Insemination Technician completing training under NSQF framework.

Exercise

Key Solutions to PHB Exercises

1. Four broad categories can be found in veterinary services:
 - Clinical assistance (treatment of diseased animals and control of production limiting disorders).
 - Proactive measures (avoiding the outbreak of diseases).
 - The distribution of medicines, vaccines, and other goods (such as artificial insemination).
 - Protection of human health (inspection of marketed animal products).

Another sector where the economic classification of multiple components varies and is subject to interpretation is veterinary services. The closest to being pure private commodities are clinical health services and the provision of veterinary medications. Refer section 1.3.2.
2. A livestock service provider in protecting the life and enhancing the productivity of farm animals – which are the key asset of rural farmers. They also assist in improving the 'capabilities' of farmers and work with other agencies to ensure that farming as an 'activity' remains viable.
3. Equipments for AI :
 1. AI Gun
 2. Felt cover for AI Gun for Thermal Protection
 3. AI Sheaths
 4. Dual reading clinical Thermometer
 5. Long Stem Mercury Thermometer
 6. Digital Thermometer
 7. Straw Cutter
 8. Forceps
 9. Plastic Apron
 10. Disposable AI Gloves
 11. Hand Sanitizer
 12. Thawing Unit
 13. Dial Type Thermometer
 14. Thaw Monitor
 15. Straw Tweezer
4. Refer section 1.3.7 for the rules related to Small Veterinary System.

UNIT 1.4 : Continuous Learning and Support System

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Recognize the importance of continuous learning and guidance from veterinarians.
2. Recognize potential institutions for seeking referral support.

Resources to be Used

- Available objects such as a white board, duster, flip chart board / paper etc.
- Projector connected to computer with internet connectivity.

Say

- Greet the participants and recall the previous session learning outcomes.

Explain

- Continuous learning and support system for referral.

Field Visit

Purpose : To get skilled on the concept through real time observations and interactions. This may be planned for 1 hours.

Methodology: Field visit

Procedure

- Organize a day long field visit covering local veterinary hospital, agri-clinic (if any) promoted by veterinarian, KrishiVigyan Kendra, any center of state institute of rural development, extension center of local university and field project sites of local NGOs.
- In situations, where majority participants have never attended any meeting of local panchayat / Gram sabha, field visit should also be attempted for giving them the opportunity to observe such meetings

Demonstrate

- Demonstrate available web sites, books etc. where participants can search for information on Dairy animal breeding/ AI in particular.

Activity

Purpose : Knowledge enhancement . Time may be plan for 15-20 minutes.

Methodology : Hands on learning activity

Procedure :

- All participants should collect available leaflets, brochures and other publications on different topics from places covered under field visit.

Do

- Clear the doubts of students related to the topic.
- Motivate the students to open up and ask questions.

Notes for Facilitation

- Students must be encouraged for going through the participant handbook and come prepared with thorough reading.

Exercise

Key Solutions to PHB Exercises

1. Skill development helps build their confidence, makes them more employable and augments their capacity to cope with labour market shocks.
2. Increasing incomes. Agricultural transformation is very slow in India, Generating employment opportunities, Reducing risks in agriculture, Developing agri-infrastructure, and Improving quality of rural life.
3. Artificial insemination is commonly used instead of natural mating in many species of animals because of the many benefits it can reap. These benefits include increased safety of the animals and producer, increased production efficiency and better genetics.
4. They store, transport, thaw and prepare semen for insemination, offer reproductive consultation to breeders and farmers, and perform pregnancy checks on animals.
5. Artificial insemination reduces the incidence of sexually transmitted diseases among cattle and increases the use of genetically superior sires to improve performance of the herd.



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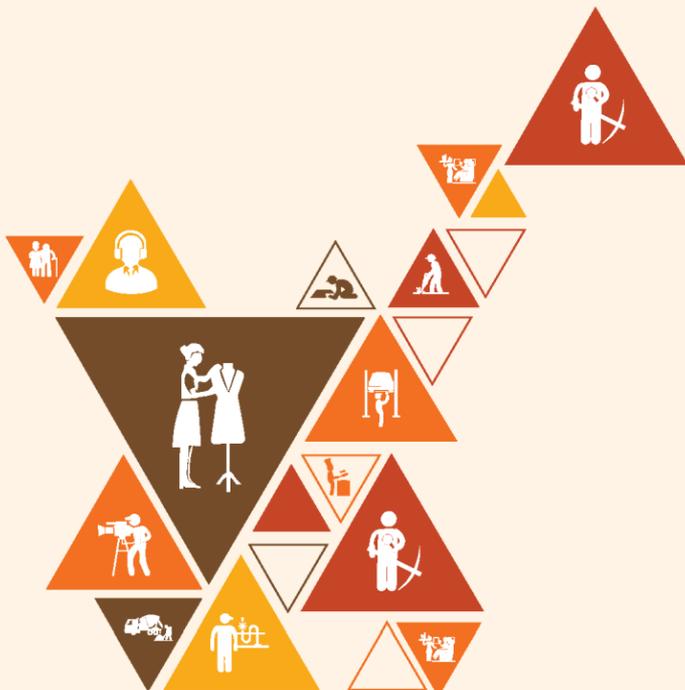
2. Veterinary First Aid

Unit 2.1 - Emergency Conditions and Pre-disposing factors

Unit 2.2 - Common first aid measures

Unit 2.3 - Handling Poisoning

Unit 2.4 - Safety measures during first aid



AGR/N4805

Key Learning Outcomes

After the completion of this module, the participant will be able to:

1. Define the meaning of emergency conditions and predisposing factors related to the cause of a disease with some suitable examples.
2. Define a healthy animal from a diseased animal.
3. Describe various common symptoms of disease and their basic treatments in emergency conditions (As per instruction/manual prepared by a veterinarian).
4. Describe the importance of record keeping.
5. Classify the available approved traditional medicinal products and practices to apply in an emergency.
6. Explain how to prepare a standard first aid kit and its applications.
7. Describe the safety measures to be taken during an emergency or during giving first aid.
8. Explain the common approaches in handling poisoning and natural calamities.

UNIT 2.1: Emergency Conditions and Pre-Disposing Factors

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Analyse situations that need emergency care and conditions that pre-dispose animals to such situations.
2. Identify signs and administer basic first aid for these situations.

Resources to be Used

- Available objects such as a participant handbook, white board, duster, flip chart board/paper etc.
- Slides in power point presentation showing relevant images.

Say

- Greet the participants and revise the key learnings of previous session discussion.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Emergency conditions and Pre-disposing factors
- Importance of Record keeping

Team Activity

Purpose : To enhance the knowledge of pre-disposing factors. It may be planned for 30-40 minutes.

Methodology : Make presentation

Procedure

A team of 3-5 participant should select any one emergency situation from the participant handbook. The team then should discuss pre-disposing factors, clinical signs and treatment before making presentation to the class.

Say

- Sum up key learnings of the above discussion.

Notes for Facilitation

- Assist all groups to understand the topic clearly through visualization.
- Encourage the participants to maintain their own record.
- Keep some exercises handy for the activity.
- Constantly motivate each student to participate.
- Address the queries of the participants and clear all the doubts participants.

Exercise

Key Solutions to PHB Exercises

1. Emergency Symptoms: Refer to Section 2.1.1 of Participant handbook.
2. Record-keeping refers to the systematic recording of data / information in standardized formats. Record keeping helps in learning from past and in deciding future course of action.
3. Learning by doing with the help of trainer.

UNIT 2.2: Common First Aid Measures

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Explain common first aid measures that can be employed in a field situation.
2. Explain the accepted traditional medicinal products and practices available to apply in case of emergency.

Resources to be Used

- Available objects such as a white board, duster per etc.
- Slides in power point presentation showing relevant images.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- How to prepare a standard first aid kit .
- Use of standard first aid kit.

Activity

Purpose: To acquaint about the standard first aid kit. This activity may be planned for 15-20 minutes.

Methodology : Pen and per activity

- Ask participants to list out the equipments which are included in the first aid kit.
- Discuss with the participants about the topic.

Do

- Encourage the students to actively participate in the activity.
- Encourage the non-participants to open up and speak up.
- Share your own thoughts and viewpoints related to the topic.

Notes of Facilitation

- Answer all the questions of the participant.
- Focus on ensuring pictorial as well as live presentation for learning.

Exercise



Key Solutions to PHB Exercises

1. Following equipment must be included in the kit-

1. scissors
2. Flashlight
3. Halter and Rope
4. Needle nose pliers
5. Wire Cutter
6. Disposable Gloves
7. 4x4 Gauze Sponge
8. Skin Cleanser
9. Several Small Bottles of Sterile Saline
10. Water Soluble Ointment
11. Anti-Bloat Medication
12. Trocar and Cannula
13. Rolls of Medical Tape
14. Fly Repellent
15. Multiple large syringes (35-60 cc)
16. Cotton
17. Antibiotic Eye Ointment
18. Thermometer

2. Some of the common first aid measures that should be employed in field conditions include:

1. Separation of the affected or sick animal from the rest of the herd.
 2. Ensuring adequate rest and environmental comfort.
 3. Application of ice cubes on the udder surface and preventing calf from sucking infected teat (in suspected cases of infection of udder)
 4. Washing mouth and feet with antiseptic solutions and application of glycerine over lesions (in cases like FMD)
 5. Provision of comfortable bedding materials for recumbent animals.
 6. Bringing the animal to sternal recumbence (in suspected case of milk fever) and possible shifting of recumbent cows from slippery floors to non-slippery areas.
3. Sage, cedar and sweet grass.

UNIT 2.3: Handling Poisoning

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Identify signs of common poisoning and provide first aid to farm animals.

Resources to be Used

- Available objects such as a white board, duster etc.
- Slides in power point presentation pictorially explaining various types of poisoning.

Say

- Good day and welcome all the participants to the training session. Recall the key points of previous session discussion.

Explain

- Types of poisoning and pre-disposing factors e.g. Pesticide poisoning, plant poisoning

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Chlorinated hydrocarbon and Oregano phosphate toxicity indicating signs and basic first aid.
- Poisoning with cyanogenic plants, Lantana camara, nitrate and nitrite poisoning indicating signs and basic first aid.

Demonstrate

- Commercially available pesticides in local market and poisoning thereof.
- Locally available known poisonous plants.

Tips



- Ask participants to mention names of various commonly available poisonous plants along with local names.

Team Activity



Purpose: Knowledge enhancement, effective communication.

Methodology: Group discussion and stage presentation for about 20- 30 minutes.

Expected outcome:

- Confidence building
- Group involvement
- Knowledge enhancement

Divide the participants into groups and ask them to discuss among themselves on the topic that has been taught in the class. Now call one volunteer from each group and ask him to summarize the topic and appreciate everyone.

Notes for Facilitation



- Indicate potential source of information to each of the group.
- Assist all groups to systematically arrange collected information and analyze them- when required.
- Constantly motivate each student to participate. Arrange for award for group presentation, based on criteria such as quality, and relevancy of the content, group involvement, presentation skills, use of tools etc.
- Where possible, display specific work of groups within the classroom.

Exercise



Key Solutions to PHB Exercises

1. Livestock may be accidentally exposed to toxic amounts of pesticides in their feed or by improper mixing of sprays or dips for external parasites. Clinical signs vary with different pesticides.
2. The symptoms include:
 - Difficult breathing
 - Sign of 'SLUD': Salivation, Lacrimation (tears coming from eyes), Urination and Diarrhoea.
 - Possible convulsions (a sudden, violent, irregular movement of the body, caused by involuntary contraction of muscle)

UNIT 2.4: Safety Measures During First Aid

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Discuss safety measures that should be adopted during first aid.

Resources to be Used

- Available objects such as a white board, duster, flip chart board/paper etc.
- Slides in power point presentation showing relevant images.

Field Visit

Purpose : To enhance the knowledge about safety measures during first aid

Methodology: Organize visit of participants to any animal welfare centre treating injured animals and introduce them standard operating procedure of the center related to transportation, handling and care of injured animal.

Tentative Time : 1-2 hours or depends on the distance of the locations.

Most of the practical assessment should be conducted during the field visits. This includes participants' ability to

1. Provide first aid to cases pertaining to injury following accidents. (Including fractures and horn injury)
2. Take care of open wounds.
3. Perform common task like cleaning and washing of muzzle, mouth, hooves, feet etc. with aseptic solution.
4. Provide first aid in attending birth related problems.

Additional practical assessment should be conducted to evaluate participants' ability to

1. Estimate body weight of animals.
2. Administer medicine as per demonstration.
3. Identify and describe use of common medications in emergency situations.

Explain

- Safety measures to be taken during first aid

Role Play

- Stage an emergency situation with an injured animal lying on a field. The lead actor who intends to provide first aid should demonstrate through acting the safety measures to be adopted. A narrator should explain the act of lead actor e.g. Placing a light towel or cloth over the animals' head to decrease its awareness of nearby activity and prevent aggressive action thereby.

Notes for Facilitation

- Encourage active participation and engagement from students, such as through group discussions and hands-on exercises.
- Provide a balance of both theoretical and practical information and other objects needed in this process.
- Get participants to open up their participant handbooks and solve the exercises given at the end of the unit.

Exercise

Key Solutions to PHB Exercises

1. Important precautionary measures for safety while handling sick animal:
 - a. Use a muzzle
 - b. Place a light towel or cloth over the animal's
 - c. One should give full concentration on the animal being handled without being distracted by other
 - d. Always leave yourself an escape route while working with injured animal.



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3. Assisting in Veterinary Extension Services

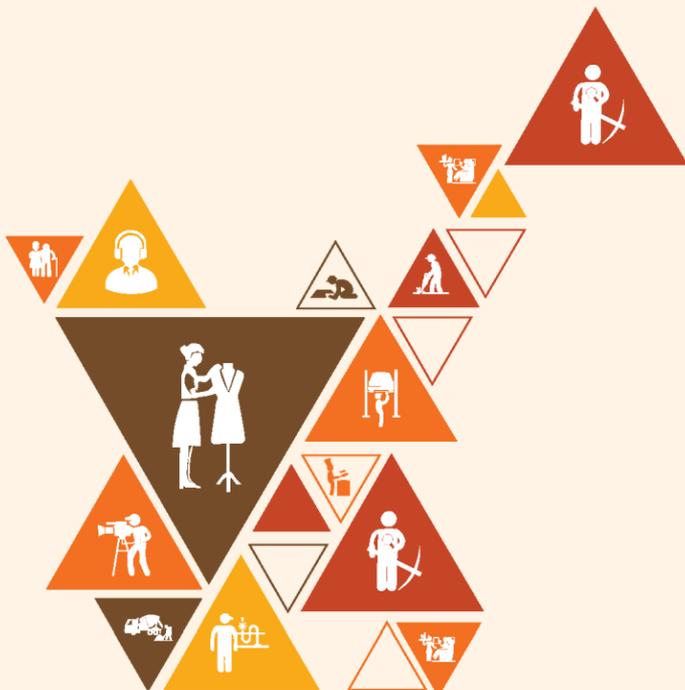
Unit 3.1 - Understanding Extension Services

Unit 3.2 - Basic principle of housing

Unit 3.3 - Dairy cattle feeding

Unit 3.4 - Breeding of Farm animals

Unit 3.5 - Farm inputs and record keeping



AGR/N4808

Key Learning Outcomes

After the completion of this module, the participant will be able to:

1. Explain the meaning of KASA (Knowledge, Attitude, Skills, and Action) .
2. Explain leadership qualities.
3. Define the meaning of extension and what it involves.
4. Explain extension related schemes and institutions within the district / state.
5. Explain the production cycle in farm animals.
6. Explain the basics of livestock housing, feeding, breeding and general farm management.
7. Explain points to be considered for selection of breeding animals to farm with.
8. Describe the applications and benefits of commonly approved technologies in feeding, breeding, and other best practices (including organic practices (s) in various situations/opportunities/constraints.
9. Explain the concept of quality and various parameters/components associated with quality farm input.
10. Describe the importance of record-keeping Or Why should one maintain records of different farmer meeting/school activities.
11. Describe the different components of record-keeping (e.g., targeted and need based)

UNIT 3.1: Understanding Extension Services

Unit Objectives

After the completion of this unit, the participant will be able to:

1. State some basic concepts needed to understand and implement extension programs.

Resources to be Used

- Available objects such as a white board, duster etc.
- Powerpoint presentation
- Reference of previous learning related to livelihood, village institutes, etc from introduction unit- whenever needed.

Say

- Greet the participants and revise the key learnings of previous session discussion.

Explain

- What is Extension ?

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- KASA
- Knowing What Extension Involves
- Technology Adoption and Extension Methods
- Leadership
- Working With Farmer Groups
- Government Extension Delivery System

Team Activity



Purpose: Knowledge enhancement, effective communication.

Methodology: Group discussion for 30-40 minutes.

Expected outcome:

- Confidence building
- Group involvement
- Knowledge enhancement

Divide the class into three teams and assist each team to discuss amongst themselves and note down as to how one should promote the practice of ensuring 24 hours clean water availability for dairy animals.

Ask them to refer to KASA concept and class example of promoting fodder production

Notes for Facilitation



- Indicate potential source of information to each of the group.
- Assist all groups to systematically arrange collected information and analyze them- when required.
- Constantly motivate each student to participate. Arrange for award for group presentation, based on criteria such as quality, and relevancy of the content, group involvement, presentation skills, use of tools etc.
- Where possible, display specific work of groups within the classroom.

Exercise



Key Solutions to PHB Exercises

1.
 - **Knowledge:** What an individual knows?
 - **Attitude:** What he / she thinks?
 - **Skills (Both Physical and Mental):** What he or she can do?
 - **Action:** What he actually does?
2. Bharat Nirman, Pradhan Mantri Gram Sadak Yojana, Sarva Shiksha Abhiyan, MGNREGA, Integrated Child Development Services, and more.
3. A leader is a person who effectively influences a group to co-operate in setting and achieving goals. Leadership is an activity in which effort is made to influence people to co-operate in achieving a goal.
4. Ministry of Agriculture, Government of India sponsored scheme "Support to State Extension Programmes for Extension Reforms" aims at making extension system farmer driven and farmer accountable by disseminating technology to farmers through new institutional arrangements named as Agricultural Technology Management Agency (ATMA). Refer section 3.1.7.

UNIT 3.2: Basic Principles of Housing

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Describe key principles of dairy cattle housing so as to interpret various best practices.
2. Demonstrate the exact design of any housing facility depending on its intended use, the local environmental conditions, the amount of available finance, and a range of other different factors.

Resources to be Used

- Available objects such as a white board, duster, etc.
- Power point slide e.g. Picture of various types of housing.

Say

- Greet the participants and revise the key learnings of previous session discussion.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Basic Environment
- Loose housing system for tropic climate

Activity

Purpose : To perceive the topic and time will be 20 minutes.

Methodology : Pen and paper

- Ask participant to work in group and discuss information given in participant handbook on loose housing system for dairy animals and housing of backyard poultry.
- Encourage participants to prepare charts indicating recommended floor, feeding and watering spaces for various livestock species.

Notes for Facilitation



- Display relevant pictures, slides or videos related to the topic.
- Plan an outing to nearby farm so that students have practical exposure.
- Encourage more participants to involve in group discussion and group activity.
- Facilitate the students if they face any kind of problem.

Exercise



Key Solutions to PHB Exercises

1. The Five Freedoms are a set of five basic rules concerning the welfare of animals. They are as follows:
 - Freedom from hunger and thirst
 - Freedom from discomfort
 - Freedom from pain, injury and disease
 - Freedom to express normal behavior
 - Freedom from fear and distress
2. The system consists of a wooden / wired compound erected around the existing animal shed. The feeding and water facilities are provided either inside the shed or outside, in which case this area is covered to provide protection from rains and intense heat. The animals are let free all the time. The floor is prepared by providing proper drainage and preferably raised from the adjoining area and slope is provided. For more details, refer section 3.2.2. of PHB.

UNIT 3.3: Dairy Cattle Feeding

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Identify key principles of dairy cattle feeding so as to interpret various best practices.

Resources to be Used

- Available objects such as a white board, duster ,etc.
- Power point presentation e.g. picture of fodder variety, nutrient requirement and feeding plan etc.
- Samples of common feed ingredient and fodder variety.
- Commercially available branded compound feed, tmr, silage etc. For demonstration.

Say

- Greet the participants and recall the previous session learning outcomes.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Basic principles
- Common Terms Used in Cattle Feeding
- Common Feed Ingredients / Fodder Variety
- Nutrient Requirement and Feeding Plan
- Fodder Preservation and Enrichment
- Organoleptic (Physical) Testing of Feed

Activity

Purpose: To acquaint about feeding . This activity may be planned for 30-40 minutes.

Methodology : Pen and per activity

- Divide the class into four teams and assist each team to discuss amongst themselves minimum five given common terms used in animal feeding (Refer participant hadnbook). At the end of the discussion, ask team leaders to explain the given terms to the class.
- Ask prepare individual charts highlighting the nutrient requirement and feeding plan for various species.
- Ask prepare a note on common popular Vis-à-vis suggested best practices on feeding of livestock as observed in their area.

Demonstrate

- Collect commercial compound feed pack of two different brands and show participants how to compare same based on information on nutrient content given in product labels / company literature.
- Invite various companies manufacturing and marketing compound feed, silage / Total Mixed Ration (TMR) / Enriched crop residue block etc. to make demonstration of their products before the participants.
- Organoleptic (Physical) testing of feed.

Notes for Facilitation

- Indicate potential source of information to each of the group.
- Assist all groups to systematically arrange collected information and analyze them- when required.
- Constantly motivate each student to participate.
- You may invite any representative of local poultry farmer to grace the training session; request him/her to give feedback/award on the team work of participants.
- Participants can be encouraged to do more group activities to understand about coordination among each other.
- Where possible, display specific work of groups within the classroom.

Exercise

Key Solutions to PHB Exercises

1. The principle of livestock feeding and nutrition must be understood and applied in any livestock farms. To get the best from your animals, it is required of you to give them nutritious feed and adequate water.
2. There are six classes of nutrients that are essential to every living animal for survival. They are:
 1. Water
 2. Protein
 3. Carbohydrates
 4. Fats/Lipids
 5. Vitamins
 6. Minerals
3. **Scientific feeding involves:**
 - An understanding of the different nutrients required by livestock for different physiological functions such as maintenance, growth, reproduction, milk production etc.
 - An understanding of the physical and nutrient components of different feed and fodder resources, the nutrients contained in them and how efficiently they are utilized by the animals.
 - Formulating balanced rations by combination of different feed and fodder resources to supply the nutrients to cattle for different physiological functions.

4. The five types of feed are:
 1. Bulk forages for energy
 2. Supplementary forages for energy and protein
 3. Concentrates for energy and protein
 4. Mineral supplements
 5. Vitamins supplements
5. Common Feed Ingredients / Fodder Variety, Refer section 3.3.3. of PHB.
6. Organoleptic (using five senses) testing of feed is a skilled work. A community level worker mastering on this skill can greatly help farmers' / community cooperative in choosing quality feed ingredient / feed for purchase. The following technical bulletin can be referred while practically attempting to physically evaluate feed / feed ingredient. For more, refer section 3.3.6 of PHB.

UNIT 3.4: Breeding of Farm Animals

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Describe techniques and rule for selecting good breeding animals.
2. Define some basic concepts related to reproductive system and reproductive cycle of dairy cattle.

Resources to be Used

- Available objects such as a white board, duster, etc.
- Power point slide e.g. appropriate diagram of production life cycle in various species of farm animals

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Production cycle in farm animals
- Body Condition scoring (BCS)
- Criteria For Good Breeding Animals
- Benefits of using technologies in breeding

Activity

Purpose : To perceive the topic and time will be 20 minutes.

Methodology : Pen and paper

Participants should work in group and discuss production life cycle of other farm animals and write the points in notebook.

Notes for Facilitation

- Indicate potential source of information to each of the group.
- Assist all groups to systematically arrange collected information and analyze them- when required.
- Constantly motivate each student to participate. Arrange for award for group presentation, based on criteria such as quality, and relevancy of the content, group involvement, presentation skills, use of tools etc.
- Focus on ensuring pictorial presentation of learning. Let language proficiency be not any barrier at initial phase and once participants get confident enough to speak then they can be asked to present in English/Hindi only.
- Where possible, display specific work of groups within the classroom.

Exercise



Key Solutions to PHB Exercises

1. The need for more dependable, high-quality livestock products is driving down the number of farms while increasing the number of animals raised on each farm and overall animal production. Problems with livestock production are also rising along with this development. Studies from many various disciplines, including technology, have helped to solve these issues. Without the use of technology and automation systems from animals with extremely high genetic values, huge organisations are unable to achieve the desired performance. The routine use of data monitoring in the modern dairy farm allows for the continual regulation of production, animal health, and welfare. Daily labour in cattle farming is straightforward. Refer section 3.4.4 of PHB.
2. **General Appearance**
 - The animals should have straight and strong top line and muscular throughout the body.
 - Animals should have long body with straight underline.
 - Skin should be fine textured, loose and pliable. Weight should be according to the ageFor more details, refer section 3.4.3 of PHB.
3. Assessment of a cattle's body condition score (BCS) gives a visual estimate of their body fat reserves. This in turn provides useful information on feeding and health status. This information is helpful in selecting good animals for breeding. Refer 3.4.2 of PHB.
4. Refer section 3.4.2 of PHB.

UNIT 3.5: Farm Inputs and Record Keeping

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Describe techniques and rules for selection of good breeding animals.
2. Explain some basic concepts related to reproductive system and productive cycle of dairy cattle.

Resources to be Used

- Available objects such as a white board, duster etc.
- Power point slides, pictures / posters. for showing various farm inputs.
- Model / institutional record keeping format , if any.

Say

- Greet the participants and revise the key learnings of previous session discussion.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Farm Inputs
- The nature of input and equipment supply
- What is Farm Record Keeping?
- Why Keep Records ?

Demonstrate

- Premises registration card (where available)
- Model health record sheet to be maintained by animal health workers for inspection of his / her supervisor.
- Model record maintained in a livestock farm.

Activity



Purpose : To recall about essential farm input quality parameters. This may be planned for 15-20 minutes.

Methodology : Pen and Paper activity

- Make groups of 2 or 3 students and ask them to write parameters of quality farm inputs.
- Ask each participant to maintain the records with the help of Participants handbook.
- Facilitate the participants to help them to maintain the record.
- Address any queries of the participants.

Notes for Facilitation



- Encourage the students to actively participate in the activity.
- Encourage the non-participants to open up and speak up.
- Share your own thoughts and viewpoints related to the topic.
- Answer all the questions of the participant.
- Focus on ensuring pictorial as well as live presentation for learning.

Exercise



Key Solutions to PHB Exercises

1. The resources that are used in farm production, such as chemicals, equipment, feed, seed, and energy.
2. Input supply can be usefully subdivided into three types of services:
 - Fertilizers and chemicals
 - Seeds and planting materials
 - Machinery and equipment.

For more details, refer section 3.5.1 of PHB.



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Corporation

Transforming the skill landscape



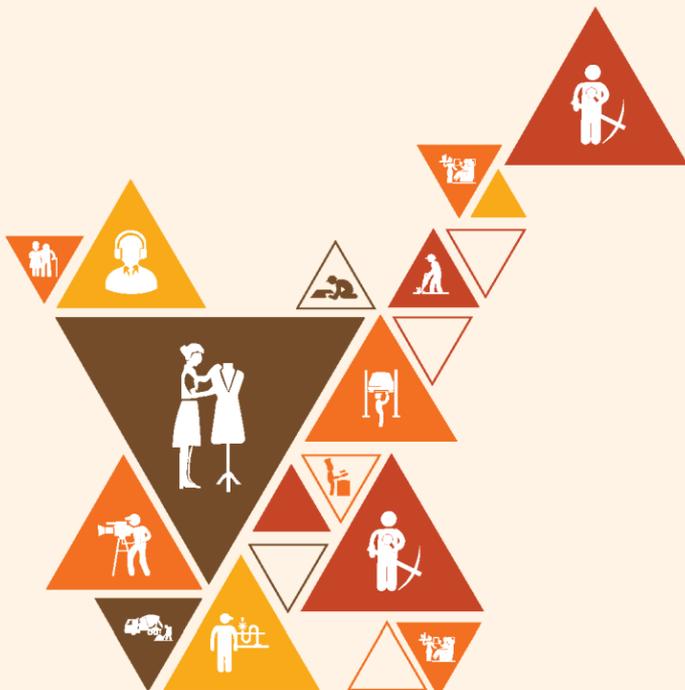
4. Development Program Implementation and Marketing in Livestock Sector

Unit 4.1 - Sustainable Development and Goal for Same

Unit 4.2 - Basics of Project Management

Unit 4.3 - Business Management

Unit 4.4 - Expectation from Development Worker



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Key Learning Outcomes

After the completion of this module, the participant will be able to:

1. State expectation from a development worker.
2. State the purpose of development program implementation and Sustainable development goal.
3. Explain basic aspect of development project management.
4. Describe business planning.
5. Describe guidelines for setting price of products.
6. Explain how to promote demand of livestock products in the market.
7. Describe various marketing task.
8. Describe the basics of project development and management.

UNIT 4.1: Sustainable Development and Goal For Same

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Describe sustainable development goals.

Resources to be Used

- Available objects such as a white board, duster, etc.
- Power point presentation, e.g. Slide showing name and corresponding picture of 17 SDGs.

Say

- Greet the participants and revise the key learnings of previous session discussion.

Explain

- Sustainable development.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- 17 Sustainable development goals.

Say

- Animal Health and livestock sector improvement is directly and indirectly linked to many of this goal.

Activity

Purpose: To acquaint about the sustainable development. This activity may be planned for 15-20 minutes.

Methodology : Group discussion

- Discuss in groups as to which development goal is directly related to animal health and livestock development programs.

Notes for Facilitation



- Assist all groups to understand the topic clearly through visualization.
- Keep some exercises handy for the activity.
- Constantly motivate each student to participate.
- Address the queries of the participants and clear all the doubts participants.

Exercise



Key Solutions to PHB Exercises

1. Development is the act of improving or advancing the quality of life (standard of living) of people. Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
(Refer to this unit for details in Participant Hand book)

UNIT 4.2: Basics of Project Management

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Describe basic concept of project management.

Resources to be Used

- Available objects such as a white board, duster, etc.
- Power point slide, e.g. showing policy to project chain, input to impact chain.
- Reference of previous learning related livelihood, village institutions, etc. from introduction unit – whenever needed.

Say

- Greet the participants and appreciate participants for their participation. Recall the previous session outcomes and then proceed towards the session.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Basic aspects of project management

Demonstrate

- Demonstrate the functioning of solar power pumps.
- Motivate the participants to observe the demonstration carefully.
- During demonstration clarify all doubts of the participants.

Ask

- Ask volunteering participants to recall few livestock related activities being undertaken in their respective districts under any known private or government project / program. Are the activities undertaken suitable for the targeted district? If not, what could have been done differently to achieve the published goal / outcome of the project / program being implemented.

Activity



Purpose : Knowledge enhancement and the tentative time limit is 30 min.

Methodology : Learning by doing

- Participants should be encouraged to collect information regarding common development programs of the government with livestock related components. Assist them to analyze government programs in terms of expected output and likely outcome.

Notes for Facilitation



- The learning under this unit will greatly depend on trainer's ingenuity and conviction that concepts related to project management as mentioned above can be taught to relatively less educated trainees.
- A basic understanding of the above concepts will ensure that animal health worker will take keen interest on livestock linked development programs within their community or village and work for desired outcome and sustainability rather focusing only on output.
- In situations when participants are being trained under the sponsorship of any exclusive project, all attempts should be made to explain the above concepts taking example the concerned project of the sponsoring organization.
- The understanding of basic project management concepts as mentioned above is crucial to achieve performance criteria in NOS i.e. to promote awareness of programs and projects.
- You can invite any local government official to interact with participants regarding ongoing rural development program with livestock components. Following the day of the interaction program, encourage participants to share their views on merits and demerits of such programs.

Exercise



Key Solutions to PHB Exercises

1. If any animal on your farm is confirmed to have Foot and Mouth Disease (FMD), all animals on the farm that could get sick (cattle, swine, sheep and goats) may be euthanized and disposed of to control the further spread of the disease. There are steps you can take to help prevent FMD from entering your farm. Refer to the veterinarian for instructions.
2. Learning by doing activity with the help of trainer

UNIT 4.3: Business Management

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Explain basics of business management and guide farmers on Marketing of farm inputs.
2. Economics of livestock based business activities.
3. Livestock product markets and marketing.

Resources to be Used

- Available objects such as a white board, duster, etc.
- Power point slide (To assist in elaboration)

Explain

- Business planning.
- Setting price of products.
- Marketing

Activity

Purpose : To facilitate learning through hands on activity. The activity may be planned for 30-40 minutes.

Material required : Projector, display screen, round table sitting arrangement.

Expected outcome : Clarity of thoughts among participants.

- Arrange participants in group to present a brief business plan of starting a basic animal health care service in a chosen area.
- Encourage the participant to prepare in a group a chart and demonstrate to the class some ideas of business related to livestock and animal health sector.
- Engage the group of participants to read information on basic tenets of marketing given in participant handbook and discuss key learning.

Notes for Facilitation



- Help the participants to complete all the exercises mentioned in the participant handbook.
- Encourage participants of group discussion to ask questions so that they can clear their doubts.
- Advise participants to search various sources and read about 7 P's of marketing.
- You can arrange a brief talk on 'selling' to be delivered by any senior sales executive of a known animal feed company.

Exercise



Key Solutions to PHB Exercises

1. Learning by doing activity with the help of trainer
2. Some business ideas in livestock-
Dairy farming, poultry farming, fish farming, goat farming , etc.

UNIT 4.4: Expectation From Development Worker

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Implement development programs.

Resources to be Used

- Available objects such as a white board, duster, etc.
- Projector (For video show)
- Reference of previous learning related livelihood, village institutions etc. from introduction unit – whenever needed.

Say

- Greet the participants and appreciate participants for their participation. Recall the previous session outcomes and then proceed towards the session.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Expectation from a development worker at village level.

Field Visit

Purpose : To gain practical insight n product and information collection.

Methodology : Field visit and the time varies according to the location, it may be 2 hours.

- Arrange a visit to any local enterprise selling various livestock / poultry farm inputs.
- Ask the participants to prepare list of available products and collect product related information.
- Discuss the problems faced during collection.

Summarize

Sum up the session with appreciation for active and patient learning of the participants.

Notes for Facilitation

- A set of select videos (as downloaded from You Tube / DD Kisan and other such channels) highlighting livestock related success stories, best practices, inspirational work of village level development workers can be shown to participants.
- You may refer to National Smallholder Poultry Development Trust (NSPDT)'s smallholder community poultry model (Refer <http://www.nspdt.org>) while explaining aggregating and collective marketing of livestock products.
- Ask each participant to pictorially (using white board / flip chart) explain potential earning from any livestock / poultry farm based small unit.
- Organize a mock selling of compound feed brand of any company by the participants.

Exercise

Key Solutions to PHB Exercises

1. Promote awareness of programs. Help in targeted beneficiary selection as envisioned in the promoted projects / programs.

Refer section 4.4.1 of PHB.

Notes



A large rectangular area with a thin orange border, containing 30 horizontal lines for writing notes.



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National
Skill Development
Corporation

Transforming the skill landscape



ASCI
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5. Implementation of Cattle Breeding Services

Unit 5.1 - Understand the Reproductive System

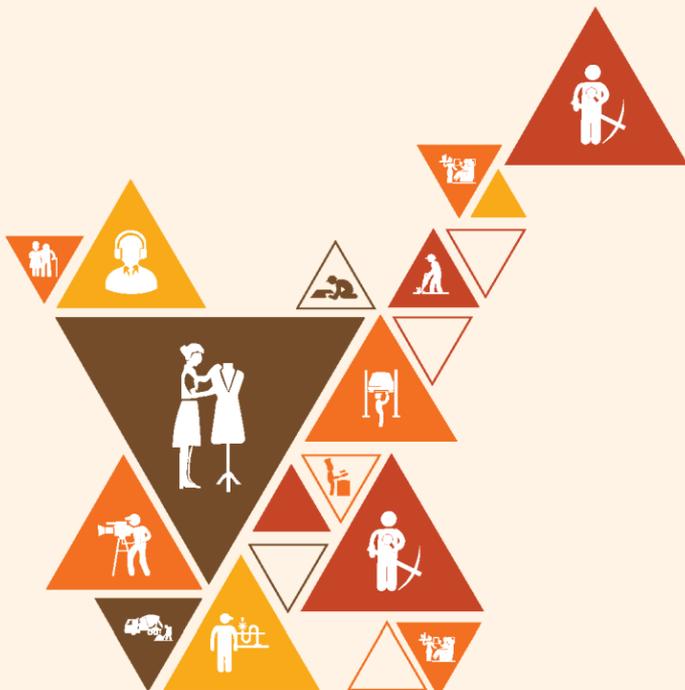
Unit 5.2 - Basics of Animal Genetics

Unit 5.3 - Signs of heat

Unit 5.4 - Artificial Insemination

Unit 5.5 - Parturition in Small Farm Animals

Unit 5.6 - Common Infertility Problems



AGR/N4820

Key Learning Outcomes

After the completion of this module, the participant will be able to:

1. Describe the basics of the reproductive system in small farm animals.
2. Describe basic concepts of genetics.
3. Describe the parameters related to the selection of breeding animals and explain how one can assist the farmers/clients in selective breeding of small farm animals.
4. Explain how to assess the right artificial insemination (AI) time in small farm animals.
5. Describe the procedures/protocols in conducting artificial insemination (AI) in goats and pigs, including biosecurity, safety, hygiene, and animal welfare.
6. Describe parturition in goat, sheep and farrowing in pigs.
7. Describe the common infertility issues in small farm animals.
8. Explain how one can guide the farmers regarding the management of infertility in small farm animals.

UNIT 5.1: Understanding the Reproductive System

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Define some basic concepts related to reproductive system and reproductive cycle of dairy cattle.

Resources

- Available objects such as a white board, duster, etc.
- Power point presentation e.g. Slide showing reproductive system.

Say

- Greet the participants and recall the previous session learning outcomes.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Understanding the Reproductive System
- Important related concepts

Activity

Purpose: To acquaint about the reproductive parameters. This activity may be planned for 15-20 minutes.

Methodology : Pen and per activity

- Arrange participants in groups should prepare self-reference charts on organ systems in animals and share with peer group.

Say

- Emphasize and elaborate the key points of the discussion.

Notes of Facilitation



- Assist all groups to understand the topic clearly through visualization.
- Keep some exercises handy for the activity.
- Constantly motivate each student to participate.
- Address the queries of the participants and clear all the doubts participants.

UNIT 5.2: Basics of Animal Genetics

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Explain basic concept of genetics.

Resources

- Available objects such as a white board, duster ,etc.

Say

- Greet the participants and appreciate participants for their participation. Recall the previous session outcomes and then proceed towards the session.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Basics of Animal Genetics
- Scoring on Body Position

Summarize

- The key learning of above group discussion topics.
- Emphasize and elaborate important aspects of these topics.

Notes for Facilitation

- Animal health workers are not expected to remember the specific terms of genetics. What is required is simple understanding of meaning. The best way to teach genetics in this context is through stories. Help participants relate genetics to day-to-day farming decisions.
- Encourage few volunteers from class to talk on his / her experience of community practices related to animal breeding.

Exercise



Key Solutions to PHB Exercises

1. The genotype is the genetic makeup of an animal while the phenotype is the physical makeup. Refer section 5.2.1 of PHB.

UNIT 5.3: Signs of Heat

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Identify heat in small farm animals.

Resources to be Used

- Live animal in heat (Where possible)

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Sign of heat in animals.

Practical

- Participants may be given farm duties for few days to help them practically learn routine day to day operations in goat and pig farms, including detection of heat.

Activity

Purpose: To acquaint about the sign of heat. This activity may be planned for 15-20 minutes.

Methodology : Pen and per activity

- Ask participants to list out sign of heat in dairy cattle.
- Discuss with the participants about the topic.

Notes for Facilitation

- Indicate potential source of information to each of the group.
- Assist all groups to systematically arrange collected information and analyze them- when required.
- Constantly motivate each student to participate.
- Participants can be encouraged to do more group activities to understand about coordination among each other.

Exercise



Key Solutions to PHB Exercises

1. The signs of heat in dairy cattle are as follows:
 - Standing to be mounted
 - Attempt to mount another cow
 - Stringy mucous hanging from vulva
 - Increased restlessness
 - Drop in milk yield
 - Reduce feed intake
 - Frequent bellowing
 - Frequent urination and tail raising
 - Swelling of vulva.

UNIT 5.4: Artificial Insemination

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Describe the process of artificial insemination (AI) in dairy cattle.

Resources to be Used

- Live animals ready for insemination.
- Projector (For video show on insemination process – where available)

Explain

- What is semen?
- Liquid vs Frozen semen.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Benefits of Artificial Insemination
- Semen handling
- Insemination Techniques
- Post – Insemination Advice to Farmers
- Protocol Related to Bio-security, Hygiene, Safety and Animal Welfare
- NB

Demonstrate

- Appliances and equipment used in insemination.
- Sterilization process.
- Handling of liquid nitrogen and semen straws.
- Actual insemination process.

Practical

- Participants should be given opportunity to practice AI on live animals.

Notes for Facilitation



- Animal Health Worker who are assigned field duties only, normally do not need to assist veterinarian during semen collection under laboratory setting. Participants should be given only a brief introduction of semen collection/ processing process from male animals.
- Inform participants that, they need to attend more specialized training to be able to do artificial insemination in dairy cattle.

Exercise



Key Solutions to PHB Exercises

1. Cervix, uterine body, uterus. Refer unit 5.4.
2. Breeding should occur when the heifer reaches puberty.
3. Breeding can be started within four months or 120 days after delivery to achieve the goal of one calf per year for economic and profitable dairy farming, according to them.
4. Crossbreeding is where two or more different breeds or strains of dairy cow are introduced into the breeding mix. The major objective of crossbreeding is to maximise hybrid vigour, which is generally important for traits associated with reproduction, survival and overall fitness.
5. This Guidance Document has been prepared to provide general advice and guidance to all persons handling cattle on farms.
6. Learning by doing activity with the help of trainer.
7. Selection should consider both subjectively measured traits (visual assessment) and objectively measured traits (genetic assessment).
8. Refer unit 5.3 of PHB.
9. Necessary to follow certain essential protocols for delivering AI Services. Focus has to be on:
 - Genetic merit of bulls from which the semen was collected.
 - Reliability and recognition of the source and quality of semen used.
 - Maintenance of quality in transit, transfer, and storage.
 - Appropriate heat detection and adherence to recommended time of insemination.
 - Practice of correct technique in inseminating an animal.
 - Maintenance of hygiene and cleanliness during insemination.
 - Animal identification and complete follow up of each AI for pregnancy and calving etc.
10. Keep the liquid Nitrogen container in a location that allows easy withdrawal of semen doses & replenishment of semen and liquid nitrogen. The surrounding should be well ventilated, dry and dust free. For more, Refer section 5.5.1.
11. **Post Insemination Advice to Farmers**
 - Ask farmer to keep the animal under observation for next 12-24 hrs.
 - If signs of heat persist even after 18-24 hrs, call for a repeat AI, otherwise observe for heat symptoms after 18-21 days and also after 36-42 days.
 - If animal does not repeat heat at 18-21 days' intervals for two consecutive times, call your supervising para-vet or veterinarian for pregnancy diagnosis after 2-3 months from the date of insemination.
 - Keep body of the animal cool by keeping animal in the shed and sprinkling water, if required.
 - If an animal does not conceive even after three consecutive AIs, farmer should be advised to get the animal examined by a veterinarian and follow his advice.

UNIT 5.5: Parturition In Small Farm Animals

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Explain parturition in Sheeps and Goats.
2. Explain farrowing in Swines.

Resources to be Used

- Available objects such as a white board, duster, etc.
- Projector (For video show on parturition in small animal -where available)
- Live cases (where possible)

Explain

- Meaning of the word 'Parturition' and 'Farrowing'.
- Normal signs of parturition / farrowing.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Parturition in sheep and goat.
- Farrowing in pigs.

Practical

- Introduce participants to live parturition / farrowing in any nearby farm.

Notes for Facilitation



- Indicate potential source of information to each of the group.
- Assist all groups to systematically arrange collected information and analyze them- when required.
- Constantly motivate each student to participate.
- Participants can be encouraged to do more group activities to understand about coordination among each other.
- Where possible, display specific work of groups within the classroom.

Exercise



Key Solutions to PHB Exercises

1. Farrowing
2. 114 days
3. On the day of delivery, the sow will start to get restless. She continually stands up and sits down while chomping and clawing at her bedding. Since a lot of sows give birth at night, it will be vital to start keeping track of the sow overnight. The sow switches her tail, passes fluid from the vulva, appears to be in discomfort, and strains to give birth when she is about ten minutes away. The first piglet should be delivered at this moment. Piglets often are born facing either forward or backward, with a roughly equal distribution .
4. Parturition
5. Sheep : Between 144 and 150 days and Goat : 150 days.
6. A live lamb or kid may need to be delivered with help if the ewe or doe has not made any progress after her water has broken for 30 to 60 minutes. Everything that will come into contact with a ewe or doe must be cleaned and disinfected before aid is provided. When handling sheep or goats, pregnant women and women who are close to becoming parents should exercise caution because several reproductive diseases can be transmitted to people. Once the lambs or young have been delivered, it is crucial that their airways are open so they can breathe normally. To remove mucus from the lamb's or kid's airways, do as you would with cattle: tickle the inside of the lamb's or kid's nostril with a piece of hay or straw, or hang the lamb or kid upside down by its hind legs. Additionally important is the lamb or child receiving its mother's colostrum. It may be provided from a dairy cow, another doe, or another ewe if the ewe or doe does not have good quality colostrum on hand.

UNIT 5.6: Common Infertility Problems

Unit Objectives

After the completion of this unit, the participant will be able to:

1. Recognize common infertility issues and your role as A I Technicians in handling or minimizing such problems.
2. Demonstrate farmers on appropriate feeding of breeding animals to avoid infertility problems.

Resources to be Used

- Available objects such as a white board, duster, etc.

Say

- Greet the participants and recall the previous session learning outcomes.

Elaborate

With the help of PHB or audio-visual aids, elaborate:

- Common infertility problems.

Activity

Purpose: To acquaint about the actions which are followed by the Artificial Insemination Technician . This activity may be planned for 15-20 minutes.

Methodology : Pen and per activity

- Ask participants to write the down the actions that can be taken as an Artificial Insemination Technician.
- Discuss with the participants about the topic.

Do

- Clear the doubts of students related to the topic.
- Motivate the students to open up and ask questions.

Notes for Facilitation

- Introduce participants to routine farm operations and various farm records with focus on breeding related records.

Exercise

Key Solutions to PHB Exercises

1. Infertility in farm animals is due various causes such as nutrition, physiological disturbances and infectious causes, which may work separately or in combination. Economic losses can be considerable, both in terms of the cost of keeping a cow and the lost cash opportunity from fewer calves available to market. AI may aid in selecting the best oocyte and sperm combination as well as predicting embryo quality.

Notes



A large rectangular area with a thin orange border, containing 30 horizontal lines for writing notes.



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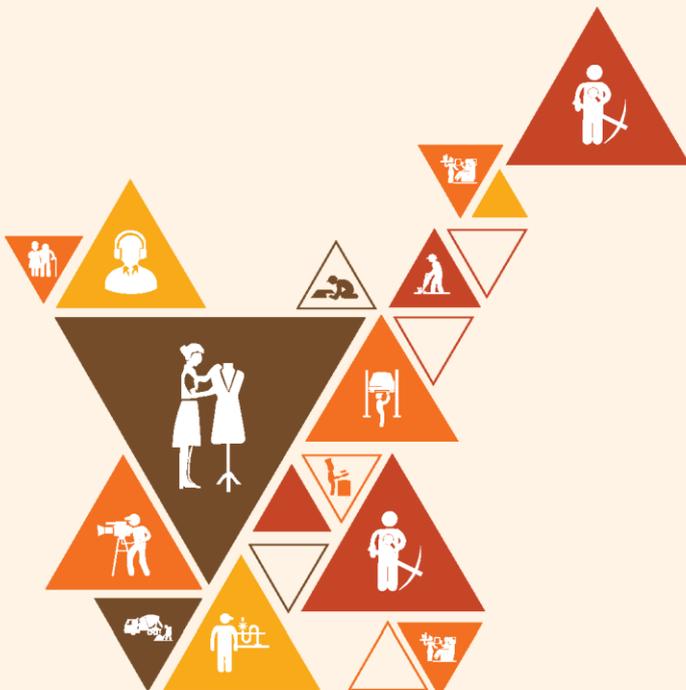
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6. Employability Skills (60 Hours)

To access content on Employability Skills, click here:

<https://eskillindia.org/NewEmployability>

Scan the QR code below to access the ebook



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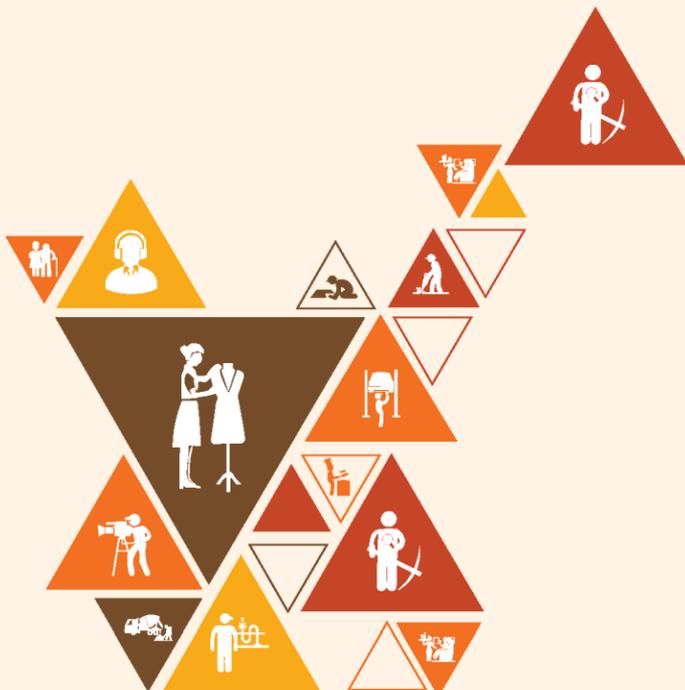
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7. Annexures

Annexure I - Training Delivery Plan

Annexure II - Assessment Criteria

Annexure III - QR Codes –Video Links



Annexure I

Training Delivery Plan

Training Delivery Plan			
Program Name:	Artificial Insemination Technician		
Qualification Pack Name & Ref. ID	AGR/Q4803		
Version No.	3.0	Version Update Date	17/11/2022
Pre-requisites to Training (if any)	12th Class OR 10th Class with 2 Years of experience relevant experience OR Certificate-NSQF (Level-3 and with minimum education as 5th grade pass) with 2 Years of experience relevant experience.		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Provide preventive care to livestock and poultry as per the guideline of the Veterinarian. • Provide primary first aid / essential curative treatment to livestock and poultry. • Assist public agencies in animal disease control • Assist in animal husbandry extension • Assist in the implementation of guidelines related to animal welfare • Assist in breed conservation • Assist in disaster management • Assist in the implementation of development programs. • Assist in marketing livestock farm inputs and products • Assist in the implementation of animal breeding services in small farm animals as per guidelines 		

S. No.	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools/Aids	Duration
1	Introduction T: 5:00 (HH:MM)	1. General Discipline in the classroom	<ul style="list-style-type: none"> • Demonstrate general discipline in the classroom • Describe Relevant organisational Policies and Procedures 		Classroom lecture, Activity	White board, duster, power point slides, etc.	T: 2:00
		2. Understanding Livelihood and Livestock	<ul style="list-style-type: none"> • Define the meaning of livelihood and relate it with dairy farming and related businesses. • Describe location of institutions and resources of your village. 		Classroom lecture, Team activity	White board, duster, power point slides, etc.	T: 1:00
		3. Importance and Role of Artificial Insemination Technician	<ul style="list-style-type: none"> • Explain Role and responsibilities as an AI Technician. • Explain Scope and demand of veterinary service • Explain Career opportunities of a Livestock Service Provider 		Classroom lecture, Team activity	White board, duster, power point slides, etc.	T: 1:00
		4. Continuous Learning and Support System	<ul style="list-style-type: none"> • Explain Importance of continuous learning and guidance from veterinarians. • Describe Potential institutions for seeking referral support. 		Classroom lecture, field visit, demonstration, activity	White board, duster, power point slides, etc.	T: 1:00

S. No.	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools/Aids	Duration
2	Veterinary First Aid T: 15:00 P: 40:00 (HH:MM)	1. Emergency Conditions and Pre-disposing factors - I	<ul style="list-style-type: none"> Analyse situations that need emergency care and conditions that pre-dispose animals to such situations. 	AGR/N4805 PC3, KU3, GS1-GS9	Classroom lecture, team activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Intravenous infusion set, scalp vein set	T: 2:00 P: 6:00
		2. Emergency Conditions and Pre-disposing factors - II	<ul style="list-style-type: none"> Identify signs and administer basic first aid for these situations. 	AGR/N4805 PC8, KU4, GS1-GS9	Classroom lecture, team activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Intravenous infusion set, scalp vein set	T: 2:00 P: 6:00
		3. Common first aid measures-I	<ul style="list-style-type: none"> Explain common first aid measures that can be employed in a field situation. 	AGR/N4805 PC5, KU8, GS1-GS9	Classroom lecture, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Antiseptic solutions, Bandage, Cotton, Gauge	T: 2:00 P: 6:00
		4. Common first aid measures-II	<ul style="list-style-type: none"> Explain the accepted traditional medicinal products and practices available to apply in case of emergency 	AGR/N4805 PC10, KU6, GS1-GS9	Classroom lecture, activity, group discussion	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Antiseptic solutions, Bandage, Cotton, Gauge	T: 2:00 P: 6:00
		5. Handling Poisoning	<ul style="list-style-type: none"> Identify signs of common poisoning and provide first aid to farm animals. 	AGR/N4805 PC1, KU8, GS1-GS9	Classroom lecture, demonstration, team activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. scalp vein set, Normal saline solution/Dextrose saline solution	T: 2:00 P: 6:00
		6. Safety measures during first aid	<ul style="list-style-type: none"> Discuss safety measures that should be adopted during first aid. 	AGR/N4805 PC9, KU5, GS1-GS9	Classroom lecture, field visit, role play	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Syringe, Needle, Antiseptic solutions, Bandage, Cotton	T: 2:00 P: 5:00
		7. Recap	<ul style="list-style-type: none"> Recapitulate complete module learning 	AGR/N4805 PC1-PC10, KU1-KU8, GS1-GS9	Classroom lecture, group discussion, Q/A session	Whiteboard, marker, pen, note pad, PHB, related PPT, etc.	T: 3:00 P: 5:00
3	Assisting in Veterinary extension services T: 20:00 P: 40:00 (HH:MM)	1. Understanding Extension Services	<ul style="list-style-type: none"> State some basic concepts needed to understand and implement extension programs. 	AGR/N4808 PC1, KU1, GS1-GS11	Classroom lecture, team activity, discussion	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures.	T: 2:00 P: 5:00
		2. Basic principle of housing -I	<ul style="list-style-type: none"> Describe key principles of dairy cattle housing so as to interpret various best practices. 	AGR/N4808 PC4, KU2, GS1-GS11	Classroom lecture, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures.	T: 3:00 P: 5:00

S. No.	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools/Aids	Duration
		3. Basic principle of housing -II	<ul style="list-style-type: none"> Demonstrate the exact design of any housing facility depending on its intended use, the local environmental conditions, the amount of available finance, and a range of other different factors. 	AGR/N4808 PC4, PC5, KU2, GS1-GS11	Class room lecture, activity, discussion	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures.	T: 2:00 P: 5:00
		4. Dairy cattle feeding	<ul style="list-style-type: none"> Identify key principles of dairy cattle feeding so as to interpret various best practices 	AGR/N4808 PC6, KU1, GS1-GS11	Classroom lecture, demonstration, facilitator led discussion, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures/pamphlets, etc.	T: 3:00 P: 5:00
		5. Breeding of Farm animals-I	<ul style="list-style-type: none"> Describe techniques and rule for selecting good breeding animals. 	AGR/N4808 PC5, KU2, GS1-GS11	Classroom lecture, demonstration, expert session, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures/pamphlets, etc.	T: 2:00 P: 5:00
		6. Breeding of Farm animals-II	<ul style="list-style-type: none"> Define some basic concepts related to reproductive system and reproductive cycle of dairy cattle. 	AGR/N4808 PC3, KU3, GS1-GS11	Classroom lecture, activity, group participation	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures/pamphlets, etc.	T: 3:00 P: 5:00
		7. Farm inputs and record keeping-I	<ul style="list-style-type: none"> Describe techniques and rules for selection of good breeding animals. 	AGR/N4808 PC6, KU4, GS1-GS11	Classroom lecture, demonstration, facilitator led discussion, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures/pamphlets, etc.	T: 2:00 P: 5:00
		8. Farm inputs and record keeping-II	<ul style="list-style-type: none"> Explain some basic concepts related to reproductive system and productive cycle of dairy cattle. 	AGR/N4808 PC6, KU4, GS1-GS11	Classroom lecture, demonstration, facilitator led discussion, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures/pamphlets, etc.	T: 3:00 P: 5:00
4	Development program implementation and marketing in livestock sector T: 20:00 P: 10:00 (HH:MM)	1. Sustainable Development and Goal for same	<ul style="list-style-type: none"> Describe sustainable development goals. 	AGR/N4810 PC1, KU2, GS1-GS8	Classroom lecture, facilitator led discussion, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures/pamphlets, etc	T: 2:00 P: 5:00
		2. Basics of Project Management	<ul style="list-style-type: none"> Describe basic concept of project management. 	AGR/N4810 PC6, KU3, GS1-GS8	Classroom lecture, demonstration, facilitator led discussion, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures/pamphlets, etc	T: 3:00 P: 5:00

S. No.	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools/Aids	Duration
		3. Business Management	<ul style="list-style-type: none"> Describe basics of business management and guide farmers on Marketing Explain economics of livestock based business activities Explain Livestock product markets and marketing 	AGR/N4810 PC8, KU5, GS1-GS8	Classroom Lecture, trainer led discussion, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures/pamphlets, etc.	T: 3:00 P: 5:00
		4. Expectation from Development Worker	<ul style="list-style-type: none"> Describe Implement development programs 	AGR/N4810 PC6, KU6, GS1-GS8	Classroom lecture, expert session, field visit	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. Paper, pen, datasheet, manual, brochures/pamphlets, etc	T: 2:00 P: 5:00
5	Implementation of cattle Breeding Services T: 60:00 P: 90:00 (HH:MM)	1. Understand the Reproductive System-I	<ul style="list-style-type: none"> Define some basic concepts related to reproductive system 	AGR/N4820 PC1, KU3, GS1-GS11	Classroom lecture, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit	T: 3:00 P: 5:00
		2. Understand the Reproductive System-II	<ul style="list-style-type: none"> Define some basic concepts related to reproductive cycle of dairy cattle. 	AGR/N4820 PC1, KU3, GS1-GS11	Classroom lecture, group participation	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit	T: 3:00 P: 5:00
		3. Basics of Animal Genetics –I	<ul style="list-style-type: none"> Explain basic concept of genetics-I 	AGR/N4820 PC1, PC2, KU4, GS1-GS11	Classroom lecture, Activity, practical	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		4. Basics of Animal Genetics -II	<ul style="list-style-type: none"> Explain basic concept of genetics-II 	AGR/N4820 PC1, PC2, KU4, GS1-GS11	Classroom lecture, activity, practical	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		5. Signs of heat-I	<ul style="list-style-type: none"> Identify heat in small farm animals-I 	AGR/N4820 PC6, KU3, GS1-GS11	Classroom lecture, demonstration, expert session, practical	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		6. Signs of heat-II	<ul style="list-style-type: none"> Identify heat in small farm animals-II 	AGR/N4820 PC6, KU3, GS1-GS11	Classroom lecture, demonstration, expert session, practical	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00

S. No.	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools/Aids	Duration
		7. Artificial Insemination-I	• Describe the process of artificial insemination (AI) in dairy cattle-I	AGR/N4820 PC9, PC10, KU7, GS1- GS11	Classroom Lecture, demonstration, trainer led discussion, field visit to site, practical	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose, Straw, Semen	T: 3:00 P: 5:00
		8. Artificial Insemination-II	• Describe the process of artificial insemination (AI) in dairy cattle-II	AGR/N4820 PC9, PC10, KU7, GS1- GS11	Classroom lecture, demonstration, expert session, practical	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose, Straw, Semen	T: 3:00 P: 5:00
		9. Artificial Insemination-III	• Describe the process of artificial insemination (AI) in dairy cattle-III	AGR/N4820 PC9, PC10, KU7, GS1- GS11	Classroom lecture, demonstration, expert session, practical	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose, Straw, Semen	T: 3:00 P: 5:00
		10. Parturition in Small Farm Animals-I	• Explain parturition in Sheeps	AGR/N4820 PC16, KU8, GS1-GS11	Classroom lecture, demonstration, expert session, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		11. Parturition in Small Farm Animals-II	• Explain parturition in Goats	AGR/N4820 PC16, KU8, GS1-GS11	Classroom lecture, demonstration, expert session, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		12. Parturition in Small Farm Animals-III	• Explain farrowing in Swines-I	AGR/N4820 PC16, KU8, GS1-GS11	Classroom lecture, demonstration, expert session, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		13. Parturition in Small Farm Animals-IV	• Explain farrowing in Swines-II	AGR/N4820 PC16, KU8, GS1-GS11	Classroom lecture, demonstration, expert session, group participation, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		14. Common Infertility Problems -I	• Recognize common infertility issues	AGR/N4820 PC21, KU6, GS1-GS11	Classroom lecture, Activity, discussion	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		15. Common Infertility Problems -II	• Explain role as AI Technicians in handling or minimizing common infertility problems	AGR/N4820 PC21, KU6, GS1-GS11	Classroom lecture, demonstration, expert session, group participation	Whiteboard, marker, pen, note pad, PHB, related PPT, etc	T: 3:00 P: 5:00

S. No.	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools/Aids	Duration
		16. Common Infertility Problems -III	<ul style="list-style-type: none"> Demonstrate farmers on appropriate feeding of breeding animals to avoid infertility problems-I 	AGR/N4820 PC21, KU6, GS1-GS11	Classroom lecture, activity, demonstration	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		17. Common Infertility Problems -IV	<ul style="list-style-type: none"> Demonstrate farmers on appropriate feeding of breeding animals to avoid infertility problems-II 	AGR/N4820 PC21, KU6, GS1-GS11	Classroom lecture, demonstration, activity	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 3:00 P: 5:00
		18. Recap -I	<ul style="list-style-type: none"> Recapitulate complete module learning -I 	AGR/N4820 PC1, KU3, KU4, GS1- GS11	Class room lecture ,demonstration, practical, group participation, Q/A Session	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 4:00 P: 3:00
		19. Recap -II	<ul style="list-style-type: none"> Recapitulate complete module learning -II 	AGR/N4820 PC1, KU3, KU4, GS1 - GS11	Class room lecture ,demonstration, practical, group participation, Q/A Session	Whiteboard, marker, pen, note pad, PHB, related PPT, etc. AI Kit, Animal for demonstration purpose	T: 5:00 P: 2:00

S.No.	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools / Aids	Duration
							HH:MM
6.	Employability Skills (60hrs)	Introduction to Employability Skills	<ul style="list-style-type: none"> Describe importance of Employability Skills Prepare a note on different industries, trends, required skills 	DGT/VSQ /N0102	Classroom lecture, Team Activity	White-Board and, Markers, Chart Paper and Sketch pens, LCD Projector	1:30
		Constitutional Values: Citizenship	<ul style="list-style-type: none"> Detail the principles of constitution of India Identify the various environmentally sustainable practices 		Classroom lecture, Team Activity	Laptop, PPT, White board Markers, note pad, pen etc.	1:30
		Becoming a Professional in the 21st Century	<ul style="list-style-type: none"> Discuss relevant 21st century skills required for employment Practice critical thinking and decision making skills 		Classroom lecture, Team Activity	Laptop, PPT, White board Markers, note pad, pen etc.	2:30
		Basic Skills-I	<ul style="list-style-type: none"> Read English text with appropriate articulation Practice basic English words, sentences, punctuation 		Classroom lecture, Team Activity, Role play, video session	Laptop, PPT, White board Markers, note pad, pen etc.	5:00
		Basic Skills-II	<ul style="list-style-type: none"> Demonstrate active listening and reading skills 		Practical, demonstration, role play		5:00
		Career Development and Goal Setting	<ul style="list-style-type: none"> Identify well-defined short- and long-term goals Explain how to build a career pathway Conduct job market research Discuss how to set career goals. 	DGT/VSQ /N0102	Class room lecture, discussion, demonstration, practical	Laptop, PPT, White board Markers, note pad, pen etc.	2:00

S.No.	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools / Aids	Duration
							HH:MM
		Communication Skills	<ul style="list-style-type: none"> Explain the importance of communication at workplace Demonstrate effective communication strategies Demonstrate how to communicate effectively using verbal and nonverbal communication 	DGT/VSQ /N0102	Class room lecture, discussion, demonstration, practical	Laptop, PPT, White board Markers, note pad, pen, audio visual aids etc.	5:00
		Diversity and Inclusion	<ul style="list-style-type: none"> Explain the need of diversity at workplace Identify the various PwD policies applicable at workplace Discuss the significance of the POSH Act 	DGT/VSQ /N0102	Class room lecture, Inter-active discussion	Laptop, PPT, White board Markers, note pad, pen, audio visual aids etc.	2:30
		Financial and Legal Literacy	<ul style="list-style-type: none"> Discuss various financial institutions, products, and services Explain the common components of salary such as Basic, PF, Allowances (HRA, TA, DA, etc.), tax deductions 	DGT/VSQ /N0102	Class room lecture, demonstrations, group discussion, practical	Laptop, PPT, White board Markers, note pad, pen, audio visual aids etc.	5:00
		Essential Digital Skills-I	<ul style="list-style-type: none"> Detail the use and features of various MS Office tools, like MS Word, MS Excel, MS PowerPoint, etc. Demonstrate how to operate digital devices Create an e-mail id and follow e- mail etiquette to exchange e -mails Describe the role of digital technology in day-to-day life and the workplace 	DGT/VSQ /N0102	Class room lecture, discussion, Demonstration, practical, learning by doing	Laptop, PPT, White board Markers, note pad, pen, audio visual aids etc.	6:00
		Essential Digital Skills-II	<ul style="list-style-type: none"> Practice Digital skills 		Demonstration, practical, learning by doing		4:00

S.No.	Module Name	Session Name	Session Objectives	NOS Reference	Methodology	Training Tools / Aids	Duration
							HH:MM
		Entrepreneurship	<ul style="list-style-type: none"> Describe the types of entrepreneurship and enterprises Describe the 4Ps Of Marketing- Product, Price, Place and Promotion and Apply the mas Per requirement Create a sample Business plan, For the selected business 	DGT/VSQ /N0102	Class room lecture, discussion, Demonstration, practical	Laptop, PPT, White board Markers, note pad, pen, audio visual aids etc.	7:00
		Customer Service	<ul style="list-style-type: none"> Identify types of customers and how to deal with them Identify methods to get customer feedback and how to implement them Explain various tools used to collect customer feedback Discuss the significance of maintaining hygiene and dressing appropriately 	DGT/VSQ /N0102	Class room lecture, activity, role play, video session	Laptop, PPT, White board Markers, note pad, pen, audio visual aids etc.	5:00
		Apprenticeships and Jobs	<ul style="list-style-type: none"> Practice personal grooming strategies Illustrate the use of online platforms for job hunting Detail the concept of Apprenticeship Demonstrate how to enroll for Apprenticeship programs. Draft a professional Curriculum Vitae (CV) Role play a mock interview 	DGT/VSQ /N0102			8:00

Annexure II

Assessment Criteria

CRITERIA FOR ASSESSMENT OF TRAINEES

(For Updated 'Assessment Criteria', please refer to Qualification Pack of this Job role available at <https://www.nqr.gov.in/>)

Assessment Criteria for ASCI- Artificial Insemination Technician	
Job Role	Artificial Insemination Technician
Qualification Pack	AGR/Q4803
Sector Skill Council	Agriculture

S.No.	Guidelines for Assessment
1.	Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2.	The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3.	Assessment will be conducted for all compulsory NOS, as well as the selected elective NOS/set of NOS.
4.	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5.	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria.
6.	To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7.	In case of <i>unsuccessful completion</i> , the trainee may seek reassessment on the Qualification Pack.

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N4805.Veterinary First Aid	34	49	0	15	98	20
AGR/N4808.Assisting in veterinary extension services	60	30	0	10	100	25
AGR/N4810.Development program implementation and marketing in the livestock sector	30	40	-	30	100	25
AGR/N4820.Implementation of cattle Breeding Services	34	44	-	22	100	25
DGT/VSQ/N0102.Employability Skills (60 Hours)	20	30	-	-	50	5
Total	178	193	-	77	448	100

Annexure-III

QR Codes – Video Links

Chapter No.	Unit No.	Topic	QR Code Links	QR code (s)
Chapter -1 Introduction to the Role of an Artificial Insemination Technician	Unit 1.3 - Importance and Role of Artificial Insemination Technician	What is Artificial Insemination?	https://www.youtube.com/watch?v=6toMXEMyH10	 What is Artificial Insemination?
Chapter -2 Veterinary First Aid	Unit 2.3 - Handling Poisoning	Cow affected by lantana poison plant	https://www.youtube.com/watch?v=urKLRsWVWY	 Cow affected by lantana poison plant
	Unit 2.4 - Safety Measures During First Aid	Know the status of your cow	https://www.youtube.com/watch?v=9VCw3xA7wBY	 Know the status of your cow
Chapter -3 Assisting in Veterinary Extension Services	Unit 3.2 - Basic Principle of Housing	Housing management of milch animals	https://www.youtube.com/watch?v=Wjyg9CRThuc	 housing management of milch animals
	Unit 3.3 - Dairy Cattle Feeding	Dairy Cattle Feeding	https://www.youtube.com/watch?v=KhuZ2ka7qb8	 Dairy Cattle Feeding
	Unit 3.4 - Breeding of farm animals	Estrous Cycle	https://www.youtube.com/watch?v=satTTWcM7_E	 Estrous Cycle
		Cattle breeding	https://www.youtube.com/watch?v=satTTWcM7_E	 Cattle breeding
Chapter -5 Implementation of Cattle Breeding Services	Unit 5.1- Understanding the Reproductive System	Breeds of Cow / Breeding System of Cattle	https://www.youtube.com/watch?v=ggLdNo3XCGA	 Breeds of Cow / Breeding System of Cattle

Chapter No.	Unit No.	Topic	QR Code Links	QR code (s)
	Unit 5.4 - Artificial Insemination	How to do artificial insemination in cow	https://www.youtube.com/watch?v=oYrdabjVjdA	 How to do artificial insemination in cow
	Unit 5.5 - Parturition in small farm animals	Parturition in goat	https://www.youtube.com/shorts/16UyGI5sU1M	 Parturition in goat



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