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

Shri Narendra Modi
Prime Minister of India
About this Guide

Dear Trainer,

This Trainers Manual is intended to empower preparing for the Animal Health Worker Qualification Pack (QP). Every National Occupational (NOS) is spread over Unit/s. Key Learning Objectives for the NOS check the start of the Unit/s for that NOS. The images utilized as a part of this book are portrayed beneath. Animal Health Worker is in charge of Installation, Testing, Commissioning of Animal Health Worker at agriculturist’s field for better water administration and increment in yield of product. The National Occupational Standards indicate the measures of execution an individual must accomplish when doing a capacity in the work environment, together with the information and comprehension they have to meet that standard reliably. These word related guidelines are appropriate both in the Indian and worldwide settings. According to these measures the Animal Health Worker ought not work freely, ought to be relentless and must be able to settle on operational choices relating to his range of work. The student ought to pick up clarity of work and ought to be result situated; The Trainee ought to likewise have the capacity to exhibit abilities to utilize different devices in the Animal Health Worker. The mentor should guide and prepare the students’ in the accompanying abilities:

- **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 course incorporates Trainer Guide including student handbook for the learners and coach’s aide; appraisal guide; session arrangement; and syllabus for you. The course material likewise incorporates a couple of blurbs as showing helps in the classroom. The appraisal guide subtle elements the assessment system. As a mentor you will assess the learners’ execution and grade them in light of the assessment parameters given in the aide. The system additionally incorporates field visit for the students where they will watch the method/operations and administrations of the Greenhouse. Chapter sare prepared to build up the expert abilities like – choices making, systematic and basic considering. We hope you will be able to impart your knowledge with our help to make this program a success and up-skill the workers to the recommended standards.

We trust you will have the capacity to confer your insight with our help to make this program a win and up-skill the workers to the suggested norms.

All the best!
Acknowledgements

We are thankful to all organizations and individuals who have helped us in preparation of this Participant manual. 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 handbook will lead to successful roll out the skill development initiatives, helping greatly our stakeholders particularly trainees, trainers and assessors etc. We are thankful to our Subject Matter Expert Dr. Miftahul Islam Barbarurah who has given the content and helped us in preparation of Participant Handbook.

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.
Role of the Trainer

As a trainer, keep in mind the following guidelines:

Know your job thoroughly

The Trainer ought to first know his/her learners (the students) keeping in mind the end goal to guarantee their productive contribution in the learning procedure. Fundamentally the majority of these contemplations are guided by the reasoning of participatory preparing, which advocates that preparation, not at all like instructing, is more worried with the general improvement of the human identity.

• As a Trainer, remember the accompanying rules:
• Training is not learning
• The trainer needs to learn for himself/herself, through his/her own particular activity and movement
• The trainer can just guide the understudy movement in a way that prompts a decent learning background
• The trainer can create reasonable situations fancied to deliver a powerful learning (curricular, co-curricular and additional curricular) experience
• Trainees’ response with the earth is relied upon to achieve an adjustment in conduct
• The trainer is the key component, as on him/her depends the arranging of the learning circumstance for accomplishing the sought result

Practice these common courtesies

• Greet the students
• Be warm and neighborly
• Introduce yourself
• Ask their names
• Explain the reason and objectives of preparing project
• Ask their desires
• Always make inquiries
• Listen to them quietly and answer their inquiries
• In case you can’t react to an inquiry say that you will hit them up
• Respect the students
• Do not hang over them, their work, or get in their work-space
• Do not take their work or move it without requesting their consent
• Be a decent onlooker
• Offer rededication for weaker students Correct the flawed practices of learners at work before they transform into propensities
• Do not condemn
• Show gratefulness where it is expected
• Always say 'please', 'thank you', and "too bad"
• Be a tutor
Responsibilities

- The trainer has a unique position and assumes a few parts. He/she is a go between the student and administration.
- The trainer has moral and lawful duties and guarantees the expert advancement as well as the prosperity of the young. You need to counteract:
  - Discrimination as a result of sexual orientation, race or nationality or some other kind
  - Bullying and/or lewd behavior
  - Abuse of liquor, prescription or whatever other substance
  - Physical threats through mischance, air contamination, commotion or risky chemicals
  - Overstepping the student’s physical limit
  - You likewise need to secure that time directions or other lawful controls are not infringing— neither by you nor by the disciple.

Symbols Used

- Steps
- Time
- Tips
- Notes
- Objectives
- Do
- Ask
- Explain
- Elaborate
- Field Visit
- Practical
- Lab
- Demonstrate
- Exercise
- Team Activity
- Facilitation Notes
- Learning Outcomes
- Say
- Resources
- Activity
- Summary
- Role Play
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1. Introduction

Unit 1.1 – Rural livelihood and livestock farming
Unit 1.2 – Knowing your village or service area
Unit 1.3 – Role and responsibility of animal health worker
Unit 1.4 – Continuous learning and support system
Key Learning Outcomes

At the end of this module, you will be able to:

- Build rapport with fellow participants of the program.
- Discuss basic concept of livelihood with the participants and guide them to apply the concept on personal life and their day to day work with livestock farmers.
- Discuss importance of livestock in rural livelihood and build self-esteem of participants as important service provider and change agent of society.
- Build capacity amongst participants to understand the functioning of village institutions, society, climate / environmental issues and village economy in brief.
- Discuss with participants about their role and responsibility as animal health worker.
- Motivate and guide participants to dedicate their life to continuous learning and suggest available referral support system.
UNIT 1.1: Rural Livelihood and livestock farming

Unit Objectives

At the end of this unit, students will be able to:

• Help participants to get rid of inhibition and anxiety (if any) thus ensuring maximum class participation.
• Empower participants to systematically think about their own livelihood and ways to enhance livelihood of others.
• Make participant understand key words like 'livestock', ‘poultry’ while explaining their role in livelihood, human health and nutrition.
• Create a sense of pride amongst the participants as would be service provider of a sector that is important to the country’s economy, social and cultural well-being.
• Inculcate the serving attitudes and create awareness of ‘people' dimensions associated with animal care and livestock development.

Resources to be Used

• Available objects such as a white board, duster etc.
• Power point slides, Pictures / posters e.g. that can depict various role of livestock (Provider of food, energy and traction etc.)
• Assignments included in participants’ manual.

Example

Examples of slides that can be used in power point presentation as shown below:

![The livelihood equation](image)

Fig 1.1.1 Presentation on livelihood equation (Source: Dr. M. Islam Barbaruah, Vet Helpline India Pvt Ltd)
Do

- Make the students stand in a circle, close enough to the person each side of them that they can pass the parcel quickly.
- Say 'Stop' when the students least expect it. The person who has the parcel at that time should get out.
- Those who get out should introduce themselves by providing their names and a little additional information such as name of his / her village, things people in their village do to earn living, favorite farm animal and why etc.
- The winner of the game should stand and introduce himself/herself along with the additional information as above at the end of the game.

Say

- Thank everyone for their participation.
- Describe some comments of participants during the game regarding things people do to earn living.
UNIT 1.1: Rural Livelihood and livestock farming

Ask

- Explore with participants what they understand about the word 'livelihood'; ask them to name equivalent word in local language. (Include images of livelihood equivalent Indian words in a power point slide e.g. See image given below which is livelihood equivalent in Kannada language)
- Ask three volunteers to give a short speech as what will they do to improve their own livelihood and livelihood of others.
- Ask few participants to describe people / occupations who are directly dependent on animals to earn living.

Explain

- Introduce participants to definition of livelihood and explain the livelihood equation as mentioned in participant manual.
- Reference to livelihood equation explain that “A farmer earns his livelihood by utilizing farm animals (Asset) and doing farming (Activities)”. By caring, protecting and improving productivity of farm animal asset, we can help farmers improve their livelihood. We also have the duty to ensure that farming as an activity in any area remains remunerative for sustaining the livelihood of farmers.
- Explain the definition of livestock and poultry with examples and pictures. Explain their role in livelihood, human health and nutrition.
- Explain various groups of livestock e.g. Big Ruminants, Small ruminants, Monogastricts and Camellias.

Elaborate

- Elaborate on the role of livestock (Provider of food, energy, tractions besides cultural and religious significance etc.)
- Size of population and importance of livestock to Indian economy.
Notes for Facilitation

- Help participants to complete all the tasks included in the participant manual.
- When you ask volunteers to give a short speech on what will they do to improve their own livelihood and livelihood of other, assist them if required to use the components of livelihood equation e.g. I will do exercise or take good food regularly to improve my physical capacity, I will attend hands-on training to improve by skill, I will buy some animals (Asset!) for farming etc.
- A thorough understanding of the meaning of livelihood will help in inculcating the serving attitudes and create awareness of 'people' dimensions associated with animal care and livestock development. Motivate participants to always think about the livelihood of owner farmer while addressing issues related to his / her animals.
- While describing the role and importance of livestock help participants to develop a sense of pride amongst themselves as would-be service providers of a sector that is important to country's economy, social and cultural well-being.
- You can end the session asking participants to take the following pledge:

“We will work hard to improve our own livelihood and livelihood of farmers. We dedicate our life to the well-being of animals and as such of humans”

Exercise

1. Why is skill development important to support livelihood?
   Answer: ..........................................................................................................................................................
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   ........................................................................................................................................................................
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2. What should you do to support the livelihood of a livestock farmer?
   Answer: ..........................................................................................................................................................
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UNIT 1.2: Knowing Your Village or Service Area

Unit Objectives

At the end of this unit, students will be able to:

- Understand the functioning of village institutions.
- Understand the basics of socio-economic parameter of a village with specific reference to agriculture.
- Understand the basic climate and environment related issues in a village/service area context.

Resources to be Used

- Available objects such as a white board, duster, flip chart board/paper etc.
- Village map or map of service area of trainees.
- Assignments/class work included in participants' manual.
- Slides in power point presentation showing specific images e.g. sustainable development goal etc. or images from village that tells any story.

Team Activity

- Make students into two or three groups. Ask them to refer to the model village institution diagram given in participant manual. 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.
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.
• The objective of the above activities is to prepare the participants for his / her future role as a socially responsible village level worker. Awareness of village level issues and capacity to effectively engage with village level institutions (as or when required) are two important qualities of an animal health worker. Many a time animal health workers are required to assist veterinarians in mobilizing local resources and in organizing events at the right time and in the right place. Animal health workers are the first point of contact for field veterinarian to know the social and cultural aspects of village society including societal norms and traditional practices.

• 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.

• Each participant should be asked to refer to the image of crop calendar included in the participant manual. They should prepare similar one in the context of their own village.
• Ask interested group of participants to look for meaning of 'sustainable development' and discuss about the same amongst themselves.
Exercise

1. How knowledge of the village you are serving can help you support the livelihood of people?
Answer: ..........................................................................................................................................................
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2. How can knowledge of crop calendar and village festivities help your work as animal health worker?
Answer: - .........................................................................................................................................................
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Notes for Facilitation

- Indicate potential sources of information to each of the group.
- Assist all groups to systematically arrange collected information and analyze them – where required.
- Constantly motivate each student to participate. Arrange for award for group presentations based on
criteria such as quality and relevancy of the content, group involvement, presentation skill, use of tools etc.
- You may invite any representative of local village council to grace the training season; request him / her to
give comment / award on the team work of participants.
- Focus on ensuring pictorial presentation of learning e.g. Group 7 (as above) showing location of village
resources in a simple graphic map drawn on large flip chart.
- Ensure presence of representative of panchayat or village council to evaluate and encourage the work of teams.
- Where possible, display specific work of groups within the classroom.
UNIT 1.3: Role and Responsibility of Animal Health Worker

**Unit Objectives**

At the end of this unit, students will be able to:

- Understand their job role as an animal health worker.
- Appreciate the key public health issues and responsibilities thereof.
- Learn about their limitations as service provider and pre-requisite to follow legal / government guidelines.
- Appreciate the need to take guidance from veterinarians

**Resources to be Used**

- Available objects such as a white board, duster, flip chart board / paper etc.
- Slides in power point presentation showing specific innovative images e.g. that depicts danger of faulty use of antibiotics, non-reporting of scheduled diseases etc.

**Team Activity**

- Divide the class into three teams. Give sufficient time for teams to refer to the text in participant manual related to roles of Animal Health Worker. 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. 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.

1. Why should we focus more on preventive care in farm animal practice?
2. Why should we report incidence of certain diseases to authority?
3. What happens when we overuse or inappropriately use drugs in livestock
Say

- Sum up the key learning of above group discussion topics and relate it to the role and responsibility of animal health worker.
- Everyone, regardless of their field or profession, operate within a legal and ethical framework of some kind. This simply means that we all work within the boundaries defined by applicable laws and ethical standards. Introduce the participants to the legal provision in India under Veterinary Council of India Act whereby animal health worker can only deliver services that are defined under Minor Veterinary Practice (MVP) notification of respective state governments. They can offer services only under the supervision of veterinarians. Encourage participants to ensure compliance of above law as same is aimed primarily at protecting public health.
- Emphasize and elaborate on the fact that 70 percent of human diseases originate in animals and actions of animal health worker can affect human lives both positively and negatively.

Elaborate

- Elaborate on work environment of animal health worker: Discuss on model service delivery examples in India, where animal health workers are working under registered institutions and getting regular guidance from veterinarians. Indicate the need for partnership between practicing veterinarian and animal health workers so as to ensure delivery of service to large number of farmers in remote areas.
- In situations where trainees are likely to be inducted directly into any organization, discuss about the work of the organization and how trainees will have to contribute.

Notes for Facilitation

- A brief general explanation of terms used in participant manual like 'animal husbandry', 'preventive vs curative treatment', 'public vs private agency', 'extension service', 'farmer institution', 'first aid' etc. will help participants to take part in discussions.
- Encourage participants of group discussion to ask questions so that they can clear their doubts (if any) on future job role.
- Assist participants to streamline their thought process while discussing the above question. E.g. Preventive service is good because it is less costly; animals retain their productivity etc.
- You can invite representative of any organization who employs animal health worker to speak on 'expectations from trainees'.
- Indicate briefly the option for career progression and career mobility of animal health worker completing training under NSQF framework e.g. an animal health worker can further study to become veterinary field assistant or veterinary clinical assistant. He/she can work anywhere in India or even seek employment outside the country.
UNIT 1.4: Continuous Learning And Support System

Unit Objectives

At the end of this unit, students will be able to:

• Appreciate the importance of continuous learning and guidance from veterinarian.
• Learn about relevant sources of information or available support system.

Resources to be Used

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

Explain

• The importance of continuous or lifelong learning and that of regular guidance from veterinarian.

Say

• On an individual level, continuous learning is defined by the practices the individual carries out daily in order to continue increasing knowledge. For example, this can be:

1. Asking for help when something is not understood
2. Observing more experienced employees at work
3. Trying new ways of doing things and exploring alternative methods
4. Practicing what has been learnt already
5. Finding ways to improve such as taking up additional training programs
Field Visit

- 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 attempt at giving them the opportunity to observe such meetings)

Demonstrate

- Demonstrate available web sites, books etc. where participants can search for information on farming and care of animals.

Activity

- All participants should collect available leaflets, brochures and other publications on different topics from places covered under field visit.
2. Controlling And Restraining of Animals

Unit 2.1 – External body parts and organ system of farm animals.
Unit 2.2 – Understanding flight zone and point of balance.
Unit 2.3 – Common behavior of farm animals.
Unit 2.4 – Use of common methods and tools.
Unit 2.5 – Personal safety.
Key Learning Outcomes

At the end of this module, you will be able to:

- Assist participants identify body parts and learn about various organ systems in farm animals.
- Prepare participants to approach and handle animals with minimum stress and with safety precautions.
- Demonstrate use of tool and equipment to restrain animals.
UNIT 2.1: External Body Parts And Organ System of Farm Animals

**Unit Objectives**

At the end of this unit, you will be able to assist participants to:

- Identify body parts and learn about various organ systems in farm animals.
- Discuss body locations with clinical or husbandry significance.
- Use various terms to describe animals based on sex and age.

**Resources to be Used**

- Power point slides, Pictures / posters e.g. that depict various body parts and organ systems of farm animals.
- Live farm animals

**Say**

- Knowing animals' body parts, organs and functional systems is the first step in handling animals and tackling any illness or disease.
- Organs are part of a living thing, distinct from the other parts, they perform specific functions.
- A functional system consists of two or more organs and they do specific functions.

**Ask**

- Ask participants to recall their learning in school days about levels of organization in animal body e.g. Cell – tissue – organ and organ system.
- Ask participants if they can remember some body parts, organs and body system in human.
Examples of image that can be used in power point presentation to show levels of organization in animal body:
Demonstrate

• Demonstrate various external body parts of different farm animals and poultry.
• The location of common lymph nodes in various species.
• Location of Pin bone, Tuber coxae (hook bone), Para lumber fossa, Point of shoulder, hearth girth

Explain

• Nine systems of animals’ body along with organs and corresponding job functions.

Elaborate

• Rumen as an organ and the importance of rumination. Briefly indicate clinical significance of para lumber fossa.
• Procedure to measure length and hearth girth of animals while demonstrating specific body parts.

Exercise

• Participant should be encouraged to complete the class assignment given in participant manual regarding meaning of used terms like Bull, Cow, Buck etc. besides young ones like Kid, Piglet etc.
**UNIT 2.2: Approaching And Moving Animals**

**Unit Objectives**

At the end of this unit, you will be able to assist participants to:

- Understand the basic principle of animal handling.

**Resources to be Used**

- Available objects such as a white board, duster etc.
- Slides in power point presentation showing specific images showing flight zone (Refer participant manual for images)

**Explain**

- Flight zone and point of balance.
- General precaution to be taken while approaching and handling livestock.

**Demonstrate**

- How to approach a farm animal or make an animal / herd of animals move

**Elaborate**

- Effect of stress on health and production of farm animals.
UNIT 2.3: Common Behavior of Farm Animals

Unit Objectives

At the end of this unit, you will be able to assist participants to:

- Learn about common behavior of farm animals.

Resources to be Used

- Available objects such as a white board, duster, flip chart board / paper etc.
- Any available video showing specific farm animal behavior.

Team Activity

- Divide the class into 2 teams. Each team should refer and discuss amongst themselves common behavior related information given in participant manual or available in various internet sources (exclude behavior related to rumination or heat / estrous). The team leaders should then make presentation preferably also highlighting experience of team members (if any). Where feasible, encourage team members to show short video clips.
- (The objective of the activity is to develop interest amongst participants to learn more about farm animal behavior so that they can handle farm animals with ease and with minimum stress)

Explain

- Possible reason of particular behavior(s) as highlighted by teams.
UNIT 2.4: Use of Common Methods and Tools for Restraining

Unit Objectives

At the end of this unit, you will be able to assist participants to:

- Understand the use of common methods and tools for controlling and restraining of animals.

Resources to be Used

- Live animal and birds
- Required tools for restraining

Explain

- The need for restraining of animals.

Say

- Restrain in possible both by manual and mechanical means. The class will however, concentrate on manual methods as same is more common in field context in India.

Demonstrate

Demonstrate the following on live animals indicating precautions to be taken:

- Use of rope halter / Nose snare
- Restraining of Pigs
- Leg restrain in cattle
- Securing cattle in standing position
- Types of knots and Restrain by casting (Reuff’s method and alternative method)
- Rope board casting of pig
- Restraining of Sheep and Goat
- Restraining of birds
UNIT 2.5: Personal Safety

Unit Objectives
At the end of this unit, you will be able to assist participants to:

- Appreciate the importance of personal safety.

Resources to be Used

- Available personal protective equipment

Explain

- How handling of animals can cause both physical injury and illness in humans (Zoonosis)

Elaborate

- Rules to be followed to ensure personal safety.

Demonstrate

- Use of personal protective equipment
Request participants to refer to tips included in the participant manual and discuss any relevant pointers helpful to participants.

**Tips for end of the unit practical assessment:**

Ask participant to approach and restrain any given farm animal.

A participant should be able to do following:

1. Determine the flight zone and point of balance of the animal and approach, hold animal securely and safely.
2. Prepare and make the animal to cooperate during handling.
3. Achieve minimum stress and injury to the animal (There should not be any accident).
4. Use restraining tool appropriately (Must follow prescribed procedure).

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**Notes**

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3. Implementing Regular Preventive Animal Health Care Program

Unit 3.1 – Animal identification and record keeping
Unit 3.2 – Observation of environment and history taking
Unit 3.3 – Routine examination of health of animals
Unit 3.4 – Cause and ways of transmission of disease
Unit 3.5 – Identifying common diseases
Unit 3.6 – Zoonotic disease
Unit 3.7 – Concept of notifiable disease
Unit 3.8 – Preventing disease in animals
Key Learning Outcomes

At the end of this module, you will be able to:

- Make participants appreciate the importance of data and prepare him/her to efficiently collect the same for preventive care service delivery.
- Make participants appreciate herd health approach and prepare him/her to identify and take action as far as preventable common or endemic disease are concerned.
- Make participant appreciate the need to follow government technical guideline related to scheduled or notifiable diseases.
- Build capacity amongst participants to communicate disease related information efficiently so as to create demand for preventive services e.g. vaccination.
- Help participant develop skills needed for scheduling and conducting preventive services such as vaccination, deworming etc. as per local area guideline.
UNIT 3.1: Animal identification And Record Keeping

Unit Objectives
At the end of this unit, you will be able to:

• Help participants understand the importance of data and the need to follow given procedure for collecting the same.
• Help participants learn about animal identification and data collection tools so that they can participate in field activities related to animal/farm premises identification and data collection (as enumerator)

Resources to be Used
• Available objects such as a white board, duster etc.
• Power point slides, Pictures/posters. E.g. showing various identification methods.
• Model/institutional record keeping format – if any.
• Cardboard sheets.
• Live animal for ear tagging.
• Ear tag pliers
• Ear tags

Explain
• Why do we need to identify animals?
• What is data and why is it important?
• What is record keeping? How helpful is it?
• Why should animal health worker maintain data of health intervention?

Elaborate
• Various methods of animal identification
• Data collection tools.
Demonstrate

- Ear tagging on live animal using ear tag plier
- 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.
- Mobile devices and process of reading ear tag, data entry and transmission.

Practical

- Assist participants prepare cow/goat ear model by cutting cardboard sheet. They should apply tags to these model ears. Check its correctness. Each participant should practice this minimum 5 times.
- Give a design simple questionnaire to team of participants to collect information on farming system, social, geographical and environmental condition of any service area. Orient team of participants as how to collect data and organize a mock data collection.
- Assist participants to practice use of mobile devices for data collection.

Each participant should be evaluated based on the following:

1. Skill of ear tagging in model ears.
2. Ability to use field data collection tools (including electronic/mobile based data collection) as per given specification.

Exercise

- Participants should be encouraged to visit nearby farms on their own and examine filled-in record formats. They should be able suggest simple changes in record format – where required.
UNIT 3.2: Observation OF Environment And History Taking

Unit Objectives

At the end of this unit, you will be able to:

- Build skills amongst the participants to observe and take history for communication to supervising veterinarian or to make provisional diagnosis.

Resources to be Used

- Available objects such as a white board, duster, flip chart board / paper etc.
- Slides in power point presentation showing specific images e.g. factors affecting animal health

Explain

- Factors that influence animal health.
- Importance of observation of surrounding and history taking.
- The process of history taking.
- Importance of herd approach (not just focusing on single animal presenting a symptom)
- Importance of early reporting of diseases.
- Why should animal health worker maintain data of his / her health intervention?

Elaborate

- Important points to remember as included in the participant manual.
Role Play

- Request few volunteers to enact a scene of history taking in village setting with following role play e.g. complaining farmer, animal health worker (lead role), ailing animal, other healthy animal, veterinarian and neighbors. Place some noticeable things within the environment e.g. Few cans of pesticide in one corner of the farm.
- (At the end of the play, comment on observed positive and negative points, re-emphasize the need of careful listening of complain, herd approach, looking into detail of environment etc.)

Say

- Listening to the owner and asking question is called history taking. One must focus on listening too. Respect your client farmer.
- As you will learn more about diseases and work in field conditions, you will automatically acquire the skill of asking relevant question. Communication and observation are two important skills of an animal health worker.

Team Activity

- Divide the class into three team. Ask each team to refer the above picture of a diseased pig as shown by a farmer in his mobile phone. Each team should make a presentation on how they will approach the case (Refer history taking, observation, reporting etc.). The presentation should include immediate advice to be given to the farmer.

Participant can refer same image in their manual)
UNIT 3.3: Routine Examination OF Health OF Animals

Unit Objectives

At the end of this unit, you will be able to:

- Build capacity of participants to differentiate between and healthy and sick animal based on observation.
- Impart skills to participants to record parameters pertaining to health of livestock and poultry.

Resources to be Used

- Available objects such as a white board, duster, flip chart board / paper etc.
- Slides in power point presentation showing diseased animals, normal range of vital para-meters etc.
- Live animals of different species.

Explain

- The definition of a healthy animal.
- Vital para-meters e.g. temperature, pulse, respiration and indicate normal values for various species.

Elaborate

- Ways to identify a sick animal based on observation of appearance, movement, eyes, ears, nose, mouth, the coat, behavior, breathing, droppings or dung, urine, appetite, rumination, sound and production.
- Disease symptoms of poultry.
- Elaborate on importance of laboratory and postmortem examination.
Demonstrate

- Physical examination of animals for:
  1. Measuring body temperature
  2. Measuring respiration.
  3. Measuring pulse
  4. Rumen motility
  5. Dehydration check

Say

- Veterinarians use many other methods to conduct more detailed examination of animal to evaluate various functional systems. As an animal health worker you can endeavor to learn these techniques with more study and practice while assisting veterinarians.
- As an animal health worker while working with veterinarian you may have ample opportunities in future to learn basics of sample collection and their dispatch to laboratories. Laboratories often publish guidelines and are good source of reference. With additional training you can also qualify as Veterinary Clinical Assistant to work in hospitals and laboratories.
- In future you should learn to assist veterinarians in conducting postmortem examination. Never attempt at conducting postmortem without knowledge of supervising veterinarian and without taking precautions. Only certificate of registered veterinarian is accepted by court of law or insurance companies.

Practical

- Assist participants to show how to take temperature in different animals and properly read thermometer. Observe and emphasize on practicing correct method.

Exercise

- Each participant should prepare a note indicating detail procedure of examination of various vital parameters.
UNIT 3.4: Causes And Ways Of Transmission Of Diseases

Unit Objectives

At the end of this unit, you will be able to:

• Build the basic understanding amongst participants regarding the causes and transmission of disease in animals.

Resources to be Used

• Available objects such as a white board, duster etc.
• Slides in power point presentation showing images of types of disease causing organisms

Explain

• Why knowing the cause of disease is important?
• Classification of diseases e.g. Acute vs Chronic, Infectious Vs non-infectious.
• Modes of disease transmission.

Elaborate

• What causes disease? e.g. Parasites, Microbes, Poisoning, Dietary / metabolic, Congenital, Environmental, cancer, allergies and degenerative disease.
• Various types of microbes and parasites (Brief introduction only)
• Non-infectious and production related diseases and losses thereof.
Microbes that cause disease are called ‘pathogens’. Typically, the term is used to describe an infectious agent. Pathogenic organisms are of five main types: viruses, bacteria, fungi, protozoa, and worms.

A diseased animal shows clinical (or disease related) signs and symptoms. Signs are those which you can observe. As an animal health worker you should give more importance on clinical signs of various diseases. Symptoms are those which an animal experiences. Pain is a symptom and in animals, we use behavioral signs and knowledge of likely causes of pain to guide its management.

When an animal / bird is infected with an infectious disease agent but displays no clinical signs it’s called as ‘carrier’.

The biggest difference between viruses and bacteria is that viruses must have a living host - like a plant or animal - to multiply, while most bacteria can grow on non-living surfaces.

There are some useful bacteria but all viruses are harmful.

Antibiotics can kill bacteria but not viruses. Antiviral drugs help to slow reproduction of viruses but cannot stop it completely.

Since microbes may become resistant, one should be very careful in using antibiotic and antiviral. A veterinarian’s guidance and proper prescription is must.

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**Say**

- Microbes that cause disease are called ‘pathogens’. Typically, the term is used to describe an infectious agent. Pathogenic organisms are of five main types: viruses, bacteria, fungi, protozoa, and worms.
- A diseased animal shows clinical (or disease related) signs and symptoms. Signs are those which you can observe. As an animal health worker you should give more importance on clinical signs of various diseases. Symptoms are those which an animal experiences. Pain is a symptom and in animals, we use behavioral signs and knowledge of likely causes of pain to guide its management.
- When an animal / bird is infected with an infectious disease agent but displays no clinical signs it’s called as ‘carrier’.
- The biggest difference between viruses and bacteria is that viruses must have a living host - like a plant or animal - to multiply, while most bacteria can grow on non-living surfaces.
- There are some useful bacteria but all viruses are harmful.
- Antibiotics can kill bacteria but not viruses. Antiviral drugs help to slow reproduction of viruses but cannot stop it completely.
- Since microbes may become resistant, one should be very careful in using antibiotic and antiviral. A veterinarian’s guidance and proper prescription is must.

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**Ask**

- Ask participants to describe any clinical signs that they observe in diseased animal.

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**Activity**

- Each participant should prepare a pictorial chart showing ways a disease can enter a poultry farm.
UNIT 3.5: Identifying Common Diseases

Unit Objectives

At the end of this unit, you will be able to:

• Help participants use the knowledge of clinical signs to identify common animal diseases.

Resources to be Used

• Available objects such as a white board, duster etc.
• Slides in power point presentation showing images of signs of various common diseases.

Summary

• Summarize previous discussion / learning on definition of clinical signs and symptoms.

Elaborate

• Common clinical signs of diseases.

Say

• Knowledge of clinical signs helps in identification of any particular disease but many a time clinical signs alone is not sufficient for proper diagnosis. Always consult with supervising veterinarian who may suggest laboratory test for confirmation and appropriate line of treatment thereof.
• Many a time disease incidence are related to change in season. For example, higher incidence of Foot and Mouth Disease (FMD) is observed during winter months and during pre-monsoon season. One can prepare a disease calendar for the whole year.
• Never attempt treatment without consulting supervising veterinarian or following organizational guideline.
• Treating animal with drugs without prescription of veterinarian is illegal. This is because of the fact that inappropriate drugs and wrong administration of same to an animal may not only harm the animal but also can affect human consuming products of that animal.
• If you know any local or traditional treatment method, check whether same is scientifically tested, documented and widely practiced.
Team Activity

- A team of 3-5 participants should select any one common disease from the participant manual or any diseases declared to be common in local context. The team then should discuss common clinical signs of the disease, species affected etc. and make presentation before the class.
- Divide the class into two teams. While one of team prepares a list of deficiency related diseases of farm animals the other team should list production related diseases. They should exchange the list thus prepared.

Field Visit

- Organize a visit of the participants to nearby village with good population of livestock or farm families. They should interact with a select group of village elders and farmers to list season wise diseases of animals. On return they should visit local veterinary dispensary and collect any published pictorial disease calendar or atlas of diseases of farm animals. A volunteer should be asked to record and present learning of the class as a whole including that of information in collected publications.
- (During field visit, interact informally with participants regarding prevalent farming system, social, geographical and environmental condition of service area).
UNIT 3.6: Zoonotic Disease

Unit Objectives
At the end of this unit, you will be able to:

- Help participants to appreciate the importance of zoonotic diseases.

Resources to be Used
- Available objects such as a white board, duster etc.
- Slides in power point presentation pictorially explaining any zoonotic disease.

Explain
- What is a zoonotic disease?

Elaborate
- How one can save himself or herself from zoonotic disease.

Say
- Few names of zoonotic disease like Anthrax, Brucellosis, Rabies, Hydatid diseases, Cysticercosis etc.

Team Activity
- Divide the class into four teams. Each team should draw the following diagram in white board / flip chart. Briefly explain the zoonosis indicated in the diagrams and assist each team to simplify the writings within the given images while mentioning the same in drawing. The team should discuss amongst themselves for few minutes and then present to the class a basic explanation of the particular zoonosis.
Objective of the above team activity is to re-enforce the knowledge of zoonosis and help the participants appreciate its importance. Animal Health workers are only expected to practice and educate people on safe ways of animal handling.

(The images included in following two pages can be photocopied and shared with the participants. Alternatively, trainer can search similar images from the internet and use it in power point presentation)
Animal Health Worker

Hydatid life cycle

Livestock become infected by eating tapeworm eggs on pasture from the faeces of infected dogs.

Cysts develop in the liver, lungs and heart.

Dogs become infected when they eat cysts in the liver, heart and lungs from infected stock.

Tapeworms develop inside dogs and shed many small eggs onto the pasture.

Humans can pick up worm eggs from infected dogs.

From terminally infected animal, or carcass after death

Cutaneous

Biting fly

Cutaneous
(via lesion)

Sporulates on exposure to O2

Vegetative forms
(shed at death in haemorrhagic exudate from nose, mouth or anus or in spilt blood)

Gastrointestinal
(infected meat, contaminated water?)

Pulmonary
(spore-laden dust)

Germination & multiplication in lymphatics & spleen.
Vegetative forms released in massive numbers into blood in final hours of life

Ingested (grazing, browsing, drinking). Inhaled sometimes?
(spore-laden dust)

Image Credit: Department of Primary Industries, Parks, Water and Environment, Tasmania
UNIT 3.7: Concept of notifiable disease

Unit Objectives
At the end of this unit, you will be able to:

- Help participants to understand the importance and legal requirement related to reporting of certain diseases.

Resources to be Used

- Available objects such as a white board, duster etc.
- Slides in power point presentation showing reporting format / protocol for animal health worker as published by local government etc.

Explain

- What is a zoonotic disease?

Elaborate

- What and how to report (Follow guideline of state veterinary department)
- Consequences of not reporting scheduled diseases.

Say

- Few names of important scheduled diseases prevalent in the local area of the participants.
Exercise

- Each participant to list five most important livestock / poultry disease as prevalent in their local area. Assist them to prepare a short / basic note on geographical spread and economic impact of each of these diseases. Participants can indicate their own experience (if any).
UNIT 3.8: Preventing Disease In Animals

Unit Objectives

At the end of this unit, you will be able to:

- Inform participants about the best possible ways to prevent diseases in animals so that they can communicate the same to farmers.
- Make participants understand the key concept of herd health approach.
- Impart skills to participants regarding delivery of preventive services e.g. vaccination and parasite control.

Resources to be Used

- Available objects such as a white board, duster etc.
- Slides in power point presentation e.g. Iceberg concept of health etc.

Explain

- The concept of herd health approach.
- The business model where a private veterinarian leads a group of animal health worker to implement herd health approach of veterinary service delivery in a production cluster. Farmers in this system are required to pay annual contract charges for services rendered.
- Immunity, vaccines and vaccination
- Why we should try our best to vaccinate maximum animals within a community to stop the occurrence of the disease in future? (Concept of herd immunity)

Elaborate

- Common measures that can be adopted to prevent disease in livestock and poultry.
- Type of vaccines and effect of storage temperature.
- Factors affecting vaccines e.g. temperature, disinfectant left in syringe, exposure of ultraviolet light etc.
- Important points to remember during vaccination. E.g. no vaccine should be used after expiry date etc.
- Community vaccination program
- Common parasite control program (including use of FAMACHA scoring tool)
- Record keeping of preventive programs.
Say

• As an animal health worker, you should educate farmers to invest on vaccination as same is the most potent tool to prevent specific disease. However, you should also inform farmers not to place all of their faith in vaccination and neglect other necessary measures for disease prevention.
• Following vaccination in any area, as an animal health worker you should always endeavor for timely reporting of vaccines failures to appropriate authorities, ensure continuity of vaccination program and support government for sample test to measure herd immunity and success of vaccination program.

Ask

• Opinion of participants as to what can be done to promote herd health approach in field practice.

Demonstrate

• Various vaccination techniques vis a vis standard procedure to be followed before, during and after vaccination.
• Species wise vaccination calendar / deworming schedule as approved by state government / local authority.

Role Play

• There is often a need for a communal or community based strategy to prevent diseases. If many neighbors have badly managed poultry flocks, it is difficult to keep a healthy flock as mixing with those flocks might infect them. Guide participants to enact a short street drama to educate farmers on need of working together e.g. vaccination of an entire village on the same day! to prevent disease.
Field Visit

- Organize visit to any project village of known NGO promoting goat farming. Ask participants to note what the organization is doing to improve the productivity of herds of goat within that village through general husbandry, nutrition management, parasite control, vaccination, and environmental management. Observation should also be made on how record keeping is helping the NGO to provide herd health service? Participant should record use of any tools (e.g. use of FAMACHA chart, software etc.) and collect prepared or published goat herd health calendar (if any).

Exercise

- A disease prevention calendar helps the farmers to identify and remember, when it is time to perform preventive measures such as vaccination and de-worming. Advice participants to work in small groups; discuss with any consultant veterinarian nearby to prepare a basic disease prevention calendar for a chosen area separately for cattle, goat and poultry.

- Ask participants to collect label / manufacturer’s instruction sheet of various vaccines as available in local market.

- Ask participants to collect information about any traditional practice followed by farmers for preventive care of animals.

- Ask participants to visit local pharmacy to collect details of products used for ecto-parasite control in livestock. Discuss manufacturer’s instructions and environmental effect of chemicals used in these products.
Tips for end of the unit practical assessment.

1. Organize a mock situation where a training assistant will act as livestock farmer. He/she will approach a trainee participant and describe any individual problem or disease related event of a village. (Prepare few scripts based on real life situation for the training assistant)

Observe / evaluate each participant for the following:

1. Behavior and listening skill.
2. Ability to comprehend the key problem and take appropriate action which is just for the farmer (based on given situation).
3. His/her awareness of things to do in case of suspected scheduled diseases.
4. His/her ability to communicate the risk to farmer and to give guidance related to bio-security (where needed -based on script)

2. Explore if the participants can attend any vaccination cum treatment camp organized by any public/private agency.

Observe / evaluate group of participant for following:

1. Approach pertaining to pre and post vaccination care.
2. Adherence to vaccine handling and administration procedure.
3. Ability to suggest common medication related to de-worming.
4. Ability to keep records of activity within the camp.
4. Veterinary First Aid

Unit 4.1 – Emergency conditions and pre-disposing factors
Unit 4.2 – Common first aid measures
Unit 4.3 – Handling superficial wounds and abscess
Unit 4.4 – Handling of fractures and horn injuries
Unit 4.5 – First aid during animal birth
Unit 4.6 – Handling of poisoning
Unit 4.7 – Administration of medicine
Unit 4.8 – Safety measure to be taken during first aid.
Key Learning Outcomes

At the end of this module, you will be able to:

• Build capacity within the participants to understand few select emergency situations and provide first aid to farm animals.
UNIT 4.1: Emergency Conditions And Pre-Disposing Factors

Unit Objectives

At the end of this unit, you will be able to:

- Help participants understand the situations that need emergency care and the conditions that pre-dispose animals to such situations.
- Impart knowledge so that they can administer first aid singlehandedly in the future with practice.

Resources to be Used

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

Explain

- Nature of emergency conditions e.g. Emergency due to infectious and non-infectious diseases, emergency due to accidents, emergency due to birth related complications etc.
- What is a pre-disposing factor along with example?

Say

- Practice with your supervising veterinarian is essential before you can independently handle some of the emergency situation.

Elaborate

- At least one emergency situation as included in participant manual and guide them to read the remaining in the list.
Team Activity

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

Notes
UNIT 4.2: Common First Aid Measures

Unit Objectives

At the end of this unit, you will be able to:

• Inform participants about common first aid measures that can be employed in field condition.

Resources to be Used

• Available objects such as a white board, duster per etc.
• New born calves / kid

Explain

• Basic principle of Cardiopulmonary resuscitation (CPR).

Elaborate

• Common measures that can be employed in field situations.

Demonstrate

• Cardiopulmonary resuscitation in new born calves / kid (Where possible, demonstration should be conducted in a livestock farm)
UNIT 4.3: Handling Superficial Wound Abscess

Unit Objectives

At the end of this unit, you will be able to:

• Impart basic skills to participants to handle wound / abscess.

Resources to be Used

• Available objects such as a white board, duster etc.
• Slides in power point presentation e.g. showing different types of wound
• Live animals with wounds / Abscess

Explain

• Causes of wound.
• Difference between fresh and chronic wound.
• Fundamentals of wound treatment e.g. debridement, infection / inflammation control and moisture balance.
• Decision to be made while handling of fresh wound e.g. when to refer to veterinarian for suturing?
• Importance and goal of wound cleaning or irrigation using disinfectant solution.

Elaborate

• Precautions to be taken in handling abscess.
• Approved traditional methods in handling wound and abscess.
Demonstrate

- Handling of fresh wound
- Handling of chronic wound with maggots
- Handling of abscess

Field Visit

- Organize visit of participants to local veterinary hospital / clinic where they can be introduced to cases of wound / abscess etc.

Exercise

- Suggest participants to collect details of locally available commercial products under category such as anti-inflammatory cream, antibiotic ointment, Fly repellent etc.

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UNIT 4.4: Handling of fractures and horn injury

Unit Objectives
At the end of this unit, you will be able to:

- Impart basic skills to participants to provide first aid for fractures and horn injuries in farm animals.

Resources to be Used
- Available objects such as a white board, duster etc.
- Slides in power point presentation e.g. showing images of horn injury.
- Animals suffering from fractures and horn injury.

Explain
- Terms like bone, tissues, blood vessels and nerves (Basic level knowledge)
- Types of fractures

Elaborate
- Signs of fractures.
- Signs of horn core injury

Demonstrate
- Steps in handling common fractures including making of bamboo splints.
- Steps in handling simple horn injury.
Field Visit

- Organize visit of participants to local veterinary hospital / clinic where they can be introduced to cases of fractures and horn injury etc.

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UNIT 4.5: First Aid During Animal Birth

Unit Objectives

At the end of this unit, you will be able to:

- Impart basic skills to participants to provide first aid for common problems during animal birth.

Resources to be Used

- Available objects such as a white board, duster etc.
- Slides in power point presentation showing cases of dystocia, retention of placenta, prolapse of uterus.
- Lives cases

Explain

- Reproductive organs of female animals.
- Placenta
- Dystocia

Elaborate

- Precautions to be taken in handling birth related emergencies.
- When to essentially seek veterinarian’s help.
- Steps in handling of cases of prolapsed of uterus and retention of placenta (prior to arrival of veterinarian)

Field Visit

- Organize visit of participants to local veterinary hospital / clinic where they can be introduced to cases of dystocia, retention of placenta, prolapse of uterus etc.
UNIT 4.6: Handling Poisoning

Unit Objectives

At the end of this unit, you will be able to:

- Impart basic skills to participants to identify signs of common poisoning and provide first aid there of.

Resources to be Used

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

Explain

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

Elaborate

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

Field Visit

- Organize visit of participants to local veterinary hospital / clinic where they can be introduced to cases of dystocia, retention of placenta, prolapse of uterus etc.
Demonstrate

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

Say

- Always refer the label of suspected pesticide container for signs and treatment of toxicity.
- It has been estimated that in India there are about 700 poisonous species of plants. As an animal health worker you should make yourself aware of poisonous plants available within the village or in your service area and educate farmers accordingly.

Example

- Mention names of various commonly available poisonous plants along with local names.
UNIT 4.7: Administration OF Medicine

Unit Objectives

At the end of this unit, you will be able to:

- Impart basic skills to participants to administer medicine to farm animals.

Resources to be Used

- Available objects such as a white board, duster etc.
- Slides in power point presentation showing common conversions, injection site etc.

Explain

- Common conversions.
- Schaeffer formula to calculate body weight of animals.
- Types of injections (IM / SC / IV) and Injection sites there of.

Elaborate

- Various topical applications, application in eye.
- Fumigation.
- Steps in intramuscular and sub cutaneous injections.
- Steps in intra mammary infusion.
Demonstrate

- Calculation of body weight of animals.
- Common medications that can be used in emergency situations.
- Drenching.
- Intramuscular injections.
- Subcutaneous injections.
- Intramammary infusion.
- Intravenous administration.

Say

- You should always consult veterinarian for prescription as per age and body weight of animal(s).
- Ask supervising veterinarian or refer drug label instructions for direction (if any) regarding withholding the animal(s) from slaughter and preventing people from drinking their milk.
- You should attempt IV administration only under direct supervision of veterinarian.

Notes
UNIT 4.8: Safety Measures To Be Taken During First Aid

**Unit Objectives**

At the end of this unit, you will be able to:

- Inform participants about the safety measures that should be adopted 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.

**Field Visit**

- 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 animals.
Tips for end of the unit practical assessment

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.

Notes
5. Assisting Government In Animal Disease Control

Unit 5.1 – Some important concept.
Unit 5.2 – Introduction to disease surveillance and monitoring.
Unit 5.3 – Livestock markets.
Unit 5.4 – Cleaning and disinfection of premise.
Unit 5.5 – Culling and disposal of animals.
Unit 5.6 – Animal disease reporting.
Unit 5.7 – Leadership for local resource mobilization.
Key Learning Outcomes

At the end of this module, you will be able to:
- Make participants appreciate the importance of national / state level disease control programs.
- Build capacity within the participants to contribute to national / state level disease control programs.
UNIT 5.1: Some Important Concept

Unit Objectives

At the end of this unit, you will be able to:

• Impart knowledge of some basic concepts so that the participants can appreciate the importance of activities under state and national disease control programs.

Resources to be Used

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

Explain

• Disease risk and risk factors.
• How health of human is connected to the health of animals and environment (Concept of one health)
• Bio-security – its components and principles.
• How researchers collect information from sample and then make inference about population. Why one should cooperate and follow given guideline (methodology) for data collection?
• Terms like 'Outbreak of disease', Morbidity and Mortality, Case Fatality Rate.
• Value chain in the context of livestock.

Say

• Veterinarians through scientific means conduct risk assessment of any disease and suggest factors that can increase or decrease the risk.
• Government makes preparedness / risk management plan to control disease outbreak. These plans contain policies and rules and it is mandatory for all to follow such plan.
During designing and implementation of a risk management plan, government agencies continuously collect information and opinion from affected people. Animal Health Workers assist veterinarians in not only collecting such information but also in educating farmers and general public about the risk factors in particular and government management plan in general.

- Live animal and livestock product movement is one of the most important causes of spread of disease. As an animal health worker, you need to help government agencies in recording animal movement routes and risky practices within value chain that can result into disease outbreak in animals or cause harm to human.

- As an animal health worker you should be vigilant of any activity within value chain that can harm animals in particular and humans in general. For example, open road side retailing of meat in villages can be threat to food safety.

Elaborate

- Risk factors for spread of Avian influenza disease in poultry e.g. Un-controlled movement of people / vehicles to farm premises, Improper disposal of used litter material, mixing of local and commercial bird at the sale / stock point etc.
- Possible collaboration between veterinary, human health and environment agencies in controlling zoonotic disease. (You can take example of cysticercosis)
- Dos and Don’ts for animal health worker while visiting client farms / farm households.

Team Activity

- Divide the class into three teams and assist each team to discuss amongst themselves any one of the following question. No two teams should select the same question.

1. Why some small broiler chicken farmers do not take risk of bird flu seriously?
2. How human action and climate change is causing increase in incidence of diseases. How can we address this challenge?
3. Why should veterinary, human health and environment related agencies work together?

At the end of individual team discussion, each group leader should be asked to explain key learning to the class.
Exercise

• Ask group of participants to collect government guidelines / publications etc. on bio-security steps to be taken in individual farms, livestock markets etc.

• Guide groups to prepare a chart showing bio-security measure to be followed in a small scale backyard poultry farm.

• Guide groups to prepare a list of different type of people they have encountered in dairy, goat, pig and poultry business separately. (Hints: farmers, dealers selling feed, transporters etc.

Facilitation Notes

• While explaining various concepts -please keep in mind that it should result into outcome whereby participants appreciate the importance of activities that are undertaken within state and national disease control programs. A basic understanding of concepts is likely to bring in more involvement on the part of animal health workers.

• The objective of discussing the concept of value chain is to help participants appreciate the fact that there are different types of people, support services and activities in livestock business and all these activities add value and therefore essential for growth. Animal Health Workers should facilitate interaction between client farmers and other value chain players for success in farming.

• The learning under this section will greatly depend on trainer's ingenuity and conviction that concepts can be taught to relatively less educated trainees. You can focus on giving more examples like the example of kids crossing road included in participant manual to explain risk and risk factors.

• Help participants to understand PPR outbreak related example as included in participant manual (Morbidity / Mortality / CFR etc.). This will help in building capacity of animal health workers to judge severity of any outbreak which in term will ensure his / her greater involvement in mobilizing resources.
UNIT 5.2: Introduction To Disease Surveillance And Monitoring

Unit Objectives

At the end of this unit, you will be able to:

• Make participant understand the meaning and importance of disease surveillance and monitoring

Resources to be Used

• Available objects such as a white board, duster etc.
• Power point slide e.g. showing components of surveillance system.

Explain

• The meaning, objective, functions and components of disease surveillance.
• The difference between surveillance and monitoring.

Elaborate

• Normal actions of veterinary authorities following confirmation of an outbreak of disease.
• The importance of surveillance and monitoring activities to prevent large scale outbreak (Highlight stories of large scale avian influenza outbreak in recent years and how culling of birds resulted into huge economic loss and public protest.)
• Role of animal health worker in disease surveillance, monitoring and during outbreak.
Ask

• Ask participants to share their experience (if any) related to animal disease outbreak and government actions following the same. (Encourage participants sharing such experience to also indicate what could have been done better)

Field Visit

• Organize visit of participants to district or regional (where feasible) disease diagnostic laboratory for a demonstration of ongoing activities related to disease surveillance and monitoring.

Notes
UNIT 5.3: Livestock Markets

Unit Objectives

At the end of this unit, you will be able to:

- Make participants understand the importance of livestock markets in the context of disease control.
- Introduce participants to activities in livestock markets and bio-security guideline thereof so that they can seek employment / contract with market committee’s for services.

Elaborate

- The need of keeping information about livestock markets vis a vis awareness of farmers in nearby area for regular preventive measures.
- How animal health workers can help or work for livestock market committees as assistant to visiting veterinarian.
- Standard government bio-security guideline for livestock markets.

Field Visit

- Organize visit of participants to local livestock market (if any). Request market committee representative to explain market activities and facilities. Participants should be asked to prepare short note of their observation regarding implementation of bio-security guideline.
UNIT 5.4: Cleaning And Disinfection Of Premises

Unit Objectives

At the end of this unit, you will be able to:

• Impart basic knowledge and skills to participants on cleaning and disinfection of animal premises.

Resources to be Used

• Available objects such as a white board, duster etc.
• Vacant farm house for demonstration.

Explain

• Cleaning and disinfection as two separate tasks.
• Bacterial spores: (Environmentally resilient life form of bacteria that causes diseases like tetanus, blackleg, botulism and anthrax.)
• Hard water vs soft water and importance of water quality in cleaning and disinfection process.

Elaborate

• Detail procedure of dry and wet cleaning
• Pointers to be considered while disinfecting premises e.g. Use of fresh solution, appropriate selection of disinfectant etc.
• Importance of appropriate concentration and contact time while using disinfectant for farm premises.
• Precautions to be taken as far as use of disinfectant are concerned.
participants should collect details of some common disinfectant products from local market that can be used in farm premises. they should try to evaluate each product based on information given in the label or the product brochure.

- improper cleaning can do more harm than good. one must take care that facility under cleaning must be dried properly. the excess moisture can result in the multiplication of bacteria to even higher levels than before cleaning.
- failure to make a fresh solution of disinfectant after it has been prepared longer than few days or after it has become visibly contaminated by organic material like manure, may result in using a product that will no longer be effective. similarly use of hard water can also neutralize some disinfectants.
- always follow labels of products to be used for disinfection or consult with supervising veterinarian. never mix different classes of disinfectant and rotate brand of disinfectant use.
- approximately 5 lit (one gallon) of diluted disinfectant can be applied 100-150 sq. ft area.

exercise

- participants should collect details of some common disinfectant products from local market that can be used in farm premises. they should try to evaluate each product based on information given in the label or the product brochure.

demonstrate

- disinfection of a poultry house.
UNIT 5.5: Culling And Disposal OF Animals

Unit Objectives

At the end of this unit, you will be able to:

• Inform participants about culling and disposal of dead animals / birds.

Explain

• Culling in the context of disease control.

Elaborate

• The process of disposal of carcass both by burial and burning.

Say

• In cases where there is need for identifying the cause of death, your supervising veterinarian will conduct post mortem examination of the carcass.
• In case of large scale death or where culling is done as per government directive, disposal must be done under supervision of registered veterinarians.
UNIT 5.6: Animal disease reporting

Unit Objectives

At the end of this unit, you will be able to:

• Inform participants on the suggested procedure for animal disease reporting

Explain

• Why should one promptly report incidence of scheduled or notifiable disease?

Elaborate

• Name of scheduled or notifiable diseases as prevalent locally.
• Model data sheet for reporting (as approved by local government)

Demonstrate

• Preparation of brief report and filling of data sheets. (including communication by email-SMS-WhatsApp / enter data to database).
UNIT 5.7: Leadership For Local Resource Mobilization

Unit Objectives

At the end of this unit, you will be able to:

- Make participants appreciate the need of public participation in disease control programs.
- Build capacity of the participants to ensure local resource mobilization.

Resources to be Used

- Available objects such as a white board, duster etc.
- Power point slide to facilitate team work.

Explain

- What is resource? and sources there of.

Team Activity

- Divide the class into four teams and assist each team to discuss amongst themselves and find answers for any one of the following questions. (Display the question in power point slide). No two team should select the same question.

1. You are being entrusted with the responsibility of organizing regular mass vaccination program for animals in your community. Consider a situation, when government fund / support is not forthcoming. What private resource you will need and how will you mobilize the same?

2. A government veterinary team is coming to your village for conducting a disease outbreak related investigation. How will you facilitate the visit and the investigation work?
3. In most cases, a new disease incident is initially encountered by a farmer, a herder or a pastor. How can you ensure that information regarding the incidence of a scheduled/notifiable disease in your village reaches to you early?

4. Recall any previous events in your state related to animal disease outbreak and discuss government actions, public protest (if any). What should have been done differently to avoid public protest?

At the end of individual team discussion, each group leader should be asked to explain key learning to the class.

Facilitation Notes

- You can invite any official from the district veterinary office / state headquarter of veterinary and animal husbandry department (Animal Resources Development Department in some states) to deliver a short lecture to the participant on “Expectation of the department from the animal health workers”.
- The invited officer can be requested to act as judge for above team activity and award the best performing team.
- This team activity should be evaluated as end module practical.

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6. Assisting In Veterinary Extension Services

Unit 6.1 – Understanding extension services
Unit 6.2 – Understanding production cycle of farm animals
Unit 6.3 – Basic principles of animal housing
Unit 6.4 – Livestock feeding
Unit 6.5 – Body condition scoring.
Unit 6.6 – Selecting animals.
Unit 6.7 – Hygienic milking and livestock product handling.
Unit 6.8 – Using communication devices.
Key Learning Outcomes

At the end of this module, you will be able to:

• To promote approved technologies and best practices in livestock farming and in handling of animal products.
• To assist livestock farmers on quality farm input selection and procurement.
• To assist in implementation of various extension related activities and in keeping record for same.
• To use mobile and other technologies for extension / client education.
UNIT 6.1: Understanding Extension Services

**Unit Objectives**

At the end of this unit, you will be able to:

- Make participants understand the basic concepts needed for effective implementation of extension programs.

**Resources to be Used**

- Available objects such as a white board, duster, etc.
- Power point presentation.
- Reference of previous learning related livelihood, village institutions etc. from introduction unit – whenever needed.

**Explain**

- What is extension?
- KASA (Knowledge, Attitude, Skills and Action) taking example such as an extension initiative to promote fodder production (refer participant manual)
- Stage of adoption process vis a vis extension method.
- What is Participatory Rural Appraisal (PRA)?
- Concept of shared or collective leadership.

**Say**

- An animal health worker is required to assist in implementation of designed extension program and provide feedback for improvement of design and delivery of such programs.
- It is important for you to understand the key message of any extension initiative in your community more particularly the KASA changes expected from farmers.
- Sometimes people may have the Knowledge, Attitude and Skills -but lack resources to undertake the practice change or actions. You can help people to mobilize required resources.
Elaborate

- What extension involves.
- What is leadership and which factors influence leader’s efforts?
- How can one identify good leaders within community so as to engage with them for development?
- Importance of group activity and role of animal health worker.
- Government extension delivery system e.g. ATMA, NRLM etc.

Team Activity

- 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-hour clean water availability for dairy animal. Ask them to refer to KASA concept and class example of promoting fodder production.

Exercise

- Participants should discuss various extension methods as indicated in the participant manual and make a comparison between result and method demonstration. (e.g. The purpose of result demonstration is to show locally the worth or value of a recommended practice. Where for method demonstration, the purpose is to teach how to do the job involving skill)

- Encourage participants to discuss in group various extension related initiatives in their district / village community.
While explaining various concepts -please keep in mind that it should result into outcome whereby participants will appreciate various extension activities that may be initiated within their community / village in future. A basic understanding of concepts is likely to bring in more involvement on the part of animal health workers in implementation of extension activities and in providing feedback for their improvement.

The understanding of the concepts should help in developing needed competencies within the animal health worker for extension related functions such as:

1. Assist veterinarian in conducting community need assessment and prioritization of same.
2. Assist veterinarian in conducting PRAs.
3. Conduct surveys and personal interviews as per approved methodology.
4. Help veterinarian in identifying stakeholders and engage them in extension programs.
5. Conduct farm and home visit.
6. Conduct method and result demonstration (as per specific training)
7. Facilitate group activities and linkages thereof.
8. Assist veterinarian in organizing extension campaigns / camps, field schools etc.
9. Communicate with community leaders.
10. Lead group activities and local / community resource mobilization.

Where feasible, participants may be introduced to Farmer Field School (FFS) programs implemented by any local NGO or government agency. Subject to availability of resources, training providers may themselves conduct FFS. One can refer to guidelines for facilitation and technical manual published by International Livestock Research Institute (ILRI) available in the internet.

Trainers can look for further reference related to iceberg model of competencies as understanding of the same can help in more efficient engagement with participants to develop their competencies.

**Field Visit**

- Coordinate with any local NGO or government agency so that participants can join any ongoing PRA exercise as observers.
- Organize visit of groups of participants to different farms own and managed by select self-help groups (SHG) or small cooperative in nearby villages. Participants groups should be introduced to the process of group formation, group activities, meetings (decision taking), bank linkages, record keeping, conflicts, problems etc. in particular and benefits of working in groups in general. Each participant groups should record learning and present the same to class on return. While presenting, groups should be encouraged to include suggestions for the SHGs they have visited / interacted with.
- Organize a visit to any nearby office of Block Development Officer (BDO) and request participants to collect detail information about veterinary related activities under ATMA and NRLM being implemented within the block.

**Facilitation Notes**

- While explaining various concepts -please keep in mind that it should result into outcome whereby participants will appreciate various extension activities that may be initiated within their community / village in future. A basic understanding of concepts is likely to bring in more involvement on the part of animal health workers in implementation of extension activities and in providing feedback for their improvement.
- The understanding of the concepts should help in developing needed competencies within the animal health worker for extension related functions such as:

  1. Assist veterinarian in conducting community need assessment and prioritization of same.
  2. Assist veterinarian in conducting PRAs.
  3. Conduct surveys and personal interviews as per approved methodology.
  4. Help veterinarian in identifying stakeholders and engage them in extension programs.
  5. Conduct farm and home visit.
  6. Conduct method and result demonstration (as per specific training)
  7. Facilitate group activities and linkages thereof.
  8. Assist veterinarian in organizing extension campaigns / camps, field schools etc.
  9. Communicate with community leaders.
  10. Lead group activities and local / community resource mobilization.

- Where feasible, participants may be introduced to Farmer Field School (FFS) programs implemented by any local NGO or government agency. Subject to availability of resources, training providers may themselves conduct FFS. One can refer to guidelines for facilitation and technical manual published by International Livestock Research Institute (ILRI) available in the internet.
- Trainers can look for further reference related to iceberg model of competencies as understanding of the same can help in more efficient engagement with participants to develop their competencies.
UNIT 6.2: Understanding Production Cycle OF Farm Animals

Unit Objectives

At the end of this unit, you will be able to:

• Make participant understand the basic production cycle of different farm animals.

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

Explain

• Production life cycle of dairy cow.

Exercise

• Participants should work in group and discuss production life cycle of other farm animals.
UNIT 6.3: Basic Principle OF Animal Housing

Unit Objectives

At the end of this unit, you will be able to:

• Make participants understand the key principles of livestock housing so that they can interpret various best practices suitable for their area.

Resources to be Used

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

Explain

• Five freedoms vis a vis housing environment.
• Type of housing e.g. closed (Conventional barns) and loose housing.

Elaborate

• The agreeable physical environment within animal house.
• Locally prevalent housing related practices indicating good and bad practices and possible use of local materials.
• Ways to ensure good ventilation and appropriate sunlight inside farm premises.
• Participants should work in group and discuss information given in participant manual on loose housing system for dairy animals and Housing of backyard poultry.

• Group of participants should be encouraged to prepare charts indicating recommended floor, feeding and watering spaces for various livestock species.
UNIT 6.4: Livestock feeding

Unit Objectives

At the end of this unit, you will be able to:

• Make participants understand the key principles of livestock feeding so that they can interpret various best practices suitable for their area.

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.

Explain

• Classes of nutrients and balanced rations.
• Physiological phases of production e.g. Maintenance, Growth, pregnancy, Production of milk, egg, wool or work.

Elaborate

• Types of feed e.g. Bulk forages for energy, Supplementary forages for energy and protein, concentrate for energy and protein, Mineral supplements, vitamin supplements and water.
• Common feed ingredients / fodder variety.
• Industrially manufactured compound commercial cattle and poultry feed.
• Nutrient requirement and feeding plan for various species in brief highlighting good and bad practices and indicating possible use of locally available unconventional feed ingredient.
• Fodder preservation and enrichment.
- Every animal should be fed so that the nutrient requirements of each physiological phase of production with which it is involved are met.

**Team 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 manual). At the end of the discussion, ask team leaders to explain the given terms to the class.

**Exercise**

- Participants should prepare individual charts highlighting the nutrient requirement and feeding plan for various species.

- Group of participants should prepare a note on common popular Vis-à-vis suggested best practices on feeding of livestock as observed in their area.

- Participants should classify various feed ingredient based on sowing time or season, e.g. Khalif, Rabi and Zaid. They should note down the best time to purchase a particular ingredient.

- Facilitate group of participants to discuss care and management of dairy animal in various stages such as pregnancy, lactation and dry period.
Collect commercial compound feed pack of two different brands and show participants how to compare the 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.

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Notes

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UNIT 6.5: Body Condition Scoring

Unit Objectives

At the end of this unit, you will be able to:

• Inform participants about the concept of body condition scoring so that they can develop the skill with experience.

Resources to be Used

• Available objects such as a white board, duster, etc.
• Power point presentation e.g. Pictures indicating what to look for in BCS

Explain

• Body condition score (BCS)

Elaborate

• What to look for in BCS?

Demonstrate

• BCS in live animal.

Say

• Before one can attempt BCS, knowledge of breed characteristics is essential and you need to read and practice to master the skill.
UNIT 6.6: Selecting Animals

Unit Objectives
At the end of this unit, you will be able to:

• Inform participants about the ways of selecting animals for milk and meat.

Resources to be Used
• Available objects such as a white board, duster, etc.
• Power point presentation e.g. Picture of high yielding animal.
• Breed charts published by National Bureau of Animal Genetic Resources (NBAGR).

Explain
• Concept of breed and breed types. (Milk, dual purpose, draught, meat purpose)

Elaborate
• Criteria for selection of dairy animal along with breed characteristics of high yielding animals.
• Characteristics of good meat animals.
• Criteria for good breeding animals.
**UNIT 6.7: Hygienic Milking And Livestock Product Handling**

**Unit Objectives**

At the end of this unit, you will be able to:

- Inform participants about hygienic milk production and scientific handling of livestock products.

**Resources to be Used**

- Available objects such as a white board, duster etc.
- Power point slide e.g. showing steps (in pictorial form) regarding clean milk production.

**Explain**

- Factors influencing milk quality

**Elaborate**

- Hygienic practices during milking or steps in clean milk production.

**Ask**

- Why livestock products from animals under antibiotic treatment should not be sold or consumed?

**Exercise**

- Assist participants to discuss in groups best ways to handle livestock products e.g. Storage of egg in village setting, conversion to value added products etc.
UNIT 6.8: Using communication devices.

Unit Objectives

At the end of this unit, you will be able to:

- Inform participants about various initiatives related to use of communication devices like cell phones.

Resources to be Used

- Cell phones
- Projectors / computers

Explain

- What is mobile application?

Elaborate

- Various resourceful web sites in India for easy reference of animal health workers and farmers

Demonstrate

- Various available mobile application such as mPower social, Pashu Poshan, mKisan India, IFFCO Kishan, RainbowAgri etc.
- Use of WhatsApp for consultation with veterinarian.
- Use of application such as bar code or QR code reader (As required for mobile based data entry from farm animals identified with QR code and bar code enabled ear tag)
The following practical assessment should be conducted to evaluate participants’ ability to:

1. Understand and explain the benefit associated with any approved technology or best practice in the context of local situation.
2. Understand and explain quality parameter of various farm inputs.
3. Scout sources, plan and organize farmers for intelligent (timely, quality and cost based) procurement of inputs.
4. Keep record of activities.
5. Use mobile and other audio visual aids.

The assessment should also evaluate participants for following skills:

**Core Skills:**Ability to prepare brief field program report, Filling of data sheet and survey form, reading government or organizational guideline / manuals and directive from superiors, ability to keep abreast with latest knowledge, Ability to discuss task with others, ability to explain farmers about various technologies and give clear guidance to farmer.

**Professional Skill:** Participants must be able to make decision related to suitability of any technology, Plan extension events, use electronic communication / presentation tools, Investigate and analyze adopted technologies and provide feedback to supervising veterinarian / scientist. The participants must develop the skill of identifying problems and take immediate action to resolve. Above all they should be able to think critically and take up his own work and learning voluntarily.

**Assessment-1**

List few best practices or technologies as approved for the local situation (earlier discussed during class). Ask participant to explain any chosen one to invited farmer audiences. *(Participants should be encouraged to use available audio-visual aid / mobile devices in explaining best practices, technologies)*

**Assessment-2**

Keep sample of various feed ingredient / fodder variety. Ask participants to identify each one of them, indicate the best time to procure and test the quality (Ref. Organoleptic testing of feed)

**Assessment-3**

Keep sample of two or three brand of cattle / poultry compound feed (label of the products should be clearly visible). Ask participants to select any one and explain why?

**Assessment-4**

Ask participants to share any resources (e.g. Leaflets, brochures, books etc.) they have collected during any of the field visits organized. Also ask them to prepare / share personal record of any chosen field visit (e.g. Places visited, persons interacted with, observations made, any demonstrations made during visit, stories, key learning etc.).
7. Development Program implementation And Marketing In Livestock Sector

Unit 7.1 – Sustainable development and goal for same.
Unit 7.2 – Basic of development project management
Unit 7.3 – Business Management
Unit 7.4 – Expectation from development worker
Key Learning Outcomes

At the end of this module, you will be able to:

- Better understand development programs and engage with institutions.
- Learn about basic aspect of business management including marketing.
- So that they can promote livestock related economic activities relevant to their area.
- So that they can assist in development program implementation.
UNIT 7.1: Sustainable Development And Goal For Same

Unit Objectives

At the end of this unit, you will be able to:

• Make participants learn and appreciate about sustainable development goal.

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.
• Reference of previous learning related livelihood, village institutions, etc. from introduction unit – whenever needed.

Explain

• Sustainable development.

Elaborate

• 17 Sustainable development goals.

Say

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

Exercise

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

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UNIT 7.2: Basic OF Development Project Management

Unit Objectives

At the end of this unit, you will be able to:

• Make participant understand the basic concept of development 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.

Explain

• Policy to project chain.
• Input to impact chain and relationship between inputs, outputs and outcomes.

Elaborate

• Ways to measure the excellence of a project.

Say

• Organizations implement projects to bring in development. A set of projects are called programme.
• Government or organizational policy leads to development of plan and programs. Public opinion and feedback can change policy and thus ensure better projects with appropriate outcome and impact.
• A project does not end with output. People who designed projects necessarily aim at better outcome and impact.
• For excellence, development project considers likely impact on environment, society and culture of people and take measure to mitigate possible negative impact.
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.

Exercise

• Participants should refer to their participant manual and discuss the given example of project, “Publication of book on dairy farming” to understand input, output, outcome and impact. Additionally, they can be assisted to explain input, output, outcome and impact for any other project, e.g. A project on control of Foot and Mouth disease in cattle.

• 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.

Facilitation Notes

• 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 sustain ability 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.
UNIT 7.3: Business management

Unit Objectives

At the end of this unit, you will be able to:

• Build capacity of participant to take business related decisions and also to guide farmers.

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.
• Ways to promote demand of products.
• Marketing task.

Exercise

• Participants should work in group and present a brief business plan of starting a basic animal health care service in a chosen area.

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• A select group of participants should be encouraged to prepare a chart and demonstrate to the class some ideas of business related to livestock and animal health sector.

• Group of participants should read information on basic tenets of marketing given in participant manual and discuss on key learning.

• Advise participants to search various sources and read about 7 P’s of marketing.

Facilitation Notes

• You can arrange a brief talk on 'selling' to be delivered by any senior sales executive of a known animal feed company.
UNIT 7.4: Expectation From Development Worker

Unit Objectives

At the end of this unit, you will be able to:

• Inform participants about the expectation from animal health workers as implementer of 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.

Explain

• Self Help Groups.
• Benefit that can be derived from small holder livestock farms.
• Aggregation and collective marketing of livestock products.

Elaborate

• Expectation from a development worker at village level.

Field Visit

• Organize visit of participants to any local enterprise selling various livestock / poultry farm inputs. Participants should prepare list of available products and collect product related information.
Facilitation Notes

- A set of select videos (as downloaded from You Tube / DD Kishan 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.

Tips for end of the unit practical assessment

The following practical assessment should be conducted to evaluate participants' ability to:

1. Facilitate implementation of government and private development programs.
2. Engage with farmers’ institutions and discuss / explain benefit or outcome of development programs.
3. Listen and comprehend farmers’ problem and suggestions.
4. Investigate and analyze opportunities and difficulties in program implementation.
5. Promote dairy sector related economic activity.
6. Facilitate marketing of milk and milk products/ farm inputs.

Assessment-1

Ask each of the participants to deliver a 5 min talk on any chosen local development related subject.

Assessment -2

Ask each participant to pictorially (using white board / flip chart) explain potential earning from any livestock / poultry farm based small unit.

Assessment: 3

Organize a mock selling of compound feed brand of any company by the participants.

Assessment: 4

Give full responsibility to entire class of participants to organize a short afternoon meeting title “Livestock sector development of .................village – Expectations from Animal Health Workers” (Participants should mobilize resources, invite local institutions, receive guest and anchor the entire program).
8. Assisting In Animal Welfare
Breed Conservation And Disaster Management

Unit 8.1 – Animal welfare
Unit 8.2 – Conservation of indigenous livestock
Unit 8.3 – Disaster management
At the end of this module, you will be able to:

- To identify cruelty to animals and appreciate human animal conflict issues.
- To appreciate and support conservation of indigenous livestock.
- Understand the ways to support disaster preparedness and handling.
UNIT 8.1: Animal Welfare

Unit Objectives

At the end of this unit, you will be able to:

• Make participants learn some basic concepts of animal welfare and common cruelty to animals.

Resources to be Used

• Available objects such as a white board, duster, etc.
• Power point presentation e.g. picture of animal cruelty, human-animal conflict.

Explain

• Three positive conditions of welfare: Living a natural life, being fit and healthy and being happy
• What animal cruelty means.
• What is human-animal conflict?

Say

• In India, nearly 70 percent of all agricultural households are involved with animals as a livelihood option. Animal Welfare is integral to Indian culture.
• Animal abuse is predictive of human aggression patterns including the ability to commit murder and larger social injustice.
• Research has demonstrated that animal welfare is linked to food safety. It can reduce incidence of diseases on farms and reduce shedding of human disease causing organism by farm animals.
• The Constitution of India Provides Animal Protection by Article 51 ensuring "Compassion to all Living Creatures". Starting from 1960, India has made legal provision to support animal welfare. The cruelty inflicted on animals is an offence punishable under Prevention of Cruelty to Animals Act’1960.
• More than 2900 non-government organizations are working in the field of Animal Welfare in India. As animal health worker you can contribute to these organizations.
Elaborate

- Goal of animal welfare. (Five freedoms)
- Instances of common cruelty and cruelty as described in Prevention of Cruelty to Animals Act’ 1960.
- What is not considered as cruelty if conducted as per appropriate procedure or method?
- The key reason of human animal conflict.
- Why grazing of livestock is not recommended within forest area?
- Role of animal health workers working in forest fringe villages.

Exercise

- Encourage participants to discuss in groups what they feel are cruelty to animals. They should list the ones punishable under law. (Ensure that discussion covers illegal practices like Phooka or Doom Dev (cow blowing), use of oxytocin injection to induce milk, etc.

Team Activity

- Divide the class into two groups. Each group should discuss amongst themselves the importance of wildlife. The team leader then will make short presentation on summary of discussion to the class.

Facilitation Notes

- Organize a visit of the participants to the office of inspector of SPCA (Society for Prevention of Cruelty to animals) in your district and request him / her to explain to participant in details the procedure of reporting animal cruelty.
- Organize a visit of participant to the facility of any agency providing services to injured work and street animals.
- In association with local officials of forest department, organize visit of participants to any forest fringe village where residents are facing problem with wild animals. Participants should interact one to one with forest officials and villagers.
UNIT 8.2: Conservation OF Indigenous Livestock

Unit Objectives
At the end of this unit, you will be able to:

• Make participant understand their role in conservation of indigenous livestock.

Resources to be Used

• Available objects such as a white board, duster, etc.
• Power point slide e.g. appropriate pictures of indigenous breeds of Indian livestock.

Explain

• Meaning of conservation.

Elaborate

• Qualities of indigenous animals.
• Government initiatives for conservation of indigenous animals.
• How animal health worker can contribute to conservation efforts.

Field Visit

• Organize a visit of participants to any local Gaushala or Gokul Gram and practically demonstrate the activities of these institutions.
• Organize health camp for any local pastoral community with an objective of giving opportunity to participants to interact with community members. Participants should note down observed practices and any issues related conservation.
• Where possible, organize visit of participants to livestock shows.
UNIT 8.3: Disaster Management

Unit Objectives

At the end of this unit, you will be able to:

- Make participants understand their role in disaster situations.

Resources to be Used

- Available objects such as a white board, duster, etc.
- Power point slide e.g. showing condition of animals in disasters like flood.

Explain

- Effect of disasters like drought and flood on production animals.
- Feed and Fodder bank to tackle emergencies.
- Common diseases during disasters and their control.
- Role of animal health worker in disaster management.

Ask

- Ask participants to elaborate why veterinary support is important in disaster.
- (Disasters affect the health, well-being and productivity of livestock; this in turn has implications for household economies and livelihoods as well as animal welfare. Delivery of veterinary support can prevent sickness and death and help maintain the value of the surviving animals)
Facilitation Notes

- You can inform participants regarding centrally sponsored ‘Aapda Mitra-scheme’. The scheme intends to train 6000 community volunteer in 30 select flood prone districts of India. It can be an opportunity for interested Animal Health Workers to further hone their skill as volunteer in the event of disasters.
- You can refer to “Livestock related interventions during emergencies – the how to do it manual” published by FAO during 2016 (Can be downloaded from [http://www.fao.org/3/a-i5904e.pdf](http://www.fao.org/3/a-i5904e.pdf) ) to further enrich your capability to train participants for this unit.
- You can invite any official from local disaster management authority to interact with participants.

Tips for end of the unit practical assessment

Continuous practical assessment should be conducted during the field visits and interaction with visitors villagers. The evaluation should be based on participants' ability to:

1. Identify specific cruelty and whether same is punishable or not.
2. Promote common prevention and protection strategies related to human animal conflict.
3. Identify indigenous breeds.
4. Explain their role in disaster management.

Notes
9. Implementation OF Animal Breeding Services In Small Farm Animals

- Unit 9.1 – Understanding the reproductive system.
- Unit 9.2 – Basic of animal genetics.
- Unit 9.3 – Signs of heat
- Unit 9.4 – Artificial insemination
- Unit 9.5 – Parturition (Giving birth)
- Unit 9.6 – Managing unproductive animals (Reproductive failure)
At the end of this module, you will be able to:

- Understand the concept of animal breeding in small farm animals.
- So that they will be able to assist farmers with information on quality animal selection and purchase.
- Acquire the skill of conducting artificial insemination on goat and pig.
- Learn ways to handle common difficulties related to animal birth.
UNIT 9.1: Understanding The Reproductive System

Unit Objectives

At the end of this unit, you will be able to:

• Impart knowledge to participant on reproductive system and reproductive cycle of Goat and Pig.

Resources to be Used

• Available objects such as a white board, duster, etc.
• Power point presentation e.g. Slide showing reproductive system.
• Parts of reproductive system as collected from slaughter house.

Explain

• Objective of animal breeding.
• Fertilization, Gestation period, birth, Fertility, Puberty, Heat / estrus, estrus cycle, service and conception.

Elaborate

• Various parts of reproductive system in small farm animals and their functions.
• Common reproductive parameters of small farm animals e.g. Age of attainment of puberty, weight at first mating, age at first mating or insemination, estrous cycle, duration of heat, gestation period, service period etc.
Exercise

- Participants should prepare self-reference charts on reproductive parameters of goat and pig.

Practical

- Participants should physically see the parts of reproductive system as collected from slaughter house.
UNIT 9.2: Basic of animal genetics

Unit Objectives
At the end of this unit, you will be able to:

- Help participants understand the basic concept of genetics.

Resources to be Used
- Available objects such as a white board, duster, etc.

Explain
- Heredity, gene and inheritance.
- Genotype and phenotype
- What is breed

Elaborate
- Objective of breeding
- Different methods of breeding e.g. selective breeding, in-breeding, cross breeding, etc.
- Types of breeding, e.g. Natural and Artificial insemination.
Say

- Success of farm enterprise depends on proper breeding plan. It is better to have a designed breeding plan for entire community. You should always take guidance of local veterinarian in promoting a breeding plan for farmers within a village / community.
- Breeding is a scientific activity and is governed by law. For example, in Maharashtra cross-breeding among sheep and goat is strictly prevented except for research purpose. Your supervising veterinarian can guide you on state livestock breeding policy.

Exercise

- Participants should collect names of various breeds of goat, sheep and pig found within the local area along with their breed characteristics and performance parameters observed locally. The exercise must help participants to guide farmers in selecting best breed to farm with.

- Assist participants to list few desirable characteristics (or traits) in meat animals.

- Encourage few volunteers from class to talk on his / her experience of community practices related to animal breeding.

Ask

- Why is better feeding and management a must to get best out of genetically superior animals? (Encourage participants to answer based on their learning of concepts related to genetics)

Facilitation Notes

- Animal health workers are not expected to remember the specific terms of genetics per se. 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.
- Where possible, introduce participants to plan breeding program being implemented by NGOs / Agencies. Representative of such NGO / agency should be requested to interact with participants and discuss on activities where animal health worker can help including data collection to monitor breeding program.
UNIT 9.3: Signs OF Heat

Unit Objectives

At the end of this unit, you will be able to:

• Build capacity of participant to detect heat in small farm animals.

Resources to be Used

• Live animal in heat (Where possible)

Elaborate

• Signs of heat in female goat and pigs.
• Best time for mating / insemination in goat / pigs.

Demonstrate

• Riding test for checking standing reflex in Pig.

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.
UNIT 9.4: Artificial Insemination

Unit Objectives

At the end of this unit, you will be able to:

• Help participants develop the skill to conduct artificial insemination in Pig and Goat.

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

• Steps in insemination of goat and pig.
• Safety measures to be followed.

Demonstrate

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

Practical

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

Facilitation Notes

- 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.
UNIT 9.5: Parturition Giving Birth

Unit Objectives

At the end of this unit, you will be able to:

- Recognize the signs that parturition is beginning
- Know when parturition is normal
- So that they can assist with parturition when necessary
- So that they can take care of mother and newborn.

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

- Signs of approaching parturition in goat / sheep and farrowing in pig.
- When and how to help in parturition / farrowing. (including safety measures to be taken)
- Care of the mother and newborn.

Practical

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

At the end of this unit, you will be able to:

• About common infertility issues in small farm animals and their handling.
• About the need of appropriate feeding in breeding animals.
• Need of maintaining optimum number of animal.

Resources to be Used

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

Explain

• Reproductive failure.
• Importance of culling and rearing of optimal number of animals.

Elaborate

• Prevention and handling of reproductive failure. (e.g. appropriate feeding of breeding animals and mineral supplementation)
• Situations that can be called as reproductive failure.
**Demonstrate**

- Demonstrate use of any data collection tools to disseminate breeding / production related field data (farm performance data) to centralize data analysis unit.

**Facilitation Notes**

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

**Tips for end of the unit assessment**

The practical assessment should be based on participants' ability to:

1. Perform given breeding related farm duty.
2. Conduct artificial insemination in small animals.
10. Annexures

Annexure I : Training Delivery Plan
Annexure II : Assessment Criteria
# Annexure I
## Training Delivery Plan

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Module Name</th>
<th>Session Name</th>
<th>Session Objectives</th>
<th>NOS Reference</th>
<th>Methodology</th>
<th>Training Tools/Aids</th>
<th>Duration</th>
</tr>
</thead>
</table>
| 1      | Introduction         | Rural livelihood and livestock farming             | 1. To help participants to get rid of inhibition and anxiety (if any) thus ensuring maximum class participation.  
                                                      | 2. To empower participants to systematically think about their own livelihood and ways to enhance livelihood of others.  
                                                      | 3. To make participant understand key words like ‘livestock’, ‘poultry’ while explaining their role in livelihood, human health and nutrition.  
                                                      | 4. To create a sense of pride amongst the participants as would be service provider of a sector that is important to the country’s economy, social and cultural wellbeing. | AGR/N4810 (Partly PC1, PC2)         | Lecture, Games, Group activity, Exercise.               | • Available objects such as a white board, duster etc.  
                                                      | AGR/N4801 (SB8)      |                                                      | • Power point slides.                                      | First half of day-1 (4 hrs.) |
| 2 | Introduction | Knowing your village or service area | To make participant:  
1. Understand the functioning of village institutions.  
2. Understand the basics of socio-economic parameter of a village with specific reference to agriculture.  
3. Understand the basic climate and environment related issues in a village / service area context. | AGR/N4810  
(Partly PC3, PC4, PC5, PC6)  
AGR/N4802  
(Firstly PC2, PC8, PC16, KB2)  
AGR/N4807  
(PC5)  
AGR / N4808  
(SB1, SB2) | Lecture, Team activity, other activities, Exercise  
- Available objects such as a white board, duster, flip chart board / paper etc.  
- Village map or map of service area of trainees.  
- Slides in power point presentation. | 2nd half of day-4 hrs. |
| 3 | Introduction | Role and responsibility of animal health worker | To make participant:  
1. Understand their job role as an animal health worker.  
2. Appreciate the key public health issues and responsibilities thereof.  
3. Learn about their limitations as service provider and pre-requisite to follow legal government guidelines.  
4. Appreciate the need to take guidance from veterinarians | AGR / N4801  
N4805 / N4821  
(KA2)  
AGR/N4802  
(PC4, PC5, PC7) | Lecture, Team activity.  
- Available objects such as a white board, duster, flip chart board / paper etc.  
- Slides in power point presentation | 1st half of day-4 hrs.  
(Time should be effectively utilized for recap of day -1 learning ) |
| 4 | Introduction | Continuous learning and support system | 1. Appreciate the importance of continuous learning and guidance from veterinarian.  
2. Learn about relevant sources of information or available support system. | AGR/N4801  
(SA3, SA4, SA5)  
AGR /N4810  
(SA2, SA3, SA4) | Lecture, demonstratio  
- Available objects such as a white board, duster, flip chart board / paper etc.  
- Projector connected to computer with internet connectivity. | 2nd half of day-2  
(4 hrs.)  
(Time should be effectively utilized for preparation of) |
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<tbody>
<tr>
<td>5</td>
<td>Introduction</td>
<td>Field visit.</td>
<td>To introduce participants to:</td>
<td>All NOS reference included for first 4 sessions.</td>
<td>Demonstratio, personal interaction, activity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1. System of veterinary service delivery in local context.</td>
<td></td>
<td>NA</td>
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<tr>
<td></td>
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<td></td>
<td>2. Veterinary care facilities and institutions, e.g. KVKs, rural development centers, NGOs, etc. where they can visit for referral support and continuous learning</td>
<td></td>
<td>Day-3 (whole day) (8 hrs.) Toward afterno on: Training institutions may also organiz e an informa l cultural evening along with particip ants so as to develop afeling of friendli ness amongs t the group particip ants.</td>
</tr>
<tr>
<td>6</td>
<td>Controlling and restraining of animals</td>
<td>External body parts and organ system of farm animals.</td>
<td>To help participants 1. Identify body parts and learn about various organ systems in farm animals. 2. Discuss body locations with clinical or husbandry significance. 3. Use various terms to describe animals based on sex and age.</td>
<td>AGR/N4801 Prerequisite to PC1, PC2, PC3, PC5, KB3, KB4</td>
<td>Lecture, demonstratio, exercise</td>
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<tr>
<td></td>
<td>Controlling and restraining of animals</td>
<td>Approaching and moving animals</td>
<td>To help participants understand the basic principle of animal handling.</td>
<td>AGR/N4801 Prerequisite to PC1, PC2 PC3, PC5, KB3</td>
<td>Lecture and demonstration</td>
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<tr>
<td>8</td>
<td>Controlling and restraining of animals</td>
<td>Common behavior of farm animals</td>
<td>To help participants learn about common behavior of farm animals</td>
<td>AGR/N4801 Prerequisite to PC1, PC2 PC3, PC4, PC6, PC8, KB1</td>
<td>Lecture and team activity.</td>
</tr>
<tr>
<td>9</td>
<td>Controlling and restraining of animals</td>
<td>Personal safety</td>
<td>To help participants appreciate the importance of personal safety.</td>
<td>AGR/N4801 PC4, PC6, PC7, PC8, KB2</td>
<td>Lecture and demonstration</td>
</tr>
<tr>
<td>10</td>
<td>Controlling and restraining of animals</td>
<td>Summary revision of day -4 learning. Review of exercise.</td>
<td></td>
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</tr>
<tr>
<td>11</td>
<td>Controlling and restraining of animals</td>
<td>Use of common methods and tools for restraining</td>
<td>To help participants understand the use of common methods and tools for controlling and restraining of animals.</td>
<td>AGR/N4801 PC5, KB4</td>
<td>Lecture and demonstration</td>
</tr>
<tr>
<td>12</td>
<td>Controlling and restraining of animals</td>
<td>Repeat demonstration and module / unit end practical</td>
<td></td>
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<tr>
<td>13</td>
<td>Implementing regular preventive animal health care program</td>
<td>Animal identification and record keeping</td>
<td>1. To help participants understand the importance of data and the need to follow given procedure for collecting the same. 2. Help participants learn about animal identification</td>
<td>AGR/N4802 PC1, PC2, PC3, KB1, SB9, SA1, SA2</td>
<td>Lecture and demonstration</td>
</tr>
<tr>
<td>14</td>
<td>Implementing regular preventive animal health care program</td>
<td>Animal identification and record keeping</td>
<td>Class practical (Ear tagging and use of data collection tool)</td>
<td>(2 hrs.)</td>
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<tr>
<td>15</td>
<td>Implementing regular preventive animal health care program</td>
<td>Observation of environment and history taking</td>
<td>To build skills amongst the participants to observe and take history for communication to supervising veterinarian or to make provisional diagnosis.</td>
<td>Available objects such as a white board, duster, flip chart board/paper etc. Slides in power point presentation showing specific images e.g. factors affecting animal health</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; half of Day-6 (4 hrs.)</td>
</tr>
<tr>
<td>16</td>
<td>Implementing regular preventive animal health care program</td>
<td>Routine examination of health of animals</td>
<td>1. Build capacity of participants to differentiate between and healthy and sick animal based on observation. 2. Impart skills to participants to record parameters pertaining to health of livestock and poultry.</td>
<td>Lecture, demonstratio n, Exercise.</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; half of Day-7 (2.5 hrs.)</td>
</tr>
<tr>
<td>17</td>
<td>Implementing regular preventive animal health care program</td>
<td>Routine examination of health of animals</td>
<td>Class practical (Routine examination) and review of given exercise</td>
<td>1.5 hrs.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Implementing regular preventive animal health care program</td>
<td>Causes and ways of transmission of diseases</td>
<td>To build the basic understanding amongst participants regarding the causes and transmission of disease in animals.</td>
<td>Lecture and activity</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; half of the day-7 (3 hrs.)</td>
</tr>
<tr>
<td>19</td>
<td>Implementing regular preventive animal</td>
<td>Causes and ways of transmission</td>
<td>Class activity</td>
<td>(1 hrs.)</td>
<td></td>
</tr>
<tr>
<td>Sl.No</td>
<td>Implementing regular preventive animal health care program</td>
<td>Identifying common diseases</td>
<td>To help participants use the knowledge of clinical signs to identify common animal diseases.</td>
<td>AGR/N4802 Prerequisite for (PC4, PC5) KB3, KB4, KB5 AGR / N 4805 (PC3, PC4) KB5, KB6, KB7</td>
<td>Lecture and team activity</td>
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<tr>
<td>21</td>
<td>Implementing regular preventive animal health care program</td>
<td>Summary and recap of learning from session Sl.No.13 to Sl.20</td>
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</tr>
<tr>
<td>22</td>
<td>Implementing regular preventive animal health program</td>
<td>Field visit</td>
<td>1. To introduce participants to season wise prevalent diseases. 2. To introduce participants to prevalent farming system, social, geographical and environmental condition of service area. 2. Practically expose participants to ailing animals (to help identify disease) 3. Introduce participants to disease identification related resources.</td>
<td>AGR/N4802 Prerequisite for (PC4, PC5) KB2, KB3, KB4, KB5</td>
<td>Personal interaction, guidance.</td>
</tr>
<tr>
<td>23</td>
<td>Implementing regular preventive animal health care program</td>
<td>Zoonotic disease</td>
<td>To help participants to appreciate the importance of zoonotic diseases.</td>
<td>AGR/N4802 Prerequisite for (PC4,PC5) KB3, KB4, KB5</td>
<td>Lecture and team activity</td>
</tr>
<tr>
<td>24</td>
<td>Implementing regular preventive animal health care program</td>
<td>Concept of notifiable disease</td>
<td>Help participants to understand the importance and legal requirement related to reporting of certain diseases.</td>
<td>AGR/N4802 Prerequisite for (PC4, PC5)</td>
<td>Lecture and exercise.</td>
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</tbody>
</table>
| 25  | Implementing regular preventive animal health care program | Preventing disease in animals | 1. To inform participants about the best possible ways to prevent diseases in animals so that they can communicate the same to farmers.  
2. To make participants understand the key concept of herd health approach.  
3. To impart skills to participants regarding delivery of preventive services e.g. vaccination and parasite control. | AGR/N4802 Prerequisite for (PC6, PC6, PC8, PC9, PC10, PC11, PC12, PC13, PC14, PC15, PC16, PC17, PC18, PC19, PC20, PC21, PC22, PC23, PC24) KB6, KB7, KB8, KB9, KB10, KB11, KB12. | Lecture, demonstration, Role play, Exercise. | Day -11 & 12  
A total 16 hrs. spread throughout two days.  
*Inform participants about program schedule for day 13.  
Day -13 should preferably after some holiday. |
<p>| 26  | Implementing regular preventive animal health care program | Preventing disease in animals | To impart skills to participants regarding delivery of preventive services e.g. vaccination and parasite control | Demonstration | Vaccines, needles etc. | 1st half of day-13 (4 hrs.) |</p>
<table>
<thead>
<tr>
<th>Day</th>
<th>Module / Unit</th>
<th>Description</th>
<th>Prerequisite</th>
<th>Activity</th>
<th>Assessment</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>Implementing regular preventive animal health care program</td>
<td>Preventing disease in animals</td>
<td>Role play</td>
<td>NA</td>
<td>2nd half of day-13 (1 hr.)</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Implementing regular preventive animal health care program</td>
<td>Preventing disease in animals</td>
<td>Review given exercise. *This session must be scheduled preferably after some holiday so that participants can get time to complete the given exercises.</td>
<td>NA</td>
<td>(3 hrs.)</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Implementing regular preventive animal health care program</td>
<td>Field visit</td>
<td>AGR/N4802 Prerequisite for (PC6, PC6, PC8, PC 9, PC10, PC 11, PC 12, PC 13, PC14, PC15, PC 16, PC 17, PC18, PC19, PC 20, PC 21 PC 22, PC 23, PC 24) KB6, KB7, KB8, KB9, KB10, KB11, KB 12.</td>
<td>Personal interaction / observation.</td>
<td>Day -14 (8 hrs.)</td>
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<tr>
<td>30</td>
<td>Implementing regular preventive animal health care program</td>
<td>Module / unit end practical assessment</td>
<td></td>
<td></td>
<td>Day -15 (8 hours)</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Veterinary First Aid.</td>
<td>Emergency conditions and pre-disposing factors</td>
<td>AGR/N4805 (PC2) KB1, KB3, KB4</td>
<td>Lecture and team activity</td>
<td>Available objects such as a white board, duster per etc. New born calves / kid</td>
<td>Day-16 (8hrs.) 2nd half should be fully devoted to team activity.</td>
</tr>
</tbody>
</table>
32 Veterinary First Aid  Common first aid measures  Inform participants about common first aid measures that can be employed in field condition.  AGR/N4805 (PC5, PC6, PC7)  Lecture and demonstration  Available objects such as a white board, duster per etc. New born calves / kid  1st half of Day-17 (2 hrs.)

33 Veterinary First Aid  Handling superficial wound / abscess  To impart basic skills to participants to handle wound / abscess.  AGR/N4805 (PC1, PC8) KB2  Lecture, demonstration and exercise  • Available objects such as a white board, duster etc.  • Slides in power point presentation e.g. showing different types of wound  • Live animals with wounds / Abscess  1st half of Day-17 (2 hrs.) And 2nd half of Day 17 (4 hrs.)

34 Veterinary First Aid  Handling of fractures and horn injury  To impart basic skills to participants to provide first aid for fractures and horn injuries in farm animals  AGR/N4805 (PC5, PC6, PC7)  Lecture and demonstration  • Available objects such as a white board, duster etc.  • Slides in power point presentation e.g. showing images of horn injury.  • Animals suffering from fractures and horn injury.  1st Half of Day-18 (4 hrs.)

35 Veterinary First Aid  First aid during animal birth  To impart basic skills to participants to provide first aid for common problems during animal birth.  AGR/N4805 (PC9)  Lecture  • Available objects such as a white board, duster etc.  • Slides in power point presentation showing cases of dystocia, retention of placenta, prolapse of uterus.  • Lives cases  2nd half of Day-18 (4 hrs.)

36 Veterinary First Aid  Handling poisoning  To impart basic skills to participants to identify signs of common poisoning and provide first aid thereof.  AGR/N4805 (PC5, PC6, PC7) KB4  Lecture and demonstration  • Available objects such as a white board, duster etc.  • Slides in power point presentation pictorially explaining various types of poisoning or showing poisonous plants.  1st half of Day-19 (4 hrs.)
<table>
<thead>
<tr>
<th>No.</th>
<th>Subject</th>
<th>Activity</th>
<th>Description</th>
<th>Prerequisite</th>
<th>Duration</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>Veterinary First Aid</td>
<td>Administration of medicine</td>
<td>To impart basic skills to participants to administer medicine to farm animals.</td>
<td>AGR/N4805 (PC2) KB3, SB1</td>
<td>Lecture and demonstration</td>
<td>Available objects such as a white board, duster etc. Slides in power point presentation showing common conversions, injection site etc.</td>
</tr>
<tr>
<td>38</td>
<td>Veterinary First Aid</td>
<td>Safety measures to be taken during first aid</td>
<td>Inform participants about the safety measures that should be adopted during first aid.</td>
<td>AGR/N4805 SB2</td>
<td>Role play</td>
<td>NA</td>
</tr>
<tr>
<td>39</td>
<td>Veterinary First Aid</td>
<td>Field visit</td>
<td>1. To introduce participants to various types of wounds  2. To give opportunity to participants in taking care of wounds / fractures / horn injury, etc.</td>
<td>AGR/N4805 (PC1, PC5, PC6, PC7 PC8) KB2</td>
<td>Demonstration, handholding</td>
<td>NA</td>
</tr>
<tr>
<td>40</td>
<td>Veterinary First Aid</td>
<td>Field visit</td>
<td>To introduce participants to cases of dystocia, retention of placenta, prolapse of uterus etc.</td>
<td>AGR/N4805 (PC9)</td>
<td>Demonstration, handholding</td>
<td>NA</td>
</tr>
<tr>
<td>41</td>
<td>Veterinary First Aid</td>
<td>Field visit</td>
<td>To expose participants to functioning of any animal welfare centre treating injured animals and introduce them to standard operating procedure of the centre related to transportation, handling and care of injured animals.</td>
<td>AGR/ N4805 (PC5, PC 6, PC7)</td>
<td>Demonstration, handholding</td>
<td>NA</td>
</tr>
<tr>
<td>42</td>
<td>Veterinary First Aid</td>
<td>Review of learning during field visits and additional module / unit end practical assessment</td>
<td></td>
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</table>
| 43  | Assisting government in animal disease control | Some important concept | To impart knowledge of some basic concepts so that the participants can appreciate the importance of activities under state and national disease control | AGR/N4807 Prerequisite for PC1, PC2, PC4, PC5, PC6, PC7, PC8, PC9, | Lecture, Exercise and team activity | Available objects such as a white board, duster etc. | Day-25 (8 hours) Team activity and
<table>
<thead>
<tr>
<th>Exercise Number</th>
<th>Description</th>
<th>Activity</th>
<th>Prerequisite</th>
<th>Location</th>
<th>Date/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>Assisting government in animal disease control</td>
<td>Introduction to disease surveillance and monitoring</td>
<td>AGR/N4807, PC10, PC11, PC12, KB1, KB2, KB3, KB4, SB9, SB10</td>
<td>Lecture</td>
<td>1st half of Day-26 (4 hrs.)</td>
</tr>
<tr>
<td>45</td>
<td>Assisting government in animal disease control</td>
<td>Field visit</td>
<td>AGR/N4807, PC4, PC5, PC6, PC7, PC8, PC9</td>
<td>Observation, one to one interaction.</td>
<td>2nd half of Day-26 (4 hrs.)</td>
</tr>
<tr>
<td>46</td>
<td>Assisting government in animal disease control</td>
<td>Livestock markets</td>
<td>AGR/N4807, PC4, PC5, PC6</td>
<td>Lecture</td>
<td>1st half of Day-27 (4 hrs.)</td>
</tr>
<tr>
<td>47</td>
<td>Assisting government in animal disease control</td>
<td>Cleaning and disinfection of premises</td>
<td>AGR/N4807, PC4, PC5, PC6</td>
<td>Lecture</td>
<td>2nd half of Day-27 (4 hrs.)</td>
</tr>
<tr>
<td>48</td>
<td>Assisting government in animal disease control</td>
<td>Field visit</td>
<td>AGR/N4807, PC10, PC11, PC12, KB1, KB2, KB3, KB4, SB9, SB10</td>
<td>Observation, interaction</td>
<td>Day-28 (8 hrs.)</td>
</tr>
<tr>
<td>49</td>
<td>Assisting government in animal disease control</td>
<td>Culling and disposal of animals</td>
<td>AGR/N4807, PC10, PC11, PC12, KB1, KB2, KB3, KB4, SB9, SB10</td>
<td>Lecture</td>
<td>1st half of Day-29 (4 hrs.)</td>
</tr>
<tr>
<td>50</td>
<td>Assisting government in animal disease control</td>
<td>Animal disease reporting</td>
<td>AGR/N4807, PC10, PC11, PC12, KB1, KB2, KB3, KB4, SB9, SB10</td>
<td>Lecture</td>
<td>2nd half of Day-29 (4 hrs.)</td>
</tr>
<tr>
<td>Day</td>
<td>Activity</td>
<td>Learning Area</td>
<td>Day</td>
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<tr>
<td>30</td>
<td><strong>Assisting government in animal disease control</strong></td>
<td>Leadership for local resource mobilization (Along with end unit/module practical)</td>
<td>31</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>To make participants appreciate the need of public participation in disease control programs.</td>
<td>To build capacity of the participants to ensure local resource mobilization.</td>
<td>32</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>AGR/N4807 PC3, PC5</strong></td>
<td>Lecture and team activity</td>
<td>33</td>
<td></td>
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<tr>
<td></td>
<td>• Available objects such as a white board, duster etc.</td>
<td>• Power point slide to facilitate team work.</td>
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<td></td>
<td>• Power point slide</td>
<td>• Reference of previous learning related livelihood, village institutions etc. from introduction unit – whenever needed.</td>
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<td></td>
<td><strong>Day-30</strong> (8 hrs.)</td>
<td><strong>Day-31</strong> (8 hrs.)</td>
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<td></td>
<td>Sufficient time should be given to team activity (which is also the end unit practical)</td>
<td>Sufficient time should be given to team activity and exercise.</td>
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<tr>
<td>31</td>
<td><strong>Assisting in veterinary extension services.</strong></td>
<td>Understanding extension services</td>
<td>32</td>
<td></td>
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<tr>
<td></td>
<td>To make participants understand the basic concepts needed for effective implementation of extension programs.</td>
<td>AGR/N4808 Prerequisite for PC1, PC2, PC3, SB1, SB2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>AGR/N4808</strong></td>
<td>Lecture, team activity and exercise.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Available objects such as a white board, duster etc.</td>
<td>• Power point presentation.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>• Power point presentation.</td>
<td>• Reference of previous learning related livelihood, village institutions etc. from introduction unit – whenever needed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Day-31</strong> (8 hrs.)</td>
<td><strong>Day-32</strong> (8 hrs.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sufficient time should be given to team activity and exercise.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td><strong>Assisting in veterinary extension services</strong></td>
<td>Field visit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To introduce participants to PRA exercise.</td>
<td>To introduce participant to SHGs/small cooperative.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To introduce participants to extension activities at block level.</td>
<td>To introduce participants to extension activities at block level.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>AGR/N4808</strong></td>
<td>Observation, one to one interaction.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Day-32</strong> (8 hrs.)</td>
<td>NA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Day-33</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Day-33</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td><strong>Assisting in veterinary extension services</strong></td>
<td>Understanding production cycle of farm animals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To make participant understand the basic production cycle of different farm animals.</td>
<td>AGR/N4808 Prerequisite for PC1, SB1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>AGR/N4808</strong></td>
<td>Lecture and exercise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Available objects such as a white board, duster etc.</td>
<td>• Power point slide e.g. appropriate diagram of production life cycle in various</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Power point slide</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td><strong>1st half of Day-33</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4 hrs.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Assisting in veterinary extension services</td>
<td>Basic principle of animal housing</td>
<td>To make participants understand the key principles of livestock housing so that they can interpret various best practices suitable for their area.</td>
<td>AGR/N4808 Prerequisite for PC1, SB1, KB5</td>
<td>Lecture and exercise.</td>
</tr>
<tr>
<td>56</td>
<td>Assisting in veterinary extension services</td>
<td>Livestock feeding</td>
<td>To make participants understand the key principles of livestock feeding so that they can interpret various best practices suitable for their area.</td>
<td>AGR/N4808 Prerequisite for PC1, PC4, PC5, SB1 KB2, KB3</td>
<td>Lecture, team activity, exercise and demonstration.</td>
</tr>
<tr>
<td>57</td>
<td>Assisting in veterinary extension services</td>
<td>Body condition scoring and selection of animals.</td>
<td>To inform participants about the concept of body condition scoring so that they can develop the skill with experience.</td>
<td>AGR/N4808 PC4, KB4</td>
<td>Lecture, possibly demonstration in live animal.</td>
</tr>
<tr>
<td>58</td>
<td>Assisting in veterinary extension services</td>
<td>Hygienic milking and livestock product handling</td>
<td>To inform participants about hygienic milk production and scientific handling of livestock products.</td>
<td>AGR/N4808 Prerequisite for PC1, KB1</td>
<td>Lecture and exercise</td>
</tr>
<tr>
<td>59</td>
<td>Assisting in veterinary extension services.</td>
<td>Using communication devices</td>
<td>To inform participants about various initiatives related to use of communication devices like cell phones.</td>
<td>AGR/N4808 PC7, KB6</td>
<td>Lecture and demonstration</td>
</tr>
<tr>
<td>Day</td>
<td>Assisting in veterinary extension services</td>
<td>Unit / module end practical assessment</td>
<td>Day -36 (8 hrs.)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>60</td>
<td>Development program implementation and marketing in livestock sector</td>
<td>Sustainable development and goal for same.</td>
<td>1st half of Day -37 (1 hrs.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>Development program implementation and marketing in livestock sector</td>
<td>Basic of development project management</td>
<td>1st half of Day -37 (3 hrs.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>Development program implementation and marketing in livestock sector</td>
<td>Business management</td>
<td>2nd half of Day -37 (4 hrs.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>Development program implementation and marketing in livestock sector</td>
<td>Business management</td>
<td>(Minimum 1 hr should be devoted to guest lecture on selling by executive of private company and demonstration of mock selling of compound feed.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AGR/N4810 Prerequisite for PC1, PC5, SA3, SA5**

**Lecture and exercise.**

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

**Lecture, exercise, mock activity**

- Available objects such as a white board, duster, etc.
- Power point slide (To assist in elaboration)
<table>
<thead>
<tr>
<th></th>
<th>Development program implementation and marketing in livestock sector</th>
<th>Expectation from development worker</th>
<th>To inform participants about the expectation from animal health workers as implementer of development programs.</th>
<th>AGR/N4810 PC1, PC2, PC3, PC4, PC5, PC8, PC9, PC10, KB2</th>
<th>Lecture, Video show</th>
<th>• Available objects such as a white board, duster, etc. Projector (For video show)</th>
<th>1\textsuperscript{st} half of Day-38 (4 hrs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>Development program implementation and marketing in livestock sector</td>
<td>Field visit</td>
<td>To introduce participants to local dealers selling various farm inputs.</td>
<td>AGR/N4810 PC9, PC10 KB5</td>
<td>Observation, One to one interaction</td>
<td>NA</td>
<td>2\textsuperscript{nd} half of Day-38 (4 hrs.)</td>
</tr>
<tr>
<td>66</td>
<td>Development program implementation and marketing in livestock sector</td>
<td>Unit / module end practical assessment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Day -39 (8 hrs.)</td>
</tr>
<tr>
<td>67</td>
<td>Assisting in animal welfare, breed conservation and disaster management.</td>
<td>Animal Welfare</td>
<td>To make participants learn some basic concepts of animal welfare and common cruelty to animals.</td>
<td>AGR/N4810 PC1, PC2 KB2, KB4</td>
<td>Lecture, exercise and team activity</td>
<td>• Available objects such as a white board, duster, etc. • Power point presentation e.g. picture of animal cruelty, human-animal conflict.</td>
<td>1\textsuperscript{st} half of Day-40 (4 hrs.)</td>
</tr>
<tr>
<td>68</td>
<td>Assisting in animal welfare, breed conservation and disaster management.</td>
<td>Field visit</td>
<td>To introduce participants to work of SPCA at district level.</td>
<td>AGR/N4810 PC1, PC2 KB4</td>
<td>Personal interaction, observation</td>
<td>NA</td>
<td>2\textsuperscript{nd} half of Day-40 (4 hrs.)</td>
</tr>
<tr>
<td>69</td>
<td>Assisting in animal welfare, breed conservation of indigenous livestock</td>
<td></td>
<td></td>
<td>AGR/N4813 PC3</td>
<td>Lecture</td>
<td>• Available objects such as a white board, duster, etc.</td>
<td>1\textsuperscript{st} half of Day-41 (4 hrs.)</td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
<td>Expectation from development worker</td>
<td>To inform participants about the expectation from animal health workers as implementer of development programs.</td>
<td>AGR/N4810 PC1, PC2, PC3, PC4, PC5, PC8, PC9, PC10, KB2</td>
<td>Lecture, Video show</td>
<td>Available objects such as a white board, duster, etc. Projector (For video show)</td>
<td>1st half of Day-38 (4 hrs.)</td>
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</tr>
<tr>
<td>64</td>
<td>Development program implementation and marketing in livestock sector</td>
<td>Field visit</td>
<td>To introduce participants to local dealers selling various farm inputs.</td>
<td>AGR/N4810 PC9, PC10 KB5</td>
<td>Observation, One to one interaction</td>
<td>NA</td>
<td>2nd half of Day-38 (4 hrs.)</td>
</tr>
<tr>
<td>65</td>
<td>Development program implementation and marketing in livestock sector</td>
<td>Unit / module end practical assessment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Day -39 (8 hrs.)</td>
</tr>
<tr>
<td>66</td>
<td>Development program implementation and marketing in livestock sector</td>
<td>Animal Welfare</td>
<td>To make participants learn some basic concepts of animal welfare and common cruelty to animals.</td>
<td>AGR/N4813 PC1, PC2 KB2, KB4</td>
<td>Lecture, exercise and team activity</td>
<td>• Available objects such as a white board, duster, etc. • Power point presentation e.g. picture of animal cruelty, human-animal conflict.</td>
<td>1st half of Day-40 (4 hrs.)</td>
</tr>
<tr>
<td>67</td>
<td>Assisting in animal welfare, breed conservation and disaster management.</td>
<td>Field visit</td>
<td>To introduce participants to work of SPCA at district level.</td>
<td>AGR/N4813 PC1, PC2 KB4</td>
<td>Personal interaction, observation.</td>
<td>NA</td>
<td>2nd half of Day-40 (4 hrs.)</td>
</tr>
<tr>
<td>No.</td>
<td>Subject</td>
<td>Activity</td>
<td>Duration</td>
<td>Notes</td>
<td></td>
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<td>-----</td>
<td>-------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
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</tr>
</tbody>
</table>
| 69  | Assisting in animal welfare, breed conservation and disaster management. | Conservatio n of indigenous livestock                                      | 1st half of Day 41 (4 hrs.) | To make participant understand their role in conservation of indigenous livestock. Lecture.  
• Available objects such as a white board, duster, etc.  
• Power point slide e.g. appropriate pictures of indigenous breeds of Indian livestock.  
| 70  | Assisting in animal welfare, breed conservation and disaster management. | Disaster Management                                                      | 2nd half of Day 41 (4 hrs.) | To make participants understand their role in disaster situations. Lecture  
• Available objects such as a white board, duster, etc.  
• Power point slide e.g. showing condition of animals in disasters like flood. |
| 71  | Assisting in animal welfare, breed conservation and disaster management. | Field visit                                                               | Day 42 (8 hrs.)    | To introduce participants to activities of Goshala’s  
To introduce participants to practices of any pastoral community (where available)  
To introduce participants to real life human-animal conflict situations. Observation, one to one interaction. |
| 72  | Implementation of animal breeding services in small farm animals.       | Understanding the reproductive system.                                   | 1st half of Day 43 (4 hrs.) | To impart knowledge to participant on reproductive system and reproductive cycle of Goat and Pig. Lecture, exercise and practical  
• Available objects such as a white board, duster, etc.  
• Power point presentation e.g. Slide showing reproductive system.  
• Parts of reproductive system as collected from slaughter house. |
| 73 | Implementation of animal breeding services in small farm animals. | Basic of animal genetics | To help participants understand the basic concept of genetics. | AGR/N4821 | Lecture, exercise | • Available objects such as a white board, duster, etc. | 2nd half of Day-43 (4 hrs.) |
| 74 | Implementation of animal breeding services in small farm animals. | Signs of heat / Artificial insemination | To build capacity of participant to detect heat in small farm animals. | AGR/N4821 | Lecture, demonstration, Practical | • Live animal in heat  
• Goat / Pig for AI demonstration. | 1st half of Day-44 at instructional or any commercial Pig / Goat farm. (4 hrs.) |
| 75 | Implementation of animal breeding services in small farm animals. | Parturition (Giving Birth) | To help participant 1. Recognize the signs that parturition is beginning  
2. Know when parturition is normal  
3. Learn to assist with parturition when necessary  
4. Learn to take care of mother and newborn. | AGR/N4821 | Lecture, demonstration, practical | • Available objects such as a white board, duster, etc. | 2nd half of Day-44 (4 hrs.) |
| 76 | Implementation of animal breeding services in small farm animals. | Managing unproductive animals (Reproductive failure) | To inform participants: 1. About common infertility issues in small farm animals and their handling.  
2. About the need of appropriate feeding in breeding animals.  
3. Need of maintaining optimum number of animal. | AGR/N4821 | Lecture | • Available objects such as a white board, duster, etc. | 1st half of Day-45 at instructional or any commercial livestock farm. (2 hrs.) |
| 77 | Implementation of animal breeding services in small farm animals. | Farm Training on record keeping (with focus on breeding related record) | To introduce participants to routine farm operations and various farm records with focus on breeding related records.  
To demonstrate use of any data collection tools to disseminate breeding /production related field data to centralize data analysis unit. | AGR/N4821 | Lecture, demonstration, one to one guidance. | NA | 2 hrs. of 1st half and 4 hrs. of 2nd half of Day-45 |
1. Total days for instruction is 45. Which includes 11 occasions of field visits and number of days (approx. 5) for end module practical assessment. Classes should be conducted in a livestock farm for 2 days (Day 44/45).

2. Training program should preferably be organized near to the residence of majority of participants or within the community itself. It is advisable to complete the 45 days training in a phase manner with sufficient break between each phase.

3. Modification of proposed field visit programs can be made subject to local situations.

4. The session on demonstration of artificial insemination in goat / pig is optional and subject to availability of facility.

5. In places where facilities are available, participants may be given opportunity to practice artificial insemination in goat and pig.

6. All attempt should be made to give the participants required exposure to all the common species of farm animals and poultry.
## Annexure II
### Assessment Criteria

**CRITERIA FOR ASSESSMENT OF TRAINEES**

<table>
<thead>
<tr>
<th>Assessment Criteria for ASCI- Animal Health Worker</th>
<th>Animal Health Worker</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Job Role</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Qualification Pack</strong></td>
<td>AGR/Q4804</td>
</tr>
<tr>
<td><strong>Sector Skill Council</strong></td>
<td>Agriculture</td>
</tr>
</tbody>
</table>

### 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, and where applicable, on the selected elective/option 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 criterion.

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 unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

### Marks Allocation

<table>
<thead>
<tr>
<th>Assessment Outcome</th>
<th>Assessment Criteria</th>
<th>Total Marks (800)</th>
<th>Out of</th>
<th>Theory</th>
<th>Skills Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. AGR/N4801 Controlling / restraining of animals</strong></td>
<td>PC1. Prepare and make the animal to cooperate during handling.</td>
<td>20</td>
<td>5</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PC2. determine flight zone and point of balance of the animal and approach, hold animal securely and safely.</td>
<td>15</td>
<td>5</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PC3. achieve minimum stress and injury to the animal.</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PC4. ensure zero accident.</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PC5. to be able to follow the prescribed procedures related to each tools and equipment.</td>
<td>30</td>
<td>5</td>
<td>25</td>
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</tr>
<tr>
<td></td>
<td>PC6. protect oneself from any physical injury arising out of animal handling.</td>
<td>100</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
### PC7. Use various personal protective materials / equipment.
- 10
- 5
- 5

### PC8. Assess the risk of diseases which can be transmitted from animal to human.
- 10
- 5
- 5

### PC1. Use point of care / field data collection tools (including electronic / mobile based data collection) as per given specifications.
- 5
- 1
- 4

### PC2. Ensure species / population or sample / geographical / Specific area coverage for data collection as per given instruction.
- 5
- 1
- 4

### PC3. Regularly collect and submit health, production and breeding data related to attended individual / herd of animals to appropriate authority on time as per given format / criteria.
- 5
- 0
- 5

### PC4. Undertake appropriate action which is just for a farmer / client as far as preventing occurrence of preventable known disease(s) in his / her animal / farm is / are concerned.
- 5
- 1
- 4

### PC5. Take only such actions / use product / follow procedure which is prescribed in the guideline for the scheduled diseases(s).
- 5
- 2
- 3

### PC6. Create future demand for preventive services by appropriately communicating the risk.
- 5
- 1
- 4

### PC7. Ensure high rate of voluntary compliance of bio-security norms.
- 7
- 1
- 6

### PC8. Schedule vaccination program at appropriate time ensuring technical requirement related to environment and convenience of farmer / client.
- 100
- 5
- 3
- 2

### PC9. Identify sick animals or animals not fit for vaccination.
- 5
- 1
- 4

### PC10. Be prepared to face any emergency situation following vaccination.
- 5
- 1
- 4

### PC11. Report side-effect (if any)
- 5
- 2
- 3

---

### 2. AGR/N4802

**Implementing regular preventive animal health care program.**

<table>
<thead>
<tr>
<th>Task</th>
<th>Weight</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC1. Use point of care / field data collection tools (including electronic / mobile based data collection) as per given specifications.</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>PC2. Ensure species / population or sample / geographical / Specific area coverage for data collection as per given instruction.</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>PC3. Regularly collect and submit health, production and breeding data related to attended individual / herd of animals to appropriate authority on time as per given format / criteria.</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>PC4. Undertake appropriate action which is just for a farmer / client as far as preventing occurrence of preventable known disease(s) in his / her animal / farm is / are concerned.</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>PC5. Take only such actions / use product / follow procedure which is prescribed in the guideline for the scheduled diseases(s).</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>PC6. Create future demand for preventive services by appropriately communicating the risk.</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>PC7. Ensure high rate of voluntary compliance of bio-security norms.</td>
<td>7</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>PC8. Schedule vaccination program at appropriate time ensuring technical requirement related to environment and convenience of farmer / client.</td>
<td>100</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>PC9. Identify sick animals or animals not fit for vaccination.</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>PC10. Be prepared to face any emergency situation following vaccination.</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>PC11. Report side-effect (if any)</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>PC12.</td>
<td>Conduct self-evaluation of procedure of procurement / infrastructure for storage etc. and use of vaccines from appropriate source only.</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>PC13.</td>
<td>Ensure cold chain and compliance of other guideline during transport to farmers / clients place and point of use.</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>PC14.</td>
<td>Rotate vaccine stock in hand so that oldest vaccines are used first, ensuring that no vaccine is used after expiration date.</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>PC15.</td>
<td>Follow all scientific guideline related to vaccine administration procedure e.g. use of appropriate dose, use of separate syringe for different vaccines etc.</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>PC16.</td>
<td>Follow local area guideline regarding species, age and season of de-worming.</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>PC17.</td>
<td>Use only permissible products, following appropriate dose and procedure of administration (As per directive of supervising veterinarian)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>PC18.</td>
<td>Use only permissible products, following appropriate dose and procedure of use/application.</td>
<td>2</td>
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<td>PC19.</td>
<td>Ensure scale of operation by involving maximum number of farmers in a given area.</td>
<td>1</td>
<td>1</td>
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<tr>
<td>PC20.</td>
<td>Take precaution for minimum effect on animal / immediate environment.</td>
<td>2</td>
<td>0</td>
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<tr>
<td>PC21.</td>
<td>Ensure record of given vaccine and administration related information (individual / herd level) along with batch numbers etc. as per given format.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>PC22.</td>
<td>Timely report vaccine failure to appropriate authority as per format.</td>
<td>1</td>
<td>1</td>
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<tr>
<td>PC23.</td>
<td>Support laboratory for sample test etc. as per directive for monitoring of success of vaccination program.</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>PC24.</td>
<td>Ensure herd coverage and continuity of vaccination program.</td>
<td>1</td>
<td>1</td>
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<td></td>
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<td>100</td>
<td>27</td>
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### 3.AGR/N4805 Veterinary first aid

| PC1 | 5 | 2 | 3 |
| PC2 | 25 | 10 | 15 |
| PC3 | 15 | 8 | 7 |
| PC4 | 7 | 5 | 2 |
| PC5 | 8 | 2 | 6 |
| PC6 | 5 | 5 | 0 |
| PC7 | 15 | 5 | 10 |
| PC8 | 10 | 2 | 8 |
| PC9 | 10 | 2 | 8 |

### 4.AGR/N4807 Assisting government agencies in animal disease control

| PC1 | 8 | 8 | 0 |
| PC2 | 5 | 5 | 0 |
| PC3 | 7 | 3 | 4 |
| PC4 | 5 | 5 | 0 |
| PC5 | 8 | 5 | 3 |
| PC6 | 8 | 2 | 6 |
| PC1. understand and explain the applicability and benefit associated with common approved technology(s) / best practice(s) in the context of local situations, opportunities and constraints. | 35 | 10 | 25 |
| PC2. give feedback on technology application in field and need for improvement (if any). | 10 | 2 | 8 |
| PC3. organize extension events based on farmer convenience and seasonal suitability. | 15 | 2 | 13 |
| PC4. understand and explain quality parameters regarding various farm inputs. | 15 | 5 | 5 |
| PC5. | Scout sources, plan and organize farmers for intelligent (timely, quality and cost based) procurement of inputs. |
| PC6. | Keep record that can help make farmer meeting and farm school activities 'targeted' and 'need based'. |
| PC7. | Use modern communication devices, audio-visual aids to explain farmers / clients. |
| PC1. | Promote awareness of programs and help in targeted beneficiary selection as envisioned in the promoted project / program. |
| PC2. | Work with selected project beneficiaries in implementing activities as envisaged in promoted programs. |
| PC3. | Attend and cooperate during meetings / programs of farmer's institutions / panchayats. |
| PC4. | Inform / involve farmer leaders / panchayat functionaries in selection of program beneficiaries. |
| PC5. | Facilitate organization's / panchayat's endeavor to ensure convergence of development projects for synergy. |
| PC7. | Guide farmers on business options and basic economics of various livestock linked activities. |
| PC8. | Motivate farmers to produce for market and ensure aggregation, collective marketing of livestock products. |
| PC9. | Provide market related e.g. prices etc. information to farmers. |
| PC10. | Provide information on livestock farm inputs e.g. feed, fodder, supplements etc. |

|   | 100 | 25 | 75 |

**6.AGR/N4810 Development program implementation and marketing in livestock sector**

| PC1. | Promote awareness of programs and help in targeted beneficiary selection as envisioned in the promoted project / program. |
| PC2. | Work with selected project beneficiaries in implementing activities as envisaged in promoted programs. |
| PC3. | Attend and cooperate during meetings / programs of farmer's institutions / panchayats. |
| PC4. | Inform / involve farmer leaders / panchayat functionaries in selection of program beneficiaries. |
| PC5. | Facilitate organization's / panchayat's endeavor to ensure convergence of development projects for synergy. |
| PC7. | Guide farmers on business options and basic economics of various livestock linked activities. |
| PC8. | Motivate farmers to produce for market and ensure aggregation, collective marketing of livestock products. |
| PC9. | Provide market related e.g. prices etc. information to farmers. |
| PC10. | Provide information on livestock farm inputs e.g. feed, fodder, supplements etc. |

|   | 100 | 45 | 55 |
| 7.AGR/N4813 | PC1. explain the cruelty for effective reporting. | 10 | 5 | 5 |
| PC2. explain stakeholders on common prevention and protection strategies related to common conflict situation. | 10 | 4 | 6 |
| PC3. scout and engage with interested breeding farms / goshala’s (Protective shelters for cows in India) for conservation of purebred animals. | 10 | 5 | 5 |
| PC4. help in stocking (as a preparedness) and mobilization of feed / fodder at the time of disasters. | 10 | 2 | 8 |
| PC5. work with community and disaster management authorities to provide safe passage to animals / livestock. | 25 | 10 | 15 |
| PC6. provide care / shelter to animal in distress | 15 | 5 | 10 |
| PC7. undertake appropriate measures for carcass disposal. | 10 | 2 | 8 |
| PC8. undertake culling and other measures suggested in case of disease related emergencies. | 10 | 5 | 5 |

| 8.AGR/N4821 | PC1 help farmers / clients with information on sources of good breeding animals. | 10 | 3 | 8 |
| PC2. assist farmers / clients in selecting animal with proper breed and other characteristics for breeding purpose. | 10 | 2 | 8 |
| PC3. detect heat in animals such as goat and pigs. | 10 | 5 | 5 |
| PC4. use semen of appropriate quality and blood level. | 5 | 5 | 0 |
| PC5. follow protocols pertaining to farm bio-security, safety, hygiene and animal welfare. | 10 | 5 | 5 |
| PC6. follow the prescribed procedures in handling semen straw and in conducting insemination. | 20 | 8 | 12 |
| PC7. conduct artificial insemination in time. | 5 | 5 | 0 |
| PC8. guide farmers / clients on common infertility issues and their handling. | 100 | 5 | 5 | 0 |
PC9. guide farmers on appropriate feeding of breeding animals e.g. mineral supplementation etc.

PC10. guide farmers on maintaining optimum number of animals based on breeding plan and suggested performance goal.

PC11. guide / assist farmer in handling common difficulties related to animal birth.

PC12. use field data collection tools (including electronic reader / mobile based data collection) as per given specifications.

PC13. provide organization with standard required information such as semen used; time of heat, time of insemination, kid / piglet born etc. needed to monitor breeding services.

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<tr>
<th>PC9</th>
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Total: 100 50 50