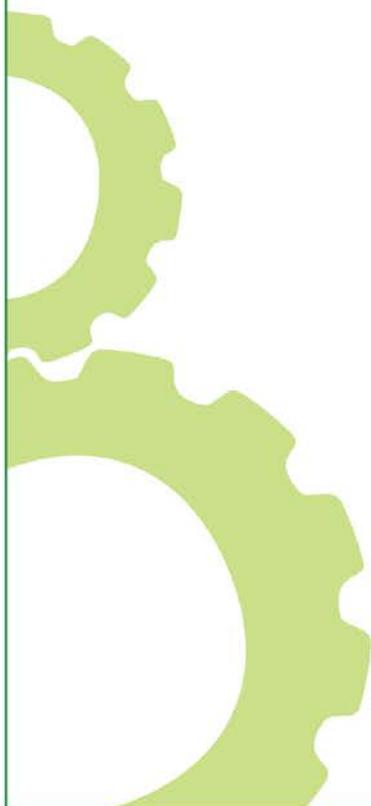


**Common Zoonotic and Animal Diseases in Oromia,
Amhara, SNNPR and Tigray Regions**

Training of Trainers for Training CIGs

FACILITATOR'S GUIDE

November 2020



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Abbreviations

AHA	Animal Health Assistant
CIG	Common Interest Group
CBPP	Contagious Bovine Pleuropneumonia
CCPP	Contagious Caprine Pleuropneumonia
IGA	Income Generating Activity
NDV	Newcastle Disease Virus
PPR	Peste des petits ruminants
PTT	Participative Training Techniques
SNNPR	Southern National and Nationalists People Region
TNA	Training Need Assessment
ToT	Training of Trainer

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About The Guideline

The primary users of the guidelines are senior veterinarians responsible for planning livestock disease outbreak control and prevention programs especially those who facilitate training for CIGs operating in Oromia, Amhara, Tigray, SNNPR and Sidama Regions, Ethiopia. The guidelines focus on major zoonotic and infectious animal diseases. Key characteristics of diseases such as etiology, transmission mechanisms, clinical signs and control-prevention measures are all presented.

The primary objective of the guidelines is to help ToT trained animal health professionals to plan and implement training program for CIGs in a participatory way. At regional level, CDSF field staff are responsible for ensuring that the ToT trained government staff are able to organize and conduct CIG training as per the technical manual and this facilitator's guide. This document is a guide and need to be applied together with ToT and technical manual.

The facilitator's guide has been structured principally to follow the chronology of major activities in the CIG training program. *Part one* summarizes training approach and methods. *Part two* provides training curriculum for CIG.

In general, a number of broader training objectives have been targeted in the guidelines. Users can include some and exclude activities to those listed under the objectives while trying to design and implement CIG training programs on own ways.

Session 1. Introduction to the Training of Trainers Course

1.1. Introduction

This guide is intended for use in the refresher course for training of trainers and provides a detailed training curriculum and course outline for Common Interest Groups (CIGs) in SNNPR, Oromia, Amhara and Tigray Regions, Ethiopia. CIGs are livestock keepers who are organized around livestock-based IGAs. Where possible, CIGs can be private livestock keepers who are linked to private veterinarians or AHAs for veterinary medicines and services. The government veterinary service is responsible for the regulation of the private system and the licensing of each type of animal health service provider.

The delivery of an effective CIG training requires a number of key stages in systems design and implementation to be followed:

- CIGs' specific training needs are identified through an assessment survey (TNA)
- A CIG dialogue and baseline survey that includes analysis of indigenous knowledge and gender roles in livestock production is undertaken
- CIGs are trained using a ToT trained trainer
- CIGs are linked to private and government veterinarians for medicines and technical supports respectively
- CIGs receive continuous mentoring and follow-up to improve on their knowledge, skills and practices provided by veterinarians.
- It is also expected that CIG members who are trained will share this information with other members and provide peer support.

1.2. Welcoming Session

When people come together to take part in a training course, it is important to make everyone feel welcome and as part of the group. This session allows the training program to commence with a brief welcoming remark from the organizer. The session also provides training organizers with an opportunity to explain the background of the program and hence participants with additional information about the training sessions and/or special arrangements and logistical issues.

Objectives: By the end of the session participants will have:

- Been welcomed to the training;
- Been introduced to each other and the CIGs represented as well as identified individual and group expectations of the training;
- Reviewed the objectives of the training;
- Agreed on group norms to be followed during the training;
- Discussed logistical concerns; and

- Reviewed the purpose, functions and composition of the training as well as selected representatives for each day.

Time: 15 minutes

1.3. Introduction of Trainers and Participants

Conventional introductions involve the stating of names, past work history and current professional status. This allows barriers and hierarchies to be established right away. Members of the training team should introduce themselves and briefly tell participants about their background and training, emphasizing their enthusiasm for the opportunity to work with the group.

Objectives:

To begin the process of getting to know each other and to allow trainees to understand the purpose of icebreakers and get experience in using them.

WORD SENSE

Icebreakers are activities that are undertaken at the beginning of an exercise to help people feel at ease in a given situation.

Time: 15 minutes

Methods:

The facilitator/trainer first introduces one of the icebreakers suggested below. Following the exercise, a general discussion is conducted on the use of icebreakers in CIGs training.

If there is enough time, trainees could do a second exercise.

Icebreakers

At the beginning of a CIG training course, icebreakers are essential in helping the trainees get to know each other and relieving the initial tension of beginning to work with a new group of people.

Subsequently, it is recommended that training sessions begin with warm-ups and icebreakers. Icebreakers help the facilitators participate and learn with the group as well as set the stage for continued training together.

Warm-up activities are usually used at the beginning of training sessions to begin on a positive note. The trainer can begin with a simple stretching exercise to get warmed up. At other times, energizers may be introduced to 'recharge' the group's energy if it seems to be low. Even when people are interested and concerned about the subject being covered, they can get tired and sleepy, so energizers give people a quick break and may add some humor, contributing to a positive group spirit.

Exercise 1: Ball Toss Name Game

Objectives: Participants learn each other's name with this icebreaker, while learning a simple metaphor for communication skills.

Time: 15 minutes

Materials: Three pieces of paper or very lightweight balls for each group of approximately 8 to 12 people.

Process: Have the balls ready for use at any time during the exercise. Make sure that the circles are positioned with a safety zone of one or two meters of space behind each group in case the participants move backwards to try to catch a ball.

Have small groups of participants (about eight to 12 people per group) stand in a circle.

Tell the participants: *"In this game, we will try to learn each other's names in the small groups."* Start by getting everyone in the circle to say their name, one by one. Repeat this once or twice and remind the group to call out their names slowly and clearly so that the others have a chance to remember one or two names. Explain that, at the beginning, the person holding the ball will call out the name of someone in the group and then throw the ball to him or her; demonstrate how this is done.

Continue to explain: *"The person who receives the ball should make eye contact with another group member, call out that person's name, and toss the ball to them. If you forget someone's name and want to be reminded of it, you can ask her/him to repeat it to you. If you like, you can even throw the ball back to the person who threw it to you."*

Part 1: Playing the game:

Begin the game as described above. After a couple of minutes, when the participants start to remember several names, add in a second ball and instruct the group to continue playing with the two balls. After a minute or so, introduce a third ball to the game. The group should then aim at throwing and catching each ball, all the while calling out the receiver's name, ten or 15 times without dropping the balls. If a ball is dropped, they must start counting again. All three balls must be used in the exercise.

Part 2: Discussion:

Once the ball throwing activity has been completed, ask the players how they felt when playing the game. Then move to the idea of how throwing the ball from one person to another can be considered a metaphor for how we communicate as CIG trainers. Ask the group to consider what actions were necessary to ensure that the game was successfully completed. These can include making eye contact, calling someone by their name, making sure the person was ready to receive the ball (or message), throwing it directly to the person, not throwing it when another ball was coming in, etc.

Closure: Point out how one of the most fundamental skills in CIG training is good communication. Suggest that the facilitators remember this game as a guide for asking themselves whether they are using the best possible communication skills in their teaching.

Note: Some effective icebreaking exercises during the start of the training include:

- Paired Interviewing
- First Name Introductions
- Self Portraits
- Something from Home
- Stepping Stones
- Symbolic Introductions
- Drawing Concepts
- The seed Mixer
- Name Game
- Who Are We?

1.4. Setting Ground Rules

Objectives: To agree on ground rules for the training workshop and to identify common ground rules for CIGs training.

Training Note

At the beginning of a training session, the group needs to set and agree upon a series of ground rules or guidelines for their work, and also understand why they are important.

The trainer should ensure that certain essential rules are included (see box below). An especially important rule in any ToT workshop is to respect all participants' privacy or confidentiality. It should be made clear that no one is allowed to share personal information about other trainees outside the group.

Some groups also operate with a rule, which encourages participants to share their feelings if they feel offended or hurt by someone's comment; providing the offender with a chance to apologize. This

can be especially relevant in cases where participants feel hurt and/or insulted by jokes or remarks related to gender, ethnicity or personal characteristics.

Once all participants have agreed on a set of rules, the list should be posted in the training room for the entire duration of the workshop. At times, it may be necessary to remind participants of the agreed rules.

Time: 10 minutes

Let trainees discuss and agree on group norms for the ToT workshop. The logistical coordinator should share logistical information with trainees; the facilitator should review the daily time schedule of the training workshop and discuss session time preferences with participants.

Common Ground Rules

- *Respecting each other, even when you disagree;*
- *Agreeing to participate actively;*
- *Having the right not to participate in an activity that makes you feel uncomfortable;*
- *Listening to what other people say, without interrupting them;*
- *Using "I" statements: using sentences that begin with "I" when sharing values and feelings (as opposed to "you");*
- *No "put-downs" (i.e. snubbing or humiliating people on purpose);*
- *Respecting confidentiality and sharing responsibility; and*
- *Being on time.*

1.5. Trainees' Expectations and Concerns

Time: 10 minutes

Trainees are given an opportunity to speak about their expectations of the training session and to state any concerns regarding CIGs training that they would like to have addressed. Responses should be recorded on a flip chart.

Assess which expectations are likely to be met in the course of the training workshop, and which ones surpass its scope. At the end of the session, a review of these initial expectations could be part of the evaluation.

The facilitator should provide a brief explanation of the expectations of the training team for a successful training workshop and incorporate participants' expectations. S/he should then explain what will happen during the training sessions over the coming few days, so that participants are aware of what to expect. Help the group compare their expectations to actual ToT objectives and point out how they match, then discuss what can and cannot be achieved during the workshop.

Session 2. Zoonotic Diseases

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission mechanism and control and prevention of locally important zoonotic diseases.

Time: 3 hours

Session 2.1 Brucellosis

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission mechanism of Brucellosis and self-protection measures

Time: 45 minutes

Approach: The facilitator/trainer first introduces symptoms of brucellosis in both people and animal as described in *section 1.1* in the technical manual and show laminated photo of a cow with prominent *joint swelling*. The primary purpose of the session is to assess whether participants have seen people or animals infected by brucellosis in the past and help them to understand the disease in question.

Following the introduction, a general discussion is conducted on the cause, transmission mechanisms, diagnosis in human, control and prevention of brucellosis.

The facilitator should stimulate a general discussion through asking the participants the local name (s) of disease introduced to them as brucellosis. Write down the names provided by participants on a flipchart. Using the name identified, probe participants to mention the key characteristics of brucellosis that are provided in *section 1.1* in the technical manual.

Concluding the Session: The facilitator needs to emphasize the human health and economic impact of brucellosis. The facilitator should also underscore the following control measures:

- In an infected herd it is important to decrease natural challenge by appropriate hygiene at kidding and milking time.
- Placenta and aborted fetuses should be buried deeply or burned.
- Purchase of unknown breeding animals should be avoided.
- Pasteurization of milk and the usual disinfectants can destroy the Brucella.
- Humans are treated with antibiotics, however, relapse are possible.
- Test and slaughter where possible.

Session 2.2 Rabies Disease

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission mechanism and control of rabies disease.

Time: 45 minutes

Approach: The facilitator/trainer first introduces symptoms of rabies in both people and animal as described in section 1.2 in the technical manual and show laminated photo of rabies affected *dog*. The primary purpose of the session is to assess whether participants have seen animals and/or people affected by rabies disease and help them to understand the disease in question.

Following the introduction, a general discussion is conducted on the cause, transmission mechanisms, diagnosis in human, control and prevention of rabies disease.

The facilitator should stimulate a general discussion through asking the participants the local name (s) of the disease in discussion. Write down the names of diseases identified by participants on a flipchart. Taking each identified disease in turn, ask the following questions and probe participants to mention the below points.

- The types of animals affected in terms of species and age;
- Suspected source of infection and how the disease transmits between animals and herds;
- Whether animal are vaccinated against each disease in question;
- If drugs are used, whether they treat only sick animals or all animals in the herd;
- Ask the following questions for each causative agent in question:
 - ✓ factors exposing animals to source of infection or reducing their resistance to the agent;
 - ✓ specific conditions under which the disease can survive longer or multiply at higher rates or easily transmits between individual animals and populations;
 - ✓ Whether antibiotic can cure the disease or not;
 - ✓ Vaccine protection period or interval between two consecutive vaccination events.

Concluding the Session: The facilitator needs to emphasize the importance of routine herd health monitoring practices and use of vaccines and preventive therapies. The facilitator should strongly advice participants that to reduce your risk of coming in contact with rabid animals:

- Vaccinate your cats, dogs and ferrets can be vaccinated against rabies. Ask your veterinarian how often your pets should be vaccinated.
- Keep your cats and dogs inside and supervise them when outside. This will help keep your animals from coming in contact with wild animals.
- Report stray animals suspected of having rabies disease to local authorities.
- Don't approach wild animals. Wild animals with rabies may seem unafraid of people. It's not normal for a wild animal to be friendly with people, so stay away from any animal that seems unafraid.

- Keep bats out of your home. Seal any cracks and gaps where bats can enter your home. If you know you have bats in your home, work with a local expert to find ways to keep bats out.

Session 2.3 *Anthrax Disease in Human*

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission mechanism and control of anthrax disease.

Time: 45 minutes

Approach: The facilitator/trainer first introduces symptoms of anthrax disease in both people and animal as described in section 1.3 in the technical manual and show laminated photo of cutaneous form of anthrax disease. The primary purpose of the session is to assess whether participants have seen people affected by anthrax disease and help them to understand the disease in question.

Following the introduction, a general discussion is conducted on the cause, transmission mechanisms, diagnosis in human, control and prevention of anthrax disease.

The facilitator should stimulate a general discussion through asking the participants the local name (s) of disease introduced as anthrax. Write down the names provided by participants on a flipchart. Using the name identified, probe participants to mention the key characteristics of anthrax that are described in *section 1.3* in the technical manual.

Concluding the Session: The facilitator needs to emphasize the importance of anthrax disease in terms of its human health impact. The facilitator should emphasize the following points:

- Anthrax can be treated with antibiotics if it's caught early.
- If you're exposed to anthrax but you have no symptoms, your doctor will begin preventive treatment. Preventive treatment may consist of antibiotics and the anthrax vaccine.
- If you've been exposed to anthrax and have symptoms, your doctor will treat you with antibiotics for 60 to 100 days.
- Do not open carcass of animal died from Anthrax Carcasses aborted fetuses should be buried deeply or burned.
- Vaccinate your animals once per year.

Session 2.4 *Echinococcosis*

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission mechanism and control of Echinococcosis.

Time: 45 minutes

Approach: The facilitator/trainer first introduces symptoms of Echinococcosis disease as described in section 1.4 and show transmission mechanism in the technical manual and show laminated photo showing disease transmission cycle. The primary purpose of the session is to assess whether participants know hydatid cyst and help them understanding the disease in question.

Following the introduction, a general discussion is conducted on the cause, transmission mechanisms, diagnosis in human, control and prevention of hydatid cyst disease. The facilitator should stimulate a general discussion through asking the participants the local name (s) of disease in question. Probe participants to help understanding hydatid cyst disease.

Concluding the Session: The facilitator needs to emphasize the importance of hydatid cyst disease in terms of its human health impact. The facilitator should emphasize the following points:

- Cystic echinococcosis is a preventable disease as it includes domestic animal types as definitive and intermediate hosts.
- Regular deworming of dogs, enhanced hygiene in the slaughtering of livestock (including the proper damage of infected offal) have been found to lower and prevent transmission and minimize the problem of human disease.
- Robust monitoring data is basic in order to reveal burden of disease and to evaluate development and success of control programs.
- Nevertheless, as for other disregarded diseases which are focused in underserved populations and remote areas, information is specifically limited and will need more attention if control programs are to be executed and measured.

Session 2.5 Tuberculosis

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission mechanism and control of Tuberculosis.

Time: 45 minutes

Approach: The facilitator/trainer should ask and probe participants to describe symptoms Tuberculosis disease in human as in *section 1.5 and show flip chart*. The primary purpose of the session is to assess participants' knowledge on Tuberculosis and help them understanding the role of animals in transmission.

A general discussion should also be conducted on the cause, transmission mechanisms, diagnosis in human, control and prevention of Tuberculosis. The facilitator should stimulate

a general discussion through asking the participants the local name (s) of Tuberculosis. Probe participants to describe symptoms and treatments of Tuberculosis.

Concluding the Session: The facilitator needs to emphasize the importance of livestock in the transmission of Tuberculosis disease. The facilitator should emphasize the following points:

- Use separate house for cattle to reduce human exposure to infected animals.
- Zoonotic tuberculosis (TB) is a form of tuberculosis in people caused by *Mycobacterium bovis*, which belongs to the *M. tuberculosis* complex.
- It often affects sites other than the lungs (extra-pulmonary), but in many cases is clinically indistinguishable from TB caused by *M. tuberculosis*.
- The most common route of transmission of *M. bovis* to humans is through food (mainly untreated dairy products or, less commonly, untreated meat products).

Session 2.6 COVID-19

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission mechanism and control and prevention of COVID-19

Time: 30 minutes

Approach: The facilitator/trainer should ask and probe participants to describe COVID-19 symptoms, transmission and prevention mechanisms described in *section 6.1 and 6.2* in the technical manual. The primary purpose of the session is to assess participants' knowledge on COVID-19 symptoms and transmission mechanisms.

The facilitator should stimulate a general discussion through asking the participants if there is local name (s) given to COVID-19. Also probe participants to describe reporting system and channel being applied in their area, if any as such.

Concluding the Session: The facilitator needs to emphasize the importance of livestock in the transmission of COVID-19 disease. The facilitator should underscore that:

- If COVID-19 is spreading in your community, stay safe by taking some simple precautions, such as:
 - Physical distancing;
 - Wearing a mask;
 - Avoiding crowds;
 - Cleaning your hands;
 - Coughing into a bent elbow or tissue.
 - Check local advice where you live and work.

Do it all!

Session 3. Animal Diseases Diagnosis, Prevention and Control

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission mechanism and control and prevention of important diseases.

Time: 3 hours

Session 3.1 The Signs of Health and Disease in Livestock

Objective: At the end of the training the trainees *understand the signs of ill-health, cause, transmission, diagnose, treatment and prevention methods of locally important diseases.*

Time: 30 minutes

Methods: Early detection of ill-health condition and understanding the causes and spread of disease is the foundation for disease treatment, prevention and control, therefore:

- It is important to relate the veterinary understanding of the causes of the disease to the local understanding of the causes of the disease, and to discuss the differences.
- It is also important to describe microscopic pathogens in simple terms; the term 'germ' (or the local translation of such terms such as very small for virus; small for bacteria; medium for protozoa; and large for parasites) may be sufficient.
- Trainees should also understand the other causes of disease in livestock such as malnutrition, foreign body injected with feed, physical injury and poor management.
- Problems such as poor breeding and abortion should be mentioned if livestock owners perceive these as problems in their area.

During this part of the training it is necessary to describe locally important specific diseases in detail, and adequate training aid or live animals should be used. There is also a need to reinforce existing knowledge on signs of good health and of illness, and to enable the trainees to differentiate between the two states in different species of livestock. The trainees should be able to list the features of a healthy animal and those of an unhealthy animal.

The facilitator/trainer should ask and probe participants to describe signs of ill-health conditions, common causes of health problems and measures taken when animals become sick. The primary purpose of the session is to assess participants' knowledge and practices related to herd health monitoring and management.

The facilitator should stimulate a general discussion through asking the participants local name (s) of common cattle, small ruminant and poultry diseases. The facilitator should also probe participants to describe reporting system and channel established in their area, if any as such.

Concluding the Session: the facilitator should underscore that “**Prevention is Better Than Cure**”.

Session 3.2 Anthrax disease

Objective: At the end of the training the trainees should be able to describe *cause, transmission, diagnose, treatment and prevention methods of anthrax disease.*

Time: 30 minutes

Approach: The facilitator/trainer should ask and probe participants to describe symptoms, transmission and prevention mechanisms of anthrax disease as described in *section 3.4* in the technical manual *and show laminated photos* showing animals died due to anthrax. The primary purpose of the session is to assess participants’ knowledge on anthrax transmission and control mechanisms.

The facilitator should stimulate a general discussion through asking the participants if there is local name (s) given to anthrax disease. Using the local name, ask the following questions and probe participants to mention the below points.

- The types of animals affected in terms of species and age;
- Suspected source of infection and how the disease transmits between animals;
- Whether animal are vaccinated against the disease;
- Whether they treat anthrax infected animals;
- Ask the following questions:
 - ✓ factors exposing animals to source of infection;
 - ✓ specific conditions under which the disease can transmits between individual animals;
 - ✓ Whether antibiotic can cure the disease or not;
 - ✓ Vaccine protection period or interval between two consecutive vaccination events.

Concluding the Session: The facilitator should emphasize the following control and prevention measures:

- Do not open cases died of anthrax at all.
- Dispose any discharges and the carcass properly: burn, bury deep and cover it tightly to avoid wild carnivores, vultures, dogs, etc, exposure.
- Vaccinate animals every 12 months.

- Anthrax vaccine may cause fever that pregnant animals may abort especially at the first three-four months.
- Avoid contaminated fields for grazing.

Session 3.3 *Black leg disease*

Objective: At the end of the training the trainees should be able to describe *cause, transmission, diagnose, treatment and prevention methods of black leg disease.*

Time: *30 minutes*

Approach: The facilitator/trainer should ask and probe participants to describe symptoms, transmission and prevention mechanisms of black leg disease as described in *section 3.5* in the technical manual and *show laminated photos of animals died of black leg.* The primary purpose of the session is to assess participants' knowledge on black leg transmission and control mechanisms.

The facilitator should stimulate a general discussion through asking the participants if there is local name (s) given to black leg disease. Using the local name, ask the following questions and probe participants to mention the below points.

- The types of animals affected in terms of species and age;
- Suspected source of infection and how the disease transmits between animals;
- Whether animal are vaccinated against the disease;
- Whether they treat anthrax infected animals;
- Ask the following questions:
 - ✓ factors exposing animals to source of infection;
 - ✓ specific conditions under which the disease can transmits between individual animals;
 - ✓ Whether antibiotic can cure the disease or not;
 - ✓ Vaccine protection period or interval between two consecutive vaccination events.

Concluding the Session: The facilitator should emphasize the following black leg control and prevention measures:

- Dispose any discharges and the carcass properly: burn, bury deep and cover it tightly to avoid wild carnivores, vultures, dogs, etc, exposure.
- Vaccinate animals every 6 months.
- Avoid contaminated fields for grazing.

Session 3.4 Contagious Bovine Pleuropneumonia (CBPP)

Objective: *At the end of the training the trainees should be able to describe cause, transmission, diagnose, treatment and prevention methods of CBPP disease.*

Time: 30 minutes

Approach: The facilitator/trainer should ask and probe participants to describe symptoms, transmission and prevention mechanisms of CBPP disease as described in sub *section 3.6* in the technical manual and *show laminated photo of CBPP affected cow*. The primary purpose of the session is to assess participants' knowledge on CBPP transmission and control mechanisms.

The facilitator should stimulate a general discussion through asking the participants if there is local name (s) given to CBPP disease. Using the local name, ask the following questions and probe participants to mention the below points.

- Suspected source of infection and how the disease transmits between animals;
- Whether they treat anthrax infected animals;
- Ask the following questions:
 - ✓ factors exposing animals to source of infection;
 - ✓ specific conditions under which the disease can transmits between individual animals;
 - ✓ Whether antibiotic can cure the disease or not;

Concluding the Session: The facilitator should inform that CBPP can be treated with antibiotics such as long acting Oxy TTC, Sulfadimidine and tylosin. Tylosin has to be injected intramuscularly every twelve hours for three consecutive days.

Session 3.5 Contagious Caprine Pleuropneumonia (CCPP)

Objective: *At the end of the training the trainees should be able to describe cause, transmission, diagnose, treatment and prevention methods of CCPP disease.*

Time: 30 minutes

Approach: The facilitator/trainer should ask and probe participants to describe symptoms, transmission and prevention mechanisms of CCPP disease as described in sub *section 3.7* in the technical manual *and show laminated photo of CCPP affected goat*. The primary purpose of the session is to assess participants' knowledge on CCPP transmission and control mechanisms.

The facilitator should stimulate a general discussion through asking the participants if there is local name (s) given to CCPP disease. Using the local name, ask the following questions and probe participants to mention the below points.

- Suspected source of infection and how the disease transmits between animals;
- Whether they treat anthrax infected animals;
- Ask the following questions:
 - ✓ factors exposing animals to source of infection;
 - ✓ specific conditions under which the disease can transmits between individual animals;
 - ✓ Whether antibiotic can cure the disease or not;
 - ✓ Whether goats are vaccinated against the disease;

Concluding the Session: The facilitator should underscore that:

- CCPP can be treated with long acting Oxy TTC, Sulfadimidine and tylosin.
- Prophylactic treatment with tylosin or long acting oxytetracyclines can help controlling outbreak.
- Treatment of individual animals diagnosed for the disease especially in endemic areas.

Session 3.6 *Peste-des-Petits Ruminant (PPR) Disease*

Objective: *At the end of the training the trainees should be able to describe cause, transmission, diagnose, treatment and prevention methods of PPR disease.*

Time: 30 minutes

Approach: The facilitator/trainer should ask and probe participants to describe symptoms, transmission and prevention mechanisms of PPR disease as described in sub *section 3.8 section* in the technical manual and *show laminated photos of PPR affected goats*. The primary purpose of the session is to assess participants' knowledge on PPR transmission and control mechanisms.

The facilitator should stimulate a general discussion through asking the participants if there is local name (s) given to PPR disease. Using the local name, ask the following questions and probe participants to mention the below points.

- The types of small ruminants affected in terms of species and age;
- Suspected source of infection and how the disease transmits between animals and populations;
- Whether small ruminants are vaccinated against the disease;
- Whether they treat PPR infected animals;
- Ask the following questions: factors exposing animals to source of infection; specific conditions under which the disease can transmits between individual animals; whether antibiotic can cure the disease or not;
- Whether they vaccinated small ruminants.

Concluding the Session: The facilitator should emphasize the following control and prevention measure:

- Regular and proper vaccination of animals.
- Vaccination Schedule
- Strict sanitation and hygienic measures are to be adopted in a flock.
- Restriction should be made for introduction of new animals in a flock especially in areas where the disease is prevalent.
- Sick animals bought from market should not be introduced without observation for a definite period.
- Sick animals should be segregated and treated with serum along with conservative management.
- Quarantine measures should be strictly attended in imported sheep and goat before introduction.

Session 4. Poultry Diseases Diagnosis, Prevention and Control

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission, control and prevention of important poultry diseases.

Time: 2 hours

Session 4.1: Newcastle Disease

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission, control and prevention of Newcastle disease.

Approach: The facilitator/trainer should ask and probe participants to describe symptoms, transmission and prevention mechanisms of ND as described in *section 4.1* in the technical manual and *show laminated photos of Newcastle cases*. The primary purpose of the session is to assess participants' knowledge on ND transmission and control mechanisms.

The facilitator should stimulate a general discussion through asking the participants if there is local name (s) given to ND. Using the local name, probe participants to mention the below signs of ND.

- The chicken fluffs its feathers and appears to 'have its coat dragging on the ground'
- Lethargy and inappetance.
- Respiratory signs such as mild rales and snick can be detected by careful observation.
- Severe respiratory distress and gasping.
- Swelling of the head and neck.
- The comb is markedly edematous and contains multiple foci of hemorrhage.
- Greenish diarrhea.

- Marked decrease in egg production. Sometimes deformed eggs may be produced.
- Nervous signs of tremor, torticollis, convulsions and paralysis of wings and legs will not be seen until the disease is advanced.

Concluding the Session: The facilitator should emphasize the following control and prevention related issues:

- Vaccination is the only effective way of controlling ND. However, vaccines currently in use are mainly of benefit to commercial poultry producers whose chickens are kept in large, single-age, confined flocks.
- Manufacturers produce heat-labile ND vaccines in multi-dose vials, often containing 1,000 or 2,500 doses, which must be kept cold (within 19 a 'cold chain') from manufacture until administration to the chickens.
- In contrast, village chickens are raised in small, multi-age, free-range flocks and large multi-dose vials of vaccine are inappropriate.
- Infected birds shed virus in exhaled air, respiratory discharges, and feces.
- Virus is shed during incubation, during the clinical stage, and for a varying but limited period during convalescence.
- Virus may also be present in eggs laid during clinical disease and in all parts of the carcass during acute vNDV infections.
- Chickens are readily infected by aerosols and by ingesting contaminated water or food. Infected chickens and other domestic and wild birds may be sources of NDV.
- Movement of infected birds and transfer of virus, especially in infective feces, by the movement of people and contaminated equipment or litter are the main methods of virus spread between poultry flocks.

Session 4.2: *Salmonellosis (Pullorum, Bacillary white diarrhea)*

Objective: At the end of the training the trainees should be able to describe clinical signs, transmission, control and prevention of Bacillary white diarrhea.

Approach: The facilitator/trainer should ask and probe participants to describe symptoms, transmission and prevention mechanisms of Bacillary white diarrhea as described in *section 4.2* in the technical manual and *show laminated photo of white diarrhoea*. The primary purpose of the session is to assess participants' knowledge on Bacillary white diarrhea transmission and control mechanisms.

The facilitator should stimulate a general discussion through asking the participants if Bacillary white diarrhea has occurred recently.

Clinical signs:

- Inappetance.
- Depression.
- Ruffled feathers.

- Closed eyes.
- Loud chirping.
- White diarrhea.
- Vent pasting.
- Gaspings.
- Lameness.
- Peracute infection with sudden death,
- Acute infection in first few days:
 - Weakness,
 - Somnolence,
 - Anorexia,
 - Poor growth,
 - Pasting of vent with chalky white excreta,
 - Death.
- In older birds:
 - Lethargy,
 - Huddling under brooders,
 - Wing droop,
 - Dyspnoea.
 - Lethargy,
 - Growth retardation and poor feathering of survivors.

Concluding the Session: The facilitator should emphasize the following treatment, control and prevention measures:

- Sulphadiazine, Sulphamerazine, sulphapyrazine, Sulphamethazine are the most effective in chicken (not in turkey poults). Furazolidone is effective.
- Also chloramphenicol, colistin and apromycin are effective.
- No vaccination practised and all positive birds may be disposed off by slaughter.
- Eradication from breeder flocks. As with other salmonellae, recovered birds are resistant to the effects of infection but may remain carriers.
- Prevention focuses on a clean and comfortable environment:
 - Check feed for mold spores
 - Provide fresh, clean water
 - Keep the pen dry
 - Check for vent prolapse – blowouts can result in diarrhea
 - Add two tablespoons of vinegar to a gallon of water for drinking
 - Try a probiotic such as yogurt
 - Properly dispose of any dead animal carcasses, do not allow birds contact with dead or decaying animals.

There are a number of simple steps you can take:

- Feed your birds a commercial, good quality pellet.
- Ensure feed is fresh, dry and in date and suitable for species and age of bird.
- Supply fresh drinking water in clean drinkers.
- Try to get rid of puddles in the range as these often contain lots of harmful bacteria and for some reason birds like to drink from them rather than their drinkers
- Regularly clean and disinfect your poultry coop using a detergent followed by an approved disinfectant such as korsolin th, vircon-s etc.
- Always worm your birds with –Albendazole/fenbendazole etc at least every three to four months.
- Give —Probiotics powder— every four to six weeks to top up the good bacteria in your birds gut.

Session 5. Training Program Evaluation

The primary objective of this session is to provide feedback for facilitator and CDSF on how successfully the training was carried out, and recommendation for future trainings, as in the below Table. The achievements against each of the evaluation criteria listed in the Table should be rated *1 to 5*. The group should be encouraged to point out limitations of the training program and make recommendation for future trainings.

Sample training program evaluation matrix

Indicator	Score (0-5)
Relevance of the training to participants	
Significance of knowledge gained from the training	
Possibility of skill, knowledge being applied	
Facilitator's knowledge and experience in the subject matter	
Limitations of the training program	<ul style="list-style-type: none"> • _____