

**ADVANCING WOMEN'S PARTICIPATION IN LIVESTOCK
VACCINE VALUE CHAINS IN NEPAL, SENEGAL AND
UGANDA**

**VAHW TRAINING:
A FACILITATION MANUAL TO TRAIN VILLAGE ANIMAL
HEALTH WORKERS WORKING WITH THE LIVESTOCK
VACCINE VALUE CHAIN FOCUSED ON GENDERED
INTERSECTIONAL TRANSFORMATIVE APPROACHES (GITA)**

**NEPAL
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LIVIF and Advancing Women's Participation in Livestock Vaccine Value Chains in Nepal, Senegal and Uganda

LIVT stands for *Leveraging intersectionality in livestock vaccine value chains for gender transformation in Nepal, Senegal and Uganda*. This is the old name of the project which was renamed to *Advancing women's participation in livestock vaccine value chains in Nepal, Senegal and Uganda*.

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Acronyms and Abbreviations

Agri-preneur	Agricultural entrepreneur
GESI	Gender Equality and Social Inclusion
GITA	Gendered intersectional transformative approach
IDRC	International Development Research Centre (Canada)
LIVT	Leveraging intersectionality in livestock vaccine value chains for gender transformation in Nepal, Senegal and Uganda
LVIF	Livestock Vaccine Innovation Fund
LVVC	Livestock vaccine value chain
MMCA	Make Me a Change Agent
PPR	Peste des petits ruminants
SBC	Social and behavior change
Shoats	Sheep and goats
SSA	Social Analysis and Action
UF	University of Florida
VAHW	Village animal health worker
Vet-preneur	Veterinary entrepreneur

Background

The goals of the LIVT project are to increase women's use of Peste des petits ruminants (PPR) vaccines for their small ruminants in Nepal, Senegal and Uganda, as well as Newcastle Disease for their poultry in Senegal. In Nepal, the project is working in Chitwan, Dhading, Kaski, Nuwakot, Palpa, and Tanahun districts. The focus is on the PPR vaccine in goats. Many recognize there are multiple factors that prevent women from vaccinating their animals, most often related to gender and other intersectional issues (such as class, caste/ethnicity, disability, age, etc.). We believe that using a *gendered intersectional approach* to working with women livestock owners, all levels of animal health workers, and trainers will be transformative in opening up the spaces to allow for fuller participation of women in the livestock vaccine value chain.

The approach taken by this project – a *gendered intersectional transformative approach* (GITA), is based on both empowering women as well as incorporating an intersectional framework. GITA is based on the fact that the *context* in which livestock vaccinations take place is as important, if not more important, than animal health factors. Often it is not simply gender that prevents owners from getting their animals vaccinated. When sex, caste/ethnicity, disability, and age (among other factors) prevent owners from getting their animals treated and prevents animal health workers from addressing the needs of these owners, then unvaccinated animals continue to present a disease risk.

This training program is developed by the University of Florida (UF) LIVT project to communicate and teach GITA and other “soft skills” to trainers. “Soft skills” include skills such as effective communication, training or group facilitation, conflict resolution, and business and entrepreneurship embedded in a GITA framework. During this training, UF LIVT training team will review each section for content and methods of delivery with training participants and solicit input into how well the information could be used by them to train village animal health workers. A pre- and post –assessment will be administered to the trainers before and after the training to assess knowledge gained for all the sessions.

The UF LIVT project intends to conduct multi-levels of training. The first training is geared towards professional veterinary staff, in a training-of-trainers mode, to prepare them to include GITA in the trainings they provide to village animal health workers (VAHWs). The second and subsequent trainings will be cascading trainings targeting VAHWs and livestock owners. The project will work with the trainers to supplement the existing VAHW curriculum with GITA and other soft skills. The five training resource manuals developed by the LIVT project are to be used in tandem with the facilitation manual to derive lesson plans and content.

Training Objectives

- Train village animal health workers in selected districts of Nepal to prepare them incorporate GITA considerations in their service delivery to community members.
- In collaboration with village animal health workers co-design community focused interventions (such as educational seminars or community dialogues) to sensitize community participants on the role of women in animal health activities, including livestock vaccinations.
- Discuss supplementing the existing VAHW curriculum with additional trainings to enhance the GITA and GESI, facilitation and training, communication, conflict resolution, and business and entrepreneurship skills.

Learning Objectives

- Understand why gender and other intersectional factors (such as caste/ethnicity, geographic location, education, age, etc.) are important to integrate in village animal health worker's activities at the community level.
- Learn basic skills related to participatory facilitation and training that actively engage women and other marginalized livestock communities.
- Recognize why men and women have different communication styles and conflict resolution approaches, and how they matter in working with community members.
- Empower village animal health workers through business and entrepreneurship skills development.

Day One

Achievement-Based Objectives

By the end of Day One, participants will have:

- Completed a pre-training assessment.
- Introduced themselves to the group.
- Learned about GITA and GESI with focus on gender, gender lifelines and gender roles.
- Understood the application of GITA and GESI in the livestock vaccine value chain.
- Distinguished between healthy and sick animals.
- Listed common diseases among goats and sheep.

Duration

6.5 hours (excluding time for break and meals during the day)

Materials (needed for face-to-face training)

- Flip chart paper, markers, masking tape, sticky color notes or small pieces of color paper
- Name tags, notebooks, pens for participants
- [Handout 1.1 Training agenda](#)
- [Handout 1.2 Pre-training assessment](#)
- [Handout 1.3 Attendance sheet](#)
- [Handout 1.4 Fishbowl](#)
- [Handout 1.5 Gender lifelines](#)
- [Handout 1.6 Multiple identities of an individual](#)
- [Handout 1.7 Signs of healthy and sick shoats](#)
- Pre-written flip charts (if applicable)
- Room with computer access, connectivity and screen if needed, projector

Tasks/Discussion/Activities

Pre-training assessment (Handout 1.2)

Use time during registration or breakfast period (if applicable) to allow ALL participants complete Pre-training Assessment form. Collect completed forms from participants before starting.

1.1 Welcome and introductions

Facilitator: Hello and welcome. This training is designed for village animal health workers. The overall objective is to enhance your capacities in using inclusive approaches in your work with community members, especially women and others from marginalized communities. The training has several components, to be offered over the course of six days. All materials will be shared during and after the completion of the training. Today's training is focused on understanding what gender is, gender lifelines and gender roles in livestock production. We will also explore the application of GITA and GESI in animal health care to better understand how to deliver veterinary or livestock advice to everybody in the community regardless of gender, caste/ethnicity, age, education, and geographic location. Let's take a few minutes to introduce ourselves and tell us what name you wish to use during this training.

Ask participants to introduce themselves by sharing their name, what they do and one trait important to being a village animal health worker. Facilitator to capture traits on the flip chart. For example: A VAHW should be a good communicator.

1.2 Activity - Fishbowl

Facilitator: This is an interactive activity. Follow a Handout 1-4. Allocated time for this activity is 30 min.

1.3 Agenda review and Workshop Objectives

Facilitator: Give a brief overview of the training. Highlight the daily topics, start/finish times, and breaks. Explain that some lessons or timing may change to meet the needs of the group. Address questions the participants may have regarding the agenda.

1.4 Setting norms and behaviors for this training

Facilitator: Using the blank flip chart with *Norms & Behaviors* ask participants what they think are appropriate and acceptable behaviors during the training.



Some examples may include:

- Be on time.
- Listen when other participants or facilitators are speaking.
- Actively participate in the training.
- Ask questions if something is not clear.
- Take care of training room and training materials.
- Keep phones silent.
- Step outside the room to take a phone call.
- Limit exiting or entering the training room during lessons.

If any norms do not have a consensus within the group, facilitate a conversation as needed to bring the group to a consensus. Write down participants' responses on the flip chart. Hang this flip chart somewhere in the room where it will be visible throughout the training. Reference it as needed to remind participants of the norms and behaviors they agreed on.

1.5 Introduction to GITA – What is meant by GITA?

Facilitator: Ask participants if they have seen or used these terms before:

- Gendered – socially prescribed roles and norms that define how men and women behave*
- Intersectional – the acknowledgement that everyone has their own unique experiences, and we must consider everything and anything that can marginalize people, such as gender, caste/ethnicity, physical ability, geographic location, etc.*
- Transformative – something that inspires change or causes a shift in someone's viewpoint.*
- Approach – start to deal with something or speak with someone for the first time in a certain way.*

The GITA approach is different from simply addressing gender issues. Sometimes it is not just about being a man or a woman but about other factors that define a person, their identity. Identity is shaped by many factors. When you meet someone in Nepal, there are several ways you use to understand their identity – their facial features, the clothes they wear, the language they speak. You make assumptions

based on these physical factors but there are, of course, many other factors that you may not know about. We’ll keep bringing these up in the workshop.

We also focus on “transformative” because that is how we can get to behavior change. When you more fully understand who the person is that you are training by discovering more about them and their constraints, you can design your training to better suit their needs. And, along the way, you yourself are experiencing transformative learning and may be changing your ways of thinking and behaving.

What is meant by GESI?

The Government of Nepal introduced Gender Equality and Social Inclusion (GESI) framework in 2008 to promote the inclusion of women, Dalits, and other vulnerable groups in various social and economic activities in Nepal.

**Gender
 Equality
 Social
 Inclusion**

GESI is a concept that addresses unequal power relations experienced by people on the basis of gender, age, disability, caste/ethnicity, religion, poverty or other. GESI focuses on the need for action to rebalance these power relations, reduce disparities and ensure equal rights, opportunities, and respect for all individuals regardless of their social identity.

GITA and GESI are similar but....

Intersectionality encompasses many categories that vary by context and site but almost always include:

- The socially excluded including women
- The particularly vulnerable
- The poor or economically excluded

GESI uses a greater number of categories and definitions as compared to GITA - the included, the excluded, the vulnerable and the non-vulnerable in Nepal.

Define who falls into the different categories of included, excluded, vulnerable and not vulnerable in the GESI framework. Prepare a flip chart with the four boxes not filled out, only labeled. Solicit from participants what goes into each box. Fill in the flip chart/box with participant responses; use guide below to complete each box

The included	The excluded
<ul style="list-style-type: none"> ● Men, especially those from high status groups ● The well-off/higher caste ● “Dominant Group(s)” as defined in Nepali society by: <ul style="list-style-type: none"> ○ Caste/ethnicity: <i>Khas Arya</i> ○ Region: Hill, therefore, Hill People or <i>Paharis</i> ○ Religion: Hindu ○ Language: Nepali 	<ul style="list-style-type: none"> ● Women ● The poor/lower class ● Marginalized/Excluded Groups as defined in Nepali society by: <ul style="list-style-type: none"> ○ Caste/ethnicity: Dalits, OBCs and Adibasi Janajatis ○ Region: Plains, therefore people from the plains or <i>Madhesis</i> ○ Religion: Muslims and other non-Hindus

<ul style="list-style-type: none"> ○ Assets: Landowner ● Citizens ● Persons without disabilities ● Adults in prime ● People living in the capital, large towns 	<ul style="list-style-type: none"> ○ Language: Non-Nepali languages ○ Assets: Landless ● Non-citizens ● Persons with disabilities ● People living in remote/difficult geographical locations (e.g., Far West and Karnali)
<p style="text-align: center;">Those not vulnerable</p> <ul style="list-style-type: none"> ● People living in areas not affected by earthquakes, floods, or droughts ● Non-HIV infected people ● Those not employed in sex work or trafficked ● Adults in prime 	<p style="text-align: center;">The vulnerable</p> <ul style="list-style-type: none"> ● People living in areas affected by earthquakes, floods, or droughts ● HIV-affected people ● Sex workers and trafficked people ● Children, adolescents, older people

Facilitator: Discuss where and how they may have seen these terms. Ask participants to think about if using GITA and GESI in their work with communities would affect their approach. Capture responses on flipchart.

Facilitator: Share this definition of GITA with participants:

“Gender-transformative approaches encourage critical awareness among men and women of gender roles and norms; promote the position of women; challenge the distribution of resources and allocation of duties between men and women; and/or address the power relationships between women and others in the community” (Rottach et al. 2009, 8).

1.5.1 Gender

Facilitator: If we are promoting change, we need to understand what needs to be changed. How is gender understood in your context? How would you define gender and sex? Would farmers use the same definitions? Discuss these questions with the group. Culture is the primary influence on how boys and girls are raised which, in turn, affects and determines their opportunities throughout life. Be aware that situations will change over time, for many reasons.

Gender refers to socially constructed characteristics that define and relate to male and female ways of being and behavior within specific contexts

For example, a web of cultural symbols, norms, institutional structures, and internalized self-images that define masculine and feminine roles, rights, & privileges within power relationships

Sex refers to the biological and physiological differences between males and females.

1.5.2 Intersectionality

Facilitator: Distribute the handout 1.6. Every person has different identities characterized by gender, sex, where we grow up, school we go to, and profession we chose. Look at handout 1.6 - we see that an individual can have many different identities.

Our identities can be

- Dynamic (that is change constantly)
- Multiple
- Shaped by society

Now, let's look at the example. Draw on a flipchart Venn diagram following what is in Figure 1. One can be a village animal health worker, a man, married, and Chhetri. Here, alone I highlighted four multiple identities. The center where these identities intersect is called intersection. Therefore, intersectionality is a framework to understand the ways that multiple aspects of our identities intersect, influence one another, and compound to create unique experiences.

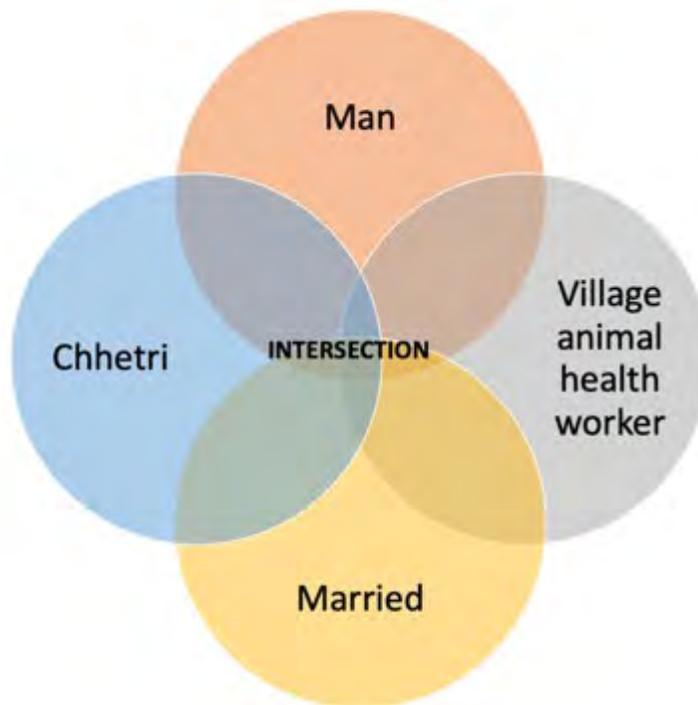


Figure 1. Intersection of identities

Intersectionality refers to the reality that we all have multiple identities that intersect to make us who we are.

Intersectionality is a way to challenge assumptions that everyone in a marginalized group faces the same problems.

1.5.3 Activity - Gender lifelines

Facilitator: Introduce the activity by explaining to the group that they will be exploring what they have learned about what it means to be a female or a male in our society. They will be creating a gender lifeline. The gender lifeline documents memorable events in our lives that brought about our awareness of our particular gender. The lifeline helps see what and who has contributed to how we feel about being a male or female, and our identities.

Divide participants into same sex groups (if possible) or else one group will have to play the role of women. Distribute handout 1.5. Ask participants to fill out the tables.

After completing the table discuss in plenary using these questions:

- *What are the differences between boys and girls, men and women?*
- *Why are they different?*
- *How do boys and girls learn the rules and responsibilities, who enforces them?*
- *Are the rules and responsibilities the same for boys and girls? Is this fair?*
- *When does a child become an adult? What changes then?*
- *What are the differences in men's and women's opportunities?*
- *How do the rules/expected behaviors shape opportunities and accomplishments?*

Facilitate a reflection and discussion in plenary:

- *What did you learn from your lifelines?*
- *Is this how your children's lifelines will look? What would you like to see change?*

1.5.4 GITA and GESI in the livestock vaccine value chain

Facilitator: While we earlier identified gender roles of men and women, we are now going to get specific about how gender roles play out in livestock production. Livestock are not gender neutral nor are the activities associated with livestock production gender neutral. What we mean here is that for many people, certain types of livestock are associated with men or women, for example, goats are for women and buffalos are for men. But even when a type of livestock is associated with men or women, some of the related production activities might be done by one or the other. For example, milking or taking animals out to graze might be considered to be the task of men only, women only, boys only, or maybe it doesn't matter who does the task. This is important when delivering training because you have to know who is responsible for the animal being discussed and its management. If you tell the men about the importance of maintaining sanitary practices while milking but only women do the milking, then the information does not get to the right user.

1.5.5 Activity - Gender roles

Facilitator: *Have you been told to act like a man or act like a woman? What does each of these means?*



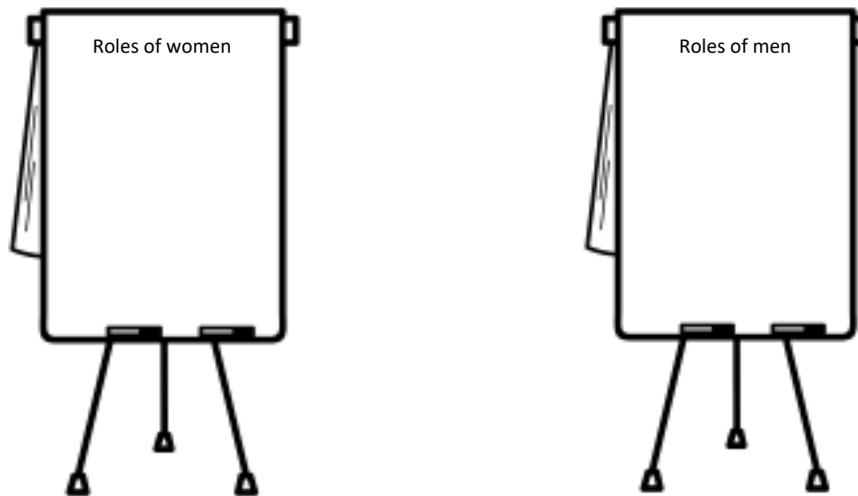
Draw two big boxes on two flipcharts as above. Make sure there is enough space around them to write. Ask participants to come to the flipchart and write on each the roles or characteristics meant by *acting like a man* or *acting like a woman*.

Reflection on this activity with participants. *Now, look at the lists and identify the differences. What does it mean to "act like a woman or man?", what do we tell children? which of these roles or characteristics could potentially be harmful? What happens to people who act outside the box? To summarize, these boxes reflect how our society has different expectations for a person depending on their gender.*

1.5.6 Gender roles in animal health

Facilitator: In this activity prepare participants to explore and identify the gender and social expectations of women and men livestock producers, to identify ways women and men benefit from and are restricted by these norms.

In every region or community, there are certain types of activities associated with livestock production and animal health that are considered "only" for men or "only" for women; that women are prohibited from doing; that certain groups of people will never do, etc.



Prepare two flipcharts as above. Make sure there is enough space around them to write. Ask participants to come to the flipchart and write on each the roles of women livestock producers and the roles of men livestock producers.

Discuss in plenary:

- Are there similarities? What are they?
- Are there differences? What are they?
- Which roles benefit men more than women and vice versa.
- Identify gender roles that changed or change over time. Why gender roles change?

1.5.7 Activity - Gender boxes for animal health

Facilitator: Divide participants into two groups and instruct groups to do the following:

One group draws a Gender Box for men and the other group draws a Gender Box for women. Within the box, give examples of what each do related to animal health. On the outside of the box, write the sources of the expectations about men or women. Next, write outside the box unexpected behavior for that gender, e.g., for women, restraining a goat to administer a vaccine for PPR.



Figure 2. Gender Box

After participants complete the Gender Boxes discuss the following questions in plenary:

- *Would these expectations and behaviors change with caste and ethnicity? With age? With location?*
- *How and why do our communities and the people in our lives enforce certain roles, behaviors, and norms for women and men?*
- *Who has more freedom to step outside the box?*
- *When do you choose to stay in the box or step out of the box? Why?*

1.5.8 GESI and gender in the Nepali context

Facilitator: As we discussed earlier, GESI encompasses many categories that vary by context and site but almost always include:

- The *socially excluded* including women and people from difference social groups
- The particularly vulnerable
- The poor or economically excluded

Gender mandates in Nepal focus on:

- Rights to lineage
- Right to safe maternity and reproduction
- Rights against all forms of exploitation
- Equal rights in family matters and property
- Elimination of traditions harmful to women.

1.6 Mini Lecture - Importance of maintaining animal health

Facilitator: Managing the health of animals is important because when an animal is sick, production decreases and this can affect family food security and income. Basic animal management, which includes feeding and shelter, also contributes to healthy animals. Diseases that spread from animals to humans (zoonotic diseases) pose a serious risk to the community. The best way to stop a disease is to prevent it from happening – vaccinations can help!

To continue with the lecture, use additional slides from **VAHW curriculum Topic 3 - Animal production and nutrition**.

Animal health cannot be overlooked as it indirectly affects us too. People who are running farms have to provide their animals with all the essential nutrition, shelter, and care to ensure their animals are in good health and to keep the production of goods from these animals (wool, manure, and meat from sheep and goats).

Nutritional needs of shoats include:

Water - Clean, fresh water must always be available for goats. Use heavy containers to prevent spilling.

Minerals - Minerals should always be available for goats. Goat minerals come in multiple forms, including loose minerals and mineral blocks. If you are keeping sheep and goats together, make sure that the minerals you use are formulated for both species because sheep cannot tolerate copper.

Feed - As ruminants (animals with stomachs that have four chambers), goats rely mainly on hay or pasture to fulfill their dietary needs. They need at least eight hours of grazing time per day with good quality forage.

What should goats eat to grow well and be healthy?

They need a diverse diet consisting of grass, shrubs and tree leaves. If pasture and forages not good, or it is the dry season, cut and give crop residues (maize, sorghum, cassava, peanuts, etc.), vegetable leaves (cassava, sweet potato, pumpkin, etc.), vegetable leftovers (sweet potato, pumpkin, cassava, etc.), native and planted vegetation (Leucaena, mulberry, velvet bean, etc.). It is important for goats to eat leaves from trees and shrubs that give pods because they are usually rich in minerals and vitamins that are important for development of the animals

Providing shelter to shoats is important because it

- Protects animals from rain and adverse weather conditions.
- Provides shade (goats like the shade and suffer when there is too much sun).
- Easier to restrain animals when they need treatment and/or observation.
- Protects animals against thieves and predators.
- Should be built on an elevated and dry location.
- Allow sunlight to enter in the mornings and late afternoons to ensure it stays dry and well ventilated.
- Should be at least one and half square meter for each doe with kid and one square meter for other animals.

How we can keep our animal healthy:

- Vaccinate - animals can be vaccinated to prevent diseases just like humans.
- Protect their feet - animals like cattle, goats and pigs need their hooves trimmed regularly.
- Handle with care - always be calm and gentle with animals.
- Respond on time - always respond with respect and on time to community members' calls.
- Consult with veterinary professionals to deliver good service to community members.

At the end of the lecture ask participants: "What else can you add to the importance of maintaining animal health management?"

1.7 Mini-lecture - Signs of healthy and sick animals

Facilitator: Before starting the lecture ask participants:

- "What are the characteristics of healthy animals"?
 - "What are the characteristics of sick animals"?
- Capture responses on prepared flip chart.

Many times, smallholder farmers do not recognize signs or symptoms of disease in their animals. This is particularly important for smallholder farmers in isolated areas as they may not have access to or can afford veterinary assistance. Women farmers are especially affected by this issue as they are often the primary caretakers of smaller livestock such as sheep and goats. Because of gender roles and responsibilities, and inability to make decisions on whether to contact outside veterinary assistance, women's shoats maybe at greater risk of not receiving adequate attention when they are sick.

In this lesson, we will review the characteristics of healthy and sick animals and how to detect these early to avoid prolonged illness or death in small livestock. We will also explore ways to assist women farmers in becoming more proactive in identifying these characteristics and seeking outside assistance to increase vaccination of their animals.

Distribute Handout 1.7 Signs of healthy and sick goats and sheep and review with participants.

To continue with the lecture, use additional slides from **VAHW curriculum - Topic 6 Healthy and unhealthy animals.**

1.8 Mini-lecture - Common diseases of goats and sheep

Facilitator: Before starting the lecture ask participants about common diseases among goats and common diseases among sheep. Write answers on the flipchart.

To continue with the lecture, use additional slides from **VAHW curriculum - Topic 10 Diseases of cattle, goats, and sheep.**

1.9 Activity - Self-reflection to wrap up Day One

Facilitator: Facilitate self-reflection with participants. Capture notes on the flip chart.

- What is the best thing you learned today?
- How will you use it in your work with community members?

Day Two

Achievement-Based Objectives

By the end of Day Two, participants will have:

- Drew community maps highlighting assets and resources.
- Identified barriers to accessing livestock and veterinary extension services based on gender, caste/ethnicity, class, and other socially constructed factors.
- Applied community mapping for business planning
- Analyzed the differences between facilitation and training and when to use both types with adults.
- Identified the importance of audience demographics, and its impact on facilitation.
- Listed key considerations for working with female participants

Duration

6.5 hours (excluding time for break and meals during the day)

Materials (needed for face-to-face training)

- Flip chart paper, markers, masking tape, sticky color notes or small pieces of color paper
- Name tags, notebooks, pens for participants
- [Handout 2.1 Examples of community assets or resources](#)
- [Handout 2.2 Key differences between trainers and facilitators](#)
- Pre-written flip charts (if applicable)
- Room with computer access, connectivity and screen if needed, projector

Tasks/Discussion/Activities

2.1 Review Agenda for Day Two

2.2 What is the community?

Facilitator: It is important to understand the community you are working in, i.e., who lives there, what do they do, the social customs and norms that determine who is allowed to do what. It is also important to understand the natural and physical aspects of a community as they affect those who live there. In this Session, we will explore the communities we work in through a tool known as *Community and livelihood asset mapping*.

2.3 Mapping Community and livelihood assets and resource

Facilitator: Mapping is a systematic process of drawing or listing key services, benefits, assets, and resources within the community, including individuals' skill sets, livelihoods, physical space, associations, and elements of local economy.

In summary, community mapping is:

- Identifying community resources, assets, and strengths
- Ensuring the intervention's relevance to community needs
- Obtaining buy-in from the community.

Use Handout 2.1 for examples of community and livelihood assets and resources

2.3.1 Activity - Drawing a community map

Facilitator: When you think about entering a community or a village, what do you see? Are all communities the same? Why or why not? Imagine you are walking through a community, where do people live, where are animals housed, where are fodder crops grown and harvested? If it were possible, the participants could do a transect walk through a community and note the important details, but also, include what infrastructure is there (water borehole, church, agro-vet store, shop, roads, health clinic, etc.). A transect walk is basically walking in a straight line – if at all possible – to cut across a village, getting a random sample of all of the important elements of the village. In biology and forestry, a transect walk is used to identify species of plants. This is very similar.

Organize participants into small groups. Ask groups to imagine a community. Give a piece of flipchart paper to each group. Ask participants to draw the map of the community. Ask groups to think about the following as they map community assets and resources:

- Which are important resources and assets for men and women? Who owns them or uses them?
- Who has access? Who controls the access?
- Are there different hazards for men and women? How do community members work around these?

Mapping hazards and security concerns in the community

Think about the many naturally occurring hazards (deep ravines, fast rivers) and those that are seasonal (monsoons that cause temporary flooding or drought that brings locusts). These hazards affect people's ability to move around at times and to do their agricultural activities.

There are also other types of security concerns, and these revolve around human security issues. Sometimes it is not safe for women or girls to walk in certain parts of the community or surrounding areas because they could be attacked. If a nature reserve is available for gathering firewood, for example, it might not be safe because of wild animals.

- On the maps identify where different groups live – the wealthy, the poor, different religious groups, different caste/ethnic groups, etc.
- Where are the temples, mosques, schools, and clinics? The stores and markets? Banks or other organizations? Natural resources like rivers and trees are also important to note.
- Can anyone access these, i.e., are they available to anyone? Does a person's gender, caste/ethnicity, age, or education level determine where they can go in the community? How are they received? Whose mobility is most restricted? Why?

Note to facilitator: if the participants do not have a community they can draw from memory, ask them to draw a typical community from the sub county where they work.

Ask groups to hang their maps on the wall for viewing by others later in the day (during a gallery walk). This could be part of Daily Reflection at the end of the day.

2.4 Access to livestock and veterinary extension services

Facilitator: Each community or district has institutional services available, either from the government or from private providers, or both.

- Extension services
- Health services
- Agricultural inputs
- Veterinary office

Ask participants: What extension services are available in the communities where you work? What agricultural inputs are there? Are there demonstration days? Do women and girls attend? What about health services? Who accesses these? Are there cultural taboos that prevent women from certain caste/ethnic groups to attend?

Discuss in plenary and summarize three key points from the discussion.

2.5 Using community mapping for my business planning

Facilitator: Divide participants into two groups and assign the same task.

Task – Explore community resources and assets that you as a VAHW can use to support your agri-/vet-preneurship enterprise. Discuss if identified resources and assets are equally accessible by men and women VAHWs. What are the differences and why?

Bring groups together to present and discuss their community mapping results.

2.6 Facilitation and training: What is the difference?

Facilitator: Have you conducted a training? How you facilitated a meeting or discussion? Do you consider yourself a trainer, a facilitator or both? What is the difference between training and facilitation? Can you do both? What are the pros or cons of each type? These are questions that need to be considered when developing and delivering a workshop to adults. Elicit responses from participants.

Training (and teaching) involves the passing on of information and/or knowledge to participants, usually in a formal setting such as a classroom. Most people attend some type of schooling as they grow to adulthood, and the teacher is the “expert” related to the information that is passed on. Students frequently memorize the material, without thinking about its application or relevance. Teaching can be an efficient method of passing on information quickly, with everyone receiving similar information. However, based on the principles of Adult Learning; teaching like a schoolteacher is not always the most effective method for adults. That is why we prefer to talk about training and trainers.

Facilitation involves the creation of a “learning environment” where both the facilitator and participants learn from each other. Facilitation recognizes the value of traditional and experiential knowledge and people’s ability to solve their own problems. Problems are investigated together with the participants and solutions are practically oriented to maximize adoption. Facilitating allows greater flexibility of materials and the workshop agenda than a more formal format.

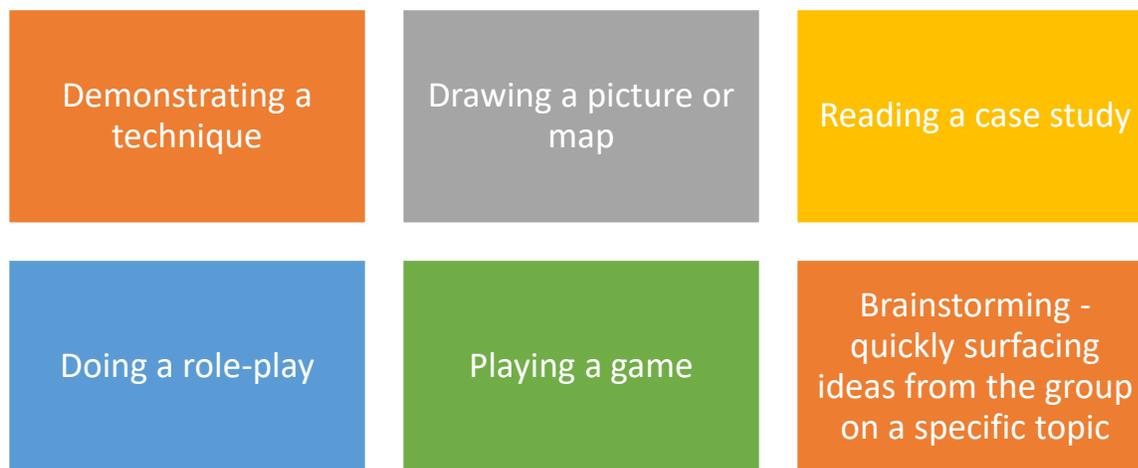
2.6.1 Activity - Key differences between trainers and facilitators

Facilitator: Have participants read Handout 2.2 individually. Ask them to discuss in pairs if they have experienced situations described in the handout.

2.6.2 Activity - Tools for facilitating a learning event in the community

Facilitator: There are many ways to facilitate a learning event in the community. Here are some common participatory tools that are often used.

Figure 3. Participatory Tools



Form small groups. Select one participatory tool from Figure 3 to facilitate a learning event in the community. Answer the following questions as you decide which tool to use:

- What are each of these tools good for?
- When are they most useful?
- When might they be less appropriate?
- Which are most challenging to you - why?
- Which tool did you select - why?

2.7 Understanding Audience Demographics:

Facilitator: Ask participants: "Why does it matter who the audience is when facilitating or training? In what ways do you adjust your training based on who is present? What considerations do you need to think about when facilitating or training a group of people?" Capture participant responses on a flip chart.

Using the flip chart that was previously created, *Understanding Audience Demographics*, discuss what is known about the target audience with participants. Facilitators need to know the answers to these questions before creating a workshop.

- Demographics (age, sex, caste/ethnicity, etc.) - Are workshop participants inter-generational (multiple ages)? Are participants predominantly male? Female? Are they of a particular ethnic group? How would these demographics affect participation?
- Location - Where are participants from? Urban? Rural? Why might their location affect their ability to attend workshops?
- Background - Have you worked with them before? Any special considerations?
- Experience (knowledge, skills, attitudes prior to training) - What kinds of experience or training have participants had previously? Will you have an audience that has multiple levels of experience?

- Literacy and numeracy levels - Have participants attended primary or secondary school? Will you need to create training materials that primarily use pictures rather than text?
- Availability and desire to participate in training - How to assess these factors?

Ask participants “what are some things they need to consider including women more actively in training”? After listening to their responses, use the handout Key considerations when working with female participants to discuss the following items with participants.

- 1) Timing of meetings? Consider women's triple roles – domestic, income generating and community responsibilities, and when is a convenient time to hold meetings to avoid conflicting with these.
- 2) Childcare- If women have young children, this needs to be provided
- 3) Location of meetings- Is it accessible? Safe for women to travel there?
- 4) Is there a need for male approval to attend meetings? This may be needed to avoid backlash or violence at home.
- 5) “Opportunity Cost” – Is the information important enough for people to forego other responsibilities to attend the meetings?
- 6) Single gender or mixed gender groups?

Consult women and men separately in sex-segregated communities to ensure that women's priorities, needs, and motivations, as well as men's, are reflected in the training design and implementation.

- 7) Consider establishing separate women groups to encourage participation and empowerment of the women first, then use mixed groups of men and women.

2.8 Discussion - Key considerations when working with female participants

Facilitator: Discuss with participants the following.

- *Timing of meetings? Consider women's triple roles – domestic, income generating and community responsibilities, and when is a convenient time to hold meetings to avoid conflicting with these.*
- *Childcare- If women have young children, this needs to be provided to encourage their attendance.*
- *Location of meetings- Is it accessible? Safe for women to travel there? Using a community building, such as a school or a church will often encourage attendance.*
- *Is there a need for male approval to attend meetings? This may be needed to avoid backlash or violence at home.*
- *“Opportunity Cost” – Is the information relevant enough to offset their other responsibilities? Think about the Adult Learning principles to engage participants in learning useful and relevant information.*
- *Single gender or mixed gender groups? Consult women and men separately in sex-segregated communities to ensure that women's priorities, needs, and motivations, as well as men's, are reflected in the training design and implementation.*

- *Consider establishing separate women groups to encourage women's participation and empowerment first, then use mixed groups of men and women.*

2.9 Activity - Self-reflection to wrap up Day Two

Facilitator: Facilitate self-reflection with participants. Capture notes on the flip chart.

- What is the best thing you learned today?
- How will you use it in your work with community members?

Day Three

Achievement-Based Objectives

By the end of Day Three, participants will have:

- Distinguished between treating sick shoats and vaccinating shoats.
- Discussed the role of women in animal health.
- Identified the impact of different types of power on individuals and communities.
- Examined the transformative nature of addressing power relations between women and men.
- Applied GITA and GESI, and power dynamics in the VAHW work.
- Discussed importance of empowering female agri-/vet-preneurs

Duration

6.5 hours (excluding time for break and meals during the day)

Materials (needed for face-to-face training)

- Flip chart paper, markers, masking tape, sticky color notes or small pieces of color paper
- Name tags, notebooks, pens for participants
- [Handout 3.1 Role of women in animal health](#)
- [Handout 3.2](#) Activity Sheet - *Who has Power and Control*. Download from <http://ingenaes.illinois.edu/wp-content/uploads/ING-Activity-Sheet-2016-2-Who-Has-Power-and-Control.pdf>
- [Handout 3.3](#) Activity Sheet - *Power over v. Power with*. Download from <http://ingenaes.illinois.edu/wp-content/uploads/ING-Activity-Sheet-2016-4-Power-Over-v.-Power-With.pdf>
- Pre-written flip charts (if applicable)
- Room with computer access, connectivity and screen if needed, projector

Tasks/Discussion/Activities

3.1 Review Agenda for Day Three

3.2 Mini-lecture - Treatment of sick shoats

Facilitator: Use supplemental slides - **Sick animals and treatment basics** for this lecture.

3.3 Mini-lecture - Vaccination of shoats

Facilitator: Vaccines protect animals and therefore protect community livelihoods. About 70% of the world's poor are dependent on livestock – vaccines protect livestock and the many communities that rely upon them for milk, meat, and eggs, as well as their income. By greatly reducing the risk of disease, vaccination makes many kinds of businesses viable, whether that is keeping large volumes of animals together or small-scale farming.

Vaccines also help control antimicrobial resistance (or AMR). By proactively protecting animals from diseases, livestock producers can reduce the need for antibiotic treatment for infections. Additionally, vaccines help farmers not to buy or use other drugs to treat their animals, thus saving income for other household needs. Vaccinating animals also means healthier people. When we vaccinate animals against a zoonotic disease like rabies, which can be transferred to people, we prevent it from ever reaching us.

Vaccines are an important tool for disease control and preventions towards eradication of diseases.

Continue lecture using additional slides from **VAHW curriculum Topic 25 - Vaccination**.

3.4 Roles of women in animal health

Facilitator: Use Handout 3.1 to assign participants to work individually. After 15 minutes bring all participants to present and discuss their strategies.

In plenary ask the following questions:

- Why is it important to raise awareness about the role of women in animal health?
- Who else is important in the community to engage to present and manage animal diseases?

3.5 Understanding Power

Facilitator: Understanding all of the different types and levels of power and how these influence individuals is key to being able to make transformative changes. Power is linked to social norms and roles as well as to productive activities including livestock production. GITA and GESI aims to transform unequal power relations by understanding power.

Power is linked to social norms and roles. We are not talking about physical power but sometimes, someone who is physically strong may have certain kinds of power, both good and bad. For example, a strong man can become a sports hero and a role model to children, or a strong man can mistreat his wife and children with no repercussions. How power is used is also related to social norms – does society accept the sports hero and condone the behavior of the man mistreating his family? Sometimes physical power is also equated with being able to do productive activities, for example, some people believe a woman cannot be a VAHW because women are not strong enough to handle animals. GITA aims to transform unequal power relations:

Power over:

- Control over people, resources, and others' lives
- Usually understood as a form of authority, control, or domination
- Also, influencing what others think they can do (rights and capabilities)

Power to:

- Act and to realize one's aspirations; measured through individual skills, capacities, and self-confidence
- Enabling a person or a group of people to act or realizing one's potential

Power within:

- Person's or group's sense of self-worth, self-awareness, self-knowledge, and aspirations
- Also related to agency and shaped by social norms and gendered and intersectional institutions

Power with:

- Collaborative and collective power with others through mutual support, collaboration, recognition, and respect for differences
- Ability to act together

Power for:

- Means a power for a vision, values and or demands that orient struggles for change

3.6 Who has power and control?

Facilitator: Use instructions in Activity 3.2.1 – <http://ingenaes.illinois.edu/wp-content/uploads/ING-Activity-Sheet-2016-2-Who-Has-Power-and-Control.pdf>

Use instructions in Activity 3.3.1 – <http://ingenaes.illinois.edu/wp-content/uploads/ING-Activity-Sheet-2016-4-Power-Over-v.-Power-With.pdf> to discuss Power over vs. power with.

3.7 Activity – Meaning of Power over, Power to, Power within, Power with, Power for in Nepal context

In plenary, facilitate discussion using below terms and what they mean in the Nepali setting. Use flipchart to capture participants ideas.

- Power over
- Power to
- Power within
- Power with
- Power for

3.8 Transformative power

Facilitator: As you begin to recognize all the different types of power, you are also learning to disentangle all of the threads that are woven into power structures which helps to start the work of transformation. Doing so allows you to question whether the norms and behaviors always have to be the same, and if there are places where you can make a change. **Are you ready to be a change agent?**
Why do you, as a VAHWs, need to understand and be able to talk about and encourage transformation?

3.9 GITA, power, and you

Facilitator: This can be done as self-reflection. May not report out in plenary but definitely give some guidance before giving the assignment.

Ask participants to answer in their own words, how to link GITA to transformative power.

- Why do they, as VAHWs, need to understand and be able to talk about and encourage transformation? They already have the technical skills in animal science and animal health. What else do they need to do to feel comfortable with being an agent of change?
- What powers could you use?

3.10 Being a leader

Facilitator: To emphasize the point that anyone can be a leader, given the right circumstances and situation.

Give participants 2 minutes to individually think of someone they see as a good leader. Color sticky notes can be distributed to participants ahead to write on.

Then ask participants share with the person next to them and take turns to explain what they admire about the person's actions, attitudes, and values. Give each pair 4 minutes (2 minutes per participant in the pair).

Bring participants together and facilitate a discussion in plenary, have participants report out on what leadership qualities or skills do admired leaders have in common.

- Who are the admired leaders – men, women, young, old, etc.?
- Do women hold leadership roles in your communities? Why or why not?
- Summarize the main findings such as:
 - Anyone can become a leader because ...
 - The qualities of a good leader...

3.11 Gender and leadership in animal health

Facilitator: This is a facilitated discussion on gender, leadership, and animal health. We're going to talk about gender and leadership. Ask participants the following questions in plenary:

- Why is this an important topic for animal health workers?
- Why should this even be discussed?
- Can women be leaders in animal health?
- There is a shortage of female veterinarians, for example. Why do you think that is the case?
- How do you feel about women speaking out in public? How do others feel?

Capture responses on the flip chart prepared for each question separately.

3.8 Empowering female agri-/vet-preneurs

Facilitator: Encouraging women and girls to pursue entrepreneurial pathways requires trainers to understand the skills gaps and opportunities within the agricultural and livestock market systems. A recent project encouraging youth engagement in Nepal's agricultural sector found that an agricultural careers fair offer platforms for knowledge and skills exchange as well as connect participants to professional networks and future job providers. The fairs offer a range of agricultural pathways along value chains as well as highlight the importance of having both technical and soft skills (e.g., a skill to vaccinate animals with a leadership skill). By exhibiting women-owned and operated agri-/vet-businesses at the career fairs they also help challenge people's perceptions around traditional gender roles in livestock and agriculture.

Facilitate discussion in plenary using the following questions:

- *Are there women-owned and operated agricultural or veterinary businesses in the area? Other businesses run by women?*
- *What are the pathways to empower female agri-/vet-preneurs? Provide examples from the Nepali context. Think of a way you can use them in your work to challenge communities' perceptions around traditional gender roles in livestock.*

3.9 Activity - Self-reflection to wrap up Day Three

Facilitator: Facilitate self-reflection with participants. Capture notes on the flip chart.

- What is the best thing you learned today?
- How will you use it in your work with community members?

Day Four

Achievement-Based Objectives

By the end of Day Four, participants will have:

- Listed animal husbandry practices for shoats used in the area.
- Practiced weighting and estimating age in animals.
- Defined and identified ways of expressing empathy.
- Shared an example of a work situation in which empathy was/could have been used.
- Practiced demonstrating empathy and respect in a field situation.
- Analyzed hidden layers and complexities of conflict.
- Examined the intersectionality of social factors when approaching conflict.

Duration

6.5 hours (excluding time for break and meals during the day)

Materials (needed for face-to-face training)

- Flip chart paper, markers, masking tape, sticky color notes or small pieces of color paper
- Name tags, notebooks, pens for participants
- [Handout 4.1 Four Skills for Improving Empathy](#)
- [Handout 4.2 Showing Respect](#)
- [Handout 4.3 Iceberg of Conflict](#)
- [Handout 4.4 Factors Affecting Conflict](#)
- Link to 1:21 minute video: *What is Conflict?*
<https://www.youtube.com/watch?v=SorqWJUHbjM>
- Link to 4:29 minute video: *Iceberg of Conflict*. <https://www.dailymotion.com/video/x2y4dz4>
- Link to 2:34 minute video: "Thomas-Kilmann Conflict Model Instrument"
<https://www.youtube.com/watch?v=PFLydyH2H8Y>
- [Handout 4.5 Conflict resolution strategies](#)
- Pre-written flip charts (if applicable)
- Room with computer access, connectivity and screen if needed, projector

Tasks/Discussion/Activities

4.1 Review Agenda for Day Four

4.2 Mini-lecture - Animal husbandry practices for shoats

Facilitator: Use supplemental slides - **Animal husbandry practices for shoats** for this lecture.

4.3 Mini-lecture - Weight and age estimation in animals

Facilitator: Use supplemental slides - **Weight and age estimation in animals** for this lecture.

4.4 Communicating with empathy and respect

Facilitator: Empathy has been found to help facilitate behavior change. Developing empathy and showing respect improves relationships with others and enhances your ability to help people address barriers to behavior change. In this session we will explore different emotions that occur within your

work situation, and how demonstrating empathy and respect will improve chances that people will adopt tools or techniques that you are trying to facilitate.

Empathy is the ability to: Understand and share the perspective, emotions, and feelings of another person. Their reality is their truth.

Put yourself in someone else's shoes (or imagine what it would be like to be in their situation)
Be able to connect with something in yourself that knows how the other is feeling and share it

Write in large letters at the top of a blank flip chart **How do you demonstrate Respect?**

4.4.1 Activity - What is Empathy?

Facilitator: Ask participants to define in a few words the term "empathy". Capture their responses on the flip chart you prepared previously.

When they have finished, share the following definition of empathy:

The ability to:

- Understand and share the perspective, emotions, and feelings of another person. Their reality is their truth.
- Put yourself in someone else's shoes (or imagine what it would be like to be in their situation)
- Be able to connect with something in yourself that knows how the other is feeling and share it

If you have access to the internet and the ability to project a video, this is a short video on "What is Empathy" you could show participants.

By Brene Brown "What is Empathy"? <https://www.youtube.com/watch?v=1Ewngu369Jw>

- 1) Ask participants to think about a time recently when they showed empathy toward someone else or when someone showed empathy toward them. As the facilitator, you may want to first share a personal example that is simple and clear.
- 2) After allowing a few moments to think, *have participants break into pairs* and work with someone they have not worked with already. *Ask them to share an empathy experience* with their partner.
- 3) After a few minutes, while the participants are still in pairs, *ask them to think of a time recently when someone did not show them empathy, and ask them to share their example with the same partner*. Encourage them to choose an example that is personal but that they feel comfortable sharing with the group.
- 4) Have the whole group come back together and allow participants to share any interesting stories they heard during the activity.

If needed, ask participants:

- How did you feel when someone did not show you empathy? How did you react?
- How was that different from the feelings you had when you were shown empathy?

4.5 Activity - Four skills for Improving Empathy

Facilitator: Hand out and review the Handout 4.1 with participants.

4.6 Activity - Showing respect

Facilitator: Ask participants how they demonstrate respect for another person in rural communities they work in. Ask them to consider an intersectionality approach (i.e., age, caste/ethnicity, education, etc.) in their responses. Capture their responses on the flip chart you prepared previously. Use Handout 4.2.

4.7 Activity - Role play on demonstrating empathy and respect with rural farmers

Break participants into groups of 5 people. In each group, have the participants select a person who will be the animal health worker who is visiting a farmer's group to check on the health of their goats. The remaining group members will be male and female farmers from a rural, isolated community.

Tell participants that the farmers have received one training on how to feed and manage the health of their goats, however there was only one woman in the group who was able to attend. After inspecting the goats, it doesn't appear that much of the training has been applied, as the goats are skinny and haven't been vaccinated. The animal health worker needs to talk with the farmers to inquire why the training has not been applied in a way that will demonstrate empathy and respect.

Give the groups about 20 minutes to prepare the role play, and then 5 minutes to present their play. Have the groups that are not performing form a large circle around the group that is performing and take notes on the conversation to determine whether the language used demonstrates empathy and respect for the farmers.

Discuss the findings with all the groups after all plays have been performed. What did they see and hear that indicated that empathic listening and respect was occurring with all the farmers?

Sources used in this lesson:

- Clark, B.J. et al. 2013. Facilitators and barriers to initiating change in medical intensive care unit survivors with alcohol use disorders: A qualitative study. *Journal of Critical Care* 28(5): 849–856. doi: 10.1016/j.jcrc.2013.06.011. Epub 2013 Jul 19. Available at: www.ncbi.nlm.nih.gov/pubmed/23876701
- Brene Brown "What is Empathy"? <https://www.youtube.com/watch?v=1Evwgu369Jw>

4.8 The culture and nature of conflict

Facilitator: VAHWs often experience conflict when training and working with local communities regarding livestock vaccination. Being aware of the nature of conflict, the hidden layers of conflict, and how social factors interact during conflict will assist VAHWs to be a positive and transforming force in their communities.

4.9 Hidden layers and complexities of conflict

Facilitator: Give participants five pieces of 3" x 3" self-adhesive paper (e.g., **Post-it**® Notes). Using markers have them write one or two words on each piece of paper that completes the sentence: *Conflict is...* Show the group an example: Conflict is SCARY. Ask the participants to place their responses at random on one of the three flip chart papers. Gather the group around the flip chart papers and ask them to describe what they see in the responses. What responses "go together?" What labels could we give to similar responses? Re-group similar words and add a label to the category.

Show the 1:21 minute video "What is Conflict?" <https://www.youtube.com/watch?v=SorqWJUHbjM>

Ask participants what “new” words they heard in the video. Ask two or three participants to write these words on additional pieces of self-adhesive paper and have them place the words under the appropriate category on the flip charts. Show the video one more time. Return to the “I Am Conflict” activity and have the participants re-position themselves according to the conflict categories.

Summarize the video discussion by saying: *As we can see, conflict has many dimensions and layers. Let's take a few minutes to explore some hidden aspects of conflict.*

Provide a mini lecture on conflict using the following bullet points as a guide: (adapted from <https://www.pon.harvard.edu/daily/conflict-resolution/types-conflict/>)
<https://www.sciencedirect.com/science/article/pii/S235264751930053X>
http://ombudsfac.unm.edu/Article_Summaries/Search_Beneath_the_Surface.pdf

Conflict...

- Behaviors or goals of one person/group are incompatible with the behaviors or goals of another person/group.
- Is inevitable.
- Is everywhere: families; communities; places of work; levels of government.
- Very different for different people.

Hidden layers and complexities can be portrayed in graphic: Iceberg of Conflict. (Source: *Resolving Conflicts at Work: A Complete Guide for Everyone on the Job* by Kenneth Cloke & Joan Goldsmith; 2000, p. 114)

Ask participants what they think is meant by “Iceberg of Conflict” before providing Handout 3.5: *Iceberg of Conflict*. Briefly review.

Show 4:29 minute video: *Iceberg of Conflict*.
<https://www.dailymotion.com/video/x2y4dz4>

Use these instructions for the small group activity:

1. Choose a personal item from your purse, backpack, or pocket.
2. Get into a line in alphabetical order of the spelling of the name of the item you're holding.
3. Form groups of three starting at the beginning of the line.
4. Using the *Iceberg of Conflict* illustration, ask the small groups to go down each layer of the iceberg and identify a conflict or issue that could arise between VAHWs and community members when VAHWS are planning and facilitating trainings on livestock vaccination.
5. Allow the groups to work for approximately 15 minutes.
6. Ask each small group to share one insight from their discussion.

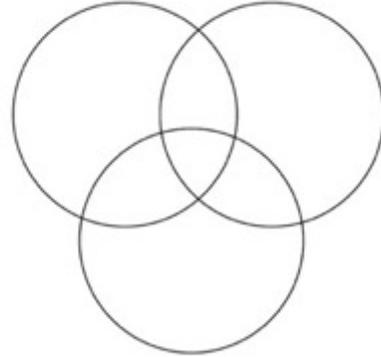


Iceberg of Conflict

4.10 Gender and conflict

Facilitator: Use the following instructions for the lesson:

1. Have the group form a line according to age with the younger participants at the front and the older participants at the back; use “decades” if participants are reluctant to share their exact ages.
2. Pair the youngest participant with the oldest; continue forming pairs from the front and back.
3. Give each pair the worksheet “Factors Affecting Conflict.”
4. Read the directions on the worksheet; do an example to ensure task is clear.
5. After approximately 20 minutes, have the pairs join another pair and compare and contrast their Venn diagrams.
6. Have each foursome, share one insight from their diagrams with the whole group not repeating what another group has shared.
7. Highlight how the intersectionality of social factors, such as gender, caste/ethnicity, age, and education interact and effect each other during conflict.
8. Ask: *When working with community members, what are the implications for recognizing that no single factor acts in isolation during conflict?*



Provide a mini lecture on patriarchy as a dominant social factor influencing conflict using the following bullet points:

- At societal level, patriarchy is characterized by historic discrimination and injustice reproduced in institutions and ideologies.
- Assumptions about male superiority pervade society.
- Life experiences on which claims of dominant ideologies have been founded have been the experiences of men, not women.
- Patriarchy controls reality.
- Women and men are socialized within rigid gender expectations.
- Institutions such as the church, the family, and the law reproduce these biases and expectations in norms, rules, and laws.
- Women have historically been subjugated politically, economically, and culturally.
- Institutional system of oppression and injustice directly creates disputes, sustains, and escalates other conflicts, and invades all other human interactions.

After the mini lecture, give each participant the Handout 4.4. Review by asking why the participants may agree or disagree with each statement and how the statements are “true” or “untrue” in a Nepali context.

Sources used in this lesson:

Adapted from <https://www.mediate.com/articles/birkhoff.cfm>.

4.11. Transforming conflict into collaboration

Facilitator: Use the following bullet points to introduce the activity:

- Different people use different methods to transform conflict into collaboration.
- Most people have one or more natural, preferred conflict resolution strategy that they use regularly.

- The Thomas-Kilmann model identifies five strategies for resolving conflicts with varying levels of assertiveness and cooperation. (Note: Uncover the descriptions on the flip chart as each strategy is explained.)



Avoiding (Ignore)

- Ignoring or sidestepping the conflict, hoping it will resolve itself or dissipate



Accommodating (Lose-Win)

- Taking steps to satisfy the other party's concerns or demands at the expense of your own needs or desire



Compromising (Lose-Lose)

- Finding an acceptable resolution that will partly, but not entirely, satisfy the concerns of all parties involved



Competing (Win-Lose)

- Satisfying one's own desires at the expense of the other parties involved



Collaborating (Win-Win)

- Finding a solution that entirely satisfies the concerns of all involved parties

Facilitator:

1. Have the participants count off by 5s? Have the 1s form a group, the 2s, etc.
2. Give each participant a copy of the Handout 4.5
3. Read the Potential Conflict and the two questions on the worksheet.
4. Assign each small group one of the five strategies to work on: Group #1: Ignoring; Group #2: Accommodating; Group #3: Compromising; Group #4: Competing; Group #5: Collaborating
5. After approximately 15 minutes, ask each small group to present their work to the whole group.
6. At the conclusion of each presentation, ask the other participants to offer additional suggestions and ideas of when to use or not use the strategy to resolve conflicts.
7. Review the five conflict strategies by showing the 2:34 minute video: "Thomas-Kilmann Conflict Model Instrument" at <https://www.youtube.com/watch?v=PFIydyH2H8Y>
8. Return to the flip charts listing the five strategies. Ask the participants which headings go with each strategy: Ignore; Win-Lose; Lose-Win; Lose-Lose; Win-Win. Write these by the appropriate heading.
9. Using the flip charts as a guide, review each method of conflict resolution by discussing how gender, caste, class, and other socially constructed factors interact with the method.

Sources used in this lesson:

Adapted from: <https://climb.pcc.edu/blog/what-are-the-five-conflict-resolution-strategies>,
https://www.organizationimpact.com/wp-content/uploads/2016/08/TKI_Sample_Report.pdf.

4.12 Additional activities on conflict resolution

Facilitator: Provide the following instructions:

1. Have the participants form a line in alphabetical order of their favorite animal. Divide the line into pairs.
2. The purpose of the activity is to engage in a mini conflict with your partner in a non-threatening manner.
3. Have each pair stand face to face and say together, *"Nothing, Something, Anything"*
4. Once the word *Anything* is said, the two participants shout out the name of any farm animal they can think of (e.g., goat, dog, chicken, pig); repeat if the partners choose the same animal.
5. After shouting out their animals, the partners must now debate one another as to why their animal is "better" than the other person's animal.
6. Allow about two or three minutes of debate, then call a brief time-out to discuss the difference between debate (competing) and dialogue (collaborating) using the following bullet points written on flip chart as a guide:

Dialogue...

- Working collaboratively toward shared understanding.
- Intent on listening to another's perspective with willingness to be influenced by what is heard.
- Everyone has chance to be heard, understood, and to learn from each other.
- Allows people to develop understanding for another's perspectives, thoughts, and feelings.
- Reevaluating one's own position in light of another's understanding.

Debate...

- Persuading or advocating for one's own view.
- Attempting to prove the other person(s) wrong.
- Searching for flaws and weaknesses in another's position.

After the brief discussion, have the partners continue with their conversations, only now, encourage them to engage in dialogue—asking questions and listening to the answers—to come to an agreement between the two of them. De-brief the activity by asking the following questions to the whole group:

1. What happened when you switched from debate to dialogue?
2. In what ways do gender, class, and other socially constructed factors impact the success or failure of dialogue/collaboration?

4.13 An appreciative approach to reframing conflict

Facilitator: Provide the following introduction to the activity: *Engaging in conflict does not have to be negative or counterproductive. Treating conflict as an opportunity for learning, connection, and insight can have positive outcomes. If we want to inspire and sustain human energy we can choose to focus on problems and conflicts or consider possibilities and opportunities.*

Ask the participants to line up according to the color of their clothing...from light to dark. Divide the group in half. Have each group go with a separate facilitator to a location far enough away that they cannot hear the other group. The facilitator will ask the following questions capturing responses on the flip chart:

Group #1:

1. What do you like most about teaching community members how to vaccinate goats?
2. What is the best experience you've had teaching community members how to vaccinate goats?
3. What new and exciting things are happening with teaching community members how to vaccinate goats?

Group #2:

1. What do you dislike most about teaching community members how to vaccinate goats?
2. What is the worst experience you've had teaching community members how to vaccinate goats?
3. What are the major problems with teaching community members how to vaccinate goats?

Gather the groups back together and ask them to share their responses and reflect on how each group felt during the exercise. How did each group view teaching community members how to vaccinate goats? How does what we pay attention to affect our feelings and possible behavior in the future?

Provide a mini lecture on Appreciative Inquiry using the following bullet points:

- We can choose to focus on problems, needs, conflicts, and deficits (the traditional problem-solving approach) OR we can choose to see possibilities, capabilities, and assets (the basis of appreciative inquiry).
- In problem-solving approach, community members begin to see themselves as people with extraordinary needs that can only be met by outsiders...the deficiency syndrome.
- Appreciative Inquiry approach focuses on what's right, rather than what's wrong with individuals and communities.
- Appreciative Inquiry explores, identifies, and further develops the best of "what is" within a group; discovering community's capacities and assets.
- Appreciative Inquiry gives access to transformative energy by providing ways to bring possibilities to life and develop capacities.
- Appreciative Inquiry allows us to see that what we call "reality" is defined by what we CHOOSE to see, what we CHOOSE to think and talk about, and what we CHOOSE to act upon. We have the capacity to create the kind of future we desire.
- Appreciative Inquiry does not dismiss conflict and problems; simply not used as basis for analysis or action.
- Appreciative Inquiry replaces problem talk with possibility talk...problems do not energize people, but rather visions of possibilities, something valued or desired, that motivates people to act.

Summarize by asking how the participants could adapt the "three questions" activity with the groups they work with; what conflicts arise when mobilizing communities to vaccinate livestock that could be reframed using an appreciative approach?

Sources used in this lesson:

Adapted from <https://www.davidcooperrider.com/ai-process/>.

4.14 Activity - Self-reflection to wrap up Day Four

Facilitator: Facilitate self-reflection with participants. Capture notes on the flip chart.

- What is the best thing you learned today?
- How will you use it in your work with community members?

Day Five

Achievement-Based Objectives

By the end of Day Five, participants will have:

- Applied knowledge about restraining goats
- Understood the important of goat nutrition
- Applied GITA in goat nutrition and pastoralism
- Distinguished between agri-/vet-preneurship concepts and ideas to start a business.
- Described differences between men and women entrepreneurs.
- Practiced creating agri-/vet-preneurship ideas with VAHWs.
- Applied SMART targets to track business progress.
- Created a plan to build and manage customer relationships.
- Applied report writing and record keeping skills

Duration

6.5 hours (excluding time for break and meals during the day)

Materials (needed for face-to-face training)

- Flip chart paper, markers, masking tape, sticky color notes or small pieces of color paper
- Name tags, notebooks, pens for participants
- [Handout 5.1 Identifying agri-vetpreneurship ideas with VAHWs](#)
- [Handout 5.2 Identifying characteristics of male and female entrepreneurs](#)
- [Handout 5.3 Images of female entrepreneurs](#)
- [Handout 5.4 Case study "The capacity to imaging - Business Planning](#)
- [Handout 5.5 SWOT analysis](#)
- Pre-written flip charts (if applicable)
- Room with computer access, connectivity and screen if needed, projector

Tasks/Discussion/Activities

5.1 Review Agenda for Day Five

5.2 Mini-lecture - Shoaat restraining

Facilitator: Use from **VAHW curriculum Topic 7 - Restraining animals** for this lecture and supplement with additional slides - **Animal restraining**.

5.3 Mini-lecture - Shoaat nutrition

Facilitator: Use supplemental slides - **Shoaat nutrition** for this lecture.

5.4 Mini-lecture - GITA in shoaat nutrition and pastoralism

Facilitator: Use supplemental slides - **GITA in shoaat nutrition and pastoralism** for this lecture.

5.5 Introduction to agri-/vet-preneurship

Facilitator: Present a short lecture on Concepts of agri-/vet-preneurship

Agricultural or Veterinary Entrepreneurship is a process of identifying and starting a business venture, sourcing and organizing the required resources, marketing, and taking both the risks and benefits

associated with the venture. Entrepreneurs are innovators who use a process of changing the current situation of the existing products or services, to set up new products or new services.

There are two kinds of entrepreneurship ventures:

1. Those that succeed.
2. Those that fail.

Facilitator: Ask participants to give examples of why some businesses succeed and some fail. Write down answers on the flipchart.

Mini lecture continued: Everyone dreams that his/her business will be successful. We should look at the foundation of building up a good business; there are four interrelated pillars that could ensure that business succeeds.



- **AN IDEA AND MARKET:** *An idea is the kind of business you want to do, and market is the people who will buy your products or services. A good idea is the basis of a successful venture while the availability of a market is the indicator of the sustainability of business venture.*

Facilitator: Ask participants about products or services that are common in their areas in relation to veterinary drugs and supplies and services (treatment, vaccination). Write on the flipchart.

- **SKILLS/KNOWLEDGE/EXPERIENCE:** *This refers to several business skills. For Example, we need both theoretical and practical skills. Do we know how to produce quality products for our market? We also need business management skills. Do we know how to keep basic records so that can assess the profitability of our business? In addition, we know something about our **MARKET**. Do people want our service or product? How are we going to inform people that we have what they want? Who will be our customer? And how will our goods get to the market?*

Facilitator: Ask participants about their skills or experience in starting a business. Do they consider their training services a niche in the veterinary sector? What skills and experience are important to make their business successful? Write on the flipchart.

- **RESOURCES**: How much **MONEY** do you need to start your business? The money you use to start your business is called your capital. It often takes a lot less money than you expect, the profits to be realized is what you should use to grow your business. **Starting small is the key for successful entrepreneurs**. Most people only talk about the business they want to start. Take some time and reflect on these things before you start.
- **MOTIVATION/HARD WORK**: working consistently every day. Making money in business largely depends on you. Are you there to open your business every day? Can people rely on you? Do you sell a quality product or service?
 - The foundation of any successful entrepreneurship is like a four-legged stool. If one of the legs is missing, then the venture will not be stable.

Sources used in this lesson:

Adapted from World Agroforestry Centre. (2014). *Farmers Training: Entrepreneurship Manual*. Page 5)
<https://www.worldagroforestry.org/sites/default/files/Entrepreneurship%20manual%20NEW.pdf>

5.6 Activity - Developing agri-/vet-preneurship ideas with VAHWs

Facilitator: This is a self-reflection activity to help animal health workers think about services or products they can provide to livestock keepers as business. Ask participants to work individually for 10 minutes by answering questions in Handout 5.1. Distribute the handouts. Assign each participant a set of questions to answer.

After about 10 minutes ask participants to share and explain their responses. Facilitate discussion among participants about VAHW-preneurship in Nepal using the following questions:

- How gender roles and relation affect VAHW entrepreneurship?
- Are there ethnic differences that may affect VAHW entrepreneurship?
- Provide examples of successful VAHW entrepreneurship in the region.

5.7 Differences between men and women entrepreneurs – Do they matter for business?

Facilitator: Present a short lecture:

There are successful male and female entrepreneurs. Studies from different parts of the world found that there are some characteristics that are found in both men and women. However, there are some distinct differences that do exist between the two. These differences exist in relations to how they make decisions, tolerate risk, set goals for their business, finance their business, manage their business, network and what personal motivations they have.

This table summarizes characteristics of male and female entrepreneurs from various studies.

Male Entrepreneurs	Female Entrepreneurs
Decision making easy	Decision making difficult
Business focused on economy and cost	Business focused on making social contribution and quality
Willing to take financial risk	More conservative when it comes to financial risk
Task oriented; focused on business growth	Focus on good relationships with clients

Facilitator: Participants to work individually. Ask participants to answer questions in Handout 5.2 and think about their reasoning for the answer they select. Based on responses request participants to volunteer to explain their reasoning behind agreement, disagreement or being neutral. If the group is small, ask each participant to explain their reasoning.

Facilitate discussion using the following questions:

- *What are the underlying reasons for these?*
- *How does the Nepali context affect these statements? Do these statements apply to male and female entrepreneurs in Nepal? Why or why not? What examples from Nepal will you use to adjust statements to the Nepali context?*
- *Do these differences matter for business? Why or why not? Provide examples from Nepal context.*

As discussion goes, make notes on the flip chart. To conclude, summarize key points from the discussion.

5.8 Building a business and managing relationships

Minilecture: One way to help the agri/vet-preneur support business in the challenging and changing market environment of smallholder agriculture is to ensure that all stakeholders are engaged in ways that enhances their cooperation with the agri-/vet-preneur.

Stakeholder is an individual, enterprise or organization that is directly or indirectly involved in a business. These are customers, suppliers and distributors, government organizations and departments, etc

There is a difference between internal and external stakeholders. Internal stakeholders include customers, suppliers and service providers (e.g., a refrigerator repairman if VAHW uses cold chain). External stakeholders include the public in general. Working with stakeholders refers to agri-/vet-preneurs ability to build long-term relationships with stakeholders.

In this session, the difference between internal and external stakeholders will be highlighted and the focus will be on two concepts regarding relationships in the agri-/vet-preneurship area, namely building business and relationship management.

Sources used in this lesson:

Adapted from GFRAS. 2017. New Extensionist Learning Kit: Module 11. Agricultural Entrepreneurship. Lead Author Shaun Ferris. <https://www.g-fras.org/en/knowledge/new-extensionist-learning-kit-nelk.html>.

5.9 Launching and growing business

Power within - the capacity to imagine - business planning

Facilitator: The ability to induce change in one’s own life is known as power within. If you feel like you can make changes – big ones like going to university or medium ones about a VAHW starting their own agri-vet-shop business– then you have power within in certain areas. These are known as tangible indicators; intangible indicators are not easy to measure – are you content or happy?

5.9.1 Activity case study “Planning for VAHW business”

Facilitator: Distribute Handout 5.4 and allocate 20 minutes for participants to individually read and respond to questions in the case study.

Convene participants back and discuss how they answered questions at the end of the case study.

5.9.2 Launching and growing business

Facilitator: Often starting and growing business involves the assessment of the viability of the business using SWOT analysis. SWOT stands for mapping and assessing Strengths, Weaknesses, Opportunities and Threats of doing business in order to keep pace with the competition or growing business. In the case of VAHWs - the agri-/vet-preneurship.

- *Strengths* and *Weaknesses* are the first two sections of the SWOT analysis. Each usually examines the internal workings of the business. These items are usually within the control of the business owner. For example, do you have reliable suppliers of vet drugs or consumables? Do you generate enough revenue to cover the cost of vaccination and make profit?
- *Opportunities* and *Threats* are the second two sections of the SWOT analysis that examine conditions outside of your business. One cannot control them, but one can manage them to enhance or reduce their impact on the business. As example for a VAHW could be the absence of vaccines in the area while there is a big demand for them among goat or sheep farmers.



Distribute the Handout 5.5 and ask participants to apply the SWOT analysis to their current or future business. Give participants 15 minutes to complete. Participants work individually. After bringing participants back ask which quadrant(s) of the SWOT analysis is most difficult to complete. Why?

5.9.3 Tracking progress with SMART targets

Facilitator: Target setting is a critical step in any planning process whether it is for business or personal. Targets are usually concrete. Ultimately, targets become the standard by which we can measure our progress in the business and even in our personal life or career path. Target setting requires attention. An acronym commonly used to describe effective target is SMART. Target must be Specific, Measurable, Action-oriented, Realistic, and Timed in order to be useful as a business management tool.

Specific— Targets should focus on a specific problem or need.

Measurable—There must be some means of tracking achievement of targets.

Action-oriented—Actions will be the pathway to achieving targets.

Realistic—Aim high but keep targets within the realm of possibility.

Timed—Targets are only useful when they are current. They should include a realistic timeline and a completion date.

Three types of targets:

1. Personal target - involve the ambition and dedication of a single individual. This could be opening an agro-vet shop in the community. Personal target can come in all sizes, but key is to communicate it to others within the business (e.g., household members involved in supporting your business) because your personal target can have a profound effect on the outcome of the business.
2. Production targets - involve improving a process within your business. These targets are narrower in scope because they can involve one piece of a puzzle. For VAHW, a good production target might be to increase a shelf space for veterinary supplies in the agro-vet shop so she or he can stock on various drugs and supplies to provide service for all livestock in the community.
3. Operational or business targets - involve targets that are larger in scope and scale than production targets. A common operational target can be to increase a revenue base by expanding the business.

Divide participants into groups and assign each group to focus on one of the types of targets. Ask them to apply SMART to the target setting. Give 15 min to complete this activity.

Group 1 - apply SMART to personal target

Group 2 - apply SMART to production target

Group 3 - apply SMART to operational target

Ask participants to present the target they set and the application of SMART. At the end, conclude with key points from the presentation and discussion.

5.10 Building and managing my customer relationships

Customer relationship involves the application of practices, strategies, and technologies to develop, manage and improve the interactions and relationships between a business and its customers. One of the main issues that new agri-/vet-preneurs may face is how to increase their sales in a risky and

competitive market environment, which leads to the focus on customers, retaining existing customers and obtaining new customers. Customer relationship is a way of improving the performance of agricultural organizations and businesses. Managing customer relationships will yield:

- Increased sales and profitability;
- Increased customer satisfaction;
- Increased retention of the existing customer base, particularly during the times of economic uncertainty (e.g., COVID pandemic); and
- In more new customers.

Building and managing relationships - these are strategies, processes and behavior involved in creating and maintaining value-producing relationships between an agri-/vet-preneur and all its stakeholders.

This type of relationship is based on:

- Acknowledging and actively monitoring the concerns of all stakeholders, and taking their interests into account when making business decisions;
- Listening to, and communicating openly with stakeholders about their concerns and contributions;
- Implementing processes and modes of behavior that are sensitive to the concerns, opinions, and contributions of each stakeholder;
- Recognizing the interdependence of the stakeholders and trying to achieve a fair distribution of the benefits among them;
- Cooperating with all stakeholders to ensure that business risks are minimized; and
- Acknowledging the potential of conflicts between stakeholders and addressing such conflict (if it occurs) through open communication.

After lecture discuss the following questions in plenary and capture responses on the flip chart:

- How many customers are in your community?
- Is there a segment of people who are most likely to be the customers? [to facilitator: if the answer is about male livestock keepers, inquire about female livestock keepers, ethnic groups, etc.]
- Who are these target potential customers? Identify approximate and realistic numbers
- What strategy as a VAHW you can use to attract their attention?
- What is key to managing customer relationship with existing and new customers?

Sources used in this lesson:

Adapted from GFRAS. 2017. New Extensionist Learning Kit: Module 11. Agricultural Entrepreneurship. Lead Author Shaun Ferris. <https://www.g-fras.org/en/knowledge/new-extensionist-learning-kit-nelk.html>.

5.11 Series of mini-lectures - Report writing and record keeping

Facilitator: Before starting the lecture ask participants about the importance of report writing and record keeping. Write answers on the flipchart.

To continue, use the following mini lectures. Dedicate 10-15 minutes per lecture and allow participants to ask questions:

- **VAHW curriculum - Topic 20 Records and record keeping I (introduction)**
- **VAHW curriculum - Topic 21 Records and record keeping II (clinical records)**
- **VAHW curriculum - Topic 22 Records and record keeping III (notifiable and TADs)**
- **VAHW curriculum - Topic 23 Disease reporting**

5.11 Activity - Self-reflection to wrap up Day Five

Facilitator: Facilitate self-reflection with participants. Capture notes on the flip chart.

- What is the best thing you learned today?
- How will you use it in your work with community members?

Day Six

Achievement-Based Objectives

By the end of Day Seven, participants will have:

- Understood participatory epidemiology
- Completed the VAHW training co-design process
- Evaluated the training using the ORID approach
- Completed the post-training assessment
- Participated in a final reflection activity
- Received a training certificate

Duration

5.5 hours (excluding time for break and meals during the day)

Materials (needed for face-to-face training)

- Flip chart paper, markers, masking tape, sticky color notes or small pieces of color paper
- Name tags, notebooks, pens for participants
- Ball of yarn
- [Handout 7.1 Flipbook](#)
- [Handout 7.2 ORID Reflection](#)
- Pre-written flip charts (if applicable)
- Room with computer access, connectivity and screen if needed, projector

Tasks/Discussion/Activities

6.1 Review Agenda for Day Seven

6.2 Mini-lecture - Participatory epidemiology

Facilitator: Use supplemental slides - **Participatory epidemiology** for this lecture.

6.3 Developing action plan with VAHWs for community engagement

Facilitator: Facilitate discussion with all around:

- **What will I use to engage community?**
- **What do I need?**
- **Where do I need help?**

Capture ideas, concerns, and reflection on the flip chart. Take notes to share with UF team.

6.4 Developing sensitization plan with VAHWs for use in communities

Facilitator: Facilitate discussion with all around:

- **Objectives of the sensitization at the community level**
- **Tools to be used**

- **Timeline of sensitization events**
- **Logistical arrangement**

Capture ideas, concerns, and reflection on the flip chart. Take notes to share with UF team.

6.5 Use of Flipbook in community engagement

Facilitator: Facilitate a discussion with all participants on the Flipbook *Happy Animals, Happy People*. Distribute copies of flipbook to participants. Each participant should practice using the flipbook by reading the story silently and then deciding how they would use the book in a community setting. Stand it up on a table? Hold it in the air? Ask someone else to hold it? What would work best for you? Would you read it out loud in different voices to represent the different characters or simply read in your normal voice? Would you get someone to play one of the characters? Think of how you will use it, practice, and become familiar with how it will help convince communities of the importance of vaccination.

After participants have familiarized themselves with the flipbook, do a role play/fishbowl using the flipbook.

Actor 1: VAHW

Actors 2-5: Community members

Rest of participants observe and make recommendations.

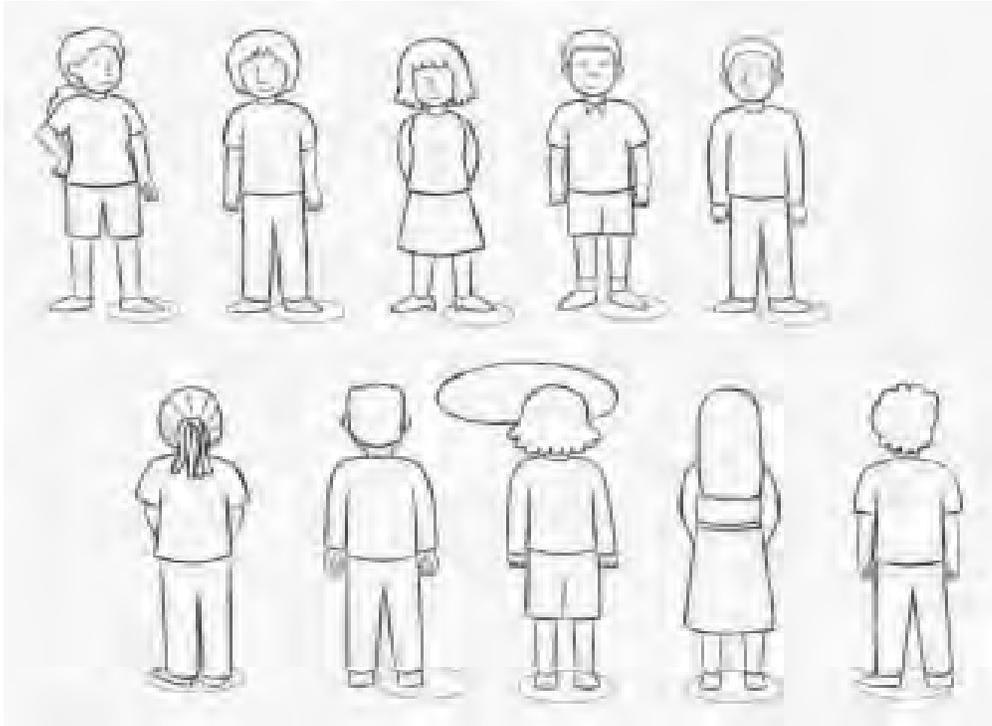
Distribute handout 6.1 to facilitate further discussion on the use of flipbook at community setting.

VAWH TRAINING WRAP-UP

To determine the effectiveness of the training participants individually and collectively evaluate the sessions thereby providing valuable feedback for improving future trainings. The “So and Now What?” of any training must be considered to ensure long-term impact; encouraging participants to identify concrete “next steps” provides a way for facilitators to follow up the training...to determine what difference, if any, the training has made.

6.6 ORID Reflection

Facilitator: Gather the participants together and briefly review the training by conducting a gallery walk throughout the meeting room (ie., to review flip charts posted on the wall). Ask participants to line up, either standing or sitting, facing one another...so each participant is directly across from one other participant. Unveil the first ORID question written on the flipchart or PowerPoint Slide, and have the pairs take turns asking each other the question. After 5-6 minutes have participants on one side to move one place to the right...so everyone now has a new partner. Unveil the second ORID question and repeat the process. Before unveiling the third and fourth ORID questions, have the one line of participants continue to move one place to the right...always having a new partner. At the conclusion, hand out copies of ORID Reflection (Handout 6.1) and discuss how they can use the activity during a training with VAHWs.



Example of ORID Reflection

6.7 Post-Training Assessment

Facilitator: Distribute [Handout 1.2 Post-training assessment](#) and provide 20 minutes for the participants to complete and return the forms.

6.8 Presentation of Certificates

Facilitator: Present certificates thanking participants for their attendance at the training and for their commitment to improving the efficacy of livestock vaccinations in their respective communities.

Handouts

Handout 1.0 Training agenda

*This training agenda is designed for six-day training to convey training content to village animal health worker participants and involve them in co-designing training plan for future trainings at the community level.

Day One	
8:00 – 8:30 am	Registration (participants check-in) Pre-training assessment
8:30 – 10:00 am	Welcome and introductions Fishbowl activity Agenda review Setting norms and behaviors
10:00 am – 12:00 pm	Introduction to GITA – What is meant by GITA <ul style="list-style-type: none"> • Gender and intersectionality • Gender lifelines • Gender roles in livestock production
12:00 – 1:00 pm	Lunch
1:00 – 3:00 pm	Introduction to GITA – What is meant by GITA (Cont.) <ul style="list-style-type: none"> • Gender boxes in animal health • GITA and GESI in the Nepal context
3:00 – 3:30 pm	Tea break
3:30 – 4:30 pm	Importance of maintaining animal health Signs of healthy and sick shoats Common diseases of shoats
4:30 – 5:00 pm	Wrap up and reflection
Day Two	
8:00 – 8:30 am	Registration (participants check-in)
8:30 am – 12:00 pm	Who is the community? <ul style="list-style-type: none"> • Mapping community and livelihood assets and resources • Access to livestock and veterinary extension services • Using community mapping for my business planning
12:00 – 1:00 pm	Lunch
1:00 – 3:00 pm	Facilitation and training <ul style="list-style-type: none"> • Key differences between trainer vs. facilitators • Understanding audience demographics

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3:00 – 3:30 pm	Tea break
3:30 – 4:30 pm	Facilitation and training (Cont.) <ul style="list-style-type: none"> • Key considerations for working with female participants
4:30 – 5:00 pm	Wrap up and reflection
Day Three	
8:00 – 8:30 am	Registration (participants check-in)
8:30 – 10:00 am	Treatment of sick shoats Vaccinating shoats Role of women in animal health
10:00 am – 12:00 pm	Understanding power <ul style="list-style-type: none"> • Who has power and control? • Meaning of Power over, Power to, Power within, Power with, Power for in Nepal context
12:00 – 1:00 pm	Lunch
1:00 – 3:00 pm	Understanding power (Cont.) <ul style="list-style-type: none"> • Transformative power • GITA and power dynamics
3:00 – 3:30 pm	Tea break
3:30 – 4:30 pm	Being a leader <ul style="list-style-type: none"> • Gender and leadership in animal health • Empowering female agri-/vet-preneurs
4:30 – 5:00 pm	Wrap up and reflection
Day Four	
8:00 – 8:30 am	Registration (participants check-in)
8:30 – 10:00 am	Animal husbandry practices for shoats Weight and age estimation in animals
10:00 am – 12:00 pm	Communication with empathy and respect <ul style="list-style-type: none"> • What is empathy? • Four skills for improving empathy • Showing respect • Role play to demonstrate empathy and respect in communities
12:00 – 1:00 pm	Lunch
1:00 – 3:00 pm	The Culture and Nature of Conflict <ul style="list-style-type: none"> • Hidden layers and complexities of conflict • Gender and conflict

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3:00 – 3:30 pm	Tea break
3:30 – 4:30 pm	Transforming conflict into collaboration
4:30 – 5:00 pm	Wrap up and reflection
Day Five	
8:00 – 8:30 am	Registration (participants check-in)
8:30 – 10:00 am	<p>Shoat restraining</p> <p>Shoat nutrition</p> <p>Role of women in shoat raising and nutrition</p>
10:00 am – 12:00 pm	<p>Introduction to agri-/vet-preneurship</p> <ul style="list-style-type: none"> • Concepts of agri-/vet-preneurship • Developing agri-/vet-preneurship ideas with VAHWs
12:00 – 1:00 pm	Lunch
1:00 – 3:00 pm	<p>Building a business and managing relationships</p> <ul style="list-style-type: none"> • Launching and growing business • Building and managing my customer relationships
3:00 – 3:30 pm	Tea break
3:30 – 4:30 pm	Report writing and record keeping
4:30 – 5:00 pm	Wrap up and reflection
Day Six	
8:00 – 8:30 am	Registration (participants check-in)
8:30 – 9:00 am	Participatory epidemiology
9:00 am – 12:00 pm	<p>Developing action plan with VAHWs for community engagement</p> <p>Developing sensitization plan with VAHWs for use in communities</p>
12:00 – 1:00 pm	Lunch
1:00 – 3:00 pm	<p>Training Wrap-up</p> <p>ORID Evaluation</p> <p>Post-training assessment</p> <p>Presentation of training certificates</p>
3:00 – 3:30 pm	<p>Tea break</p> <p>Training ends</p>

Handout 1.1 Pre-training assessment

Name: _____ Date: _____

Please rate your **ability to complete** the following activities using the scale:

3=To A Great Extent **2**=Somewhat **1**=Very Little **0**=Not At All

_____ **Describe** how using GITA and GESI in your work with community members would affect your approach.

_____ **Identify** how culture influences opportunities for men and women, boys, and girls.

_____ **Explain** how GITA in the livestock value chain influences how you work with community members.

_____ **Analyze** how decision making can negatively or positively affect livestock production.

_____ **List** three differences to consider when training community men and women.

_____ **Explain** the concept of agri-vetpreneurship.

_____ **Distinguish** differences between female and male entrepreneurs.

_____ **Analyze** how personal perceptions affect your service to male and female livestock keepers.

_____ **Distinguish** four skills for improving empathy.

_____ **Explain** different types of power and how they interact with concepts of GITA and GESI.

_____ **Distinguish** hidden layers and complexities of conflict.

_____ **List** three differences between being a community leader and business leader.

_____ **Practice** facilitating and negotiating behavior change and integrating facilitation into work with communities.

The **main outcomes** I hope to gain from this training: _____

Thank You!

Handout 1.2 Post-training assessment

Name: _____ Date: _____

Please rate your **ability to complete** the following activities using the scale:

3=To A Great Extent **2=Somewhat** **1=Very Little** **0=Not At All**

_____ **Describe** how using GITA and GESI in your work with community members would affect your approach.

_____ **Identify** how culture influences opportunities for men and women, boys, and girls.

_____ **Explain** how GITA in the livestock value chain influences how you work with community members.

_____ **Analyze** how decision making can negatively or positively affect livestock production.

_____ **List** three differences to consider when training community men and women.

_____ **Explain** the concept of agri-vetpreneurship.

_____ **Distinguish** differences between female and male entrepreneurs.

_____ **Analyze** how personal perceptions affect your service to male and female livestock keepers.

_____ **Distinguish** four skills for improving empathy.

_____ **Explain** different types of power and how they interact with concepts of GITA and GESI.

_____ **Distinguish** hidden layers and complexities of conflict.

_____ **List** three differences between being a community leader and business leader.

_____ **Practice** facilitating and negotiating behavior change and integrating facilitation into work with communities.

The **best parts** of this training:

A **new insight** I gained from participating in this training:

One action I will **commit to completing** because of this training:

Suggestions for **improving** this training: _____

Thank You!

Handout 1.3 Attendance sheet

**Use new attendance sheet for each day of training.*

Training title							
Trainer(s) name							
Training location: (<i>village, district, region, and country</i>)							
Date							
First and last name	Sex M/F	Age		Position	Name of community served	Phone	Signature
		(15-29)	(30+)				
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

Handout 1.4 Fishbowl

In the following scenario, you will facilitate and ask participants to observe a role play that involves women livestock owners and male spouses. Those with VAHWs' role will be tasked with identifying, finding, and locating women who own small ruminants to encourage them to get their animals vaccinated. VAHWs will invite the women livestock keepers and male spouses to participate in a focus group meeting and inquire why they don't take their goats and sheep to be vaccinated against PPR. Ask participants without roles to observe and listen to what occurs with the role play participants. What do they hear? How can they encourage women to get their animals vaccinated with the barriers they discuss?

Ask eight volunteers to play the following roles:

- Four play the role of women livestock owners
- Two play the role of male spouses
- Two play the role of VAHWs

Script for women livestock owners:

You are unwilling to get your animals vaccinated because – each of you give several reasons:

- The vaccination site is too far away.
- I didn't hear about vaccination in time.
- I heard that only people who owned lots of animals could participate.
- I don't have money to pay. Or I assumed I would have to pay so I didn't go.
- I asked my husband to take my goats, but he didn't want to be bothered.
- I must do household chores.
- I am busy with my crops.
- My husband won't let me go.
- It is not safe to walk there alone because I might be attacked.
- These types of meetings, like the one right now, take me away from my work.
- Many of my friends wouldn't come because they are too busy.

The male spouses can choose how they want to play the role of the man.

Give women livestock owners and male spouses about 5 min to talk using above script.

The two VAHWs are listening and asking questions of women.

After 5 min talking among the role play participants facilitator does Critical Reflection.

Critical Reflection questions:

- What are your assumptions about women livestock owners? What is your knowledge based on?
- Did you know about all the reasons why women don't participate?
- How would you encourage these women to participate?

Notes to Facilitator:

- Encourage men play women's role and vice versa.
- For critical reflection ask everybody but also those who played the role.

Handout 1.5 Gender lifelines

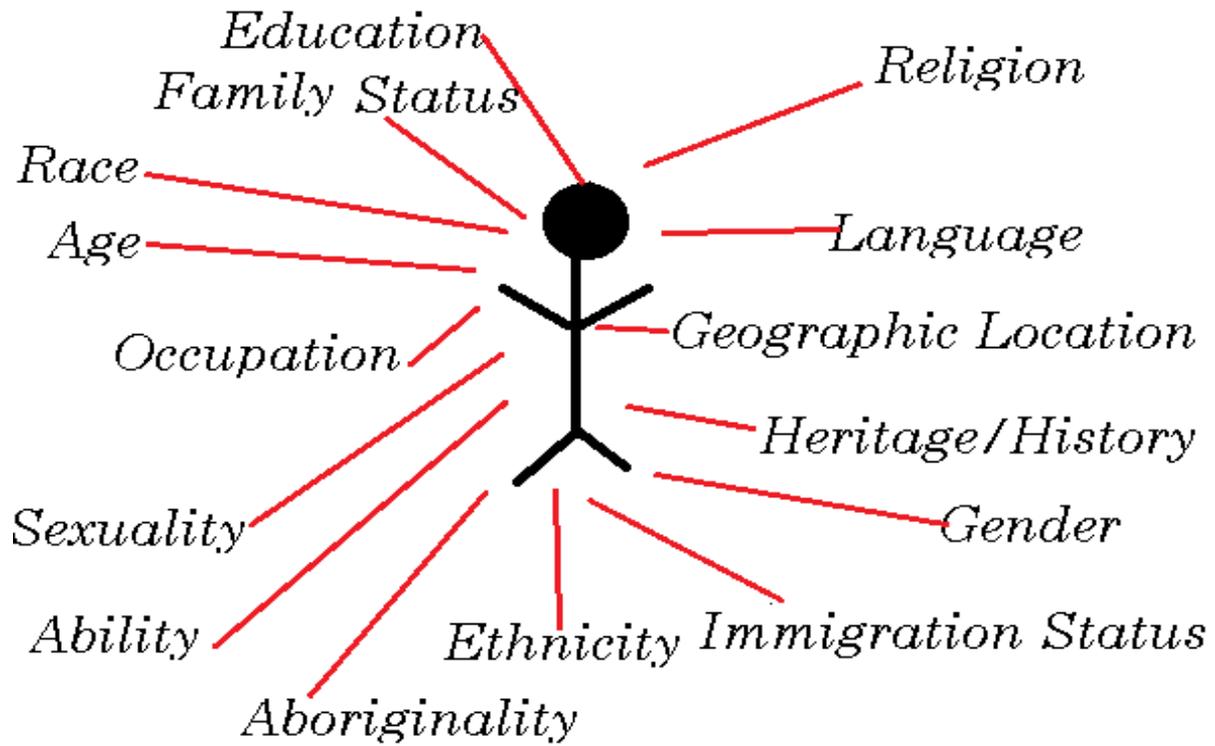
Table 1a: A gender lifeline of a woman

Age	Expected behaviors, responsibilities, and rules	Opportunities and accomplishments
0-5		
5-10		
10-15		
15-20		
20-25		
25-35		
35-50		
Over 50		

Table 1b: A gender lifeline of a man

Age	Expected behaviors, responsibilities, and rules	Opportunities and accomplishments
0-5		
5-10		
10-15		
15-20		
20-25		
25-35		
35-50		
Over 50		

Handout 1.6 Multiple identities of an individual



Handout 1.7 Signs of healthy and sick shoats

What are some of the characteristics you look for in healthy animals

What are some of the characteristics you look for in sick animals?



Which sheep look healthy? Which sheep look sick?



Which goat looks healthy? Which goat looks sick?



Characteristics of healthy and sick animals

Healthy Livestock	Unhealthy Livestock
Alertness	Lethargic/Listless
Chewing cud	Ruminants not chewing their cud
Sleek coat	Rough hair coat
Bright eyes and pink eye membrane	Dull eyes
Normal feces and urine	Abnormal feces and Discolored urine
Normal temperature	High temperature
Gait steady, no limping	Limping
Normal respiration	Labored breathing/coughing
Stays in herd or flock	Separates self from herd or flock
Eats and drinks normally	Loss of appetite
Contentment	Runny nose
Normal pulse rate	Swelling on any body part

Handout 2.1 Examples of community assets or resources

<p>Associations</p> <ul style="list-style-type: none"> - Goat cooperative - Producer cooperative - Women’s group - Charitable group - Livestock group - Education group - Elders group - Environment group 		<p>Physical Space</p> <ul style="list-style-type: none"> - Livestock Service Division - Church - Market - Shop - Farm - Forest/forest preserve - Water borehole - River
<p>Institutions</p> <ul style="list-style-type: none"> - School - Community center - Health clinic - Temple - Veterinary office - Agro-vet store - Cooperative 	<p>Individuals</p> <ul style="list-style-type: none"> - Gifts, skills, capacities, knowledge, and traits - Youth - Older adults - People of different caste (Brahmin, Chettri, Janajati, Dalit) - People with disabilities - Parents - Children - Entrepreneurs 	<p>Local Economy</p> <ul style="list-style-type: none"> - Poultry farm - Goat commercial farm - Crop field - Livestock Service Division - Agro-vet store - Bank - Beer-making - Vegetable stall in the market

Adapted from: Discovering Community Power: A Guide to Mobilizing Local Assets and Your Organization’s Capacity, Kretzmann, J. & McKnight, J.; Asset-Based Community Development Institute, School of Education and Social Policy; Northwestern University, 2005.

Handout 2.2 Key differences between trainers and facilitators

TOP-DOWN TRAINER	FACILITATOR
Has the answers, gives knowledge to the students or trainees	Values the experience and knowledge of the participants; Poses problems and sets up a process in which the participants search for answers
Is the expert, knows best	Helps people to become responsible for their own learning; demonstrates ideas
Presents new information from the front of the group	Uses practical, participatory methods, e.g. group discussion and activities in which all members of the group participate
Information flows in just one direction, from teacher to students	Information flows in many different directions between the facilitator and individual group members – a genuine exchange of ideas
Brings extensive knowledge of the subject	Draws out and builds on the knowledge of the group, and knows where to find further information on the subject
Is concerned with students understanding the right answer	Is concerned with the discussion; encourages and values different views
Has a formal relationship with the students, based on their status as a teacher	Is considered as an equal, and has relationships based on trust, respect and a desire to serve
Directs the learning	Allows learning to be self-directed

Source: CARE International. Farmer’s Business Schools (2017). https://care.org/wp-content/uploads/2020/05/FFBS_1_Facilitation_Tools.pdf

Handout 3.1 Role of women in animal health

Participants work individually.

As a village animal health worker, you are working in a rural, isolated region with smallholder farmers who rely heavily on government livestock service division to provide veterinary assistance. There are a number of livestock diseases prevalent in the area that the government wants to eradicate including the PPR (peste des petits ruminants) disease. The government holds periodic vaccination campaigns in specific locations that maybe far from the livestock keepers based on reporting of disease outbreaks. Because of the isolated conditions, communications about these campaigns are erratic, and many times women do not hear about them before they happen.

Women and men have traditional roles in livestock production including animal health. Women are responsible for feeding and caring for small livestock while men care for cattle and any work off the farm. When animals are sick, women are left to take care of them while men take other animals for grazing. Women are also responsible for most of the domestic labor, childcare, cooking and any additional income generating activities they can fit into their schedules. Because of these duties, it is difficult for them to participate in livestock trainings or vaccination campaigns. You have been asked to create a campaign to increase awareness about women's role in animal health. You are specifically tasked to develop a vaccination strategy for PPR that will increase vaccinations of small livestock and accommodate women's ability to participate.

Using information from previous sessions, create a mobilization strategy that will incorporate a) building awareness of the role of women in animal health, b) building awareness on the need for vaccination among women; b) use effective communication tools to announce vaccination sites in advance; and c) increasing women's ability to get their animals vaccinated. Use bullet points rather than text to outline your mobilization strategy.

1. _____

2. _____

3. _____

4. _____

Handout 3.2 Activity Sheet - *Who has Power and Control*

This activity sheet is also available to download from:

<http://ingenaes.illinois.edu/wp-content/uploads/ING-Activity-Sheet-2016-2-Who-Has-Power-and-Control.pdf>

Handout 3.3 Activity Sheet - *Power over v. Power with*

This activity sheet is also available to download from:

<http://ingenaes.illinois.edu/wp-content/uploads/ING-Activity-Sheet-2016-4-Power-Over-v.-Power-With.pdf>

Integrating Gender and Nutrition within Agricultural Extension Services

Activity Sheet
August 2016

Who Has Power and Control?

Time: 60 - 90 minutes

Materials Needed:

- Flipchart with activity title and objectives listed
- Markers or crayons
- 50-60 sheets of paper
- Sticky wall, if available
- Masking/scotch tape



Introduction

Power can be defined as the degree of control over things and people. Being powerful means people are in a position to make decisions, control resources, and direct what others do. Analyzing what gives people power is a first step in addressing gender inequalities within the family and society. Different degrees of power determine how men and women view their own capacities and the capacities of their partner, the level they are allowed to participate in decision making, and the extent they can control their own lives.

Objectives

- ✓ To explore factors that give people power.
- ✓ To analyze the power dynamics and how power can shift and change within a “typical” rural household.

Steps

- 1) Review title of activity, objectives, and brief introduction. **(5 min)**
- 2) With no talking ask the participants to line up by the letter of their first name. Divide the line into **four** groups of approximately the same size. **(5 min)**
- 3) Give each group sheets of paper and colored markers or crayons. Ask each group to draw and label different members of a typical rural household on separate sheets of paper: mother, father, son, daughter, aunt, uncle, grandmother, grandfather, mother-in-law, father-in-law, unmarried brother. **(20 min)**
- 4) Invite small groups to display their drawings on the wall or floor by degree of power: from the **most** powerful to the **least** powerful. If some household members are perceived to have the same degree of power, they can place the drawings next to each other. **(15 min)**
- 5) Gather participants into a circle around the drawings and ask the following questions. **(30 min)**
 - *What makes one person more powerful than others? Examples: property owner, gender, position in household, level of education, wealth, social status, physical strength, moral integrity.*
 - *In what ways can power shift among family members? (e.g., a husband dies or moves away for work; a wife begins earning money)*
 - *What are the implications of one person holding all the power in the household? In what ways can power be shared within the household?*

Now What?

Putting the activity into practice. Ask the participants to provide ideas and examples of how they see themselves using this activity in the field...how they would adapt and adjust the exercise depending on a specific audience.

For example:

- If no sticky wall, place the pictures on the floor or ground.
- Role play the levels of power instead of drawing pictures.
- Use chalk or colored powder to draw pictures if no crayons/markers or paper.
- Use different size pebbles or stones to indicate levels of power within a household.
- Have men and women in separate groups draw and rank the pictures of power and then compare.

(10 min)

References:

Helen Keller International (2015). Nurturing Connections. Part 2: Exercising Power; Activity 3: What is Assertiveness?

www.fsnnetwork.org/sites/default/files/TOPS_Nurturing%20Connections_English_FINAL_P.pdf

USAID Integrating Gender and Nutrition into Agricultural Extension Systems (INGENAES) (2015). Integrating Gender and Nutrition with Agricultural Extension Services Facilitator's Guide. <http://ingenaes.illinois.edu/wp-content/uploads/Gender-and-Nutrition-Facilitators-Guide.pdf>



Designed to be shared.

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www.ingenaes.illinois.edu/library

Prepared by Jan Henderson
University of Illinois at Urbana-Champaign

Photo Credits: Jan Henderson & Andrea Bohn

Integrating Gender and Nutrition within Agricultural Extension Services

Activity Sheet
August 2016

Power Over v. Power With

Time: 1.5 hours

Materials Needed:

- Flipchart with activity title and objectives listed
- Flipchart paper – one for each small group
- Markers or crayons
- Masking/scotch tape
- Flipchart with “Power Over” and “Power With” descriptors listed in two columns



Introduction

There are different types of power. “Power Over” has numerous negative associations for people, including force, abuse, discrimination, oppression. In many households, the person who has the resources and makes most of the decisions is the man: the man has power over the other family members who are often excluded from participating in decision-making and from access to healthy food, healthcare, land, and decisions about the children. “Power With” is power that comes from collective strength. “Power With” is based on identifying what people have in common, despite their differences and seeking ways to act together. If people give each other mutual support, solidarity, and recognition they can work together more effectively. Identifying and understanding different types of power are important if extension providers are to transform the lives of the men and women they work with; helping women and men to recognize their own abilities and power to act in collective and equitable ways.

Objectives

- ✓ To define and illustrate two types of power.
- ✓ To examine the challenges of discussing issues of power with men and women.
- ✓ To identify ways of moving from “Power Over” to “Power With”

Steps

- 1) Review title of activity and objectives. Introduce the session by briefly sharing the flipchart that lists the words describing “Power Over” and “Power With.” Invite participants to add descriptors. Then ask participants: “Where did you see examples of “Power Over” and “Power With” in the role plays from the previous exercise?” (10 min)

Power OVER

Force
Abuse
Discrimination
Domination
Oppression
Exclusion
Control

Power WITH

Mutual support
Solidarity
Recognition
Sharing
Inclusion
Cooperation
Respect
Trust
Coordination



2) Ask participants to return to their role play groups from the activity: *Exploring Gender Stereotypes* or form new groups by lining up by the letter of their last name. Form small groups of four to five members. **(5 min)**

3) Ask small groups to draw symbols illustrating “Power Over” and “Power With” by providing the following instructions. **(30 min)**

As extension providers, you are planning an activity for women and men farmers describing two types of power: power over and power with. Create a visual you will use to illustrate the differences between the two types of power using only symbols that represent power. For example, raised fist v. two hands shaking.

4) Bring the small groups back together to briefly present their drawings. **(10 min)**

5) After all presentations, ask the whole group the following questions. **(15 min)**

Which symbols best represent the two types of power for you?

Why is talking with men and women about issues of power challenging?

In what ways can you help the people/groups you work with move from “Power Over” to “Power With” within their household and community?

Now What?

Putting the activity into practice. Ask the participants to provide ideas and examples of how they see themselves using this activity in the field, such as how they would adapt and adjust the exercise depending on a specific audience. For example:

Work with local political parties, religious and community leaders, and children’s clubs to discuss issues of power in the family and community. Use facial expressions and body language to demonstrate the two types of power.

Use simpler language to describe the two types of power in the local language. **(10 min)**

References:

Helen Keller International (2015). *Nurturing Connections. Part 2: Exercising Power; Activity 3: What is Assertiveness?* www.fsnnetwork.org/sites/default/files/TOPS_Nurturing%20Connections_English_FINAL_P.pdf

USAID Integrating Gender and Nutrition into Agricultural Extension Systems (INGENAES) (2015). *Integrating Gender and Nutrition with Agricultural Extension Services Facilitator’s Guide.* <http://ingenaes.illinois.edu/wp-content/uploads/Gender-and-Nutrition-Facilitators-Guide.pdf>



Handout 4.1 Four skills for improving empathy

1. Ability to Read Emotion

- Pay close attention to: – Words spoken – Verbal tone – Facial expressions – Body language

2. Ability to Appropriately Express Emotions

- Use “I” statements, not “you” statements. For example: “I feel worried that you haven’t been coming to the clinic,” rather than “You didn’t come to the clinic.”
- Pay attention to and adjust your nonverbal expressions when interacting with participants. This can include things such as crossed arms or a bored/upset facial expression, based on the cultural norms of the area.
- Recognize negative emotions and use control methods: – Take a deep breath and breathe slowly. – When you know your advice will create difficulties for participants, begin with an empathetic statement that shows you understand their feelings. Then explain why the change you are suggesting is important. For example: “I realize it’s hard to walk three kilometers to the clinic. I can understand why you would rather just go to the corner store. But it’s important that you get the medicine at the clinic, because the corner store medicine doesn’t work.” – Leave the situation, if necessary. For example, if you feel angry and think you will not be able to express your emotions appropriately at that moment, walk away.

3. Accept Differences and Show Respect

- Remember that you are trying to change the behavior, not the person.
- Explore with people how behavior change is possible while accepting differences of opinion or belief.
- Ask questions to understand what could encourage people to change their behavior.

4. Ability to Listen Effectively

- Use listening and rephrasing skills (e.g., restate or summarize in your own words what you have heard). For example: “So I want to make sure I understand. You are feeling frustrated about this because you don’t have enough time”.

Sources used in this handout:

- The FSN Network and CORE Group. 2015. Make Me a Change Agent: A Multisectoral SBC Resource for Community Workers and Field Staff. Washington, DC: The TOPS Program.
https://coregroup.org/wp-content/uploads/media-backup/documents/Resources/Tools/MMCA_English_Final.pdf

Handout 4.2 Showing respect

1. Get to know the people you are working with.
 - Learn the names of the people you are working with and get to know the individual members of your team, members of the community, and family members. Allow them to get to know you as well.
 - Always call people by their name or their respectful title.
 - Learn about each family's life and show your understanding of their difficulties and challenges.
2. Practice good verbal and nonverbal communication skills.
 - Greet people in a culturally appropriate way.
 - If it is normal for this culture, look at people when you speak with them.
 - Listen carefully and thoughtfully.
 - If appropriate and safe, communicate with people one-on-one (not only in large groups).
3. Actively listen to others.
 - Create a safe and open environment to encourage people to share their ideas and opinions.
 - Give people a chance to discover their answers and insights.
 - Ask open-ended questions about what people already know about the topic you are discussing.
4. Create an environment in which people can be themselves without feeling judged.
 - Show that you understand and appreciate people's knowledge and the positive, healthy behaviors they already are using.
 - When sharing new information, find out what people already know about the topic before adding information.
5. Remain humble.
 - Encourage people to ask questions and answer these questions to the best of your ability.
 - Acknowledge when you do not have an answer for a situation.
 - If you do not know the answer to a question, say that you do not know but will find out.

Sources used in this handout

- The FSN Network and CORE Group. 2015. Make Me a Change Agent: A Multisectoral SBC Resource for Community Workers and Field Staff. Washington, DC: The TOPS Program. https://coregroup.org/wp-content/uploads/media-backup/documents/Resources/Tools/MMCA_English_Final.pdf

Handout 4.3 Iceberg of conflict



Source: *Resolving Conflicts at Work: A Complete Guide for Everyone on the Job* by Kenneth Cloke & Joan Goldsmith (2000, p. 114)

Handout 4.4 Factors affecting conflict

Factors Affecting Conflict

Directions: Write "*Conflict*" in the center of the Venn diagram. Select three factors that affect conflict and write these words in the three large circles. Add descriptions how the factors can vary. Example: If Gender is a factor, descriptors could be female and male. Explain how the factors interact where the circles cross over each other and when they converge in the middle.

Patriarchy and Conflict (True or False)

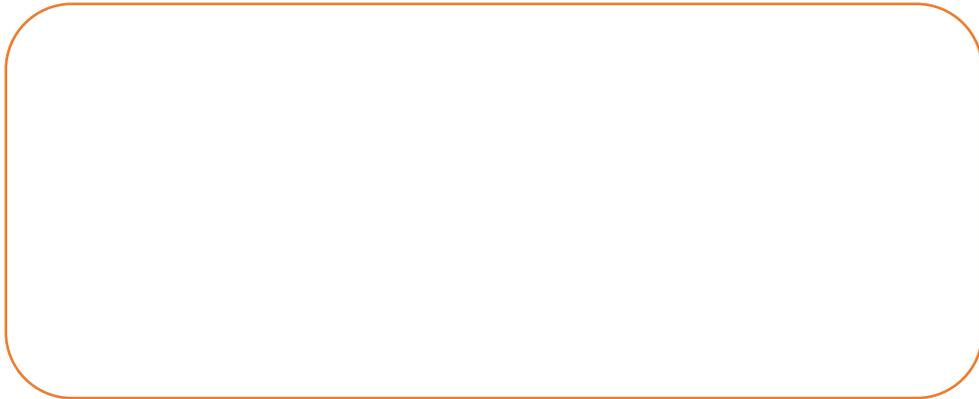
- At societal level, patriarchy is characterized by historic discrimination and injustice reproduced in institutions and ideologies.
- Assumptions about male superiority pervade society.
- Life experiences on which claims of dominant ideologies have been founded have been the experiences of men, not women.
- Patriarchy controls reality.
- Women and men are socialized within rigid gender expectations.
- Institutions such as the church, the family, and the law reproduce these biases and expectations in norms, rules, and laws.
- Women have historically been subjugated politically, economically, and culturally.
- Institutional system of oppression and injustice directly creates disputes, sustains, and escalates other conflicts, and invades all other human interactions.

Source: <https://www.mediate.com/articles/birkhoff.cfm>

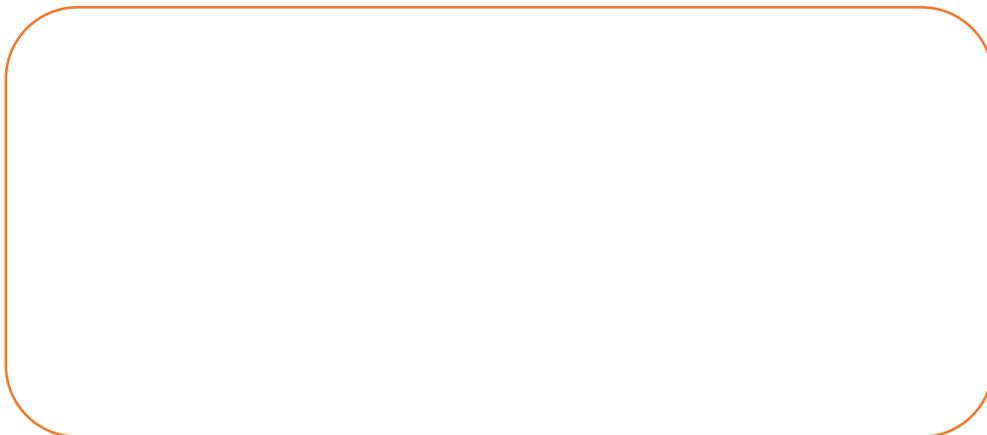
Handout 4.5 Conflict resolution strategies

Potential Conflict: Several community members are spreading rumors about the high cost of vaccinations and insisting the vaccines do not work.

As a VAHW, when might you want to use _____ as an option to address and resolve the conflict?



As a VAHW, when might you not want to use _____ as an option to address and resolve the conflict?



Handout 5.1 Activity identifying agri-vetpreneurship ideas with VAHWs

- *List the type of activities local VAHWs are engaged in in the veterinary service delivery in Nepal. Are there differences in their activities from one district to another? Why?*

Answer:

- *Which activity or activities do you think VAHWs can use to start a business? What do they need to start a business?*

Answer:

- *Are there differences between male and female VAHWs in doing business? Why?*

Answer:

- *Are there caste/ethnic differences what male and female VAHWs need to consider in starting business? Why?*

Answer:

- *Do you see a role for yourself in helping VAHWs to start a business? What is it?*

Answer:

Handout 5.2 Identifying characteristics of male and female entrepreneurs

Complete this handout by indicating your agreement, disagreement or neutrality for each statement and be prepared to explain why.

1.	Disagree	Neutral	Agree
Men are focused more on economy and cost of their business venture.			
Women are focused more on making social contribution and quality in the communities.			

2.	Disagree	Neutral	Agree
Men are more willing to take a financial risk.			
Women are more conservative when it comes to financial risk.			

3.	Disagree	Neutral	Agree
Men are task oriented and focus on business growth.			
Women focus more on good relationships with their clients.			

Handout 5.3. Images of Female Entrepreneurs

Print these images beforehand (make multiple copies of each).

Image 1



Credit: Logged On Foundation Ltd

Image 2



Credit: Taylor Pittman

Image 3



Credit: Heifer International

Handout 5.4 Case study "The capacity to imaging - Business Planning"

(Adapted from *World Agroforestry Centre. (2014). Farmers Training: Entrepreneurship Manual. Pages 7-8* <https://www.worldagroforestry.org/sites/default/files/Entrepreneurship%20manual%20NEW.pdf>)

Rita, a widow, owned five goats and two cattle. Her husband was a VAHW when he was alive. He used to treat all their household livestock. When the goats started to get sick, she thought of becoming a VAHW to treat her animals and offer the service to others in the community. She went to the Livestock Division Center to inquire what other VAHWs were doing, and for how much. She noticed that most of the people were coming to an only VAHW in the area to purchase dewormers, and treatments for livestock. She recalled that when her husband was alive, he was recruited as a PPR vaccinator. She thought of doing the same and perhaps offering her service at a lower price, than that an only VAHW in the area.

Because she was just starting her VAHW business a new, she decided it would be best if she worked with the more experienced VAHW. Then she would learn a lot. But if she did that, how would people know she was starting a VAHW business? So, she went to community elders and requested their support to serve women and other livestock keepers in the area. She prepared a brief write up on how her VAHW business would be beneficial to the community and women, and how it was important for her own family.

She further asked the community elders to allow her to spread the word to others in the community. She did the same thing at the local temple asking the religious leader to recommend her work to their members. She did not stop there; she offered VAHW services to all her friends.

Lastly, she looked around for someone who might be able to help her if her business was successful. She would open an agro-vet store on her own to start with, because that would save her paying a salary, but she hoped very soon she could afford help, and she would need a friendly person who would be good with the customers to help her.

Business Skill

Before you start your business, you need to make a plan. A good business plan is a product of a homework done well. There are basic questions that need to be answered before your start.

Answer these basic questions:

1. What does Rita want to do or sell?
2. Who will buy her product or service?
3. How much will it cost her to offer her service?
4. What price will she charge her customers?
5. Where will she sell her service or product?
6. How will people know she is in business so they can buy her service?
7. What else would you do if you were Rita to strengthen your VAHW business?

Handout 5.5 The SWOT analysis



In the space provided below, list the strengths, weaknesses, opportunities, and threats for your business. Once you have listed all the items you can think of, prioritize each category.

Strengths:

Weaknesses:

Opportunities:

Threats:

Handout 6.1 Use of Flipbook

The use of flipbook in the community setting is better facilitated when illustrations and storytelling are accompanied with some brain teasers/ attitude change questions. As community participants listen to your reading (or storytelling), conduct the following activity after you read the flipbook once. On the second read, pause after a certain set of pages and discuss.

1st set of illustrations:

- What do you see in the pictures?
- Apart from the above signs, what other signs show that the goats are sick.
- Where can we report if our goats have such signs?

2nd set of illustrations:

- What did Rita hear from the radio?
- What other sources do you receive information from?
- How does this happen in our community?
- Do women here decide to take their goats for vaccination?

3rd set of illustrations:

- Why did Raju shout at Rita?
- Does it happen in your community often?
- If so, how can we encourage community members to appreciate women's role in taking goats for vaccination?

4th set of illustrations:

- Do we have people who do not trust vaccination in our communities?
- Why is it important to vaccinate our animals?
- What are the benefits of vaccinating animals?

At the end, as a VAHW finalize this activity with the following key take-away messages:

- Please take your goats and sheep, and other animals for vaccination.
- Vaccinated animals are healthy and fetch higher prices in the market.
- It is the responsibility of both men and women to take goats and other animals for vaccination.
- Men, women, and elderly children should share household chores equally for better quality life.
- All household members including men and women should discuss issues of vaccinating animals together.

Handout 6.2 ORID Reflection

- **What** – happened? (**O**bjective Questions)
 - *What images from the training are most memorable?*
- **Gut** – how do you feel about what happened? (**R**eflective Questions)
 - *What was a high point of the training?*
 - *A low point?*
- **So, what** – difference does this make? (**I**nterpretive Questions)
 - *What did you learn about your knowledge and skill levels regarding using GITA and GESI considerations in your work with VAHWs?*
- **Now What** – do we do? (**D**ecisional Questions)
 - *What will you do differently in your interactions and work with VAHWs because of participating in the training?*

Power Point Presentations

- CAHW curriculum Topic 3 - Animal production and nutrition
- CAHW curriculum Topic 6 - Health and unhealthy animals
- CAHW curriculum Topic 7 - Restraining animals
- CAHW curriculum - Topic 10 Diseases of cattle, goats and sheep
- CAHW curriculum Topic 20 - Records and record keeping I (introduction)
- CAHW curriculum Topic 21 - Records and record keeping II (clinical records)
- CAHW curriculum Topic 22 - Records and record keeping III (notifiable and TADs)
- CAHW curriculum Topic 23 - Diseases reporting
- CAHW curriculum Topic 25 – Vaccination
- Supplemental slides - Animal husbandry practices for shoats
- Supplemental slides - GITA in shoat nutrition and pastoralism
- Supplemental slides - Intro to participatory epidemiology
- Supplemental slides - Shoat nutrition
- Supplemental slides - Shoat restraining
- Supplemental slides - Sick animals and treatment basics
- Supplemental slides - Weight and age estimation in animals
- Supplemental slides -Types of power



Nuyok

Topic 3: Animal production and nutrition

ADAPTED FROM

A manual for the primary animal health care worker

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome, 1994

Heifer International CAHW Manual

Dilip P Bhandari, BVSc & AH, MVSc

July 2009

Where There is No Animal Doctor

A Publication of the Christian Veterinary Mission

Maureen Birmingham and Peter Quesenberry

Objective

- Participants to learn/appreciate the importance of nutrition to animal health and well being
- Be aware of other sources of feeds are available for livestock except natural pastures, feed preservation and how to manage grazing in their communities

Learning outcomes

- various sources of feeds for livestock in Karamoja and the effect of climatic changes on them.
- Describe the current livestock feeding system in Karamoja and their **advantages and disadvantages**
- List alternative types of feeds, sources of feeds and approaches for feeding livestock.
- Explain the process of preparing and storage of animal feeds.
- List the various feed supplements for livestock in Karamoja

Significance of feeding livestock (in relation to production)

- Nutrition determines how animals grow to produce a good quantity and quality of food for people.
- If an animal does not get enough nutrients in its feed
 - loses weight
 - Failure to reproduce/low fertility
 - Weakened immune system/increased disease
 - milk production drops
 - production of young is affected/lack of growth

Livestock feeding approaches

- Green growing grass contains all the nutrients, but in the dry season grass contains little protein and energy and few vitamins.
- Give additional feed in dry season to prevent weight loss, maintain high milk production, growth and reproduction.
- It may also become necessary to give minerals to the animal.

Livestock feeding approaches

- Green grass can be harvested and dried for hay production to sustain milk production and growth during dry season
- Harvesting also promotes new growth which is better feed than older grass
- Burning may promote new growth but also promotes soil erosion and loss of nutrients

Types and sources of animal feeds

- **Roughage** is bulky and low in energy-giving carbohydrates. Examples of such feeds are grasses and other browse species
- Crop residues: maize stalks, sorghum, sweet potato leaves, other left over crop
- **Concentrates** are feeds which are rich in proteins and carbohydrates, e.g. grain crops, brewers grains, acacia pods
- The large stomach of the ruminant with its four compartments means that it can live mainly on roughage.
- Animals with single stomachs need more concentrates than ruminants.

6 Major Nutrients

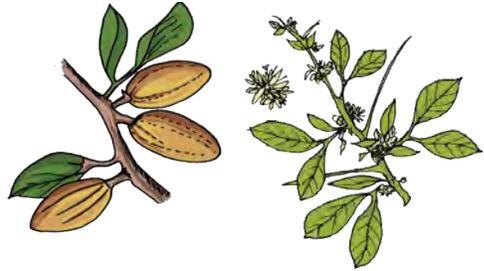
- Water
- Carbohydrates/fats (Energy)
- Protein
- vitamins
- minerals

Types and sources of animal feeds

Nutrients	Sources
Carbohydrates	maize, wheat, rice, oat, sorghum, millet, grasses
Protein	Beans, clover, legumes/pod bearing plant, brewers grains
Fat	Sunflower, groundnut cake, cotton seed

Carbohydrates and fats

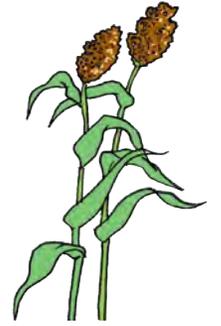
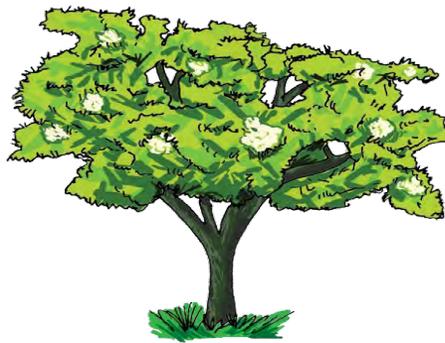
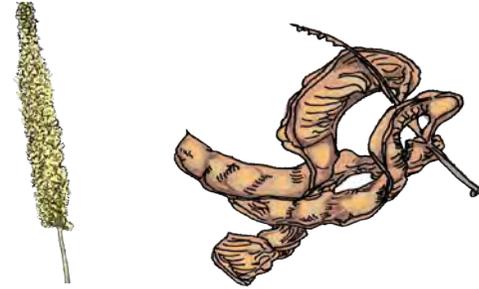
desert date
(Ekorete)



umbrella
thorn



white acacia
(Ngitit/Edurukoit)



sorghum



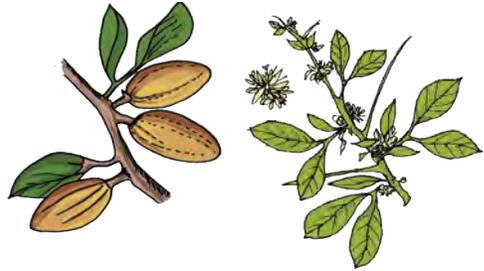
bulhum millet



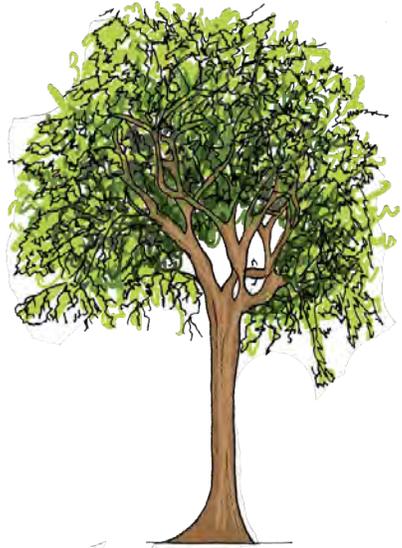
millet

Carbohydrates and fats

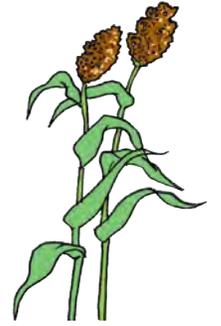
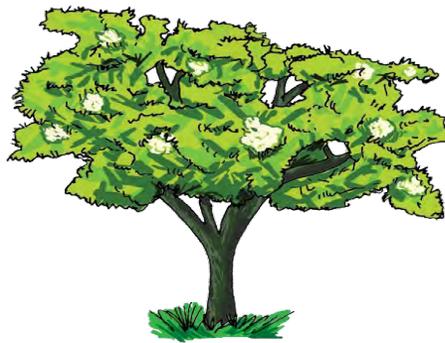
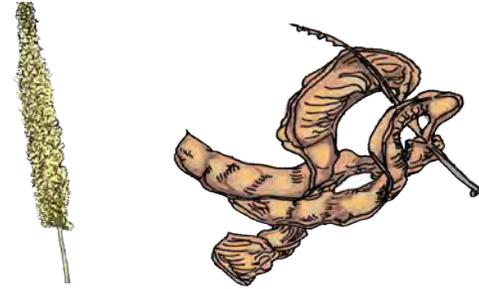
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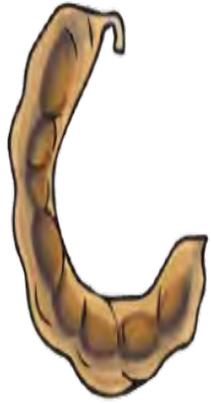
Carbohydrates and fats



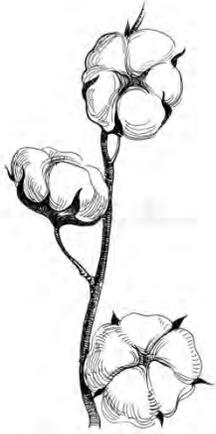
Good foods/food groups

Protein and Water

Protein

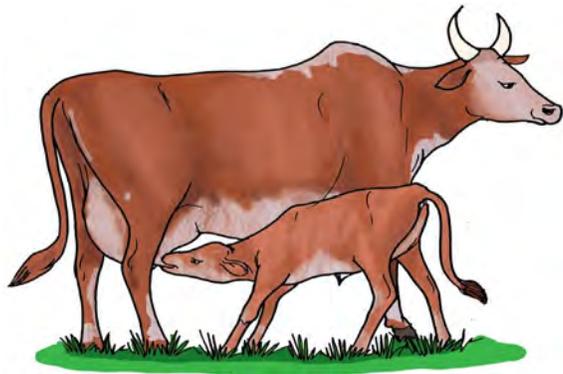
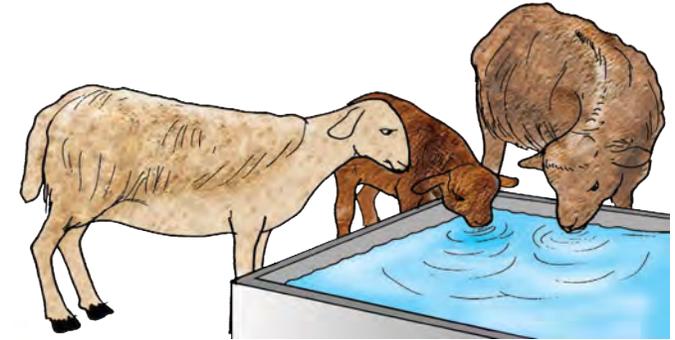


Acacia Pod



Cotton Seed

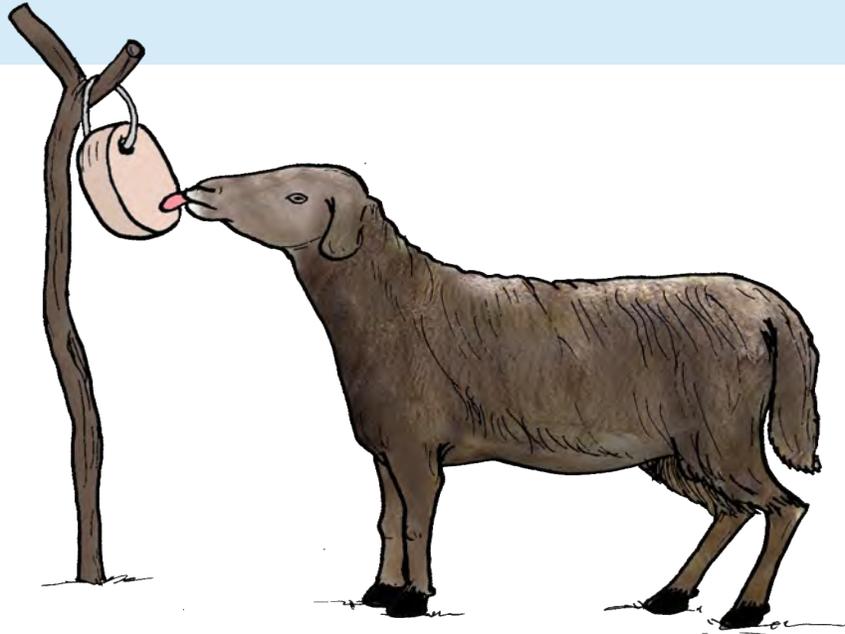
Water



Water Sources and Protection

- Water should be available in adlib (always enough) for animals
- Water sources (dams, valley tanks, seasonal rivers, swamps, boreholes)
- Protecting water sources from over use and contamination is key
- Water sources should be fenced esp. dams, valley tanks, boreholes
- Clean around water sources

Minerals



Protein and mineral supplements

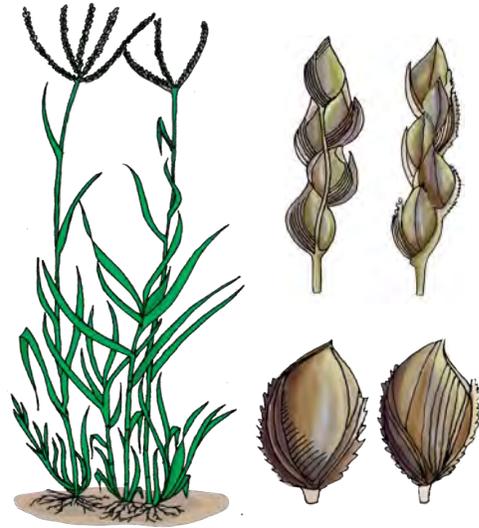
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Vitamins



thatching grass



star grass



red oat grass

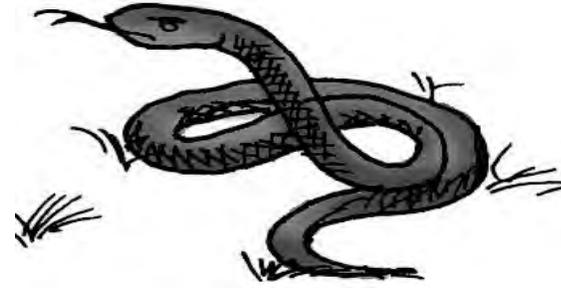


fruits and vegetables

Poisons



Sorghum
(when excess grain or fresh leaves are eaten)



Snake bites



Insect stings (from bees, wasps and scorpions)



Leucaena leaves
(when eaten in excess)



**Lantana
Camara**

Other feeds

Grasses	Legumes	fodder	Grass/legume mixtures
Chloris gayana (Rhodes grass)	Desmodium intortum (Green Desmodium)	Pennisetum purpureum	Panicum maximum
Brachiaria ruziziensis (Ruzi grass)	Desmodium uncinatum (Silver leaf desmodium)	Leucaena leucocephala	Chloris gayana
Pennisetum clandestinum (Kikuyu grass)	Neonotonia wightii (Neonotonia)	Dolichos lablab (Lablab bean)	Brachiaria ruziziensis
	Macroptilium atropurpureum (Siratro)	Medicago sativa (Lucerne/Alfalfa)	Desmodium uncinatum
	Stylosanthes guyanensis (Stylo)		Desmodium intortum

Other fodder crops

- Napier grass
- Sweet potato vines
- Fodder sorghum

Effects of weather in livestock feed resources

- In the dry season, grass becomes scarce and is low in nutrients. When grass is plentiful in the wet growing season, you can cut grass and store it until it is needed in the dry season. The grass can be kept as hay or silage.
- Hay is dried grass. The best hay is prepared before the seed head ruptures. Cut the grass and leave it to dry in the sun for several days turning it over to make sure it is completely dry when it can be stored until needed. Making hay is challenging during the rainy season; make hay during dry days
- Silage is grass or other plants which are cut while green and stored without air. To make silage you will need an airtight container or pit to store it in.
- Dry straw and stovers can also be ensilaged by adding molasses and urea solution to increase the energy and protein component, respectively, hence the feed value

Rangeland management

- Efficient pasture management results in high yields of good-quality pasture that can be fed to cattle for high milk production.
- Grazing should be controlled to avoid over grazing of some areas
- There should be plans to rotate grazing at the rangelands
- Animals graze in different areas during different seasons of the year

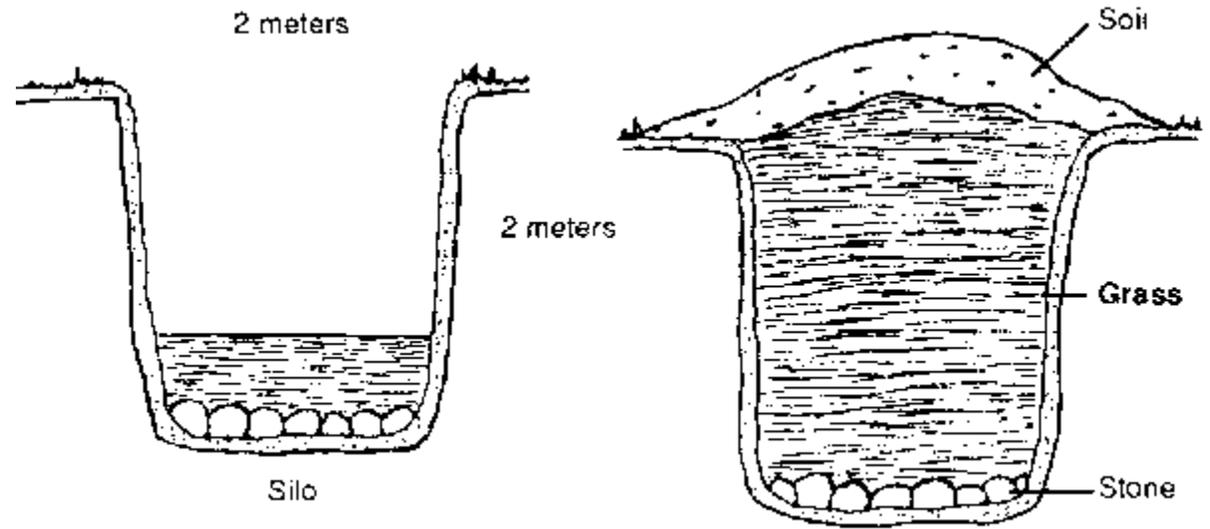
Rangeland mgt

- Pasture establishment can be by direct sowing, under sowing or over sowing.
- During direct sowing, the pasture grasses are established without any cover crop, usually recommended as early as possible in the rainy season.
- Over sowing is the introduction of improved pasture species (grasses or legumes) to a natural pasture. Eg chloris gayana, centrosema spp
- This is the easiest and most costefficient strategy for improving natural pasture.
- Although both grasses and legumes may be over sown, legumes are more suitable
- Grasses do not establish readily, especially on soils that are not loose.
- Over sowing should be done in areas where soils are light and loose.

Grazing mgt

- Influenced by Stocking rate(number of animals/hectare to provide adequate dry-matter forage for a specified length of time.
- Stocking rate influences animal performance, pasture recovery, long-term pasture production and long-term pasture species composition.
- Stocking rates should represent a balance between grazing pressure (pasture demand) and carrying capacity (pasture supply).
- The main goal should be to optimize both animal and pasture production over the long term, as opposed to maximizing only one or the other.
- In general, improved pastures can support higher stocking rates than native or unimproved pastures.

Silage Making



Methods of feed storage

- Hay and Grains must be stored dry or they will mold
 - Keep off ground-plastic or raised floor
 - Keep safe from rain
 - Feed granary/hay barn
 - Standing hay

Hay making in North Karamoja (courtesy FAO)



Feed supplements (making salt lick in Karamoja-source FAO)

- Salt licks
- Mineral blocks
- Mineral cake





Nuyok

Topic 6: Healthy and unhealthy animals

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Learning objective

- ❑ To get acquainted with the different external features of a healthy animal and how they function

Learning outcome

- After studying this session you should be to
 - List the characteristics of a healthy animal.
 - Recognize the signs of ill health .
 - Outline the differences between a healthy and a sick animal.
 - Describe the effects of sickness on an animal, its production and its owner.

Healthy and unhealthy animals

- You should be able to distinguish between the sick and the healthy animal. Identifying the signs of ill health in livestock will mean that you can:
 - Give first aid and quickly refer the animal for treatment
 - Prevent the spread of disease to other animals
 - Recognize any problems in animals offered for sale
 - Recognize any signs of health problems in animals to be used for breeding

Appearance and behaviors of a healthy animal

- What are some traits, attitudes and looks of a healthy animal?
- Write on a flip chart your ideas

Appearance and behaviors of a healthy animal

- The healthy animal is alert and aware of its surroundings.
- It is active and holds its head up watching what is happening around it.
- It should stand on all of its feet.
- The separation of an animal from the others in its group is often a sign of a health problem.
- An animal which is not interested in its surroundings and does not want to move has health problems.
- An animal that has no appetite is not healthy

Appearance and behaviors of a healthy animal

□ Movement (gait)

- The healthy animal will walk easily and steadily with all of its feet taking its weight.
- Steps should be regular.
- Irregular movement results from pain in the feet or limbs



Appearance and behaviors of a healthy animal

□ Eyes

- The eyes should be bright and alert with no tears or any discharge at the corners.



Appearance and behaviors of a healthy animal

☐ Ears

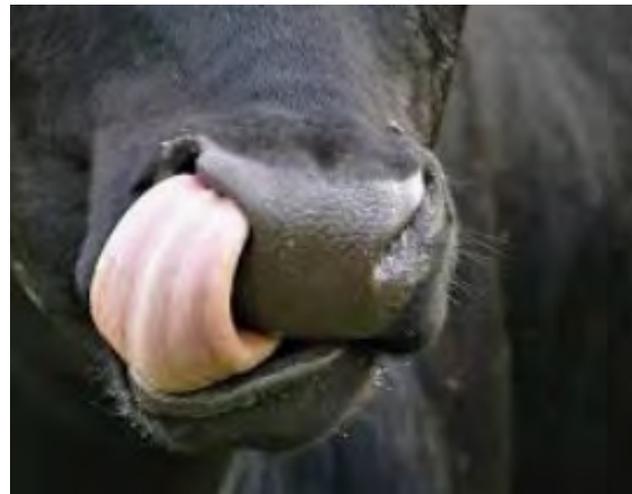
- Most animals have erect ears which move in the direction of any sound. Certain goat breeds have large and long, floppy ears
- Ear movements will also be quick to get rid of flies.
- Body temperature of the pig can be checked by touching the ear when an unusually high temperature will be noticed.



Appearance and behaviors of a healthy animal

☐ Nose and Muzzle

- The nose should be clean with no discharge.
- In cattle the muzzle should be moist not dry.
- In sheep and goats the nose should be cool and dry.
- Healthy animals frequently lick their noses with their tongues.



Appearance and behaviors of a healthy animal

□ Mouth

- There should be no saliva dripping from the mouth.
- If chewing is slow or incomplete there must be a problem with the teeth.



Appearance and behaviors of a healthy animal

□ The coat

- In short-haired animals, e.g. goat and cattle, the hair or coat of the healthy animal will be smooth and shiny.
- Healthy cattle and their calves lick their coat and the lick marks will show.



Appearance and behaviors of a healthy animal

☐ Behaviour

- Eating well (no appetite is one of the first signs of illness)

☐ Breathing

- Breathing should be smooth and regular at rest.
- Remember that movement and hot weather will increase the rate of breathing. If the animal is resting in the shade it should be difficult to notice the chest moving as it breathes.

General signs of sickness in animals

- Rough coat
- Dull eyes
- Excessive saliva
- Sores
- Lameness
- Irregular breathing
- Diarrhea/constipation
- Abnormal temperature (high/low)
- If an animal keeps looking at its flanks or kicks at its belly it has a pain in the stomach.

The appearance and behaviors of various animal species during sickness

- Lameness in ruminants
- Bloat in ruminants
- Abnormal color in urine
- Molting in poultry

Other examples?

- Aggressiveness and paralysis in rabies
- Pecking of feathers
- Cannibalism (eating of other birds in the same flock)
- Eating of own eggs in poultry

Healthy Animal	Sick Animal
Normal feeding	Decrease in feed intake
Shiny coat	Dull or rough coat
Sociable and active	Not very active and isolated
Bright and clear eyes	Runny eyes
Well-fleshed	Weight loss
Normal body temperature	Lower or higher body temperature
Strong legs and feet	Lameness, swollen joints
Normal gums	Anemic (pale gums)
Firm stool	Diarrhea/ constipation

Defining the term disease

□ Disease is therefore a change from the normal state



Nuyok

Topic 7: Restraint of animals

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Restraint of animals

- ❑ Handling animals may lead to stress and injuries especially if the animals are not used to being handled and the handler is not experienced.
- ❑ There are different techniques used to restrain and cast (throw) these large ruminants

Learning objective

- To be able to properly handle the animal with minimal stress and to avoid harm to the animal and the handler

Learning objectives

- Explain the purposes for restraining animals.
- List the different methods of and materials for restraint of animals.
- Perform restraint of different domestic animals.
- Construct a crush using available local materials.

Purposes of restraint of animals

- Physical examination of animals
- Administration of medicines and vaccines
- For carrying out operations like dehorning, trimming hooves, castration, breeding/AI, sample collection, milking etc
- Safeguarding from harming other animals, humans and crops
- Safety from getting lost /stolen

Methods and equipment used in restraint of animals

□ Methods

- **Humane and safe physical restraint-** the use of manual or mechanical means to limit some or all of an animal's normal voluntary movement for the purposes of examination, collection of samples, drug administration, therapy, or manipulation. Should protect both the animal and handler from harm.
- **Chemical restraint-** the use of drugs to sedate the animal so that clinical procedures may be carried out with minimal stress, pain and discomfort to the animal, anesthetist or clinician.

ONLY DONE BY A TRAINED VET

□ Equipment/materials

- Different size ropes
- Halters
- Wooden logs (Crush)
- Nose Holder/Hand

❑ **Avoid getting the animal excited.** A good animal handler not only understands the psychology of his animals for better animal handling but also ensures his/her own safety.

❑ **Herd instinct:** Farm animals have a tendency to stay together in herds and this is called their herd instinct. Therefore, farm animals become agitated when they are isolated from the herd. If an isolated animal becomes overexcited, it is allowed to go back to the herd.



Precautions when restraining individual cows

Ropes and halters are very useful for handling cattle and moving them

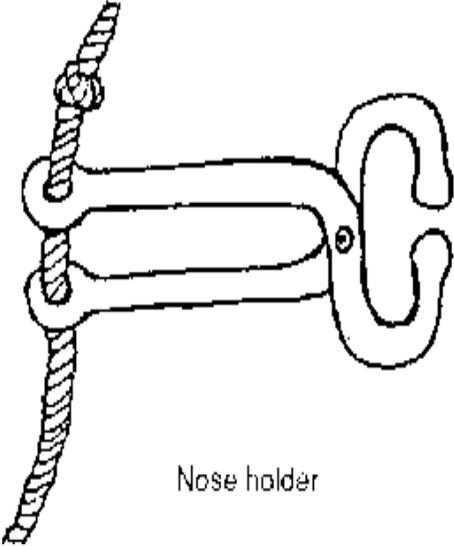
- ❑ Always announce your presence.
 - Cows are generally more nervous than other animals. Approach it from the sides and gently touch it.
- ❑ Cows can kick, consider using a rope.
 - Do not permit noise. Gentle cows can be dangerous while defending their calves and such information should be shared with the visitors and new workers.
- ❑ Special care is required for handling the breeding bulls.
 - The handler should never come in direct contact with a breeding bull.
- ❑ Cattle can be difficult to handle if you force them to act in ways that are not natural for them.
- ❑ Keep small children and strangers away from the animals.

Restraining particular parts of a cow

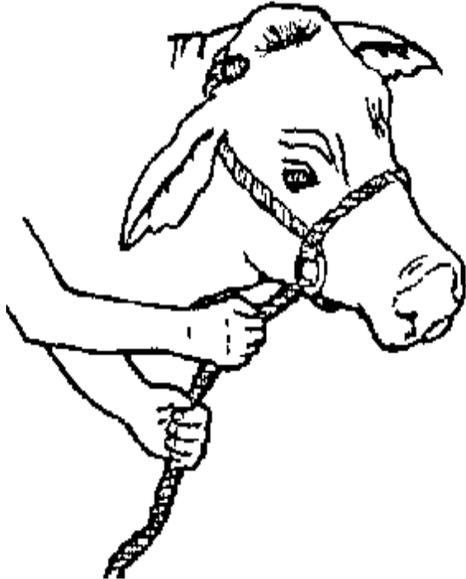
A. Restraining the head region



Restraining the head



Nose holder



How to use restraining materials and equipment

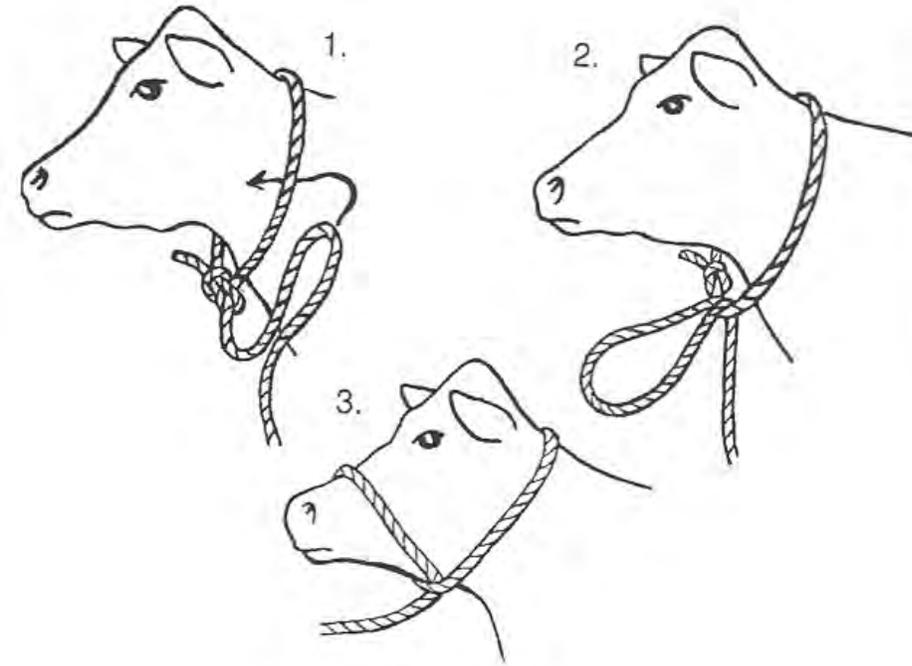
- Rope-Halter

Advantages

- Gentle and easy
- Any type of rope
- Performing small but quick jobs.

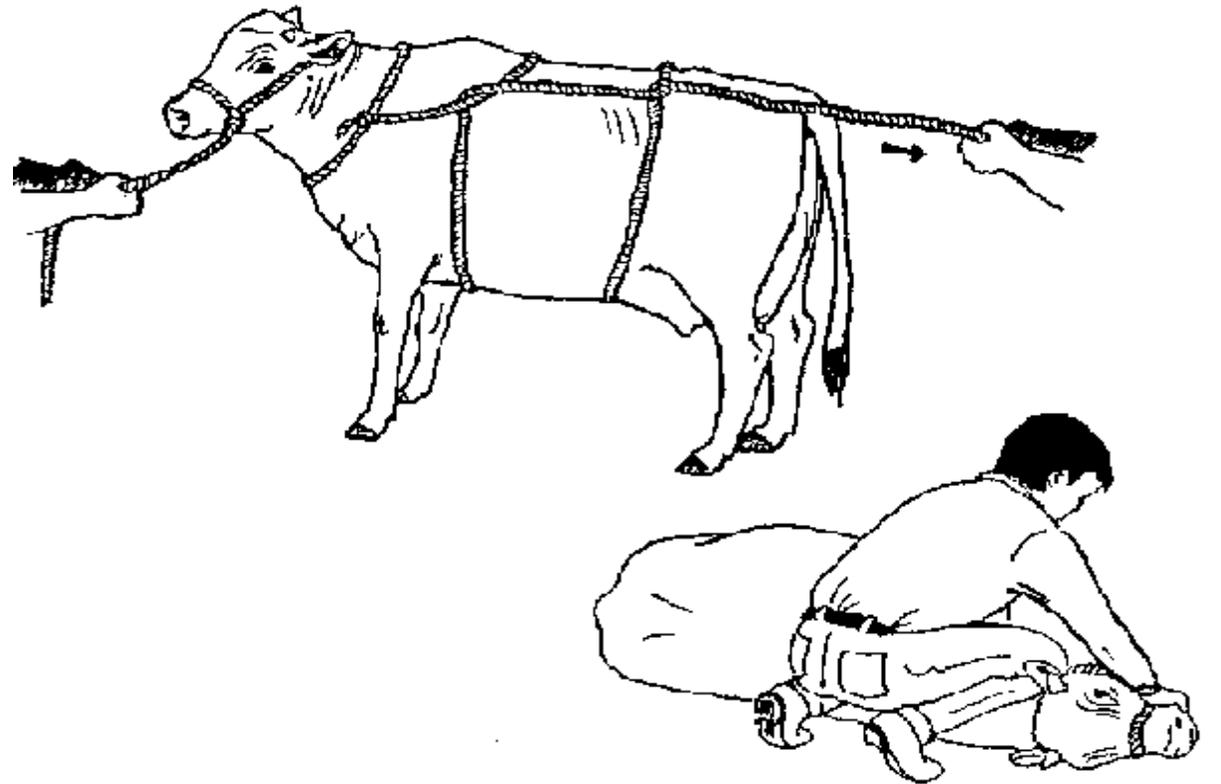
Disadvantages

- Creates uncomfortable pressure on the face



Casting the animal

- Rope-Casting
 - First halter
 - Tie the long rope around
 - Have one person to hold the halter
 - Two pull the rope.
 - When animal collapses immediately put knee on its neck hand on head to prevent rising.
- Tie feet to prevent kicking

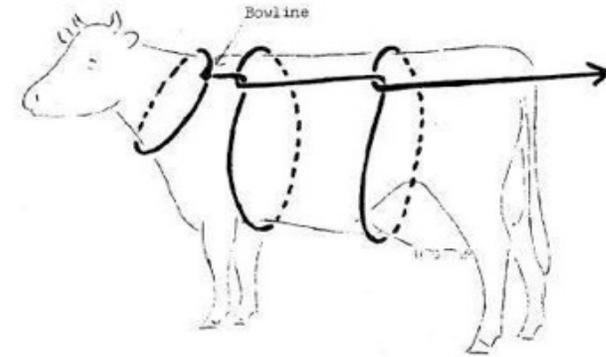


Do not leave the animal down for a long time as bloat may develop.

Casting

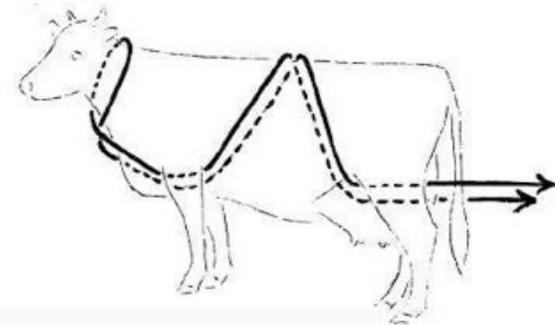
- Crisscross Method
- Relatively easy
- Avoids udder and/or penis of animal
- starts with tying the animal's head by a short rope to a strong post.
 - Long rope is folded in half, place the middle of the rope over the neck of animal.
 - Both ends of the rope crossed under the neck and passed inside the front legs and up over the back again and crossed again.
 - Pass both ends of the rope down to sides of animal between the back legs.
 - Pull both ends of the rope with equal forces for animal to lie down.
 - Securely tied down all the legs as required.

CASTING CATTLE REUFF'S METHOD



ALTERNATIVE METHOD

(Less danger of damage to udder, but otherwise less effective)



About 30 feet of rope required for either method

Restraining the fore legs

- ❑ Raising the foreleg also helps in controlling the movement of the animals and hinder their kicking with the hind leg.



Restraining the hind legs

- Raising of the hind leg off the ground and holding it in that position facilitates examination or treatment of the animal. It is particularly useful for the treatment of hooves



Fig. 1.15: Restraining of hind leg of cattle

The milker's knot

- ❑ Prevents the animal from kicking during examination of udder and teats while milking or examination of the hind region in case of Mastitis and udder swelling.



Fig. 1.16 (b) Milker's knot

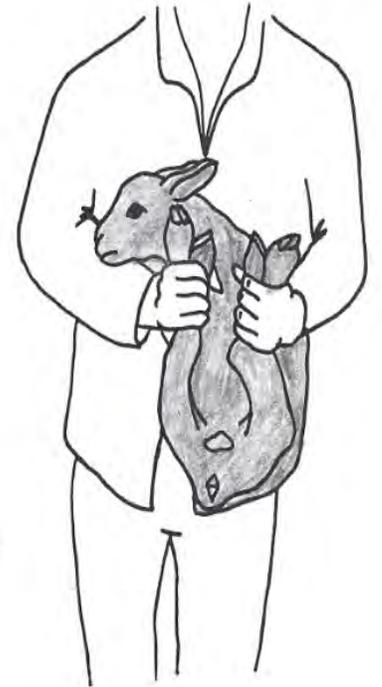
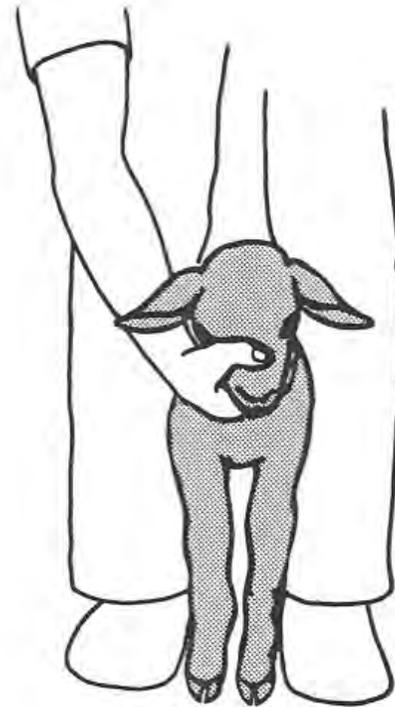
Restraining the tail

- ❑ Restraining of tail is required to distract the cattle's attention from another part of its body on which some operation is being done.



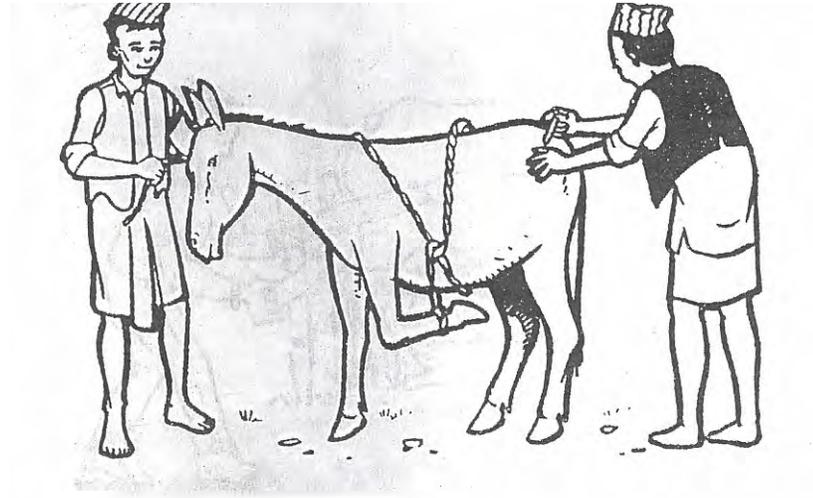
Restraining kids/lambs

- ❑ Sheep and goats can be restrained by trapping them in between your legs
- ❑ The handler also can hold the right front and hind legs in his right hand and the two left legs in his left hand.
- ❑ The head of the kid/lamb is upward and its back is laid against the handler's body.



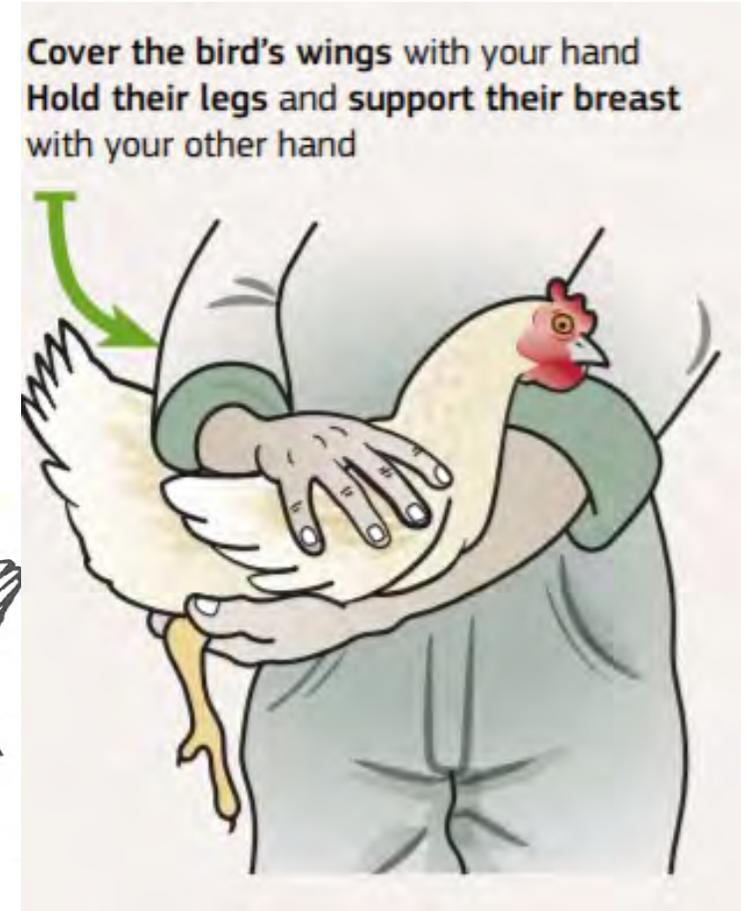
Restraining donkeys

- A horse or donkey can be restrained by tying its front leg just above the foot. In this procedure, one front leg is raised, which prevents the animal from moving.



Restraining birds

- ❑ Chickens and other domestic fowl can be restrained by reaching over the back and holding the wings down.
- ❑ The bird should be picked up and the fingers inserted between the legs while supporting the breast with the other hand
- ❑ Restraining the bird upside down is not ideal, because it may increase its stress level and also cause regurgitation, as well as result in broken bones if bones are brittle from low calcium.
- ❑ The bird should be kept as calm as possible to prevent injury to both the bird and the handler.



Restraining Pigs

- ❑ Snare or rope around muzzle
- ❑ Lift piglets by back legs



Fig 3: Restraining piglet for transportation

3



Fig 5: Preparing a slip knot



Fig 6: Restraining a heavier pig with the help of a rope

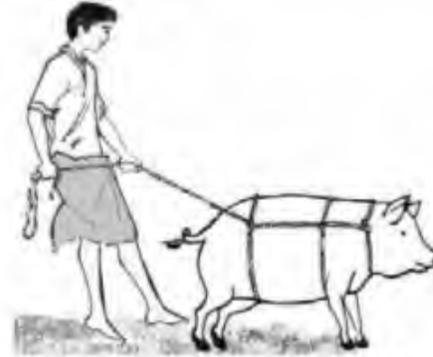


Fig 7: Efforts to restrain a pig by pulling the rope

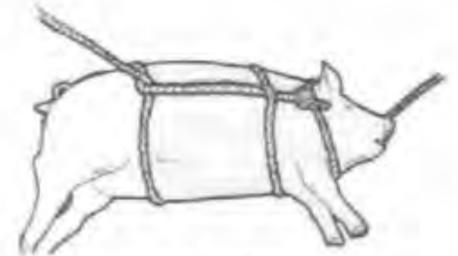


Fig 8: A restrained pig

Caution: Adequate care should be taken for restraining pregnant pigs to avoid any injury to the foetus. ■

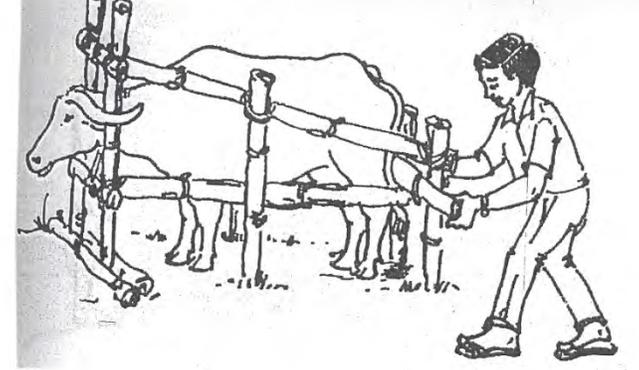
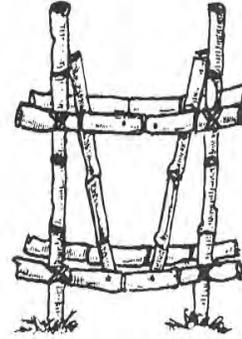


Fig 4: Restraining a heavier pig with the help of a rope and snare

4

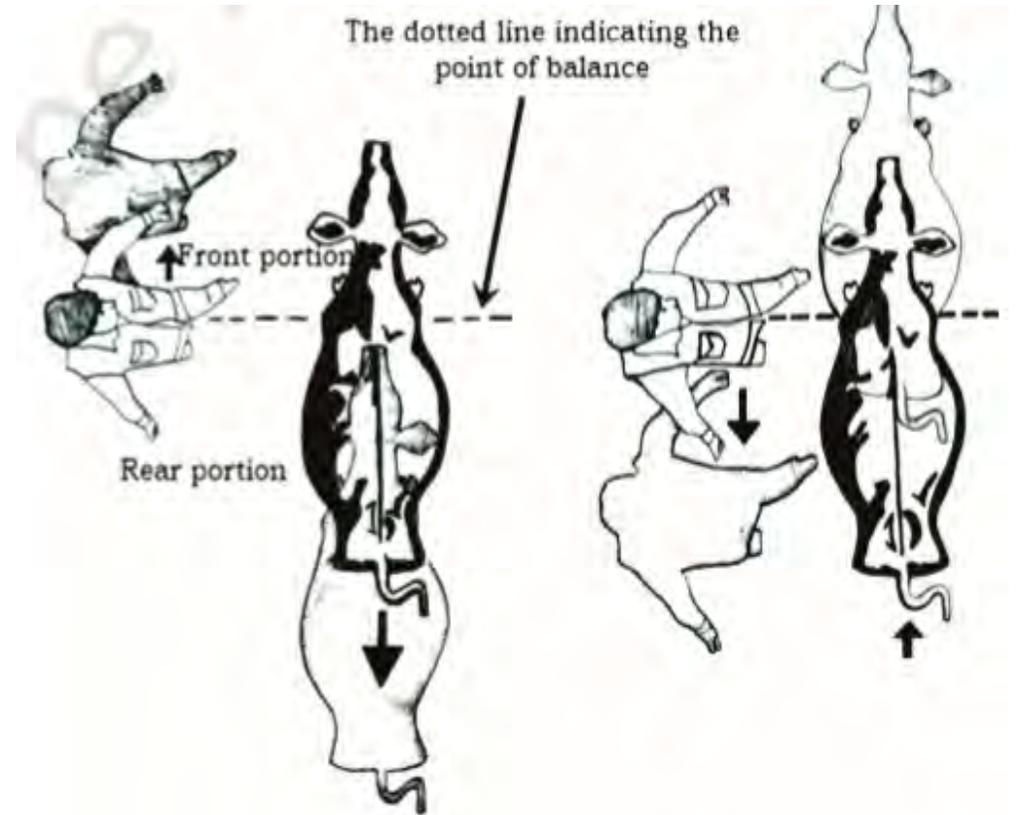
Design and use of local materials to construct a crush

- ❑ Wooden logs can be used for this purpose.
- ❑ Generally it is 2 meters long, 1.5 meters high
- ❑ Only wide enough for widest animals.
- ❑ Posts are driven firmly into the ground level, as deep as possible.



Three essential concepts of animal handling

- ❑ Flight zone or animal's personal space- is the minimum distance the animal tries to maintain between itself and any perceived threat. The size of the flight zone slowly diminishes when animals receive frequent gentle handling
- ❑ Blind spot- where the animal cannot perceive the handler. An efficient handler never approaches the animal in the area of blind spot as it may get frightened and cause injury to the handler
- ❑ Point of balance-is the imaginary point located on the animal's shoulder which divides the animal's body into two portions, i.e., front portion and rear portion. If one crosses this hypothetical line to the front or rear, the animal moves in the opposite direction



Dos and Don'ts of livestock handling

Dos

- Train animals on how they are to be handled- they can be handled safely and effectively if they are trained with appropriate handling technique
- Develop a strong attachment- animals are very observant. They learn to watch and listen to their owners
- Always emphasize the need for calm and respectful handling of animals at all times- cattle remember “bad” experiences and create associations from fearful memories
- Move cattle quietly, they remain calm- they easily get frightened by high-pitched voices

Don'ts

- Never handle excited animals- give them sometime to get calm
- Do not cause any stressful situation- they express fear or alarm through change in their behavior
- Avoid contrasting situations on the farm- cattle are color-blind and are poor at depth perception
- Do not approach cattle bravely from the front or cowardly from behind- they can knock and kick



Topic 10: Diseases of cattle, goats and sheep

Learning outcomes

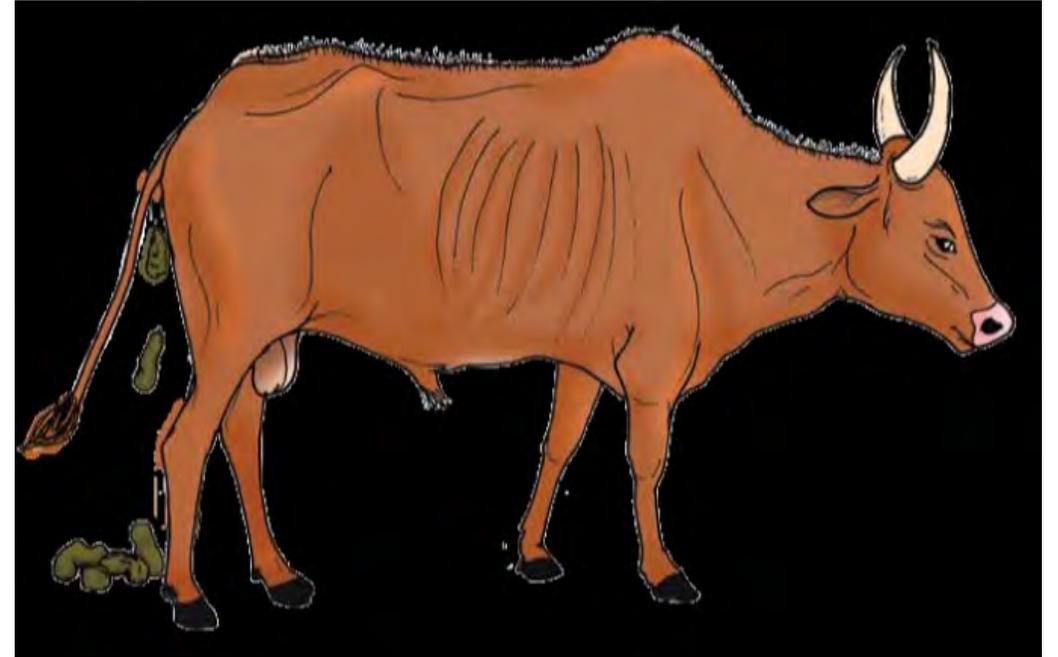
- List major diseases of livestock (cattle, sheep, goats) in Karamoja sub-region.
- Explain how diseases affect local, regional and international trade in livestock and livestock products.
- Describe the main clinical signs of major diseases of livestock (cattle, sheep, goats) in Karamoja sub-region.
- Administer treatment; institute prevention and control measures for the various diseases.

Common and major diseases of livestock in Karamoja

- Anaplasmosis (Lopid)
- East Coast Fever - ECF (Lokit/Longarwei)/Thileria
- Babesiosis (Lokulam, Kp'kison)
- Heartwater(Lokou, Chepurpurmöt)
- Trypanosomosis (Edit/ Abur/ K'p'lus,)
- Sheep and Goat Pox (Etom)
- Lumpy Skin Disease (Enaarulonaru)
- CBPP/CCPP/Pneumonia (Loukoi)
- Foot and Mouth disease
- PPR (Louruto)

ANAPALSMOSIS

- Is an infectious disease of cattle, sheep and goats.
- The disease can be acute or chronic in nature.
- Animals show signs such as fever, anemia (pale gums), and yellowing of the linings of the mouth and nose and the eyes
- The disease is more severe in adult animals than calves. Why?
- Constipation , diarrhoea and death (if not well managed)



- Animals that die of anaplasmosis are generally thin , anaemic and yellowing of carcass.
- Blood is watery and the spleen is enlarged but soft.
- The liver may be spotted and yellow-orange and the gall bladder is often enlarged and contains thick brown or green bile.
- The kidneys and heart are bloody. The body cavities are filled with fluids., lungs are swollen. The rumen, omasum (third stomach) and large intestine are inactive (still)
- The omasum (third stomach) is impacted and dry, and the large intestine contains hard, dry, often bile stained faecal balls (constipation)
- The urine is yellow to dark brown

Management and Control

- Take the animal to the shade, provide enough water and food.
- Call a vet/paravet
- Routine and strategic tick control

East Coast Fever-Lokit, Tukuren, Longarwei

A tick borne, fatal disease causing swelling of the lymph nodes

Spread: Brown ear ticks; Rhipicephalus appendiculatus, a 3-host tick (Nayeye).

Animals affected: Cattle

Signs: Swollen lymph nodes especially near the ears, swollen ears and eyelids, fever on day two of upto 41°C, loss of appetite, weakness, loss of milk for milking or lactating cows, standing hair, tears and cloudy eyes, blindness, froth discharge with slight cough, constipated at first but later diarrhea with blood and mucus, blood spots under the tongue.

Management: Give water and feed to the animal. CALL A VET/PARAVET

Prevention: Spray to kill the ticks, ensure the acaricide gets into the ears;

Alternatively, give monthly LA Oxytetracycline (Tetroxy LA) especially for exotics in high exposure areas. CALL A VET



swollen lymph glands

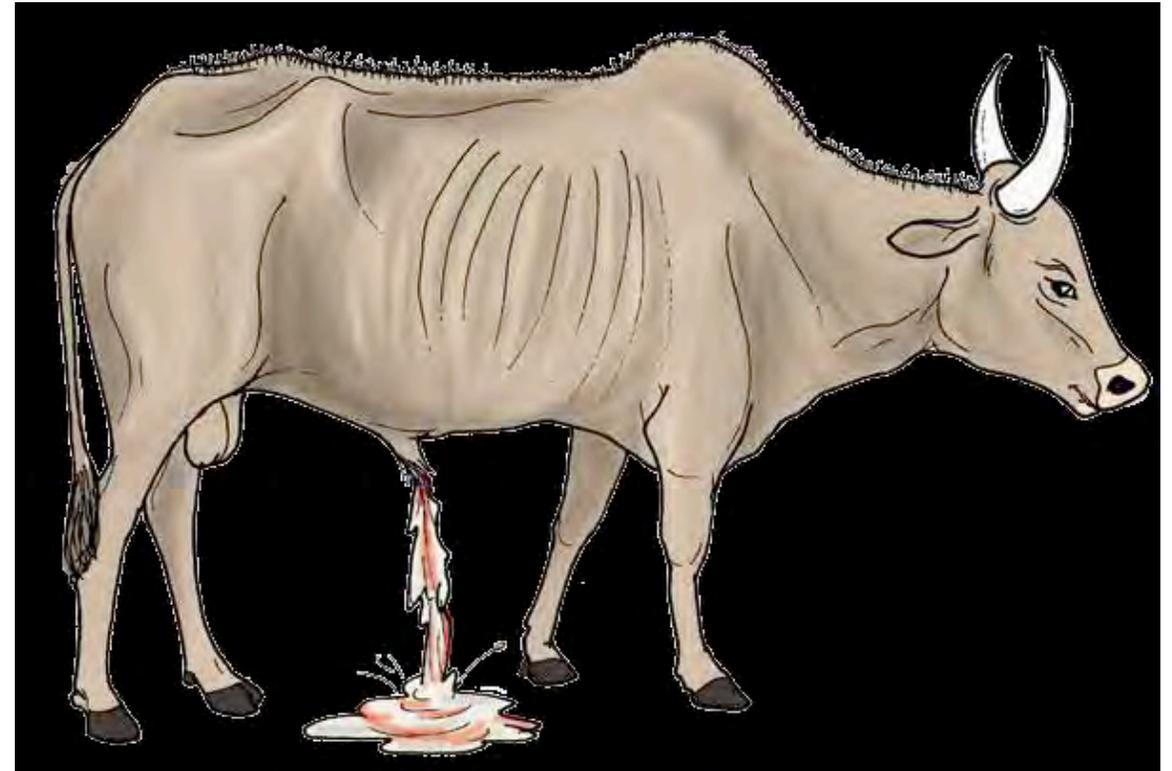


Babesiosis (Lokulam, Kp'kison)

- Is a tick-borne disease of cattle caused by the protozoan parasites Babesia
- Principal vectors are the blue ticks

Clinical signs:

- High fever
- Uncoordinated movements
- Lack of appetite
- Dark red or brown-colored urine
- High pulse rate and heavy heart beat
- Sometimes nervous signs like aggression and circling,

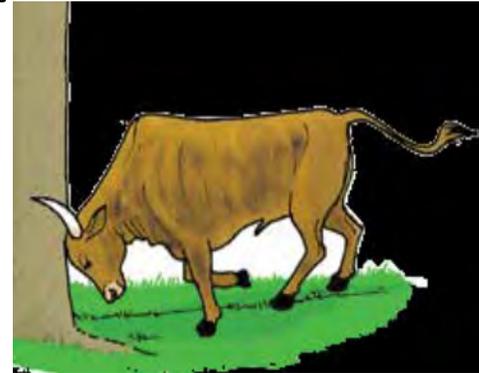


CALL A VET/PARAVET

Heartwater (Lokou, Chepururmót)

- Is a disease of domestic animals (cattle, sheep and goats) and wild animals deer,.
- is caused by the bacteria spread by infected bont ticks (lokumae),
- Fever up to 40°C
- Causes circling, uncoordinated gait and aggressiveness
- It commonly causes death of infected animals.
- Heart of dead animals filled with fluid hence “heartwater”
- Control: Acaricides to kill ticks

REFER TO A VET/PARAVET

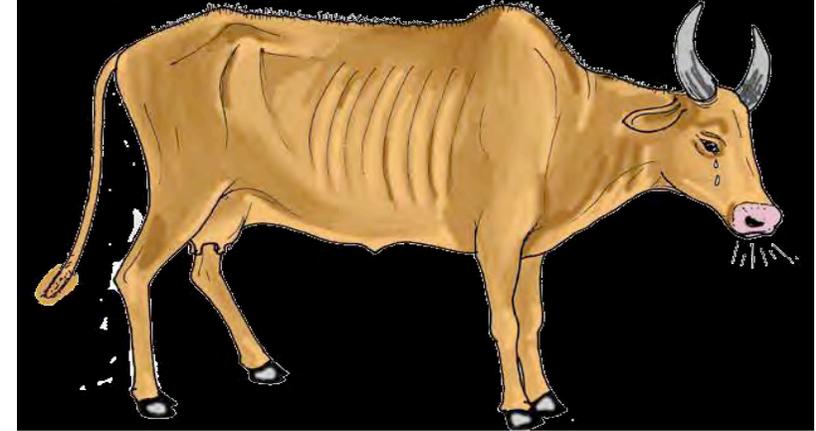


Trypanosomoses/Nagana (Abur/Ediit, K'p'lus)

- Is transmitted by the tsetse fly
- Tsetse flies are bloodsucking flies of the group *Glossina*.
- They occur only in tropical Africa and are important as vectors of African trypanosomiasis in both humans and animals.
- Sleeping sickness, as it is commonly called, is generally fatal in humans if left untreated.
- Sleeping sickness occurs in scattered sites throughout Africa south of the Sahara.

Symptoms of Trypanosomoses (nagana)

- The signs of disease appear 11-21 days after an infective bite as a relapsing fever, and temperature peaks
- A progressively loss of weight
- The hair (coat) is rough and standing appearance ('staring coat')
- The skin is drawn tightly over the ribs and pelvis
- Discharge from the eyes and avoidance of light by closing the eyes,
- Swellings of the superficial lymph nodes.
- The tail bush may fall out
- The animal is inactive, lags behind the herd, ears and tail hang lifelessly and it stops to react to biting insects.



Symptoms of nagana in cattle

- Progressive thinness.
- The hair has a characteristic rough and upstanding appearance ('staring coat')
- The skin is drawn tightly over the ribs and pelvis and lacks the looseness of healthy animals.



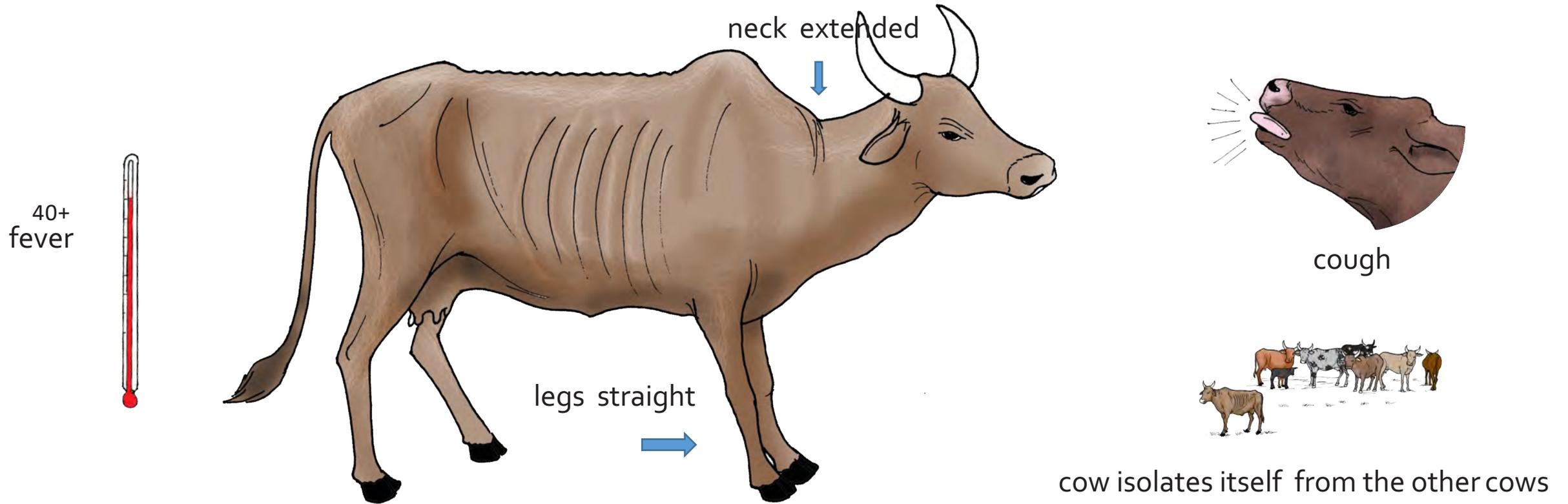
Treatment, prevention and control

- Treatment: REFER TO A VETERINARIAN
- Integrated tsetse control through:
- Controlling Tsetse with vectocid spray or pour on (also kills Ticks)
 - Treating sick animals (Sanative pair : Berenil/Veriben+Veridium/Novidium)
 - Use of tsetse traps and insecticide-impregnated screens
 - Arial spray
 - Biological control of tsetse by use of sterile males

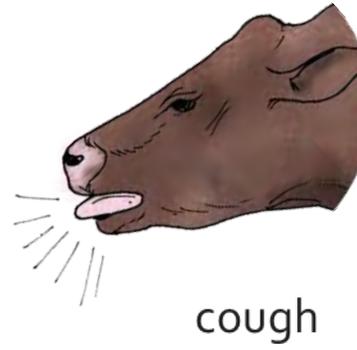


Contagious bovine pleuropneumonia (CBPP)– Loukoi

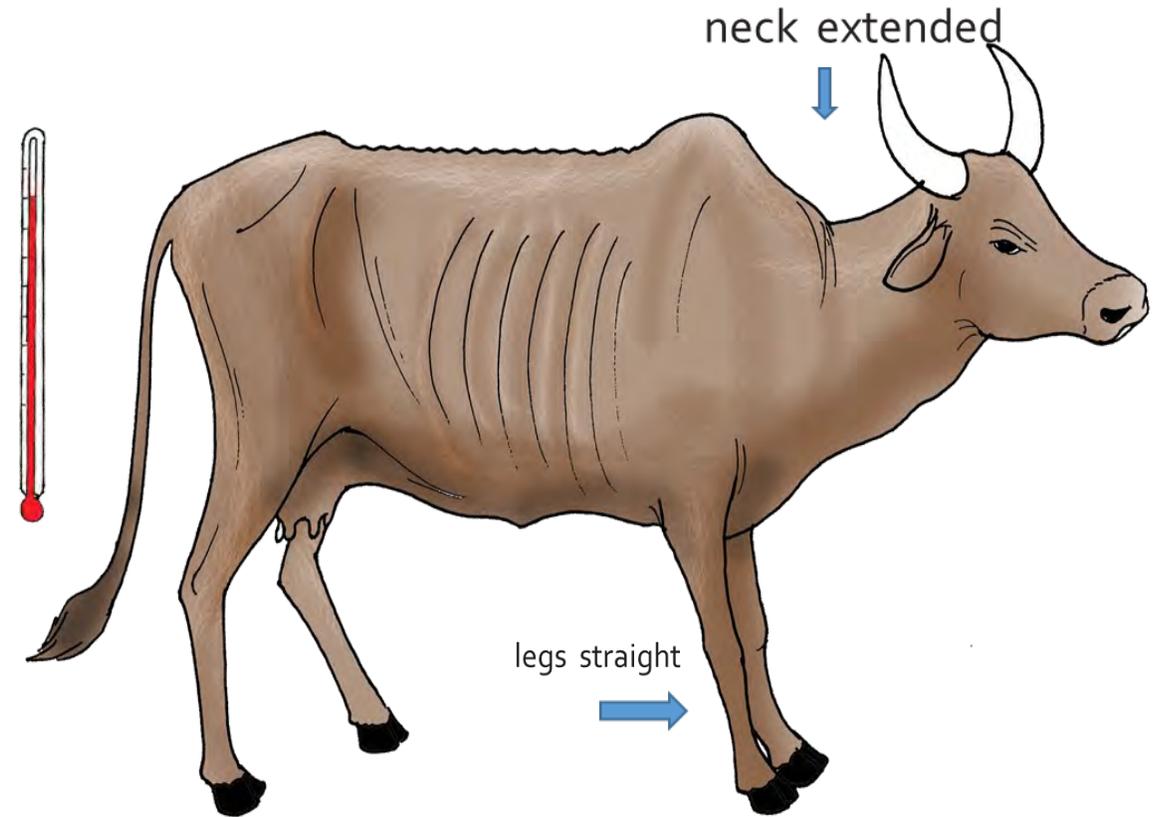
Causes and clinical signs



Contagious bovine pleuropneumonia (CBPP)– Loukoi



- CBPP is an infectious and highly contagious disease of cattle and water buffaloes
- Affected animals have difficulty in breathing due to damage to the lungs, and is isolated from the herd
- Lose body condition and a good number die.
- Young cattle develop joint swellings rather than lung infections.
- High temperature $> 40^{\circ}\text{C}$
- Many cattle show no disease signs despite being infected (carriers or lungers)



Transmission and spread

- Distribution: Karamoja region has highest presence in Uganda
- Introduction into a herd by contact with an infected animal; through direct, close, repeated contacts between diseased and healthy animals in shared night kraals or water places, dip tanks, markets, common grazing and gathering places for mass vaccination campaigns.
- Indirect transmission from pastures and water or by carriage, for example, on people and feed sacks, are thought not to be important.
- The causative germ is present in liquid droplets in the breath and in urine and, air-borne transmission appears possible over distances up to 200 metres.
- Chronically infected and symptomless animals (lungers) play an important role in the persistence and spread of the disease, very common in ist herds are especially

Herd signs

- When first introduced into a herd CBPP is severe and mortality relatively high.
- A small proportion of cattle may die rapidly mainly showing of fever
Clinical signs may become apparent only several months after the contact. Incubation period takes about 6 months , hence back to the origin can be difficult. particularly so where vaccination intervals are very long and where antibiotics have been grossly abused.
- After some time, the disease in the herd becomes chronic, and mainly “lungers’

Clinical Signs

- **The acute form** The earliest signs are a sudden onset of fever to 40° C or more and, in milking cows, a drop in milk yield.
- Sick cattle tend to isolate themselves from the herd and stop eating.
- A typical painful respiratory and abdominal breathing is observed
- Application of pressure between the ribs is painful and hated by the affected
- Lower part of the chest sounds dull on tapping, (fluid in the chest cavity).
- Affected cattle stand with head and neck extended and forelegs spread apart, dilated nostrils and with mouth open panting for air.
- Nasal discharge, sometimes with blood, and frothy saliva accumulates around the mouth.
- Some animals develop swellings of the throat and dewlap.

Clinical signs cont.

- Pregnant cows and heifers may abort and diarrhoea has been recorded.
- **Calves**, in the first six months of life, more often show lameness from swollen, hot, painful limb joints.
- Many affected cattle become 'lungers' and are responsible for new outbreaks
- In summary, suspect CBPP if one or more animals have:
 - **fast, difficult or noisy breathing**
 - **discharges from the nose or mouth**
 - **coughing, especially after exercise**

At slaughter;

- Yellow fluid in the chest cavity
- Lungs covered with yellowish material
- Lungs adhering to the chest wall
- Lungs which do not collapse and are solid (marbled)
- ***Because the lesions are so characteristic, abbatoir monitoring is a powerful tool to use in detecting introduction and spread of the disease!***

Investigation of field outbreaks

1. Obtain a general picture of the way the disease has behaved in the herd (**Epidemiology**)
2. How the animals of a herd are affected by the disease (**Clinical examination**)
3. to observe the characteristic lesions in organs of dead and or slaughtered animals (**Post-mortem examination**)
4. confirm the presence of infection (**Laboratory examination**)

Treatment, prevention and control of **CBPP** (Loukoi)

- Treatment: Not encouraged because it promotes “lungers’ or carriers. Advise to slaughter the affected animal.
- Control:
 - Some countries have very strict measures such confinement, test and slaughter, etc., but this is not yet applicable in pastoral systems like Karamoja
 - Report to the DVO
 - Vaccination (annually on herd basis).

Contagious caprine pleuropneumonia (CCPP)

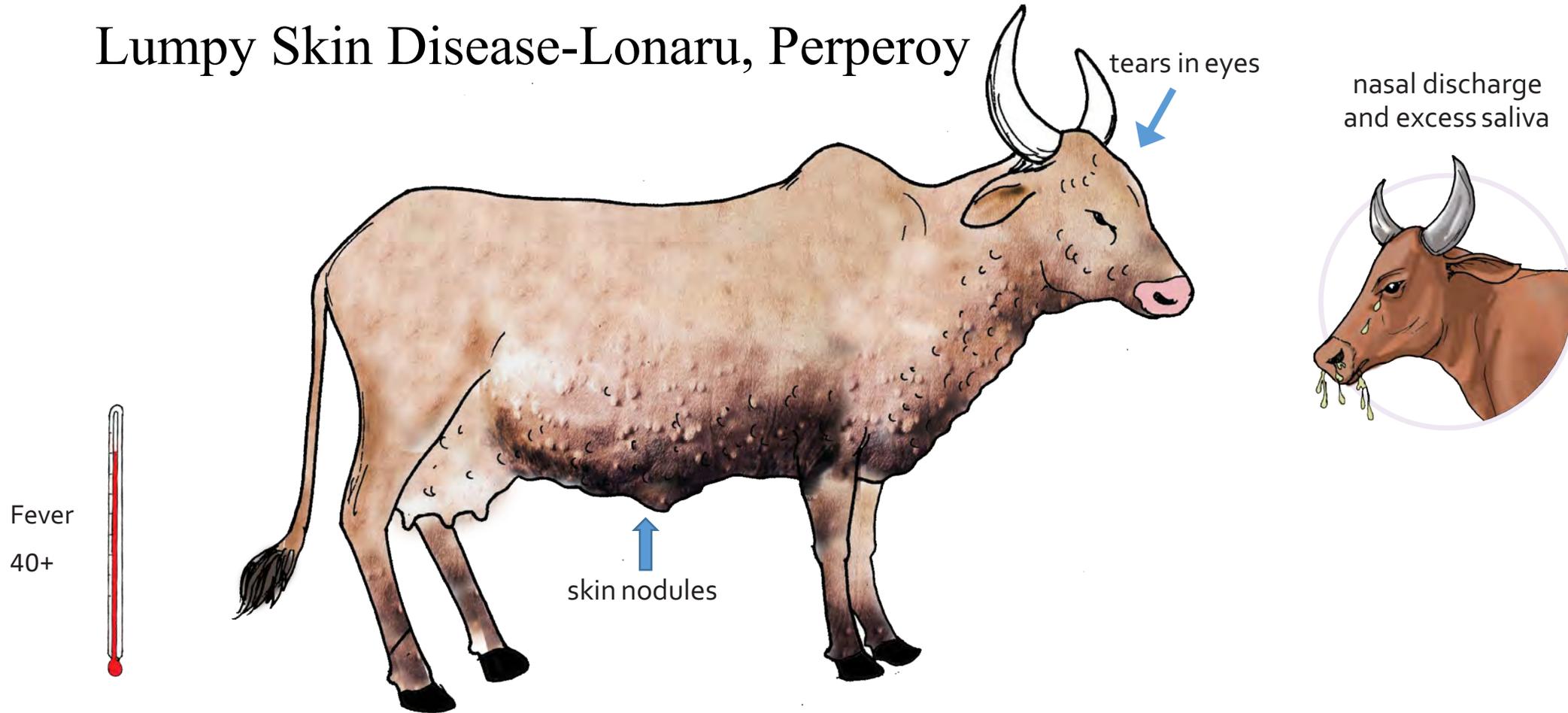
- CCPP is the mirror image of CBPP, but it only affects goats
- Diagnosis:
- Clinical Signs:
 - Fever (40-42°C),
 - coughing,
 - Irregular breathing (dyspnea,)
 - high morbidity (about 100%)
 - and high mortality of about 70%.
- At slaughter
 - fibrinous pleuropneumonia
 - increased pleural fluid,
 - enlarged and oedematous mediastinal lymph nodes.

Management and Control

- The disease occurs in epidemics, antibiotic treatment only would be very uneconomical.
- Therefore, efforts have been directed towards controlling the disease by vaccination.
- Movement control
- Quarantine

Lumpy Skin Disease-causes and clinical signs

Lumpy Skin Disease-Lonaru, Perperoy



Hosts

- Lumpy skin disease (LSD) is caused by lumpy skin disease virus (LSDV)
- It is similar to the Sheep goat pox virus
- LSDV is highly host specific , only in cattle and water buffalo.
- Holstein Friesian or crossbred cattle exhibit higher morbidity and mortality due to LSD when compared with local zebu cattle
- LSDV is not zoonotic

Transmission

- The principal means of transmission is believed to be *Culex* and *Aedes* mosquitoes, biting flies, and male ticks
- Infected bulls may excrete the virus in the semen, however transmission of LSD via infected semen has not been demonstrated.
- transmission can occur via fomites, for example ingestion of feed and water contaminated with infected saliva.
- Direct contact is real in transmission of the virus.

Clinical signs

- Fever that may exceed 41°C.
- Marked reduction in milk yield in lactating cattle.
- Depression, loss of appetite and emaciation.
- Swelling of the nasal track, eyes and excessive salivation.
- Enlarged superficial lymph nodes
- Skin nodules of 2–5 cm in diameter develop, all over the body especially the head, back and genitals (sex organs) inclusive

Clinical signs cont.

- Large nodules eventually turn into the scars may remain indefinitely.
- Vesicles, erosions and ulcers may develop in the mucous membranes of the mouth and alimentary tract and in the trachea and lungs.
- Limbs and other ventral parts of the body, such as the dewlap, brisket, scrotum and vulva, may be swollen, causing the animal to be reluctant to move.
- Bulls may become permanently or temporarily infertile.
- Pregnant cows may abort and be in anoestrus for several months
- Recovery from severe infection is slow due to secondary infection, mastitis, and dead skin masses, which attract fly strike, leaving deep holes in the hide.

Control and Prevention

Successful control and eradication depends on early detection of the index case, followed by a rapid and widespread vaccination campaign.

- Total stamping-out (killing all clinically affected cattle and unaffected herd-mates) and
- Partial stamping-out (killing only clinically affected cattle) policies only successful in rich countries, but not yet feasible in Uganda and Karamoja specifically
- Initiate vaccination campaigns ahead of virus entry.
- Vector control (mosquitoes and flies)

Treatment:

- REFER TO A VET/PARAVET

Brucellosis

- Brucellosis is a disease of public health importance (zoonotic) and affect humans, livestock(Cattle, goats, sheep, pigs) and wildlife animals
- It severely impacts on human health by being characterized with severe fever that is normally confused with malaria or even HIV
- In animals it is often characterized by abortion storms and retained placenta, thereby impacting greatly on “replenishment stock”

Perception of Brucellosis

- Brucellosis is one of the most feared diseases in both human and animal medicine in Uganda today
- The exact disease distribution is not known but it is believed to be wide spread in both humans and animals in Uganda
- The disease is closely related to the lifestyle of most people associated with animals and animal products – consumption of raw or poorly cooked meat and milk being largely incriminated in Uganda

Multiple sources of infection



GHEE



ANIMAL HANDLING



**MEAT
HANDLING**



**VACCINATIONS &
TREATMENTS**

Brucellosis: What causes it?

- Brucellosis is an infectious disease caused by *Brucella* bacteria
- It affects many different animal species and humans
- It is primarily a reproductive disease in animals, but it can also cause reoccurring fevers, arthritis or udder infection (mastitis).

What animals get brucellosis?

- Brucellosis can affect sheep, goats, cattle, pigs, horses, and dogs.
- Brucellosis can also affect rats and wild animals

Transmission:

- Brucella are usually spread through contact with infected reproductive tissues and fluids (e.g., placenta, aborted fetuses, fetal fluids, vaginal discharges).
- The bacteria can also be found in the milk, blood, urine and semen of infected animals.
A common route of human infection
- Animals can get the bacteria by ingestion (oral), direct contact with mucous membranes (eyes, nose, mouth), or wounds in the skin and contaminated fomites.
- Some animals are carriers; they and can shed the bacteria into the environment for long periods of time, infecting other animals in the herd.

Prevention & Control:

- Clean and disinfect areas exposed to infected animals, their urine, blood, milk, or discharges.
- Keep sick animals away from other animals to avoid spreading the disease.
- Vaccination program is used to control brucellosis in cattle in some countries

Personnel protection:

- Do not eat or drink raw milk or unpasteurized dairy products.
- Wear protective clothing (gloves, masks) when handling reproductive tissues (assisting delivery of new-born animals) and meat inspection!
- Always wash your hands after touching animals.

Prevention cont.

- all pre-purchased stock should be tested and preferably isolated for at least 30 days.
- Communally grazed animals should be treated as a single herd and never get in contact with other herds or flocks especially if their brucellosis status is unknown.
- All cases presenting with clinical signs suggestive of brucellosis such as abortions, premature births, or any other clinical signs should be tested in a recognized laboratory to determine the cause illness
- all suspect animals should be isolated until a confirmatory diagnosis is made.
- proper disposal of placentas and non-viable fetuses by burying or burning followed by thorough disinfection of contaminated areas.

Control

- To reduce impact of a disease on human health and the economic consequences, should be backed by government regulation
 - Test and slaughter or isolation
 - Biosecurity(aloud exposure)
 - Control of animal movement(e.g. quarantine)
 - Eradication as the ultimate

Mastitis

- Inflammation of the udder/mammary gland.
- Caused by bacteria, virus, or fungi and external injury to the udder.
- Incomplete milking
- Age of animals (older and high-producing dairy cows are more susceptible)
- Initial stage of lactation
- External injury due to floor bed
- Hygiene of udder and milking man

Clinical Signs

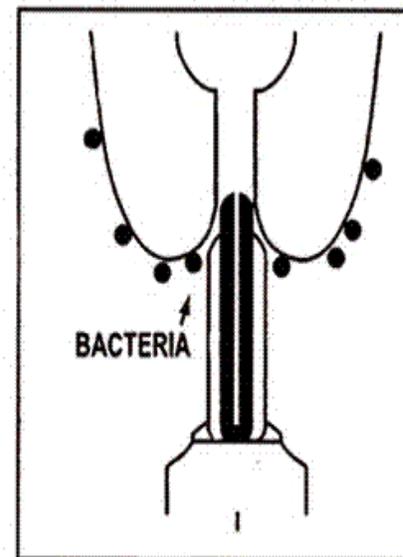
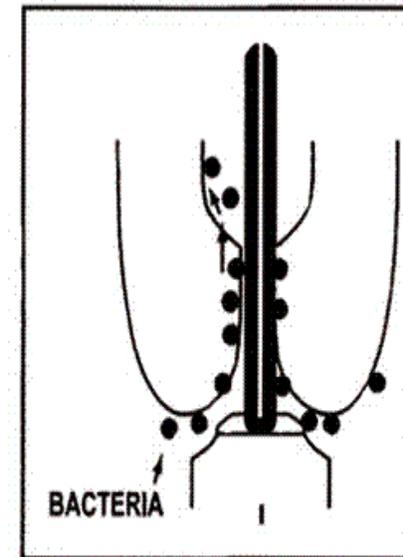
- Swelling of udder and teat, which is hot and painful
- In acute cases, there may be fever
- Animal refuses to let down milk
- Milk may coagulate, containing blood or pus
- Decrease in milk production
- Lumps can be observed/felt in the udder
- Teats may drop off in severe cases

Mastitis-Clinical Signs



Management

- Clean the udder with warm water and apply warm compress to reduce swelling
- Remove all milk from the udder frequently
- Infuse intra-mammary antibiotics into the teat at least twice daily
- Penicillin/tetracycline I/M injection may be needed



Prevention and control of Mastitis

- Always keep the udder and teats clean after each milking
- Dipping teats is recommended
- Clean hands and bucket before milking.
- Milk healthy animals first and then the infected animals.
- Soft bedding materials in the floor are recommended.

Effects of diseases on trade (local, regional and international) **Trade restrictions**

- Loss of export
- Regional quarantine
- Possible herd condemnation
- No regional slaughter allowed
- All leading to loss of livelihood for many
- **Cost of outbreak containment :**
 - **vaccination,**
 - **Stamping out**
 - **Sero monitoring, etc.**

Notifiable and non-notifiable diseases

- What is meant by notifiable Disease?
- What diseases must be notified if positively diagnosed
- Alert your DVO if you suspect the presence of a notifiable disease
- What might happen once a notifiable disease is reported?
- Why is this important?

Transboundary animal diseases and non-transboundary diseases.

- Transboundary diseases are
 - High impact with economic consequences
 - Usually high morbidity/mortality consequences

- Non-Transboundary diseases are
 - Usually associated with production losses

FOOT AND MOUTH DISEASE

- ❑ Foot and mouth disease (FMD) is the most contagious disease of mammals and has a great potential for causing severe economic loss in susceptible cloven-hoofed animals.
- ❑ There are seven serotypes of FMD virus (FMDV), namely, O, A, C, SAT 1, SAT 2, SAT 3 and Asia 1.
 - **Infection with one serotype does not confer immunity against another!.**
- ❑ Laboratory diagnosis of any suspected FMD case is therefore a matter of urgency and the most important way to confirm,

Clinical signs:

Typical cases of FMD are characterised by a vesicular condition of the feet, buccal mucosa and, in females, the mammary glands.

FMD: Hosts & ways of Transmission

- ❑ Wide host range, all cloven footed animals are susceptible
- ❑ Modes of spread varied; aerosol, contaminated vehicles, equipment/formites, other body fluids
- ❑ Carriers; incubation, pharyngeal carriers

FMD: Lesions (wounds)



Goat, oral mucosa. There is a large, partially re-epithelialized (healing) erosion on the rostral mandibular buccal mucosa.



Bovine, There is an elongate erosion (ruptured vesicle) ventral to the incisors.



Pig, foot. There is a ruptured vesicle of the caudal-lateral coronary band, with undermining of the heel.

FMD: Lesions



Bovine, lip. The buccal mucosa contains an erosion (ruptured vesicle).



Bovine, tongue. A large area of epithelium is centrally eroded; this lesion probably resulted from combination of several smaller lesions

FMD control protocol for Uganda

- ❑ FMD is a notifiable disease which should be reported within 48 hours of the outbreak.
- ❑ Any person responsible for animals is obliged by the Act to report animal disease outbreaks that occur in their herds.
- ❑ The farmer reports disease within 24 hours to the DVO who undertakes a clinical investigation and reports to Commissioner within the next 24 hours.
- ❑ The Commissioner constitutes an investigation team composed of an epidemiologist and laboratory scientists and reports are sent to all stakeholders (Farmer, local veterinarian, MAAIF administration, AU IBAR, OIE).
- ❑ FMD ring vaccination with an appropriate vaccine is instituted immediately

FMD control protocol for Uganda

- ❑ FMD control in Uganda is undertaken through a multi-disciplinary approach
 - Early detection and reporting
 - Movement control
 - Quarantine restrictions
 - Vaccination with trivalent vaccine (covering the most common outbreak serotypes – SAT 1, SAT 2, and O), based on the principle of matching vaccine serotypes with the circulating virus in the field
 - Serological and molecular confirmations
- ❑ But overall, should be aligned to the FAO-OIE global control strategy

Universally advised global Biosecurity principles

- Minimize contact between farms
- Do not enter or bring anything onto or off a farm unless necessary
- Carry out cleansing and disinfection before and after visiting any farm
- Strict segregation between “dirty” and “clean” areas are essential
- Quarantine period: if you have been in a “dirty” area, avoid any premises with livestock for at least 5 days

>>NB: Risk reduction at every step

Disinfection principles

- ❑ Clean before disinfection - dirt and organic matter can protect virus from disinfectant
- ❑ Disinfect surfaces fully and completely - splashing disinfectant on something is not enough
- ❑ Ensure adequate contact time - disinfectant need time to work
- ❑ Use approved disinfectant eg washing soda + citric acid and virkon

Bio-security cont.

- Personal Biosecurity 1 (adequate PPE: latex, gumboots, etc.)
- Personal Biosecurity 2 (when leaving farm, disinfect every article eg spectacles, watches and place in safe bags. Clean arms thoroughly)
- Personal Biosecurity 3 (Don't bring lighters & cigarettes, unless you leave them there)
- Vehicle biosecurity for visits
- Cleaning & disinfecting vehicles

Peste des petits ruminants (PPR)

- ❑ Peste des petits ruminants (PPR) is a highly contagious and infectious viral disease of domestic and wild small ruminants. It was first described in Côte d'Ivoire in West Africa in 1942.
- ❑ Because of its apparent similarity to rinderpest – the clinical signs of PPR closely resemble those of rinderpest,

The disease

- ❑ PPR is a severe, fast-spreading disease of mainly domestic small ruminants. It is characterized by the sudden onset of depression, fever, discharges from the eyes and nose, sores in the mouth, disturbed breathing and cough, foul-smelling diarrhoea and death.
- ❑ The virus which causes PPR, the peste des petits ruminants virus (PPRV), is closely related to the rinderpest virus of cattle and buffaloes.
- ❑ Clinical disease is seen in sheep and goats
- ❑ PPR infection has been recognized in many of the African countries including Uganda.

PPR Clinical signs

- ❑ Clinical signs appear an average of two to six days after natural infection with the virus (the incubation period).
- ❑ This is followed by the sudden fever with rectal temperature of at least 40° to 41° C.
- ❑ Affected animals are markedly depressed and appear sleepy.
- ❑ Their hair stands erect giving them a bloated appearance, especially the short-haired breeds.

PPR Clinical signs

- ❑ Soon after this stage, a clear watery discharge starts to issue from the eyes, nose and mouth,
- ❑ Later becoming thick and yellow as a result of secondary bacterial infection.
- ❑ The discharges wet the chin and the hair below the eye; they tend to dry, causing sealing together of the eyelids, obstruction of the nose and difficulty in breathing.



PPR Clinical signs

- ❑ In summary, suspect PPR if you see any combination of:
 - The sudden onset of a febrile illness affecting sheep and/or goats;
 - Eye, nose and mouth discharges with sores in the mouth, with or without scabs or nodules around the mouth;
 - Pneumonia;
 - Diarrhoea;
 - A significant death rate.



Prevention and control

- ❑ Movement control (quarantine)
- ❑ Combined with focused (“ring”) vaccination
- ❑ Report cases to the DVO



Topic 20: Records and record keeping I (introduction)

ADAPTED FROM

A manual for the primary animal health care worker

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome, 1994

Heifer International CAHW Manual

Dilip P Bhandari, BVSc & AH, MVSc

July 2009

Where There is No Animal Doctor

A Publication of the Christian Veterinary Mission

Maureen Birmingham and Peter Quesenberry

Learning outcomes

- Outline purposes of records and record keeping in livestock production.
- List consequences of not keeping records and of poor record keeping.
- List the types of records to keep.

Contextual definition of records

- Records are a permanent file made to keep track of illnesses and treatments, breeding protocols and presence of disease in an individual animal and a herd.

Purposes for keeping records

- Records are kept to help you keep track of your business, help alert the DVO to any problems and help the producer be aware of his herd/animal health.
- Records are kept to supply information to disease control on a national/regional/community level.
- Convenient to perform follow up of CAHWs and suggestions for improvement
- Improves the awareness level in the communities and dignity of CAHWs themselves
- Helpful in interacting among CAHWs and with project partners and government veterinary systems

Types of records to keep

- Permanent record for the animal
 - Breeding records
 - Records on a herd level as well
- Records for the animal owner
- Records for the veterinary officer
- Vaccination, Treatment and charge records

Consequences of poor and lack of records

- Won't know what treatment/Vaccination has already been performed
- Won't know when a treatment/vaccination was done
- May not charge properly for services performed
- Failure to track costs for services (drugs, travel, etc)
- May not catch a disease in time to prevent spreading
- May underreport diseases to the DVO



Topic 21: Records and record keeping II (clinical records)

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Learning outcomes

- ❑ Explain the significance of keeping clinical records (treatment, drugs, animal details).
- ❑ Describe relevant elements of clinical records to keep.
- ❑ Describe relevant elements of herd health records to keep.
- ❑ Examples of specific records

Significance of clinical records

- Looking at progress of disease
- Keeps track of animals progress
- Is the disease getting better or worse
- Creates a syndromic record

Elements of clinical and herd health records

- Date
- Location
- Owner name
- Animal identification
 - Age, sex, weight, species, breed
 - Physical exam data (appearance, attitude, organ systems)
 - Medical history (individual animal and herd)
 - Family history
 - Environmental history
- Symptoms/assessment
- Treatment/Advice

Example of clinical records

Case No:		Date:				Advice
Name of the owner:		Address:				
Animal Species:		Age:	Sex:	Weight (approx.)		
Symptoms		Temperature:				
		Rumen Motility:				
		Respiration:				
		Tentative Diagnosis				
Treatment						
Drug		Dose		Duration (How many days)		

Herd health

- Although disease prevention programs may appear to be a costly investment initially, a good program will ultimately be more cost effective than treating a disease outbreak.
- A good herd health management helps to prevent development and/or uncontrolled spread of diseases and reduces economical losses.
- Developing a good herd health program is centered around disease prevention, diagnosis, and treatment.
- Management strategies for a good herd health program typically focus on minimizing stress for the animal. It has been well demonstrated that stress compromises immune function.
- When cows or calves are not provided adequate nutrients to meet their needs from high quality feed or forage they experience a nutritional stress.
- Calves, young cows, older cows, pregnant cows, and lactating cows all have increased requirements. Forage alone may not be enough to meet increased requirements.
- Minerals and vitamins are vital for numerous functions, such as the immune system, reproductive performance, and growth.

General problems in the herd/flock

□ Biosecurity problems

- A really big threat to the health of every herd/flock is the uncontrolled traffic (e.g. purchase, breeding, pasture contacts, shows, exhibitions) of livestock and humans (e.g. farmer himself [sales barn visits], custom workers, visitors).

□ Problems with management or animal environment

- Many diseases and health problems that can occur in a flock are based on a faulty or incorrect:
 - Sheep environment (space, climate, bedding, light: keeping conditions)
 - Feeding
 - Handling
 - Care
- Let us call these four subjects ‘**basic needs**’ of the animal

The basic needs which have to be satisfied by management

'Basic needs'	Common failures	Normal
<p data-bbox="211 561 835 615">Environmental conditions</p> <ul style="list-style-type: none"> <li data-bbox="211 639 397 694">–Space <li data-bbox="211 718 453 772">–Climate: <li data-bbox="211 796 800 851">. Air quality & movement <li data-bbox="211 946 461 1001">. Humidity <li data-bbox="211 1025 524 1079">. Temperature <li data-bbox="211 1103 756 1158">–Bedding & walk ways <li data-bbox="211 1182 379 1236">–Light 	<p data-bbox="871 629 1327 684">Too tight, crowding</p> <ul style="list-style-type: none"> <li data-bbox="871 786 1625 915">– Draft or sticky, with accumulation of noxious gases <li data-bbox="871 939 1551 993">– Over 80 % for a longer time <li data-bbox="871 1018 1403 1072">– Too cold or too warm <p data-bbox="871 1096 1549 1150">None, wet, dirty, foul, muddy</p> <p data-bbox="871 1175 1531 1229">Too dark (often in old barns)</p>	<p data-bbox="1727 625 2170 679">Comply with codes</p> <p data-bbox="1727 853 2364 982">⇒ better cold and dry, than warm and too humid</p> <p data-bbox="1727 1089 2206 1218">Dry, clean, sufficient 'News-paper'-test</p>

Basic needs continued

'Basic needs'	Common failures	Normal
Feeding	<ul style="list-style-type: none"> • Not balanced and not according to performance: <ul style="list-style-type: none"> - Energy ↑↑ and protein ↑↑ - Energy ↑↑ and protein ↓↓ - Protein ↑↑ and energy ↓↓ • Not enough fiber in ration • Too monotonous • Feeding time too short • Spoiled feed • Not enough minerals, trace minerals, vitamins • Not enough feed trough width for all • No or not enough water, bad quality 	<ul style="list-style-type: none"> • Well-balanced and according to performance (3 phases: starting phase, producing phase, high pregnancy & preparation phase) • Always supply roughage, even during summer • Variety of feed • Long feeding times (over 6 hours) • Clean, without mold, dust-free • Well balanced mineral salts <u>and</u> NaCl-salt-[blocks], check intake, keep clean! • Provide enough feed trough space • Free access to clean water, check & clean waterers regularly
Handling	No handling facilities: stress, injuries	Well considered handling: no need of fancy equipment and facilities
Care	Neglecting foot trimming, shearing	Foot trimming 1-2 x per year, shearing in minimum once per year (East Friesian: 1-2 x)

↑↑ = too much ↓↓ = not enough

Data to be recorded in flock/herd health management

Data	Kind of data	Reason (s)
Heath	<ul style="list-style-type: none"> ▪ Kind of health problem, Date 	<ul style="list-style-type: none"> ▪ Decision for culling, Offspring, Preventive measures
Calving/lambing/ kidding	<ul style="list-style-type: none"> ▪ Date of Birth, Problems, # born 	<ul style="list-style-type: none"> ▪ Decision for culling, Offspring, Preventive measures
Breeding	<ul style="list-style-type: none"> ▪ Breeding dates 	<ul style="list-style-type: none"> ▪ Information for feeding, Management
Vaccinations	<ul style="list-style-type: none"> ▪ Date, Vaccine used, Meat/milk withdrawal period 	<ul style="list-style-type: none"> ▪ Information for booster, animal sales, decision for milk/meat use.
Deworming	<ul style="list-style-type: none"> ▪ Date, Drug used, Meat/milk withdrawal period 	<ul style="list-style-type: none"> ▪ Information on pasture management, decision on milk/meat use
Hoof trimming	<ul style="list-style-type: none"> ▪ Date 	<ul style="list-style-type: none"> ▪ Control
Spraying/dipping	<ul style="list-style-type: none"> ▪ Date, drug used, meat/milk withdrawal period 	<ul style="list-style-type: none"> ▪ Decision for appropriate tick control strategy, decision on milk/meat use
Culling	<ul style="list-style-type: none"> ▪ Date, reason 	<ul style="list-style-type: none"> ▪ Decision for offspring, preventive measures

Herd health record form

Herd #	Name of the herd owner				Location				Date				
Composition of the herd:		Species		# Males		# Females		Kids/Lambs/Calves					
List of common procedures													
<ul style="list-style-type: none"> ▪ Health problems ▪ Breeding ▪ Vaccination ▪ Feeding ▪ Deworming ▪ Hoof trimming ▪ Spraying ▪ Culling 													
Procedure performed				Males	Females	Amount of the drug used				Advise			
Name of CAHW					Signature								

Storage of records

- Keep protected from moisture-clean and dry
- Keep secure-not meant for just anyone to see
 - DVO
 - Owner
- Should be kept for an extended period of time (years)
- Each household/herd/kraal should have a record
- Individuals animals should be linked to a household/herd/kraal



Topic 22: Records and record keeping III (notifiable and TADs)

ADAPTED FROM

A manual for the primary animal health care worker

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome, 1994

Heifer International CAHW Manual

Dilip P Bhandari, BVSc & AH, MVSc

July 2009

Where There is No Animal Doctor

A Publication of the Christian Veterinary Mission

Maureen Birmingham and Peter Quesenberry

Learning outcomes

- ❑ List Uganda's notifiable diseases that occur in Karamoja
- ❑ List TADs that occur in Karamoja
- ❑ Describe the procedure and channels for reporting notifiable diseases and TADS

Notifiable diseases of Uganda

Public good diseases

- FMD
- CBPP/CCPP
- Rabies
- Rinderpest

Private good diseases

- Tick borne diseases
- Brucellosis
- TB
- Newcastle disease
- Anthrax
- African swine fever
- Rift valley fever
- Tenia solium
- Hydatid disease

Notifiable diseases that occur in Uganda

- All the previously mentioned diseases exist in Uganda
- If you have any concerns about what you see, contact the DVO

Procedure for reporting notifiable diseases

- ❑ All reporting goes through the DVO
- ❑ If you suspect a notifiable disease, consult your DVO!!
- ❑ If you have any questions about any illness you see, call your DVO
THAT DAY!!



Topic 23: Diseases reporting

ADAPTED FROM

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Rome, 1994

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Learning outcomes

- Outline the purposes for disease reporting.
- Explain the timeliness of disease reporting.
- Describe procedures and channels for disease reporting.
- Apply technology in disease reporting.
- Prepare disease reports.

Purposes of disease reporting

- To control the diseases at source
- To prevent spread of disease
- To prevent human disease if zoonotic
- To ensure compliance with regional trade laws
- To describe distribution of the disease within the region and to establish quarantine if indicated
- To protect the public health and local/regional/national economy

Reasons for urgency in reporting

- To identify disease before it spreads!!
- To facilitate immediate response

Structure and content of disease reports for various purposes

- National disease reporting forms
- Remember, reporting is done by your DVO
- Information from your animal records
 - Location
 - Contact numbers
 - Animal identification
 - Name of disease(s)

Specific reporting needs for the district



Topic 25: Vaccinations

ADAPTED FROM

A manual for the primary animal health care worker

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome, 1994

Heifer International CAHW Manual

Dilip P Bhandari, BVSc & AH, MVSc

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Learning objective

- ❑ To be able to properly understand and use vaccines

Learning outcomes

- Explain what vaccines are, what vaccination is and the purpose of vaccination.
- List the various types of diseases of livestock in Karamoja that are controlled by vaccination.
- Administer vaccines appropriately and timely.
- Outline an appropriate vaccination regime for various livestock species in Karamoja
- Explain causes of vaccine failure.

What are vaccines? What is vaccination and why is it done?

- A form of the disease causing agent (bacteria, virus or parts of them) that has been treated to be non-infectious and provides protection to the vaccinated animal
- The vaccine works by allowing the body to fight off the infection
- Some vaccines give long term protection
- Some vaccines need to be given often

ALL VACCINES MUST BE KEPT COLD OR THEY WILL GO BAD

Diseases to vaccinate against in livestock in Karamoja

CBPP/CCPP

PPR

Newcastle's

FMD

Lumpy Skin Disease

Sheep and goat pox

Blackleg/Blackquarter

Vaccination methods/timing

- ❑ Young animals compared to old animal

- ❑ Annual Vaccination
 - Private good-Farmer pays for all costs

- ❑ Outbreaks/Campaigns
 - Governmental/international
 - Public good diseases-government oversight and may support.
 - Transboundary diseases
 - Public health disease
 - Zoonotic diseases
 - Food borne disease

Routes of administration of vaccines

Under the skin (sub-cutaneous)

Most are not intramuscular

In the tail

In the eye/nose

Orally

Causes of vaccine failure

- Improper storage of vaccine (lack of cold chain)
- Improper administration
- Improper preparation and use
- Vaccines do not work on animals with the disease
- Poor health of the animal (undernourished, other disease present)
- Vaccine may not be the right serotype or strain

Supplemental Slides for Facilitator Manual: Animal husbandry practices for shoats



Credit

The information in this presentation is based on the University of Maryland Extension for small ruminant program, 2013

Sheep vs. goats

Sheep

- Grazers
- Prefer forbs, grass
- Easier to contain (fencing)
- No horns
- Aloof, reserved
- Better adapted to climate
- Easier to handle, manage

Goats

- Intermediate grazers
- Prefer browse
- Harder to contain (fencing)
- Usually have horns
- Curious, independent
- Less adapted to climate

Reproductive basics

Sheep

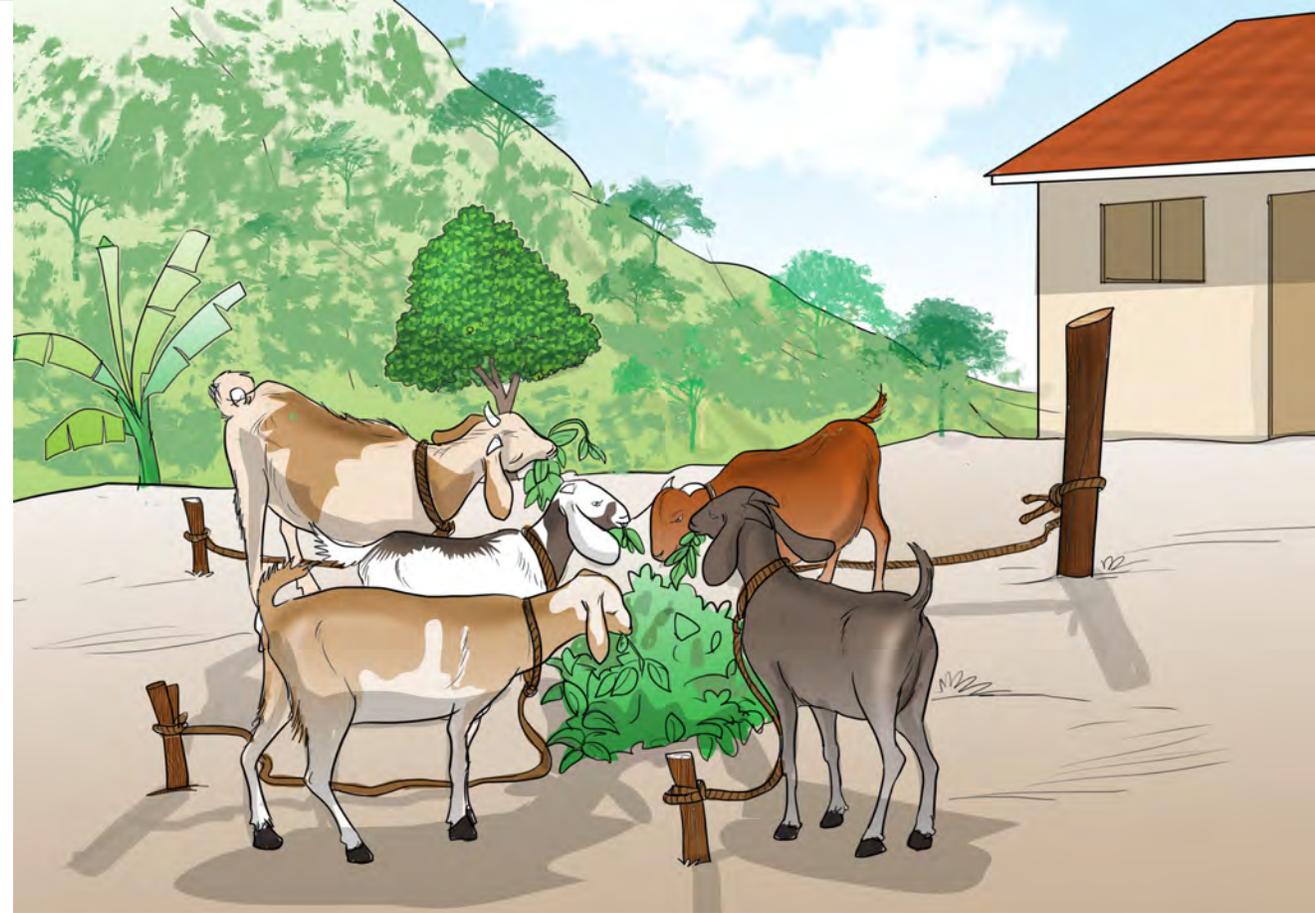
- Puberty at 5-12 months
- Seasonally polyestrous
- Short day breeders
- 17-day estrus cycle
- 24-36 hours estrus
- 5 months gestation
- 1 to 3 offspring
- 1 ram: 35 ewes

Goats

- Puberty at 3-7 months
- Seasonally polyestrous
- Short-day breeders
- 21-day estrus cycle
- 24-48 hours estrus
- 5 months gestation
- 1-3 offspring
- 1 buck: 35 does

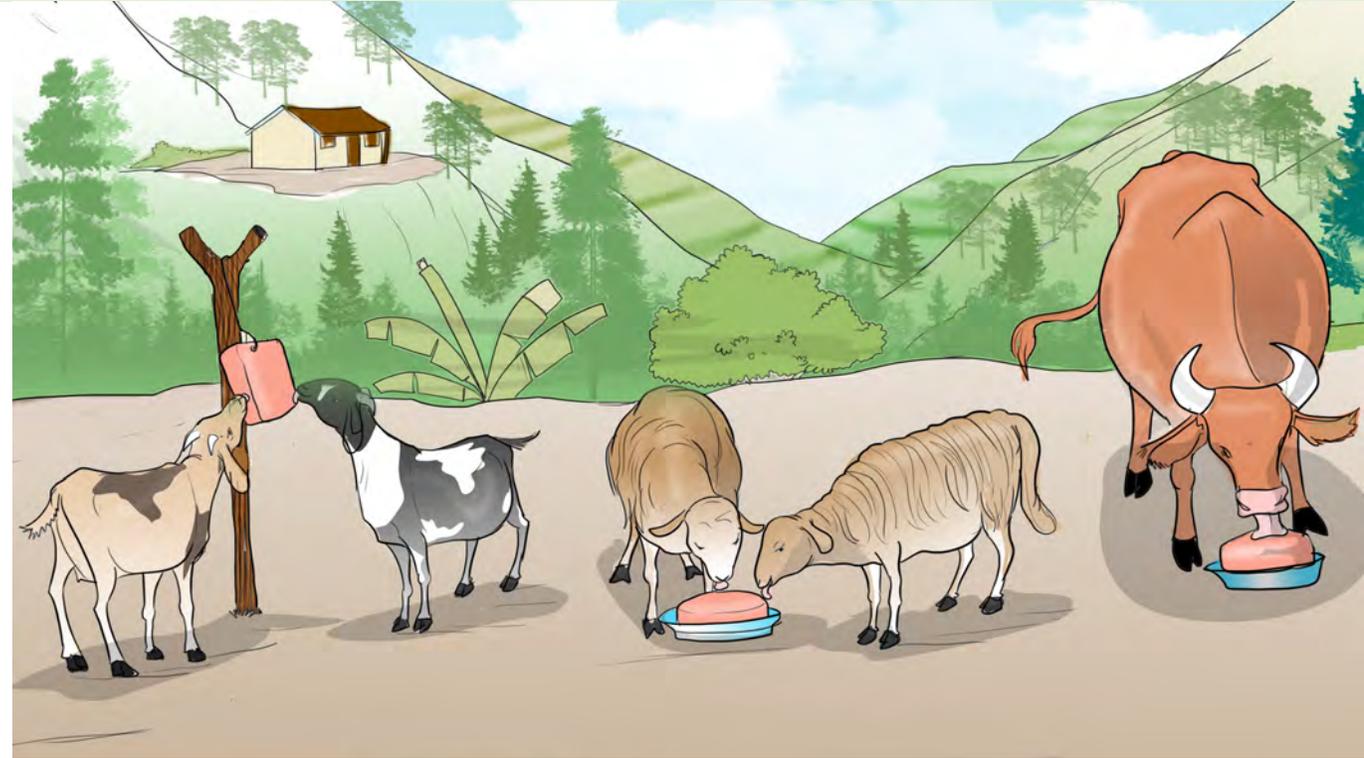
Nutrition basics

- Sheep and goats are ruminants
- Majority of their diet is composed of forage - grass, forbs, browse, hay, etc.
- Supplements may be required to meet nutritional requirements not met by forage diet, especially during
 - Late gestation
 - Lactation
 - Growth
 - Poor quality forage
- Rumen is adaptable to different breeds, but needs time to adjust - always make changes to diet gradually



Free choice minerals

- To meet nutritional deficient in forage diet
- Used as a behavior modifier
- Loose minerals preferred to mineral blocks
- Feed appropriate mineral mix to sheep and goats, due to differences in copper requirements and sensitivities:
 - Goats feed goat minerals
 - Sheep feed sheep minerals



Health care

Routine management

- Vaccinations
- Parasite control
- Hoof care
- Biosecurity



Common diseases

- Internal parasites
- Foot rot and scald
- Respiratory
- Digestive

Parasite control

- Sheep and goats can be affected by numerous internal and external parasites
- External parasites are flies, ticks, lice, and mites
- Internal parasites are helminths (worms) and single cell protozoa

External parasite control

- Some dewormers (e.g., Ivermectin) have efficacy against some (biting) external parasites
- Many insecticides are labeled for external parasite control in small ruminants. They are administered as sprays, dusts, or pour-ons
- Some external parasites can be vector for other diseases



Internal parasite control



- Sheep and goats should be dewormed on an as-needed basis, based on the observation on clinical signs.
- Deworming is done with oral formulations of dewormers (called drenches)
- Dosage should be based on accurate weight; under dosing should be avoided

Hoof care

- Hoof care is as important aspect of sheep and goat management and welfare
- Lameness can be a sign of disease
- Hooves should be inspected regularly for disease and excess growth
- Sheep and goats are susceptible to numerous hoof diseases

Treating hoof diseases

- Trim and inspect feet
- Isolate infected animals
- Foot bathing with zinc sulfate
- Antibiotic treatments (sprays and injections)
- Vaccinate
- Cull chronically infected animals

Predator control

- All sheep and goats are vulnerable to predators of many types: domestic dogs, wild dogs, foxes, vultures, eagles, lions, etc.
- Horns do not protect goats from predators
- All sheep and goat owners should consider predation to be a significant risk to their operation and implement a program to prevent and/or minimize predation
- Start with a good fence
- Keep animals in the kraals at night
- Keep lambs and kids enclosed
- Have good neighbor relations!



Thank you and acknowledgments

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Supplemental Slides for Facilitator Manual: GITA in shoat nutrition and pastoralism



GITA in shoat nutrition



Credit: University of California Davis

Facilitate a discussion and capture notes on the flipchart

- What do you see in this picture?
- What is the role of women in your community in feeding shoats? List all roles.
- How do roles vary by caste/ethnic group?

GITA in household nutrition



Credit: Heifer International

Facilitate a discussion and capture notes on the flipchart

- What do you see in this picture?
- What is the role of women in your community in feeding children and other household members? List all roles.
- How do roles vary by caste/ethnic group?

GITA in community animal health care



Credit: Heifer International

Facilitate a discussion and capture notes on the flipchart

- What do you see in this picture?
- What is the role of women in your community in relation to community animal health care? List all roles.
- How do roles vary by caste/ethnic group?

Let's return to GITA



Credit: Elisabet Back

What is GITA?

Gendered – socially prescribed roles and norms that define how men and women behave

Intersectional – the acknowledgement that everyone has their own unique experiences, and we must consider everything and anything that can marginalize people, such as gender, race, ethnicity, class, physical ability, etc.

Transformative – something that inspires change or causes a shift in someone's viewpoint

Approach – start to deal with something or speak with someone for the first time in a certain way

Let's discuss how you can use GITA and GESI in your VAHW work

Facilitate a discussion and capture notes on the flipchart

- How to raise awareness about women's role in goat nutrition
- How to raise awareness about women's role in household nutrition
- How to raise awareness about women's role in community animal health care

- What can you do to make VAHW services acceptable by ALL community members?

What is pastoralism?

- Pastoralism is **a form of animal husbandry where livestock are released onto large vegetated lands (pastures) for grazing**
- Sometimes, this involves migrating with livestock from one location to another in search of grass and water. Some migrating communities may not return to their permanent manyattas for months
- In Karamoja, the livestock species that are often taken for grazing are cattle, camels, goats, and sheep.

Women's role in pastoralist communities

- In pastoralist communities, while men and boys take livestock for grazing, women often remain in manyattas to:
 - Collect fodder to supplement the feed of those livestock kept close to the homestead
 - Look after pregnant livestock, and then their calves, kids and lambs
 - **Take care of sick animals** that cannot keep up with the main herd that is gone for grazing
 - Milk lactating animals and make sour milk or butter, which are important parts of the diet of many pastoralist families, and finally
 - Take care of other household responsibilities and childcare

Pastoralism among various ethnic groups

- It is important to note that there is huge diversity among ethnic groups and their pastoralist styles, as to who owns the animals, who takes care of them, who sells the products and who controls the income from sales (animals or their products)
- Now, let's list the similarities and differences of women's role in pastoralism among diverse caste/ethnic groups in Nepal

Women's role in pastoralism among various ethnic groups

Women's role	Brahmin	Chettri	Janajati	Dalit	Newar
What animal species women own?					
List ALL activities women do in relation to species identified above					
Indicate if women sell animals or animal products themselves					
Indicate if women keep income from sale of animals or their products (milk, meat, wool)					
Indicate if women seek advice from you when their animals sick					
Indicate if women bring their animals to vaccination sites					

Applying GITA & GESI to our work as VAHWs

We've talked about why women are less visible as livestock keepers and why you may not easily acquire them as clients. Let's use this activity to put into action some of the ways you can reach **ALL** women livestock keepers in your area

Start a personal list of barriers that is specific to your site and location. Be prepared to share the list with the group. The facilitator will then put on a flip chart those barriers that are common to all. Barriers could include not **ALL** women come to trainings, not **ALL** women know who you are and the services that you offer, **ALL** women livestock keepers think you charge too much, etc.

Work individually

Barrier (list all barriers that prevent you reaching ALL women)	How to overcome (add a specific activity that can help you overcome the barrier)
Example: <u>Young women</u> in my community don't know who you are and the services that you offer in comparison to <u>older women</u>	Example: Organize a workshop for both young and old women to explain what you do and how you can help ALL women with their livestock. <i>(Remember to organize a session at times that work well for both young and old women)</i>

Plenary

- Ask participants to share their list with the group
- The facilitator will put on a flip chart those barriers that are common to all
- Facilitate a discussion around proposed activity/action to overcome common barriers

Thank you and acknowledgments

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Supplemental Slides for Facilitator Manual: Introduction to Participatory Epidemiology



Credit

The information in these slides are based on the presentation
“Introduction to participatory epidemiology” by Barbara Weiland (ILRI)
at the Livestock and Fish Participatory Epidemiology and Gender
Training Workshop, Addis Ababa, 15-19 June 2015

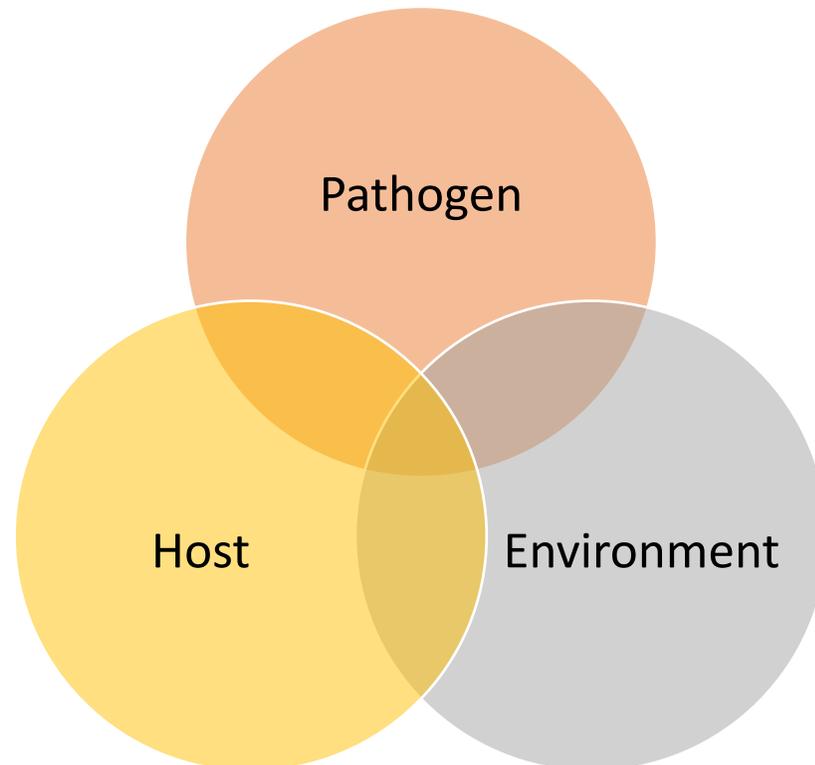
<https://www.slideshare.net/ILRI/speg-workshop-intro>

Focus of this lecture

- What is epidemiology?
- What is participatory epidemiology?
- What is participation?

Epidemiology

- Epidemiology is the study of diseases in populations (of animals) and of factors that determine its occurrence.



Questions answered with epidemiology

- How much disease is present in this population?
- What are the factors that make disease more likely to occur in the population?
- What measures could be taken to prevent disease occurring in the population?
- How effective are these measures?

**Epidemiology is the study of
causality and its impact**

Participatory epidemiology

Participatory epidemiology means the use of participatory tools to improve understanding of patterns of diseases in populations (of animals)

- Participatory epidemiology is conducted by professionals (for example, trained epidemiologists or researchers or veterinarians)
- It requires to listen, learn, and respect
- It helps better understand why people make rational decisions
- It captures existing knowledge
- It helps develop action-oriented approach

Epidemiology – why bother?

Discussion Activity:

- As a community animal health worker, where do you see your role in participatory epidemiology?

Discuss with your neighbor next to you. Enrich discussion with examples from prior work if you participated in the participatory epidemiological work in your communities

In plenary – discuss why Epidemiology is important

Allocated time for this discussion activity: 20 minutes

What is participation?

- Bringing different groups of people together and facilitating a discussion around finding solutions to their own challenges
- Participation means:
 - Listening
 - Learning
 - Respecting
 - Discovering
 - Being flexible

Moving away from this... talking to one person



Moving to this...collecting input from ALL



Credit: USAID/Nepal

Final words...

- Participatory Epidemiology (PE) must be conducted by trained professionals. For example, epidemiologists, veterinarians, researchers
 - CAHWs facilitate participatory epidemiology by mobilizing community members to participate in PE studies
- Participatory Epidemiology is an approach that is sensitive to (because it deals with people) and benefits local communities

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Supplemental Slides for Facilitator Manual: Nutrition for shoats



Why nutrition?

- Nutrition determines shoats' growth to produce a good quantity and quality food for people
- If shoats do not get enough nutrients in its feed
 - They can lose weight
 - They can fail to reproduce or have low fertility
 - The production of young will be also affected (kids born weak)
 - Poor food will weaken their immune system and may increase susceptibility to diseases
 - They can produce less milk or wool

Nutrition basics

- Sheep and goats are ruminants
- Majority of their diet is composed of forage - grass, forbs, browse, hay, etc.
- Supplements may be required to meet nutritional requirements not met by forage diet, especially during
 - Late gestation
 - Lactation
 - Growth
 - Poor quality forage
- Rumen is adaptable to different breeds, but needs time to adjust - always make changes to diet gradually

Free choice minerals

- To meet nutritional deficiency in forage diet
- Used as a behavior modifier
- Loose minerals preferred to mineral blocks
- Feed appropriate mineral mix to sheep and goats, due to differences in copper requirements and sensitivities:
 - Goats feed goat minerals
 - Sheep feed sheep minerals

Feeding of goats

- Goats prefer clean, fresh or well-conserved forage
- Goats will not eat dirty, wet or rotting feed
- Goats are browsers and will prefer to feed on small trees and shrubs as their basic diet
- If Goats are housed, tie feed on pegs, side poles, and roof or on horizontal beams from which branches are tied
- Goats are selective and will always prefer to eat the better parts of the feed; young shoots and fleshy leaves are preferred
- Goats are able to eat and utilize certain plants that are not utilized by other livestock species, like sheep and cattle
- Goat feed is made up of 74% tree and shrub leaves and 26% grass

Supplementary feeds for goats

- Sweet potato vines
- Banaba peelings
- Protein supplements
- Sunflower, cotton seed cake, soya meal and bone meal

When supplementary feeding a must

- All Goats during periods of pasture shortage/dry season
- When animals are sick
- Pregnant animals in the last six weeks of pregnancy
- Mothers after kidding in the first 4 weeks of lactation
- Kids before weaning and up to 5 weeks after weaning
- Goats being prepared for the market

Forage supplements for goats

- Protein supplementation may take many forms
 - Fresh legume fodders
 - Legume hays
 - High protein supplemental agro-industrial by-products such as cottonseed and soybean meal
- Adequate energy is important for good conception rates, milk flow, and kid growth rates
- High-energy supplements include
 - Maize, Rice or Wheat Bran
 - Goat Pellets

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Supplemental Slides for Facilitator Manual: Shoats restraining



How do you restrain an animal? Especially if you don't have equipment....

- Animal restraint is done by using manual (hands) or mechanical (tools) to limit the animal's movement.
- These methods are used to protect both the animal and the person handling the animal.
- Restraint is used during:
 - ✓ Manipulation of the animal – to provide diagnosis or treatment
 - ✓ Collection of samples – urine, feces, discharge, blood
 - ✓ Drug administration
 - ✓ Vaccination
 - ✓ Therapy - treatments

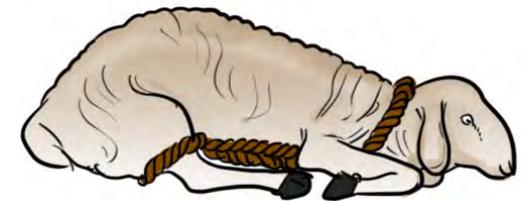
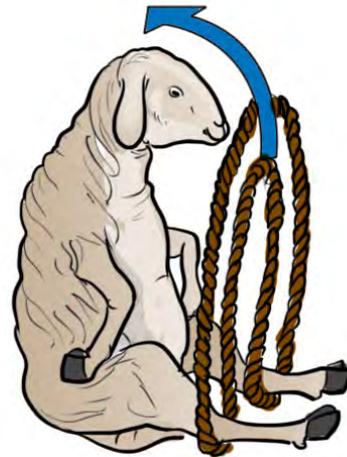
How to use restraining methods properly

- There are different methods for restraint. They should be used according to the type of procedure that is needed.
- Restraining methods should be performed correctly and minimize fear, pain, stress, and suffering for the animal.
- The animal we are handling needs to feel safe, as it will make the procedure much easier for you and the animal and minimize risk of injury.
- If we are using a device/tool, we need to get the animal used to the device, so they do not experience fear or distress.

Restraining goats: Techniques and approaches



Restraining sheep: Techniques and approaches



Restraining sheep: Techniques and approaches (2)



- Sheep are held by one hand around the neck and placing the other hand on their rump (rear end).

Restraining sheep: Techniques and approaches (3)



- Another type of handling includes putting the animal in a corner, i.e., stall or fences.
- You can gently straddle the animal between both of your legs and squeeze the sheep's shoulders to maintain the animal in this position.
- You can control their head and neck by holding the head with one hand and gently grasping the neck with the other.

Lamb restraint



- Lambs are handled by putting one hand under the body and between the forelimbs to support their chest and the other hand should be placed on their neck without applying too much pressure.

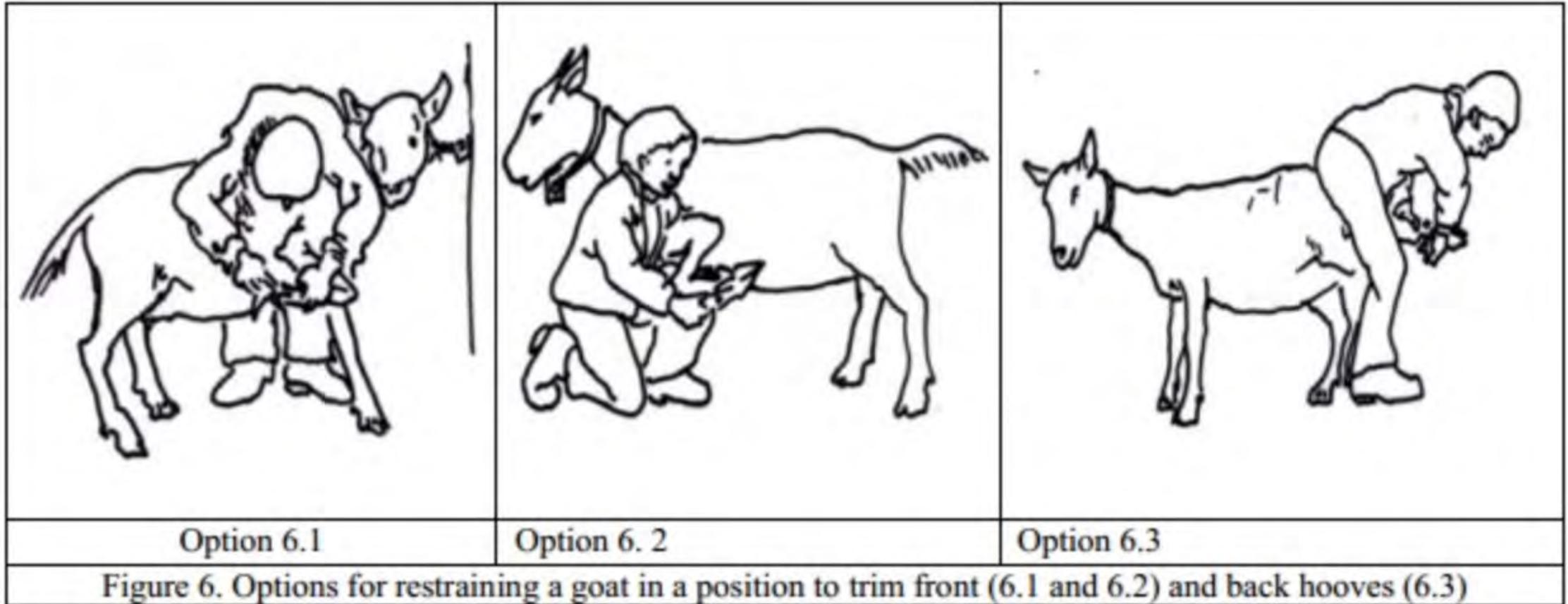
Things to remember while restraining sheep

- Individual sheep need to be separated from the flock. This is usually done by cornering the desired sheep or putting them against the wall.
- Sheep have a very strong flocking instinct which means they want to be with the other sheep at all time. This instinct will make them try to escape when they are separated from the rest.

DO NOT:

- ✓ Grab the sheep by the wool, you can pull off the wool and bruise their skin.
- ✓ Grab the sheep by the horns (if they have) you can break them or hurt yourself.

Restraining goats: Techniques and approaches



Restraining goats: Techniques and approaches (1)

In the first picture one arm is used to hold the beard and the other is used to hold the neck



In the second picture the head is held with both hands



Restraining goats: Techniques and approaches (2)



If they have horns, you can hold the horns at the base of the head for restraining

Restraining kids

The kid is held on the handler's lap with the two front limbs in between the handler's legs, and their hands should be holding the head.



Thank you and acknowledgments

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Supplemental Slides for Facilitator Manual: Treatment of sick shoats



How do you decide if an animal is sick?



- What are some of the characteristics you look for in healthy animals?
- What are some of the characteristics you look for in sick animals?

Which sheep looks healthy? Which sheep look sick?



Which goat looks healthy? Which goat looks sick?



Characteristics of healthy and sick animals

Healthy Livestock	Unhealthy Livestock
Alertness	Lethargic/Listless
Chewing cud	Ruminants not chewing their cud
Sleek coat	Rough hair coat
Bright eyes and pink eye membrane	Dull eyes
Normal feces and urine	Abnormal feces and Discolored urine
Normal temperature	High temperature
Gait steady, no limping	Limping
Normal respiration	Labored breathing/coughing
Stays in herd or flock	Separates self from herd or flock
Eats and drinks normally	Loss of appetite
Contentment	Runny nose
Normal pulse rate	Swelling on any body part

It is important to get prompt treatment for sick animals!



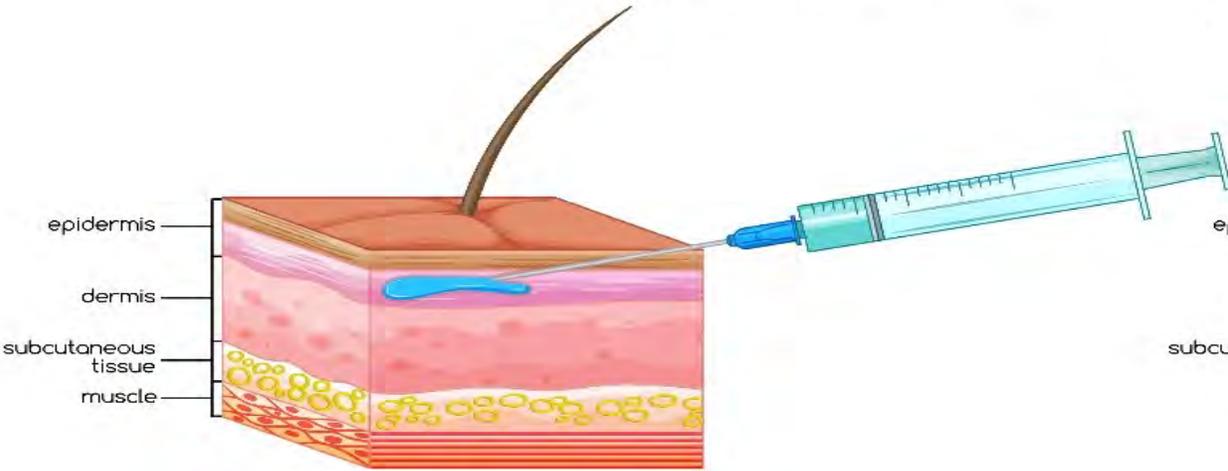
Credit: Heifer International

Injections and treatments

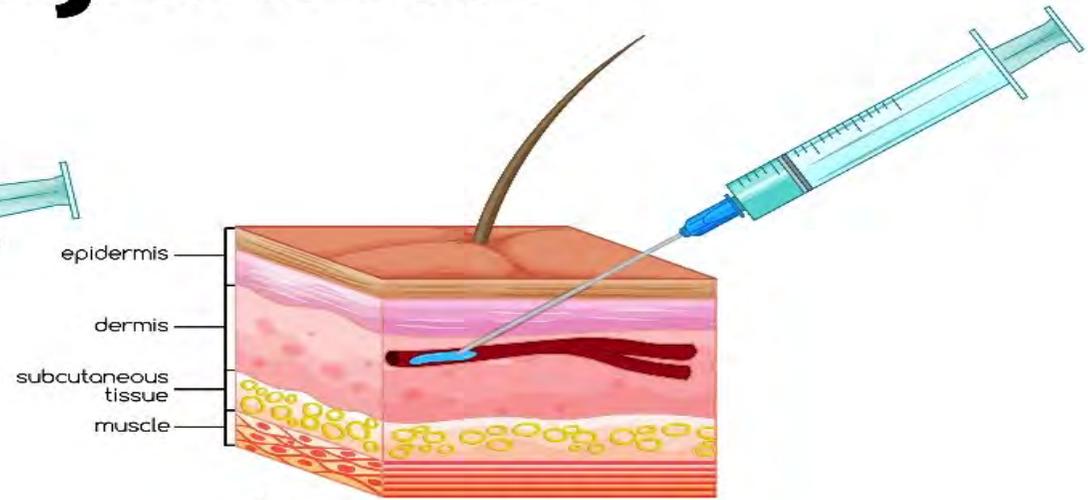


- An *injection* is a drug that is administered to fight an infection the animal has. There are various ways that injections can be given but the three most common are: subcutaneous, intramuscular, and intravenous. You can *treat* disease conditions with injections.
- **Example of an injection:** You can inject the drug Penicillin (which is an antibiotic) into your sheep if they have pneumonia.

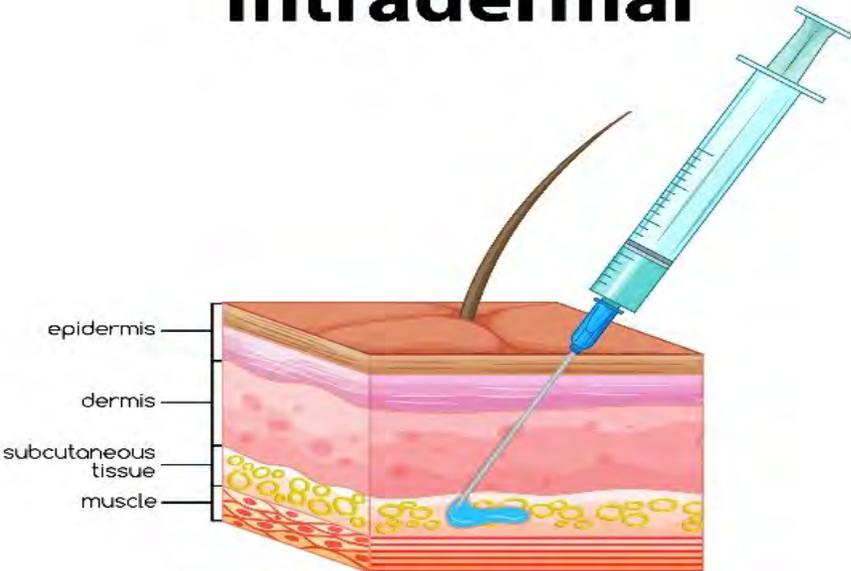
Types of Injections



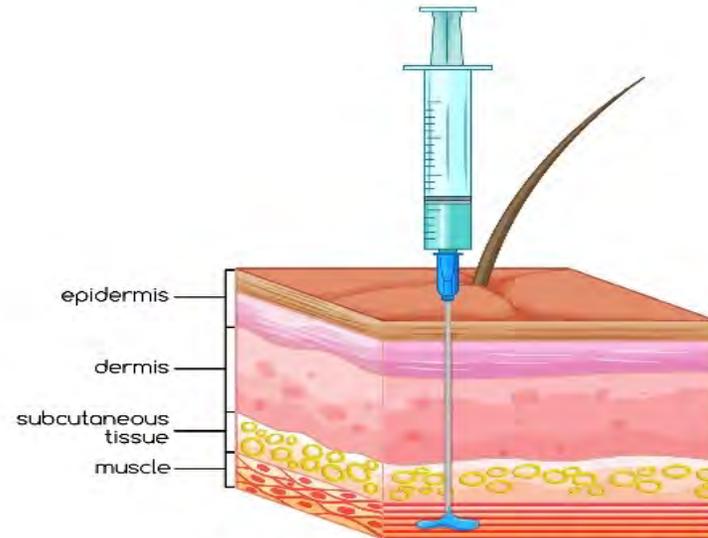
Intradermal



Intravenous



Subcutaneous

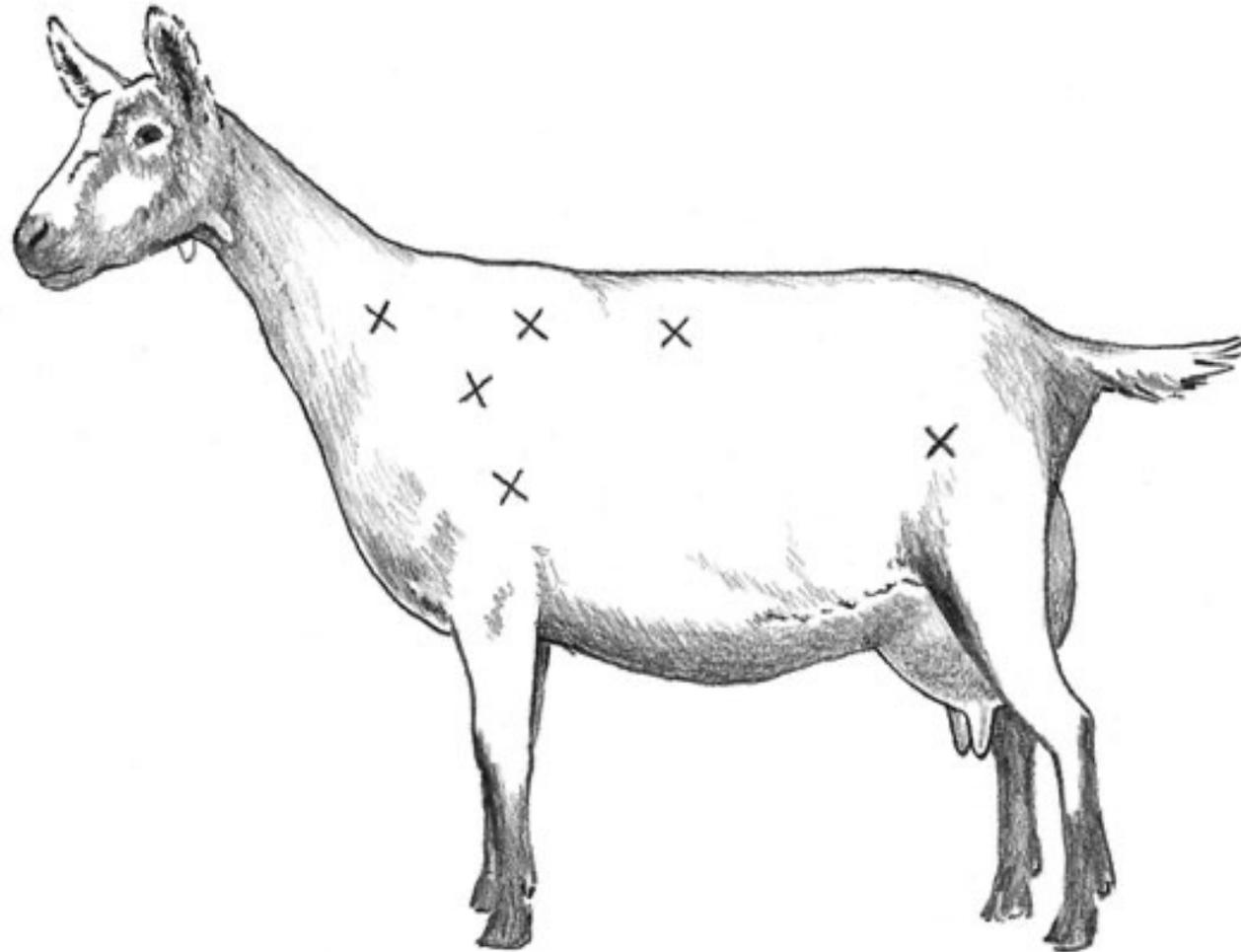


Intramuscular

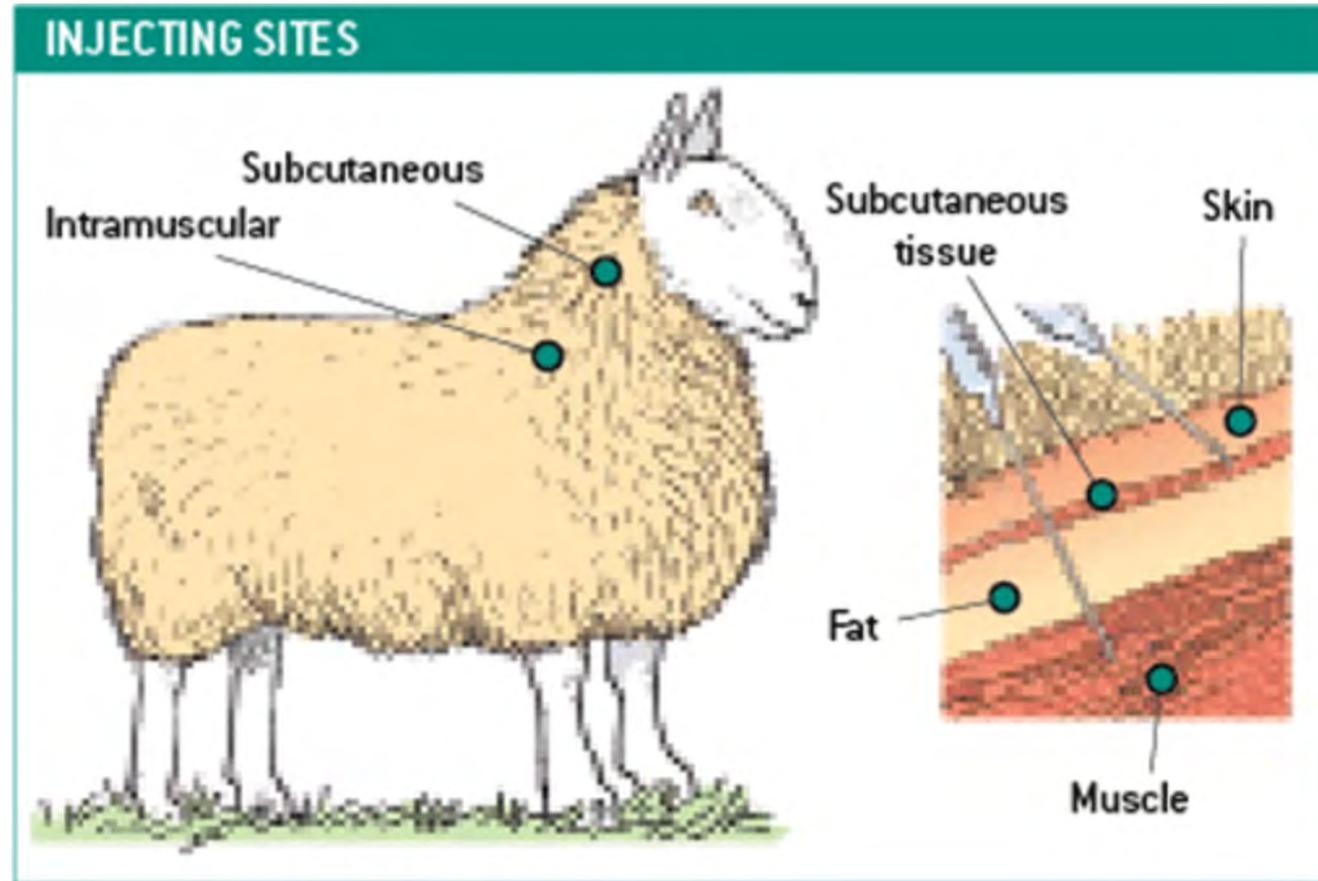
Types of Injections

- “Subcutaneous” injections are given just beneath the skin
- “Intramuscular” injections are administered within the muscle mass
- “Intravenous” injections enter through a vein, directly into the blood stream
- “Intradermal” injections occur within the dermis layer of the skin

Best places to give injections on a goat



Best places to give injections on a sheep



Basics of treating shoats

- Ensure sick animals are separated from healthy animals
- Ensure sick animals have food and water
- Ensure sick animals are in shelter and not under the sun or other weather perils (e.g., rain)
- Contact a veterinarian or report the disease to the vet

Common diseases in sheep and goats

Includes recognition of symptoms, control and prevention

Brucellosis

- This is a **zoonotic** disease caused by a *bacteria*.
- Transmission can occur via ingestion of or contact with infected placenta, fetus, fluids from the fetus, discharge from the vagina, semen, urine, milk. Saliva, feces, nasal, and eye fluids can be infective, but they are not as dangerous.

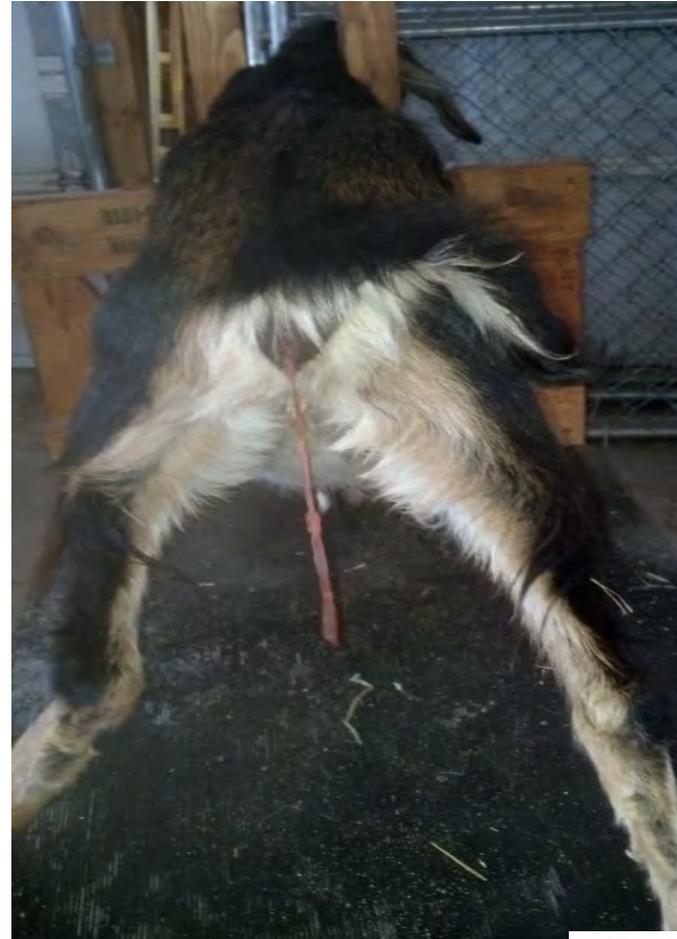
Symptoms include:

- ✓ Reproductive issues (late term abortions, retention of placenta). Abortions tend to occur once and afterwards the female can have normal gestations (birth cycle).
- ✓ Orchitis (inflammation of male reproductive organs) will cause reproductive issues.

Brucellosis (2)



Inflamed testicles in male from brucellosis



Abortion in goat.

Control and prevention of brucellosis

- **Vaccinate** sheep and goats.
- Remove and destroy placenta and aborted fetus and clean the area where this occurred.
- For people: avoid eating undercooked meat, unpasteurized dairy products.
- If an animal is known to be infected, wear protective clothing around the animal. (ie. gloves, mask, overcoat and boots)
- Sick animals should be separated from healthy animals.

PPR (peste des petits ruminants)

- PPR is a disease caused by a *virus*.
- Animals become infected by having close contact with other infected animals. The virus is excreted in tears, nasal discharge, coughing, and feces.

Symptoms include:

- ✓ Fever, depression, loss of appetite
- ✓ Nasal discharge (sometimes it becomes so thick it blocks the nostrils)
- ✓ Thick discharge from eyes making it very hard to open the eyes.
- ✓ Ulcers (sores in the gums, mouth)
- ✓ Diarrhea and dehydration
- ✓ Death can occur between 5-10 days after fever occurs

PPR symptoms



Significance of PPR

- PPR morbidity and fatality rate can be as high as 80–100%
- It can range from 10 to 100% in endemic areas due to factors such as previous immunity, age, and species of the infected animal
- PPR is found throughout Central and Eastern Africa, and parts of Asia and the Middle East, including the Karamoja Region of Uganda

Control and prevention of PPR

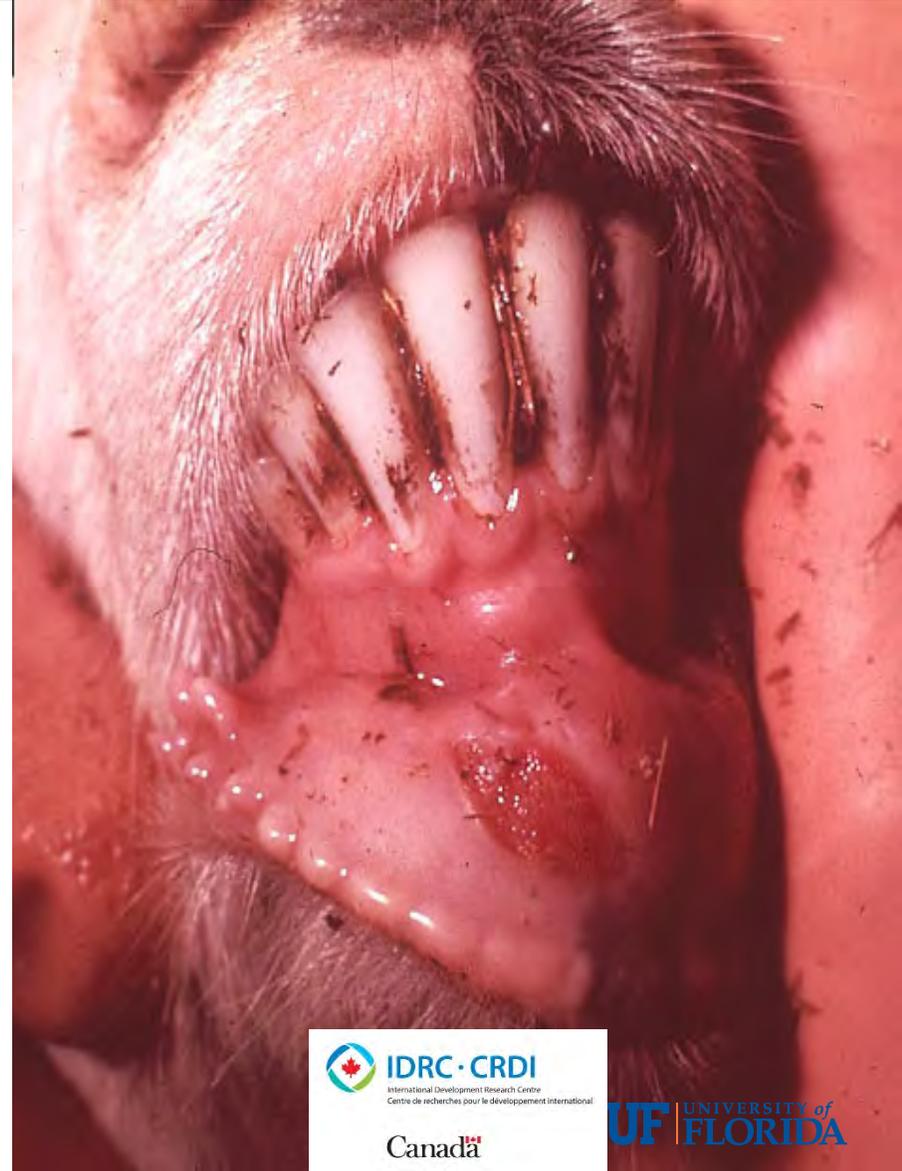
- Quarantine sick animals
- Control movement of animals
- Sanitary slaughter – dispose of carcasses properly
- Clean and disinfect area where sick animals are located
- **Vaccinate** animals

Foot and Mouth Disease

- Highly contagious disease caused by a *virus*.
- Animals become infected by contact with any type of fluids from an infected animal (saliva, respirations, milk, urine, feces, semen).

Symptoms include:

- ✓ Fever
- ✓ Lameness (limping)
- ✓ Sores around the mouth, on the feet, and on the mammary glands, they can be found on other parts of the body as well.
- ✓ Reduction in milk production
- ✓ Lambs and kids may die due to wasting or heart issues.



Control and prevention of FMD

- Humans can carry the virus on their shoes or clothes. If working with animals you suspect may have this disease, take extra precautions when going from sick to healthy animals.
- Restrict movements of affected humans or animals
- Slaughter infected and exposed animals appropriately. Infected carcasses must be incinerated or buried.
- Clean and disinfect the premises, equipment, and vehicles.
- Pest control is important since rodents can carry the disease.
- There is a [vaccine](#) for this disease.

Pneumonia

- Pneumonia is an inflammation of the lungs and is caused by *bacteria or viruses*
- It affects young animals more and can be caused by stress (like transporting animals), overcrowding, poor ventilation, and infected animals transmitting. Death may occur when the animal can't breathe fully or there is a systemic infection caused by the bacteria or viruses

Symptoms include:

- Reduced appetite
- Rapid, shallow breathing
- Nasal or eye discharge
- Coughing

Control and treatment of pneumonia

Treatment:

- Use broad spectrum antibiotics if bacterial pneumonia
- Use antihelminthic wormers if caused by lungworms
- Isolate sick animals
- Anti-inflammatory drugs can be used in valuable animals

Prevention:

- Avoid mixing new animals – quarantine first
- Reduce crowding and poor ventilation
- Treat rapidly to avoid spreading and death

Contagious caprine pleuro pneumonia (CCPP)

CCPP is a contagious disease of goats in Africa, the Middle East and Western Asia. It is spread through the inhalation of airborne droplets from coughing/sneezing animals.

Symptoms include:

- Fever
- Weakness
- Lethargy
- Coughing
- Difficulty breathing
- Frothy nasal discharge
- Stringy saliva
- Anorexia (poor appetite)
- Exercise intolerance



Contagious caprine pleuro pneumonia (CCPP)

- If caught early, CCPP may be treated with antibiotics.
- Morbidity is considered to be 100% with mortality being between 60-100%.
- Quarantine of affected individuals is the best form of preventing herd infection.
- There is a [vaccine](#) for CCPP



Sheep and goat pox (SGP)

Sheep and Goat Pox is caused by a *virus*

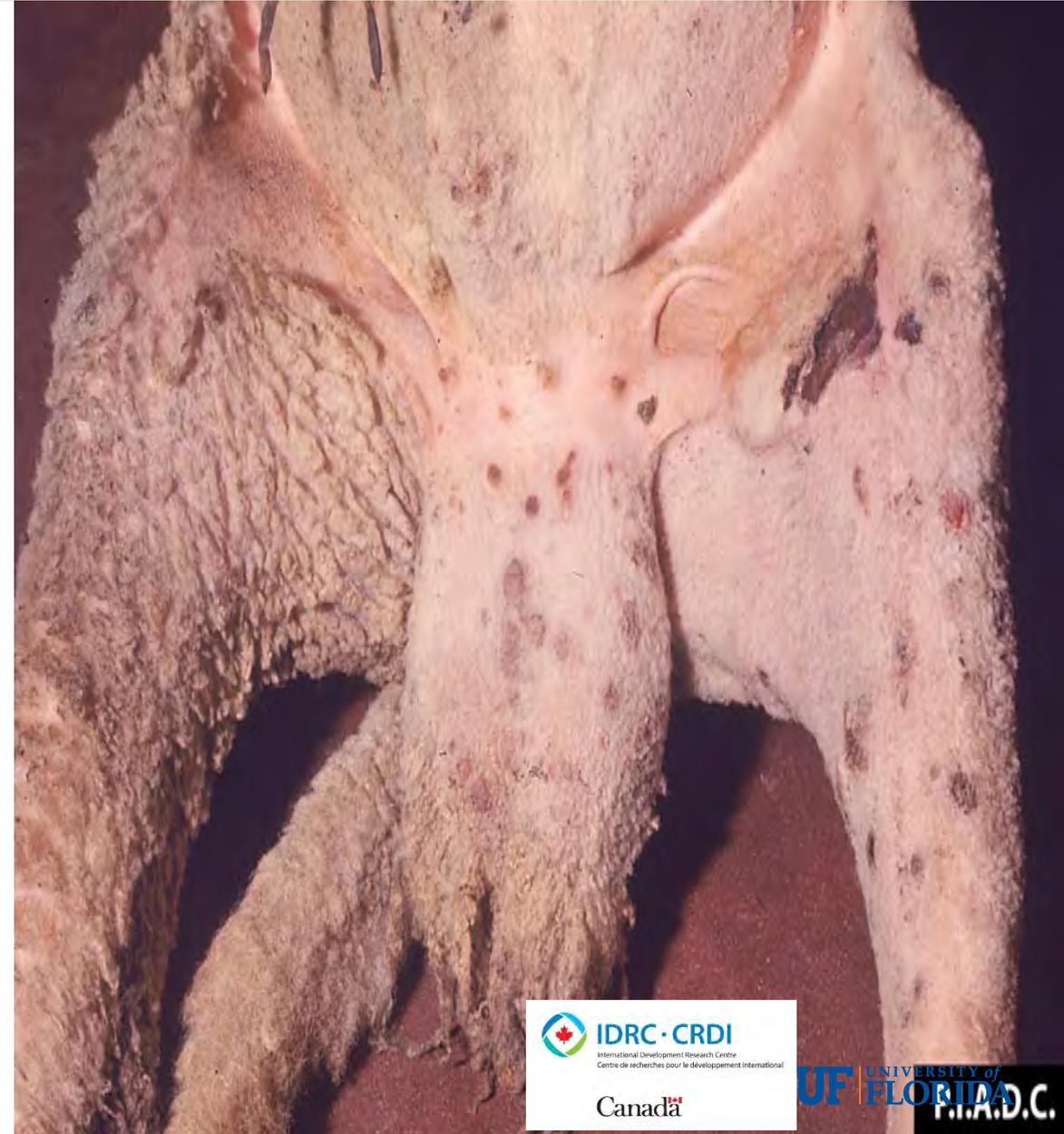
- It is spread through infected animals' oral, nasal and eye discharges

Symptoms include:

- Fever
- Blisters and lesions on the skin – often on mouth, ears, udder
- Discharge from eyes and nose
- Death can occur if untreated

Prevention and Treatment:

- Avoid mixing new animals – quarantine first
- SGP can be controlled by an annual **vaccine**



Contagious Ecthyma (Sore mouth)

- Caused by a *virus*
- It is a **zoonotic** disease and can be transmitted to humans
- Transmitted by other infected animals through direct contact

Symptoms include:

- Sores on the lips and mouth
- Possible sores on lower legs and teats – difficult for lambs or kids to nurse if they are infected

Prevention and Treatment:

Disinfect surfaces where infected animals have been. Isolate new animals.

There is a **vaccine** available



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Supplemental Slides for Facilitator Manual: Weight and age estimation in animals



Credit

The information in this presentation is on the Technical Bulletin titled “Estimation of weight and age of sheep and goats” which is the 23rd in a series produced by the Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP). 2009

For more information consult:

<http://esgPIP.langston.edu/sites/default/files/Technical%20Bulletin%20No.23.pdf>

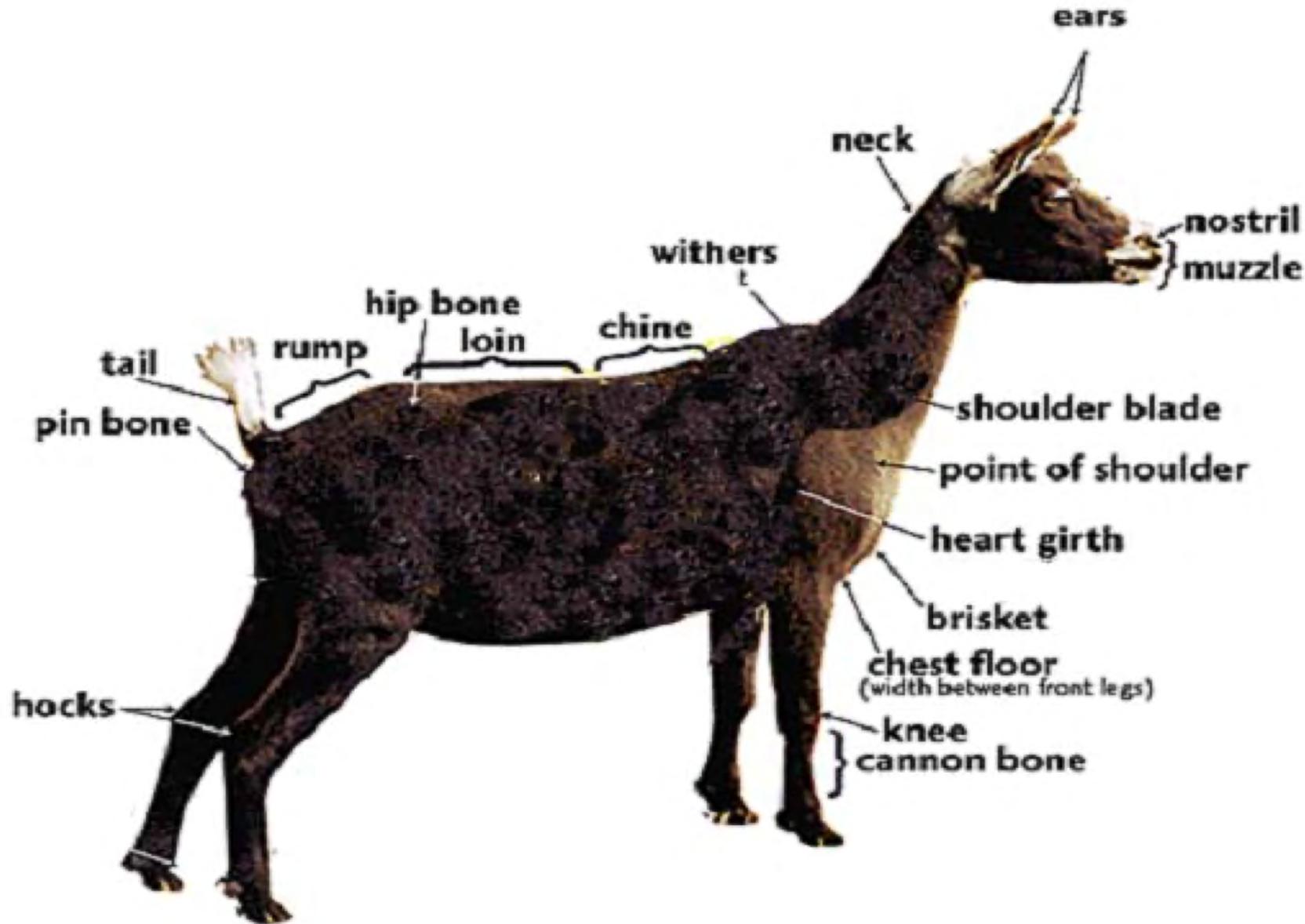
Introduction

- The size and age of sheep and goats are normally related to their productivity. Larger sized animals usually produce more meat than smaller animals. Size is commonly represented by weight, though other linear measurements can be used.
- The size of an animal should be considered in relation to its age allowing for evaluation of growth performance used as a component in deciding which animals to buy, sell, cull or mate.
- Properly calibrated livestock scales are the most accurate and consistent method for determining body weight.
- Linear measurements of animals, in addition to providing body size, can be used to estimate weight.
- Change in dentition of sheep and goats from birth to maturity can be used to estimate age.

Need of measuring

- The weight of a sheep or goat fluctuates as a result of management system, pregnancy, gut fill, lactation, etc.
- Physical body characteristics or linear measurements are less affected by the above factors and allow for growth comparisons of different body parts at any stage or phase of growth

Parts of the body of sheep and goats



It is important to know the different parts of the sheep and goat body to understand the different linear measurements

Measuring weight

Weigh at a constant time of day to obtain

- Fasted weight – best done in the morning before grazing or watering or
- Full gut weight – in the afternoon after animals have had time to eat as much as they want.

Weighing lambs and kids at birth

- Birth weight is an important trait and is related to survival and growth performance. There are three main aspects to consider when measuring birth weight; Restraint, accuracy and reliability.

Restraint, accuracy and reliability

Restraints: Without appropriate restraint of the animals, the scale reading fluctuates wildly. This causes serious error when detecting small differences in weight. Lambs and kids can be restrained by:

- a plastic bucket of known weight
- placing the animal in a sack
- suspended by the legs
- suspended in simple harness

Accuracy: Lamb birth weights commonly range from 1.5-4.0 kg and kid weights from 1.0-3.5 kg, so it is important to use a scale which has sufficient accuracy. Scales reading to 0.1 kg should be the minimum accepted

Reliability: Clean and check the scales since the difference in birth weight to be detected is quite small. It is important to thoroughly maintain the balances/scales used

Procedures for measuring linear dimensions

Height at withers (HAW):

This measures the distance from the surface of a platform on which the animal stands to the withers. The measurement is best made with a special measuring stick made with two arms one which is held vertical and the other at right angles to it sliding firmly up and down to record height.



Procedures for measuring linear dimensions (2)

The sheep or goat should stand squarely on all 4 legs. The legs should be equally spaced, and carry equal portions of its weight.

Place the vertical arm of the measuring device on the ground and ensure it is at a right angle to the platform

Then slide the other shorter arm down until it just touches the shoulder at the desired point

Withdraw the vertical measuring device and measure distance with a measuring tape

Alternatively, the vertical arm could have the measuring scale inscribed onto it and height read directly



Heart Girth (HG) or Chest circumference

Heart girth is a circumferential measure taken around the chest just behind the front legs and withers. The measurement should be taken to the nearest 0.5 cm. HG is a highly repeatable measure though it does vary somewhat with extremes of posture and perhaps as the animal breaths



Body length (BDL)

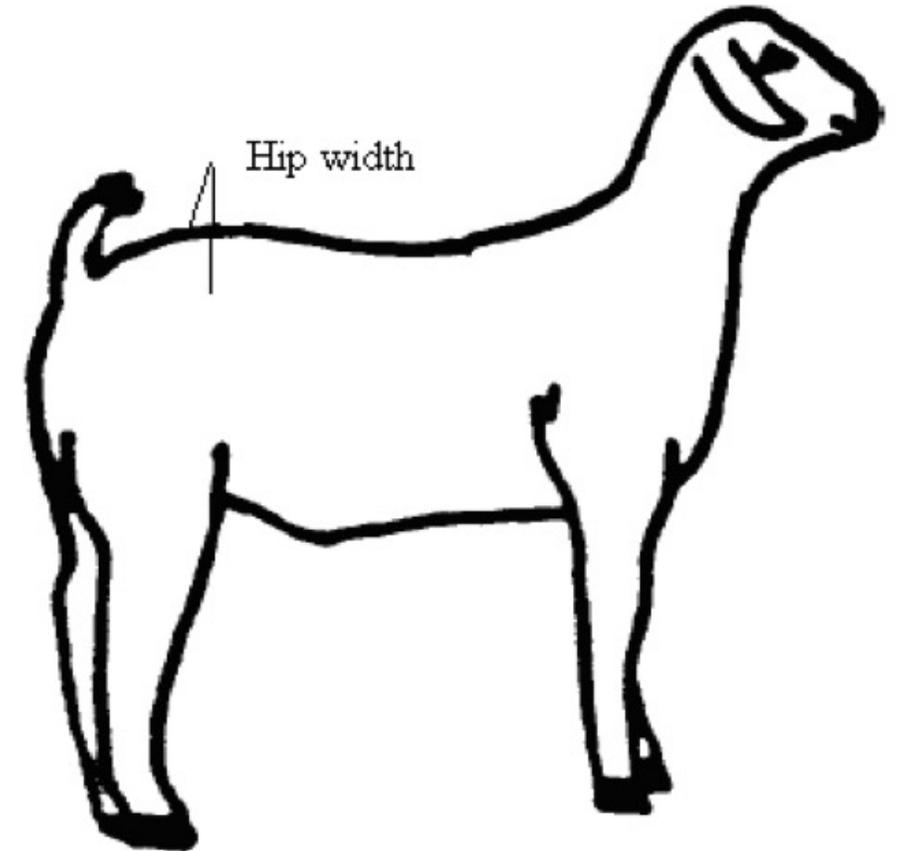
Body length refers to the distance from the base of the ear to the base of the tail (where it joins the body). It can also be measured as the distance from base of tail to the base of the neck (first thoracic vertebrae), or to front of the chest or to tip of the nose. Extreme care is needed to ensure that the backbone is straight in both vertical and horizontal planes



Hip width (pin bone width) (HW)

Hip width is the distance between the outer edges of the major hip bones on the right and left side

The hipbones are easily located and the distance between them easily measured with a pair of large, half round or oval shaped calipers



Chest Depth (CD)

Chest depth measures the distance from the backbone at the shoulder (standardize on one of the vertical processes of the thoracic vertebrae) to the brisket between the front legs



Importance of age determination

In addition to weight and linear dimensions knowing the age of sheep and goats is important for a number of reasons. Some of the reasons are to:

- decide when to cull
- know and choose a sheep or goat to purchase
- decide when to mate
- know contemporaries for selection among them
- adjust for age differences
- have a good estimate of (reproductive) performance of a sheep or goat

Determining the age of sheep and goats through dentition

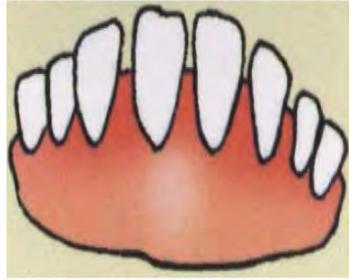
Since most smallholder farmers do not keep records, it is difficult to obtain information on age of animals. Under such circumstances age is estimated based on dentition. Normal tooth arrangement in animals is, from front to back is incisors, canines, premolars, and molars

Sheep and goats, like all ruminant animals, have no canine teeth and do not have upper jaw incisors, rather they have a thick layer of tissue called the “dental pad”

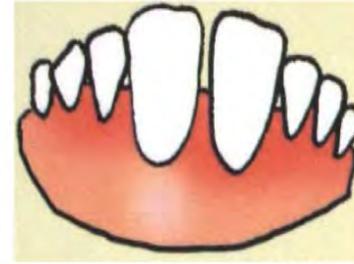
Determining the age of sheep and goats through dentition (2)

Mature sheep and goats have a total of 8 incisors (4 pair-lower jaw), 12 premolars (lower and upper jaw, 3 pairs each), and 12 molars (lower and upper jaw, 3 pairs each) making a total of 32 teeth. When ageing sheep and goats by looking at their teeth, one considers “pairs” of incisors rather than their total. The four pairs which exist at birth or erupt after birth will be replaced by permanent incisors as the animal ages. The replacement of the incisor pairs takes place roughly every 12 months beginning with the center pair. This pattern of replacement can be used to estimate age of sheep and goats

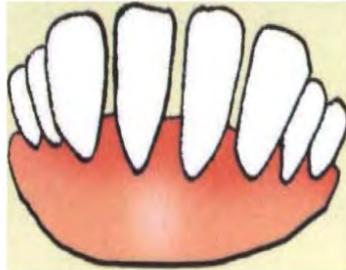
Dentition showing the estimated ages of sheep and goats (Adopted from Vatta et al. 2006)



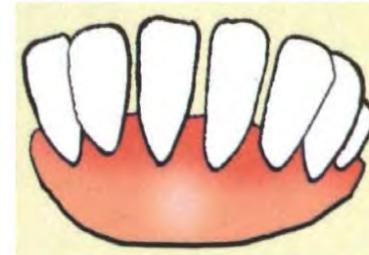
Milk teeth



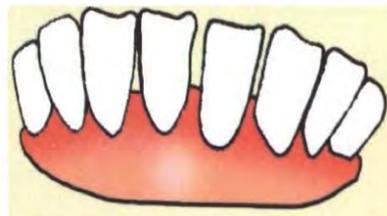
2 permanent (central) teeth



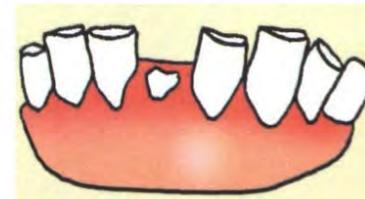
4 permanent teeth



6 permanent teeth



Full mouth – 8 permanent teeth



Broken mouth

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Using Gendered Intersectional Transformative Approaches for training of Village Animal Health Workers



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Gender vs. Sex

Gender:

- Socially constructed characteristics that define and relate to male and female ways of being and behavior within specific contexts
- A web of cultural symbols, norms, institutional structures and internalized self-images that define masculine and feminine roles, rights, & privileges within power relationships

Sex

- Refers to the biological and physiological differences between men and women

Types of Power

Supplemental presentation for VAHW training

POWER OVER

- Control over people, resources and others' lives
- Usually understood as a form of authority, control or domination
- Also, influencing what others think they can do (rights and capabilities)



POWER WITHIN

- Person's or group's sense of self-worth, self-awareness, self-knowledge and aspirations
- Also related to agency and shaped by social norms and gendered and intersectional institutions



POWER TO

- Act and to realize one's aspirations; measured through individual skills, capacities and self-confidence
- Enabling a person or a group of people to act or realizing one's potential



POWER WITH

- Collaborative and collective power with others through mutual support, collaboration, recognition and respect for differences
- Ability to act together



POWER FOR

Power for a vision,
values and demands
that orient struggles for
change



Thank you!

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