Small ruminant flock health and welfare management training report: Cheki Kebele, Angolela-Tera District, Amhara Region

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Summary

The small ruminant industry in the highlands of central Ethiopia is crucial for the livelihood of farmers, but it faces various challenges that hinder production and productivity. The system is characterized by low input and low output, with poor management systems, feed shortages, and health problems being the main issues. Farmers' awareness of disease prevention and control and the economic benefits of community-based strategies is low. To address these issues, a training session was organized with 55 smallholder farmers and 2 veterinarians. The training aimed to improve farmers' knowledge and attitude towards improved small ruminant husbandry, livestock parasite ecology, and the proper usage of drugs to prevent drug resistance. During the training, key points and actions were discussed. Strategic deworming and preventative measures for liver fluke control were emphasized, along with the importance of biosecurity and vaccination for disease prevention. Newborn lamb care management, improved feeding and housing, and the risks of antimicrobial resistance were also covered. The farmers expressed their willingness to implement the knowledge gained from the training and engage more with village-based veterinary services in the future. The training materials and methodology were well-received, and the lessons learned will be applied in future training sessions.

Introduction

Small ruminant in the highlands of central Ethiopia is a main livelihood source for most farmers. The production and productivity of sheep in the area is challenged with different production constraints. Generally, the system is characterized by low input and low output types. Of the problems poor management systems, feed shortages, and health problems are the most one. Farmers' awareness of community-based small ruminant disease prevention and control and its economic benefit is low. Usually, farmers used individual disease /case-based/ animal treatment for different diseases and household disaggregated deworming schemes at different times. Awareness creation on improving small ruminant husbandry system, disease control and prevention, and community-based strategic deworming methods is important to improve small ruminant productivity in the area.

The objectives of the training were:

1. To improve farmers' knowledge and attitude towards small ruminants' improved husbandry and its importance on the welfare of animals and income of the farmers.
2. To improve farmers' knowledge and attitude on livestock parasite ecology and key critical prevention points that will be applicable in their local context.
3. To create farmers' awareness about the proper usage of drugs to prevent drug resistance.

The number of participants in the training was 55 (6 female and 45 male smallholder farmers who have at least one small ruminant in their household and volunteer to participate in the future research and development activities that the project proposed. In addition, 2 veterinarians (1 private and 1 village-level government veterinary service provider, and 3 trainers (2 veterinarians and 1 animal feed and nutrition professional) participated in the training. The training was given in two days (on 12/07/2023 and on 16/07/2023). The training was given at one of the villages (Mangudo) in the ideal place for most of the farmers. The training methodology was a participatory type.

Main points, agreements, and actions

Session 1. Strategic deworming for endoparasite control and prevention

Key issues from the exploratory discussion:

- During discussions, farmers mentioned that the rangeland was infested with liver fluke parasite locally called "wodoma", they frequently (2-3 months intervals) treat their animals.
- Liver fluke is a main threat for them even some farmers lose their whole flock because of this parasite
- Knowledge gap regarding parasite ecology, liver fluke, and snail intermediate host interaction
- They believe liver fluke arises from a special leafy weed found around marshy areas

- They usually found the typical liver fluke live parasite in the liver, which results in disposal of the liver

Key learning points and messages:

- Awareness was given about small ruminant endoparasite lifecycle and how to minimize their impact on sheep morbidity and mortality
- Given the most emphasis that all parasites reproduce like other animals /with examples like a chicken, snake, flies, and other egg laying, heating, and hatching processes/ and they need important suitable environmental conditions for that
- Their villages as compared to other areas of the country most suitable for small ruminant endoparasites/they also raise it in the exploration
- The importance of breaking the life cycle of the parasite to minimize next season's high parasitic burden in the village communal grazing land
- Individual farmers separate grazing practice, cut and carry, forage production /oat and vetch/ are less risky for endoparasite and too more nutritious

Agreements and action points:

- The farmers are willing to deworm strategically and also, and they will practice minimizing liver fluke infection rate by avoiding grazing sheep on the riskiest marshy areas
- They acknowledge village-based veterinary services, and they will engage more with them in the future.

Session 2: Biosecurity and strategic vaccination for disease prevention

Key themes that emerge from the exploratory discussions:

- Farmers know important diseases in the area like sheep pox, foot and mouth disease, anthrax, foot rot, orf and others
- They know most transmission pathways of the diseases
- They do not usually have prevention and control strategies
- They are willing to participate in vaccination campaigns if there is vaccination access for them

Key learning points and messages:

- The farmers get knowledge on the importance of disease prevention and control strategies

Agreements and action points:

- They will vaccinate their small ruminants in the future
- They will do isolation of diseased sheep until their recovery

Session 3. Newborn lamb care management

Key themes that emerge from the exploratory discussions:

- Some farmers explain that they usually do not give attention to newborns
- Some of them critically give special attention

Key learning points and messages: key takeaway messages as implemented (2-3 bullet points)

- they shared knowledge and skills about newborn lamb and kid management
- minimizing stressors and feeding colostrum at neonatal age is important

Agreements and action points: what actions do farmers identify and agree to implement?

- They will practice giving special care to newborn lambs
- Colostrum feeding at birth is important. Farmers do not prevent lambs and they are aware of its importance for calves (few farmers misunderstand that colostrum for calves is not very important particularly if it is given much for calves).

Session 4. Improved feeding and housing for animal welfare

Key themes that emerge from the exploratory discussions:

- They reflect that they usually used extensive feeding, they do not supplement concentrate and another important nutrient for sheep
- The housing and hygiene for most farmers are poor (agreed with the veterinarian's observation)

Key learning points and messages:

- To get more profit from sheep and goats, improving housing, hygiene, watering, and feeding is very important
- If they handle their animals in good welfare, they will get a good outcome (rapid growth, fast reproduction, less morbidity, and mortality)

Agreements and action points:

- Agreed to start improving hygiene, drainage, ventilation of sheep barn, feeding improved forage (oat)

Session 5. Antimicrobial resistance

Key themes that emerge from the exploratory discussions:

- Illegal use of veterinary drugs in the community is rare
- They usually follow veterinarians' prescription
- They understand the negative impact of using under or over-dosage, interruption of long-term antibiotic treatment

Key learning points and messages:

- We have a few veterinary drugs in Ethiopia and in the world. We must use them properly to slow antibiotic and anthelmintic resistance.
- Antibiotic resistance bacteria and parasites are a challenge for veterinary and public health
- Antibiotic-resistant bacteria, if zoonotic, will also be resistant in humans since most antibiotic drug groups for humans and animals are the same.

Agreements and action points:

- They will not use veterinary drugs improperly for their animals

Monitoring and mentoring support

- The training methodology and documents we have prepared in this training are important sources for our future training and extension services
- The extension workers reflected that the training materials and the way of training were so smart, and they get important skills for their future extension services

Observations, reflections, and lessons learned

- We observe that the farmers have good knowledge about the ecology of parasites except for liver fluke
- Liver fluke and other internal parasites are a main constraint for small ruminant production
- Organized training materials and a different training methodology for the farmers have a good advantage in fulfilling their knowledge gap,
- The farmers acknowledge the importance of veterinary service, particularly in the private sector and they volunteer to work together
- The private veterinarian reflected that he will serve properly for his customers /the farmers
- We will use these training documents and methodology in our future training time.

CGIAR's Sustainable Animal Productivity for Livelihoods, Nutrition and Gender Inclusion (SAPLING) is working in seven countries focusing on livestock value chains to package and scale out tried-and-tested, as well as new, innovations in livestock health, genetics, feed, and market systems. SAPLING aims to demonstrate that improvements in livestock productivity can offer a triple win: generating improved livelihoods and nutritional outcomes; contributing to women's empowerment; and reducing impacts on climate and the environment. Its seven focus countries are Ethiopia, Kenya, Mali, Nepal, Tanzania, Uganda, and Vietnam.