

FEED THE FUTURE INNOVATION LAB FOR LIVESTOCK SYSTEMS

THE EFFECT OF PASSIVE SURVEILLANCE TRAINING ON ANIMAL HEALTH PARAMETERS, NORTHERN ETHIOPIA

Background

The University of Georgia partnered with Mekelle University, Ethiopian State Ministry for Animal Health, Tigray Regional Head of Veterinary Services, and African Union Inter-African Bureau for Animal Resources (AU-IBAR), to conduct a proof-of-concept research activity involving enhancement of awareness regarding recognition and reporting of transboundary animal diseases (TADs). TADs are defined as diseases which are capable of very rapid spread and/or severe socioeconomic impact. Their presence impedes economic success at both the national and local levels, with trade restrictions damaging the national economy, and death of smallholders' livestock impairing the microeconomy. The AU-IBAR, in their Standard Methods and Procedures for Animal Health (SMP-AH) program for TADs, has emphasized awareness, reporting, and control, as the cornerstone of livestock health for the Horn of Africa.

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Research conducted: October 2016 – April 2018

Project area: Tigray (Misraqawi, Debubawi, Mehakelegnaw, Semien Mi'irabawi, Mi'irabawi) region, Ethiopia

It is only when these diseases are controlled that the livestock sector can flourish and maximally benefit the economy through improved production and trade.

Control of TADs, as described by the World Organisation for Animal Health (commonly known as the OIE), is effected through each country's national Veterinary Services (VS). The OIE maintains an evaluation program, Performance of Veterinary Services (PVS), which provides guidance on how to improve the VS. The PVS report for Ethiopia specifies that the country's VS needs better connections with regional veterinary service departments, private veterinary service providers, and other stakeholders. The PVS report also highlights a significant gap in effectiveness of the VS due to lack of reporting of TADs from the field. In order to address these shortcomings, this project conducted training on recognition and control of TADs at the field level, to enhance awareness and improve reporting.

The objectives of the project were to: (1) Measure reporting of TADs before and after training, to determine if producer involvement sufficiently enhances awareness and reporting of diseases which the government is tasked with controlling; (2) Identify perceived barriers to reporting among producers through discussion sessions; and (3) Determine amount of downstream dissemination of information post-training.

Approach

Training was conducted in 15 woredas in late March and early April 2017 using a standardized curriculum. The number of suspected TAD outbreaks reported to the Regional Bureau was measured for six-months following the training. This reporting was compared with 5 years of historical data for the same area and same time period. The historical data was used to create reporting baselines by woreda, disease, region, and year for five significant TADs already known to be a problem in the region. Additionally, reporting in trained woredas was compared to reporting from ten woredas that did not receive any training. At the beginning of each workshop, discussions were held regarding reporting of diseases to governmental authorities. This was done to discern

underlying reasons for reporting (or not reporting). A pre- and post-training test was also given at the beginning and end of each workshop to assess learning.

Results

Perceived barriers to reporting, collected in an anonymous manner at the beginning of each workshop, largely centered around the lack of awareness about reporting responsibilities and/or mechanisms. Other barriers discovered were poor understanding of the clinical picture of TADs, how they are spread and possible biosecurity measures that will help prevent their spread.

Pre- and post-training tests confirmed that the learning objectives were achieved. Specifically, participants gained knowledge about TADs, the importance of reporting, and basic biosecurity concepts.

Data on reporting to the Regional Veterinary Bureau was collected from the 15 woredas where training took place as well as 10 randomly selected woredas without the training. The analyzed data revealed no statistical differences in reporting to the Regional Veterinary Officer on TADs subsequent to training or between trained and untrained woredas. The research team then reviewed the reporting structure, which turned out to be complicated, with 2 levels of screening of disease events prior to reporting to the Regional Veterinary Officer. This complicated disease reporting structure may have prevented increased outbreak reports from reaching the Regional Veterinary Officer. To test this hypothesis, a nearby woreda was evaluated to determine the intra-woreda impact of training individuals. The result was a clear, positive behavioral change with statistically significant (p -value = 0.004) indication of the benefit of training and a trend of increased reporting from the farmers to the local veterinarians among the trained individuals. The failure of getting outbreak information to the Regional Veterinary Bureau and beyond in the initial trial is based on the complicated disease reporting structure, and limited understanding of reporting requirements by all stakeholders involved.

Recommendations

Based on the evidence from this project, ensuring that all stakeholders understand the importance of reporting TADs is essential. It is recommended that not just producers, but the local animal health workers (both community animal health workers and local veterinarians), as well as the district veterinarians, receive training. Targeted studies revealed that there was extensive downstream delivery of information by veterinarians trained so behavioral change in this group has the potential to markedly expand overall awareness and subsequent reporting.

The Ethiopian Office of the FAO was enthusiastic about the training method and manuals. They partnered with the Ethiopian Ministry of Agriculture, translating the manual into the major local languages – Amharic, Tigrinha, Oromifa – and delivered training throughout the country. These manuals can be accessed at <https://livestocklab.ifas.ufl.edu/projects/dr-corrie-brown>.

1. Training of producers and veterinarians is essential to promote awareness and reporting of TADs, in order to prompt prevention and effective control. It is important to ensure that all levels in the reporting chain are included in the training.
2. Use of tools and community-level teaching and interaction events should be included in these training events to identify methods that the community can adopt to encourage reporting and to implement biosecurity within the community to mitigate the spread of diseases.

This work was funded in whole or part by the United States Agency for International Development (USAID) Bureau for Food Security under Agreement # AID-OAA-L-15-00003 as part of Feed the Future Innovation Lab for Livestock Systems. Any opinions, findings, conclusions, or recommendations expressed here are those of the authors alone.

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Photo Selection:



Participant teaching transmission



Dr. Etsay (Univ. of Mekelle), right, teaching class



Participants reviewing manual



Group work



Group work



Participants demonstrating the “wave” to demonstrate how quickly transboundary animal diseases can move

Photo credit: Corrie Brown