FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

Feed the Future Innovation Lab for Livestock Systems

INNOVATION SUMMARY:
SMARTPHONE APP FOR LIVESTOCK DISEASE REPORTING

The innovation is a mobile phone-based application (app) to report livestock diseases through participation of women in rural villages with difficult access to animal health services. Members of remote communities report livestock diseases to a lead woman "sentry" who uses the app to upload disease symptoms and an image of the sick animal and GPS location to a server. A veterinarian reviews them, diagnoses the disease and, if needed, notifies local authorities to act. This innovation allows rapid detection and control of livestock diseases in Nepal.

INNOVATION QUICK FACTS

Lead Implementing Institution: Colorado State University

Category: Disease Management

Applied in: Nepal

Innovation Type: Technology

New/Adapted: New

Created for: Mainly Women

Nutrition Linkage: Dietary Quality

THE PROBLEM & ITS IMPORTANCE

Livestock diseases and their spread cause significant economic loss in Nepal. This is mainly due to lack of awareness of outbreaks, limited capacity to implement disease control and mitigation measures, and poor road conditions that make it challenging for animal health workers to reach remote areas. These problems hinder livestock productivity and profitability for smallholder producers living in remote locations and can also negatively impact human health through consumption of unsafe foods and products from diseased animals. Livestock producers are often forced to either leave the animals untreated or travel long distances to veterinary clinics, resulting in time away from their production-related tasks.

POTENTIAL BENEFITS

Due to rapid reporting by a woman sentry, veterinary services were able to respond in a timely manner, which prevented an outbreak of haemorrhagic septicaemia, a deadly disease of cattle and water buffalo, from becoming an epidemic. This approach also significantly improved disease reporting during the two months it was tested, generating 1042 reports. However, many of the disease event reports submitted through the app were production-related diseases that did not require an immediate response from the veterinary services. Nevertheless, improving grass-roots level disease surveillance is important as it can help detect disease outbreaks early when they are easy to control.

APPLICATION OF THE INNOVATION

The resources needed to apply this innovation are training and availability of a smartphone. To apply the innovation, first designated lead village women ("sentries") need to be trained in animal disease recognition, particularly on diseases of special interest to the Veterinary Services. In addition, sentries, epidemiologists, and others may need to be trained to learn how to use the app, navigate the reporting system, and manage data.

As cell phones are already widely available in Nepal and the app is free, the main investment is to support capacity building activities. This reporting system and app will be most appropriate in rural areas where veterinary services are not readily available or accessible.

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