# Evidences

## Study #3287

**Contributing Projects:**
- P356 - Evidence that counts for zoonoses

## Part I: Public communications

**Type:** OICR: Outcome Impact Case Report

**Status:** New

**Year:** 2019

**Title:** More than 12,000 farmers in Kenya provided access to zoonotic disease information though mobile phones

**Short outcome/impact statement:**
Since 2017, ILRI researchers supported by A4NH have been partnering with Green Dream Tech to integrate information on 15 key zoonoses into iCow, a mobile phone agricultural platform reaching nearly 600,000 smallholder farmer subscribers in East Africa. As of November 2019, around 178,000 SMS messages on zoonotic diseases have been sent to 12,643 farmers primarily in Kenya.

**Outcome story for communications use:**
iCow is a mobile phone agricultural platform operating in East Africa [1]. It provides a complete portfolio of information for smallholder farmers, with a special focus on livestock farmers. Since 2017, ILRI researchers in A4NH have provided information on infectious diseases from animals that can be passed to people (zoonoses) that is included in an iCow app [2]. This is part of a package available to iCow's subscribers (smallholder farmers). iCow is designed for the most basic feature phones and is available in different languages depending on the country. It also provides options to connect to advisors.

The zoonotic disease module includes key messages for anthrax, brucellosis and Rift Valley Fever; rabies and trypanosomiasis; cysticercosis and leptospirosis; avian influenza; echinococcosis; foot and mouth; and Q fever. Farmers access the zoonotic disease content through the library by dialling a short code and following the simple menus or by sending keywords by SMS to the iCow platform, an option known as autoresponder. From April 2017 to November 2019, around 178,000 SMS messages on zoonotic diseases were sent to 12,643 farmers. Around 6,065 of the farmers accessed disease information from the library and 6,578 access information from the autoresponder. The five most research zoonotic diseases during this 2 ½ year period were anthrax, brucellosis, Rift Valley Fever, foot and mouth disease (not a zoonosis), and leptospirosis. Beyond information provision, there are plans to assess whether the provision of information actually is applied and how. Using iCow and other citizen science networks for surveillance of infectious diseases of animals and humans diseases are a potential tool for surveillance in resource-poor environments. This is an important area of A4NH to guide disease preparedness and intervention strategies. It also links to A4NH and partner research and partner work in the Zoonoses in Emerging Livestock Systems Program to strengthening existing and evolving surveillance networks with feedback to farmers.

**Links to any communications materials relating to this outcome:**
- https://www.icow.co.ke/
- http://global.icow.co.ke/icow-app/

## Part II: CGIAR system level reporting

**Link to Common Results Reporting Indicator of Policies :** No

**Stage of maturity of change reported:** Stage 1

**Links to the Strategic Results Framework:**
Sub-IDOs:
- Reduced livestock and fish disease risks associated with intensification and climate change
- Increased resilience of agro-ecosystems and communities, especially those including smallholders


Is this OICR linked to some SRF 2022/2030 target?: No

Description of activity / study: <Not Defined>

**Geographic scope:**
- National
- Regional

Region(s):
- Eastern Africa

Country(ies):
- Kenya

Comments: <Not Defined>

**Key Contributors:**
Contributing CRPs/Platforms:
- A4NH - Agriculture for Nutrition and Health

Contributing Flagships:
- F5: Improving Human Health
Contributing Regional programs: <Not Defined>
Contributing external partners:
- FCDO - Foreign, Commonwealth & Development Office (formerly DFID)(United Kingdom)
- BBSRC - Biotechnology and Biological Sciences Research Council
- University of Liverpool
- GDT - Green Dream TECH Ltd

**CGIAR innovation(s) or findings that have resulted in this outcome or impact:**
The link to the innovation entry in MARLO is provided below . The zoonotic disease module was designed by ILRI researchers in the Zoonoses in Livestock in Kenya project funded by the UK Biotechnology and Biological Sciences Research Council (BBSRC) and UK Department for International Development (DFID), implemented in in Kenya from 2014-2020. This is a research project focussed on disease surveillance for zoonoses in smallholder livestock systems.

**Innovations:**
- 1350 - Mobile-phone application with zoonotic disease information for smallholder farmers in East Africa

**Elaboration of Outcome/Impact Statement:**

iCow is a mobile phone agricultural platform operating in East Africa. Since 2017, ILRI researchers supported by A4NH have been partnering with iCow to integrate information on zoonotic diseases into their platform. Now subscribers (smallholder farmers) obtain information on zoonotic diseases, especially those that impair livestock production, when they place a request. iCow is a comprehensive solution for farmers designed not only to support them with livestock and crop production but also to connect them to the vital players in their agricultural ecosystem. iCow is designed for the most basic feature phones and is available in different languages depending on the country of deployment.

The research team developed key messages on zoonoses according to a format specified by iCow. A set of key messages were developed and tailored for specific diseases, including anthrax, brucellosis and Rift Valley Fever; rabies and trypanosomiasis; cysticercosis and leptospirosis; avian influenza; echinococcosis; foot and mouth; and Q fever. Farmers access the zoonotic disease content through the library by dialling a short code and following the simple menus or by sending keywords by SMS to the iCow platform, an option known as autoresponder. From April 2017 to November 2019, around 178,000 SMS messages on zoonotic diseases were sent to 12,643 farmers. Around 6,065 of the farmers accessed disease information from the library and 6,578 access information from the autoresponder. The five most research zoonotic diseases during this 2 ½ year period were anthrax, brucellosis, Rift Valley Fever, foot and mouth disease, and leptospirosis. How this information translated into changed behaviour or improved outcomes is yet to be formally evaluated.

Strengthening and integrating zoonotic disease surveillance systems is one of the main areas of A4NH's work on improving human health. Integrated surveillance activities for zoonoses involve the systematic collection, analysis, and evaluation of health-related data from animal and human populations. These data, in turn, can be used to enhance disease preparedness, improve resource allocation, and guide disease intervention strategies. This initiative with iCow is part of a larger project funded by multiple United Kingdom partners in the Zoonoses in Emerging Livestock Systems programme. The projects are not developing new stand-alone surveillance systems but strengthening existing systems and assessing the cost-effectiveness of different options alongside partners. Surveillance system data gathered is then translated into farmer-directed feedback, which has been disseminated through farmer face- to-face gatherings and to policy partners like the Kenya Government Zoonotic Disease Unit [1].

**References cited:**

1. Falzon, L.C., Alumasa, L., Amanya, F., Kang'ethe, E., Kariuki, S., Momanyi, K., Muinde, P., Murungi, M.K., Njoroge, S.M., Ogendo, A., Ogola, J., Rushton, J., Woolhouse, M.E.J., Fèvre, E.M. (2019). One Health in Action: Operational Aspects of an Integrated Surveillance System for Zoonoses in Western Kenya. Frontiers in Veterinary Science. 6: 252. https://doi.org/10.3389/fvets.2019.00252

**Quantification:** <Not Defined>

**Gender, Youth, Capacity Development and Climate Change:**
**Gender relevance:** 0 - Not Targeted
**Youth relevance:** 0 - Not Targeted
**CapDev relevance:** 0 - Not Targeted
**Climate Change relevance:** 0 - Not Targeted

**Other cross-cutting dimensions:** NA

**Other cross-cutting dimensions description:** <Not Defined>

**Outcome Impact Case Report link:** Study #3287

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