Boosting Uganda’s investment in Livestock Development - RVF component

Major achievements

1. Genomics
   - KEMRI commenced RVF virus isolation from archived serum samples from patients suspected to have had RVF in previous outbreaks in Kenya.
   - To date, 50 samples have been inoculated in the African monkey kidney cell lines (Vero) cells; 7 of these were collected during the 1997/98 outbreak in 1 (Kajiado) district, 18 samples were collected during 2006/2007 outbreak in 3 districts, and 25 samples were collected during the 2018–19 outbreak in central Kenya. Twenty samples showing cytopathic effects have been screened using RT-PCR.
   - A few samples (n = 3) from different outbreaks have been classified as being positive for RVF virus on RT-PCR as shown in Figure 2.

2. RFV risk mapping
   - MAAIF has compiled data on historical RVF outbreaks in the country, starting with the first outbreak that occurred in March 2016 (Figure 3a).
   - MAAIF and ILRI conducted spatial analysis of sero-epidemiological data that were collected just before the project commenced.
   - A draft a risk map generated is shown in Figure 3b.

3. Vocational training
   - MAAIF, NaLIRRI, KEMRI and ILRI trained 22 entomologists from 6 districts on sampling and characterization of RVF mosquito vectors (Figure 4a). Most of those trained had wealth of expertise on tick and tsetse sampling, but not mosquitoes.
   - VSF – Germany trained 36 veterinary field personnel from 12 districts on participatory disease surveillance. This will improve syndromic surveillance for RVF and other diseases such as PPR.

Challenges

- Inadequate research personnel: there is need for more scientists to support field research
- Delays on formalization of One Health partnerships
- Delays on accessing stored livestock samples in both countries

Context
RVF risk is expected to increase in the region with climate and land use change

The project aims to generate knowledge and tools that can support better surveillance and control of the disease in Uganda. Figure 1 demonstrates the proposed impact pathway.

Future steps – Year 2
- Launch field activities as soon as travel restrictions imposed to manage COVID-19 are lifted
- Finalize statistical analyses on seroprevalence data

Outputs in CGSpace
- Draft RVF risk map
- Entomology training report
- PDS training report

Contact
Bernard Bett
b.bett@cgiar.org

ILRI thanks BMZ and all other donors and organizations which globally support its work through their contributions to the CGIAR Trust Fund.

This document is licensed for use under the Creative Commons Attribution 4.0 International License. June 2020