Peste des petits ruminants post-vaccination seromonitoring in Uganda

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Introduction

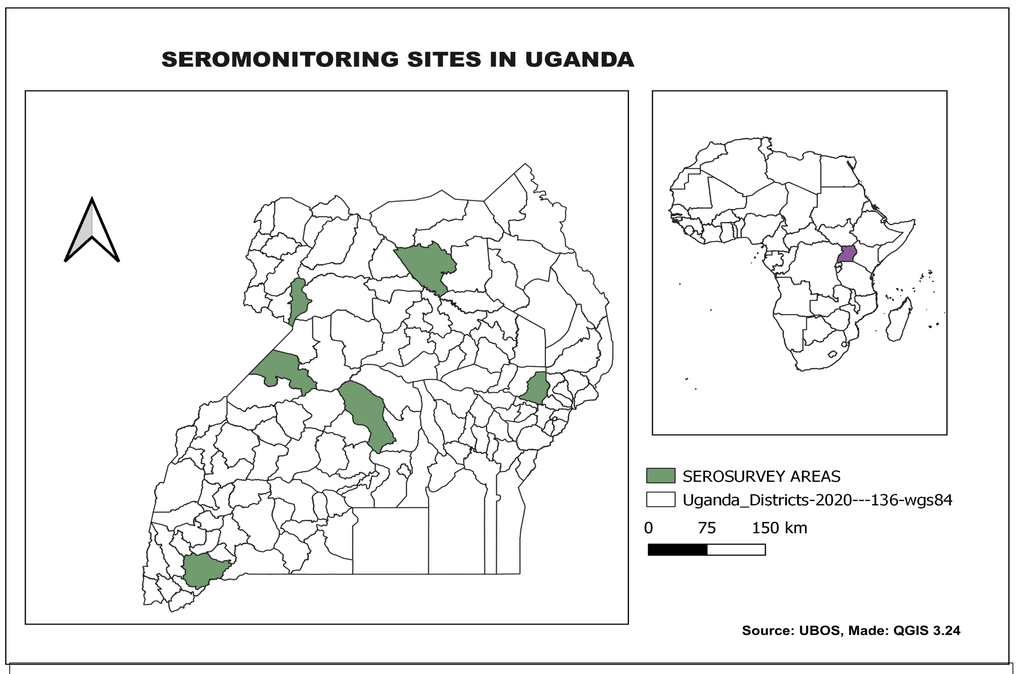
Following the adoption of the Global Strategy for the control and eradication of PPR, Uganda is set to procure over 8 million doses of vaccines for the eradication of PPR. 1.5 million doses of vaccines were utilized in 2020/2021 and a post vaccination seromonitoring exercise was conducted to assess the critical control points which determine the success of a mass vaccination campaign. This included identifying best practices, resource gaps and infrastructure status needed for successful mass vaccination campaigns.

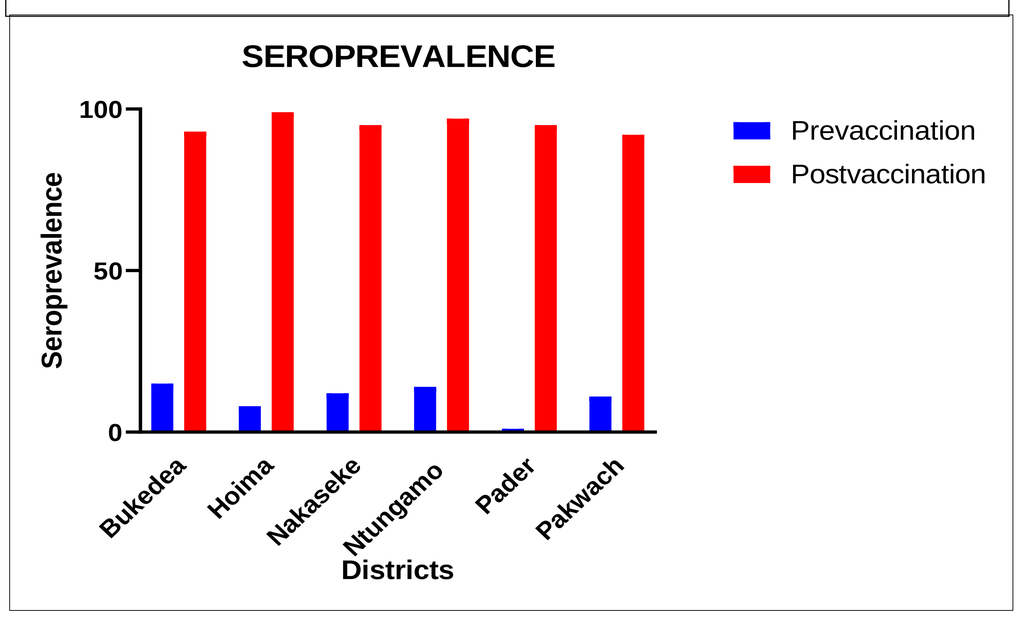
Methods

A longitudinal study was conducted in 6 purposively selected districts of Uganda , 16 randomly selected villages, and 17 purposively selected sheep and goats, to assess cold chain management, vaccine administration protocols and seroconversion. Questionnaires, key informant interviews and observation were used to collect data. 1602 blood samples were collected from small ruminants and analyzed for presence of antibodies against PPR before and in 1245 three months after vaccination using competitive ELISA.

Findings

- Pre-vaccination sero-prevalence: 12% (n=1602)
- Post vaccination seroprevalence was 93% (n=1245)
- Drop out rate was 3% (of which 80% were goats sold)
- 84% of districts have fridges dedicated to storage
- 33% of districts had temperature monitors for fridges
- Prevaccination refresher trainings were not conducted in all districts
- Farmers were educated about the importance of vaccination
- Cool boxes used in the field lack temperature monitors
- There were no adverse effects reported by farmers
- Vaccinators administered the recommended dose
- On average, a 100ml vaccine bottle was used to vaccinate 94 animals





Conclusions & limitations

Mass vaccination programs are effective and can be relied upon for control and eradication of PPR. High stock replacement rate underscores the need for more frequent vaccination if eradication is to be achieved.

Next steps: Logistic regression to determine the effect of vaccination practices and animal factors on seroconversion.

Contribution to Uganda's livestock development agenda

This study is useful for identifying the critical control points for improving the vaccination protocol that is being used for mass vaccination campaigns towards PPR eradication.

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