FOOD SECURITY IN UGANDA: SPATIAL AND TEMPORAL TRENDS OF CONTANGIOUS BOVINE PLEUROPNEUMONIA IN UGANDA (1956-2011)

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Abstract

CBPP is an economically important disease of cattle in Uganda, causing mortality and reduced productivity, with losses estimated at €3.7M per annum. The objective of this study was to determine the spatial and temporal trends of CBPP in Uganda from 1956-2011. Of the 850,452 samples submitted to MAAIF, 6,410 (0.8%) tested positive for CBPP, 835,905 (98.2%) tested negative and 8,137 (1%) had missing results. The CBPP positive samples increased during the study period, ranging from 0.05% in 1956 to 84.19% in 1996. A seasonal trend was observed with highest average monthly percent of positive samples reported in November (39.50%) and lowest in March (3.10%). Majority of samples (89.71%) were from Karamoja, tested between1956 to 1974; 1975 to 2011 most samples were from Southern Uganda. The increase in CBPP prevalence during the study period was attributed to movement of infected cattle triggered by trade and political instability. Continued government support is therefore crucial for an effective surveillance program.

Introduction

CBPP is a bovine respiratory disease caused by a bacterium, *Mycoplasma mycoides* subsp. *mycoides* small colony (MmmSC), and is listed among the notifiable diseases that has to be reported to the OIE. It is an endemic cattle disease in a large area of the Sub-Saharan Africa, and can spread rapidly. It is also one of the most economically serious diseases of cattle in Uganda, affecting production through mortality and reduced productivity. CBPP diagnosis relies on a combination of clinical examination and laboratory examination based on pathology, microbiological methods, serological tests and molecular (DNA PCR) techniques.

Therefore, understanding the trends control and eradication strategies for these diseases could be improved, and hence provide the population with a stable food security.

Objectives

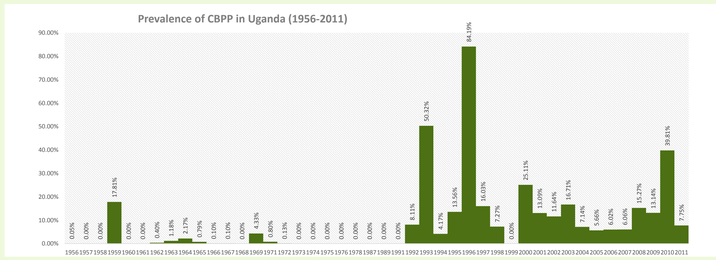
- To determine the CBPP case trends over the past years in Uganda.
- To show the spatial distribution of CBPP outbreaks in Uganda.

Methodology

The study was a retrospective case series which utilized archived data from Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Uganda, between 1956 and 2011. Microsoft Excel and SAS software were used for data analysis.

Results and discussion

The CBPP positive samples increased during the study period, ranging from 0.05% in 1956 to the highest of 84.19% in 1996.



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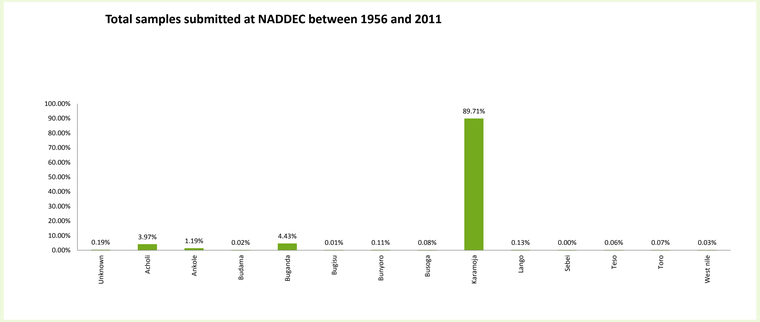

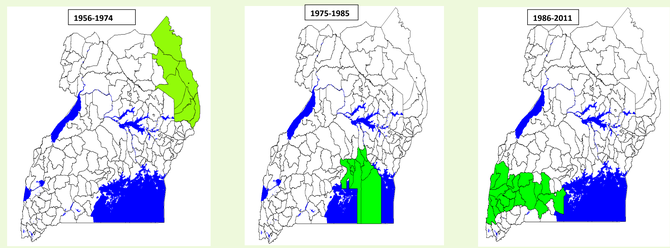

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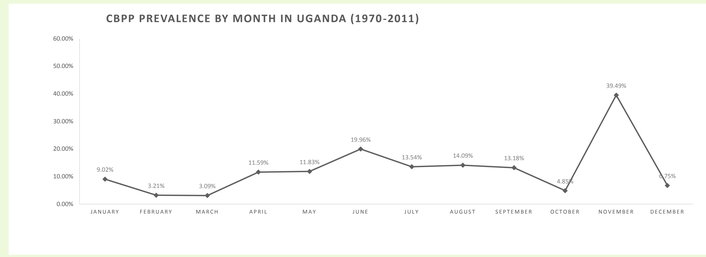

Conclusion and Recommendations

- The increase in CBPP prevalence during the study period was attributed to illegal movement of infected cattle.
- The high prevalence in November could be attributed to the dry season when cattle movement is increased in search of water and pasture.
- Continued government support is therefore crucial for an effective surveillance program.

References

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