Data in Brief 19 (2018) 1080–1085

Contents lists available at ScienceDirect

Data in Brief

journal homepage: www.elsevier.com/locate/dib

Data article

Relative importance of wildlife and livestock transmission route of brucellosis in southwestern Uganda

Pius Mbuya Nina [a,b,d,*], Herwig Leirs [c], Samuel Mugisha [b], Patrick Van Damme [a,e]

[a] Department of Plant Production, Faculty of Bioscience Engineering, Ghent University, Ghent, Belgium
[b] College of Natural Sciences, Department of Biology, Makerere University, Kampala, Uganda
[c] Department of Evolutionary Ecology, University of Antwerp, Belgium
[d] Department of Environmental Sciences and Management, International University of East Africa, Kampala, Uganda
[e] Faculty of Tropical AgriSciences, Czech University of Life Sciences, Prague, Czech Republic

ARTICLE INFO

Article history:
Received 23 November 2016
Received in revised form
20 March 2018
Accepted 25 May 2018
Available online 29 May 2018

ABSTRACT

The data in brief provides a descriptive summary of the field data collected using Eco-health approach in order to support local effort aimed at creating information base for taking evidence-based decisions, especially in regard to wildlife conservation outside protected area and range resource management. The data were collected between June 2012 and July 2014 on a range of issues including wild animals, livestock, household income and cost of diseases control in cattle. In a nutshell the data article shows spatial pattern of a declining brucellosis prevalence in cattle linked to animal population density with increasing distance away from the Lake Mburo National Park (LMNP) boundary in southwestern Uganda. It is the trend of animal distribution in private land that the pastoralist communities perceived as influencing economic losses associated with diseases affecting cattle production. The pastoralists strongly believe that wild ungulates grazing with cattle outside the park on a daily basis present a potential risk of disease transmission which adversely affects their cherished source of livelihood. This article refers to “Brucellosis in cattle and

DOI of original article: https://doi.org/10.1016/j.actatropica.2016.11.030
* Corresponding author.
E-mail address: piusm.nina@gmail.com (P.M. Nina).

https://doi.org/10.1016/j.dib.2018.05.135

micro-scale spatial variability of pastoral household income from dairy production in south western Uganda. Acta tropica", Acta Tropica, 2018.

Specifications Table

Subject area	Agricultural and Biological Sciences
More specific subject area	*Ecohealth approach to disease control at wildlife-livestock nexus*
Type of data	*Tables, text file and a figure*
How data was acquired	*Two data sets were obtained one focusing on serological surveys and another on socio-economics of pastoralist households. The first set of data were collected through serological surveys where blood samples were collected from cattle at household level and analyzed for brucellosis in cattle [4]. Another data set contained socio-economic data which were collected through interviews with respondents from randomly selected households. The households were mapped prior to the study using a hand-held GPS receiver for easy identification. Cattle blood sample were from the same homesteads selected for the interviews. We also surveyed wild animals' distribution outside protected area using established transect lines [3].*
Data format	*Raw, filtered and analyzed*
Experimental factors	*Sera were collected from 1962 cattle between August 2012 and June 2013 from 330 homesteads that were proportionately distributed in samples of 55 across six zones along a distance gradient from LMNP. All blood samples were centrifuged and the sera stored at* $-80\,^{\circ}C$ *in the microbiology laboratory of Mbarara University, Mbarara before carrying out screening and subsequent confirmatory tests for brucellosis.*
Experimental features	*An indirect multi-species immunosorbent assay (iELISA) using Brucella S-LPS antigen was developed. Serial testing of the cattle sera for anti-B. abortus antibodies was conducted using the Rose Bengal Plate Test (RBPT) [1], and later confirmed with iELISA. A confirmatory positive sample was one that tested positive for both RBPT and I-ELISA (titers 1:80).*
Data source location	*Kiruhura District of western Uganda*
Data accessibility	*Data are contained within this article*

Value of the data

- The data variables indicate unique circumstances of brucellosis transmission in cattle and household income that might inform a monitoring plan for local disease control.
- The data provides information evidencing strong concerns the local communities have regarding the presence of wild species of animals on their private farms and ranches around Lake Mburo National Park in southwestern Uganda.
- Therefore, the data in this article allows other interested researchers access and use of raw facts in different ways that might extend statistical analysis and subsequently lead to a more comprehensive understanding of pastoralists' development trajectory at the wildlife-livestock nexus.