

**THE QUARTERLY
ANIMAL HEALTH EPI-LAB**

BULLETIN

APRIL - JUNE 2022



**MINISTRY OF AGRICULTURE,
ANIMAL INDUSTRY AND
FISHERIES**



MAAIF

Ministry Of Agriculture,
Animal Industry And Fisheries

VOL I, ISSUE NO.2

Dear Reader,

Welcome to the second issue of the Quarterly Animal Health Epi-Lab Bulletin.

This bulletin is intended to provide a quarterly animal and zoonotic disease situation update to all stakeholders at district, national and international

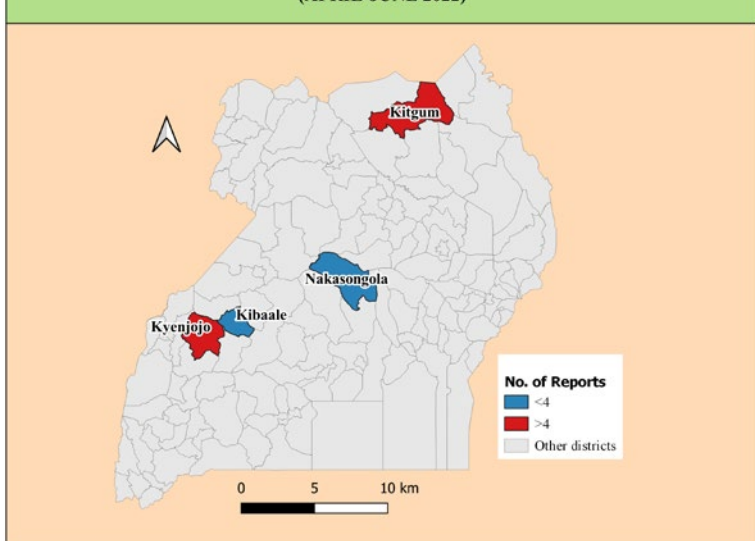
levels, as well as promote data utilization, information sharing and feedback.

In this issue, summaries of event and indicator-based disease reporting by districts between April – June 2022 are given. We also provide a disease highlight on tick-borne diseases and anthrax.

EVENT MOBILE APPLICATION (EMA-i) REPORTING

EMAI is an electronic tool utilized by MAAIF to capture information on disease events from frontline animal health officers in real time using their smart phones and tablets.

MAP OF UGANDA SHOWING DISTRICTS THAT REPORTED EMAI DISEASE EVENTS (APRIL-JUNE 2022)

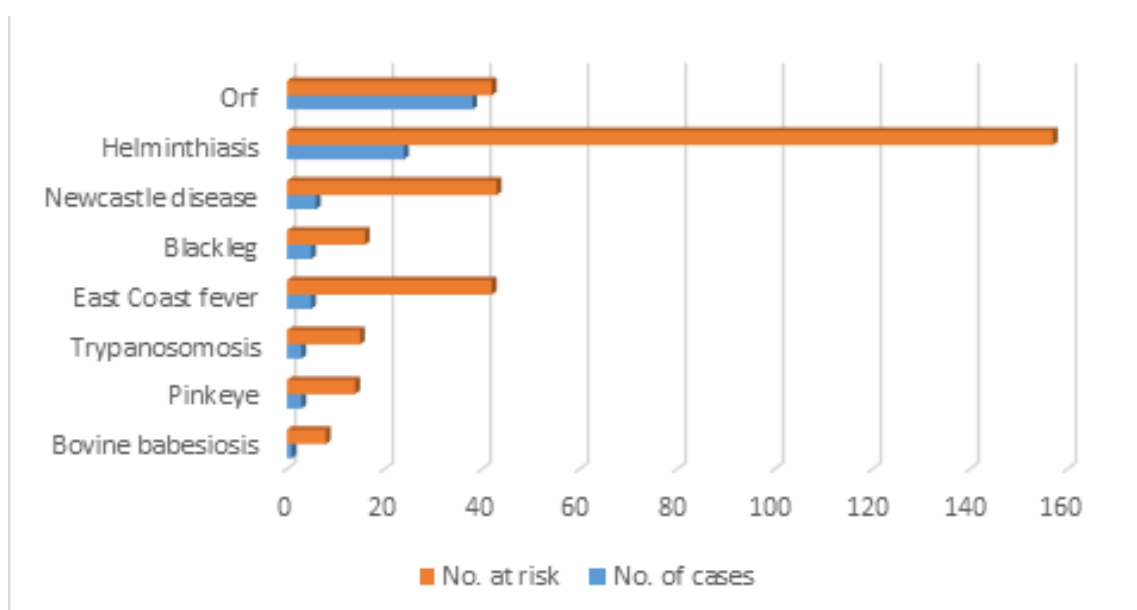


Key Highlights:

- Only 4 (3%) districts out of 146 reported disease events using EMA-i, a 6% decline from the previous quarter.
- A total of 14 animal disease events were reported with ECF being the most frequently reported disease event (29%).
- 79% of the disease events reported were in Cattle, followed by goats and chicken respectively.

Kyenjojo	5
Kitgum	5
Kibaale	3
Nakasongola	1

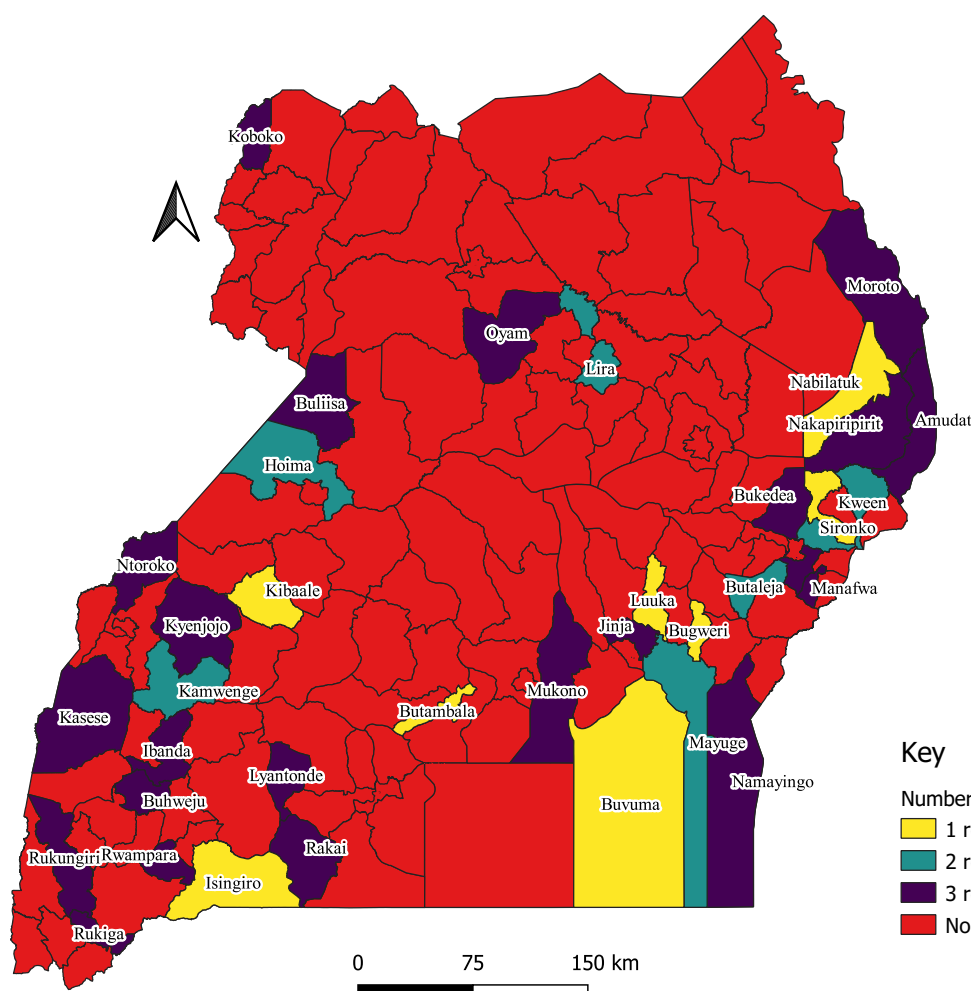
BAR CHART SHOWING DISEASE EVENTS REPORTED THROUGH EMAI



DISTRICT MONTHLY REPORTING STATUS

Passive surveillance is utilized in form of routine monthly reports of animal disease occurrence in the districts.

DISTRICT MONTHLY REPORTING STATUS



Key highlights

- 37 (25%) out of the 146 districts submitted at least one report
- 88 (25%) out of the 351 expected reports were received this quarter, a 14% improvement from quarter 1.
- 50% of the reports received were submitted late.

Key

Number of reports	
Yellow	1 report
Teal	2 reports
Dark Purple	3 reports
Red	No reports

*National target for monthly reporting is 80%

Overall reporting rates in the animal sector remain low. Districts are encouraged to improve on both weekly and monthly reporting rates. Districts should ensure completeness and timeliness of the report submissions, utilizing the right formats

provided by MAAIF. There is need for continuous sensitization and training of animal health practitioners on disease surveillance and reporting. Prompt and regular reporting of diseases would help provide a clear understanding of the timing

and distribution of disease occurrences, so that practical steps for intervention are taken to reduce impacts and achieve the desired disease prevention and control goals.

MONTHLY REPORTING STATUS BY DISTRICTS THAT SUBMITTED REPORTS

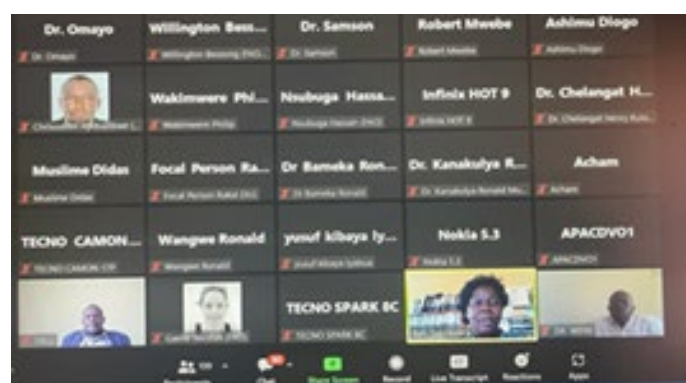
District	April	May	June
Amudat	Report submitted on time	Report submitted on time	Report submitted on time
Bugweri	No Report submitted	No Report submitted	Report submitted on time
Buhweju	Report submitted late	Report submitted late	Report submitted on time
Bukedea	Report submitted late	Report submitted late	Report submitted late
Bulambuli	Report submitted late	No Report submitted	No Report submitted
Buliisa	Report submitted on time	Report submitted on time	Report submitted late
Butaleja	No Report submitted	Report submitted late	Report submitted late
Butambala	Report submitted on time	No Report submitted	No Report submitted
Buvuma	Report submitted late	No Report submitted	No Report submitted
Hoima	No Report submitted	Report submitted on time	Report submitted late
Ibanda	Report submitted on time	Report submitted on time	Report submitted on time
Isingiro	Report submitted late	No Report submitted	No Report submitted
Jinja	Report submitted late	Report submitted on time	Report submitted on time
Kamwenge	Report submitted on time	No Report submitted	Report submitted on time
Kasese	Report submitted late	Report submitted late	Report submitted late
Kibaale	No Report submitted	Report submitted late	No Report submitted
Koboko	Report submitted on time	Report submitted on time	Report submitted on time
Kween	Report submitted on time	Report submitted late	No Report submitted
Kyenjojo	Report submitted late	Report submitted on time	Report submitted late
Lira	Report submitted on time	Report submitted on time	No Report submitted
Luuka	Report submitted late	No Report submitted	No Report submitted
Lyantonde	Report submitted on time	Report submitted late	Report submitted late
Manafwa	Report submitted late	Report submitted late	Report submitted late
Mayuge	No Report submitted	Report submitted late	Report submitted on time
Mbale	Report submitted on time	Report submitted late	Report submitted late
Moroto	Report submitted on time	Report submitted late	Report submitted late
Mukono	Report submitted late	Report submitted late	Report submitted late
Nabilatuk	Report submitted late	No Report submitted	No Report submitted
Nakapiripirit	Report submitted on time	Report submitted on time	Report submitted on time
Namayingo	Report submitted on time	Report submitted on time	Report submitted on time
Ntoroko	Report submitted on time	Report submitted on time	Report submitted on time
Rakai	Report submitted late	Report submitted late	Report submitted on time
Rukiga	Report submitted on time	Report submitted late	Report submitted late
Rukungiri	Report submitted on time	Report submitted on time	Report submitted on time
Rwampara	Report submitted late	Report submitted late	Report submitted late
Sironko	Report submitted late	Report submitted late	No Report submitted
Oyam	Report submitted late	Report submitted late	Report submitted on time
Number of reports	32	29	27

Key

No Report submitted
Report submitted on time
Report submitted late

Actions taken:

- MAAIF in collaboration with FAO organized a virtual refresher training to equip districts with the skills and knowledge on utilization of Event Mobile Application (EMA-i) for real time reporting of animal and zoonotic disease events at national and sub-national levels. The training, attended by over 200 participants from all districts countrywide, was presided by the Commissioner Animal Health who urged all participants to take reporting seriously as this is the basis of generating evidence to inform decision makers on animal and zoonotic disease priority interventions.



Virtual EMAi training in July 2022

- In Service Applied Veterinary Epidemiology Training (ISAVET) programme is currently on going to build capacity of frontline animal health staff in surveillance, outbreak investigation, and reporting. This is being implemented by MAAIF with support from FAO. The programme has so far graduated two cohorts of in service frontline animal health staff, who have significantly contributed to improved surveillance and reporting in their districts. Currently, a third cohort of 40 frontline animal health staff from various districts are undergoing training.

Current cohort of 40 trainees are from the following districts: Lyantonde, Mukono, Ntoroko, Jinja, Hoima, Kitagwenda, Dokolo, Moyo, Pader, Zombo, Nakapiripirit, Butaleja, Kumi, Adjumani, Sembabule, Buliisa, Kiruhura, Kyenjojo, Bukomansimbi, Kotido, Namisindwa, Amudat, Kiryandongo, Tororo; and institutions of NADDEC and UWEC.



Launch of the cohort 3 ISAVET training at Civil Service College in Jinja



Trainees preparing for field work during the course.

Upcoming:

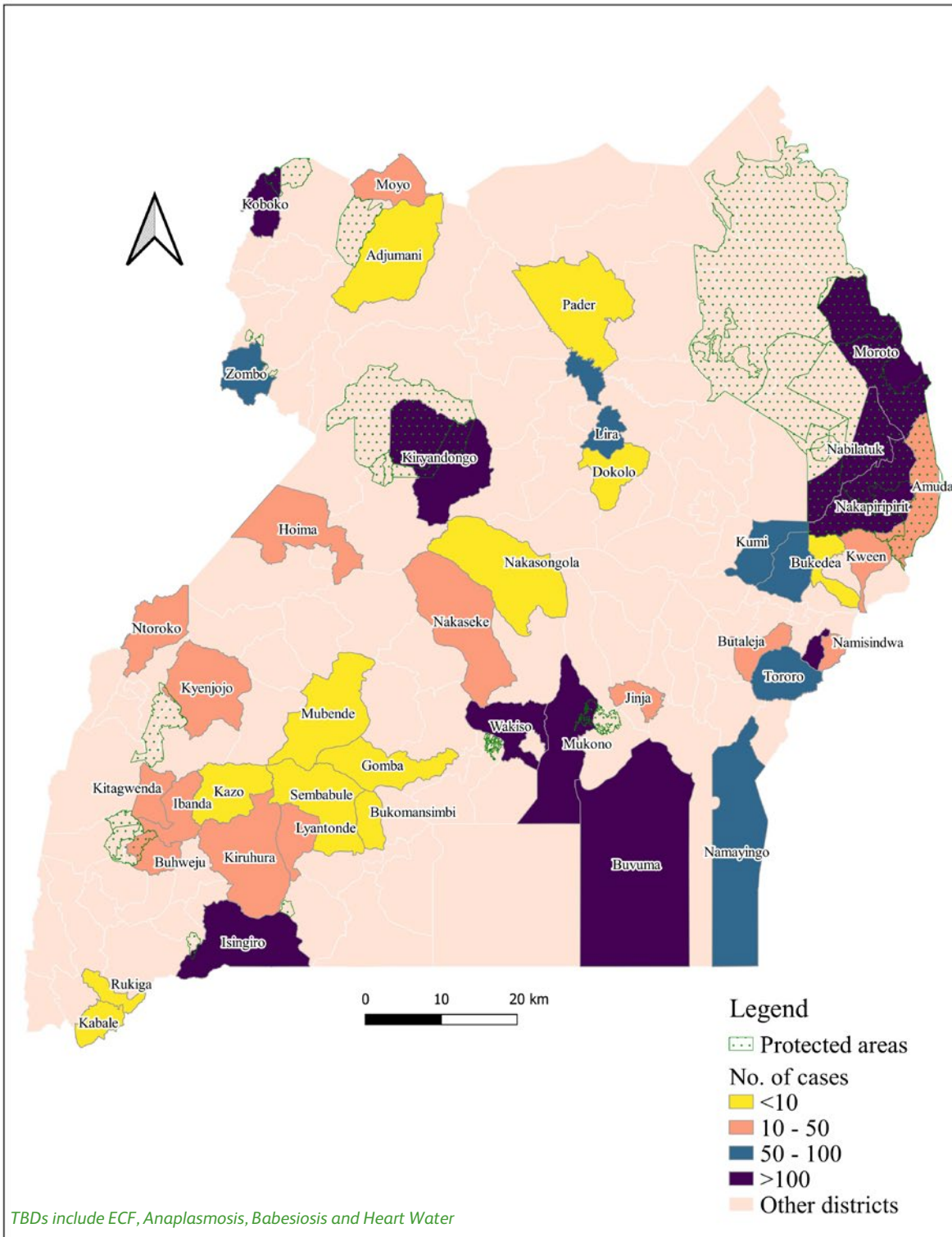
- Regional trainings by MAAIF to scale up use of EMAi and provide technical backstopping to districts based on identified gaps and challenges.
- Good Emergency Management Practices (GEMP) Training in Mbarara to strengthen emergency preparedness, detection, response and recovery for animal and zoonotic diseases.

DISEASE SPOTLIGHT

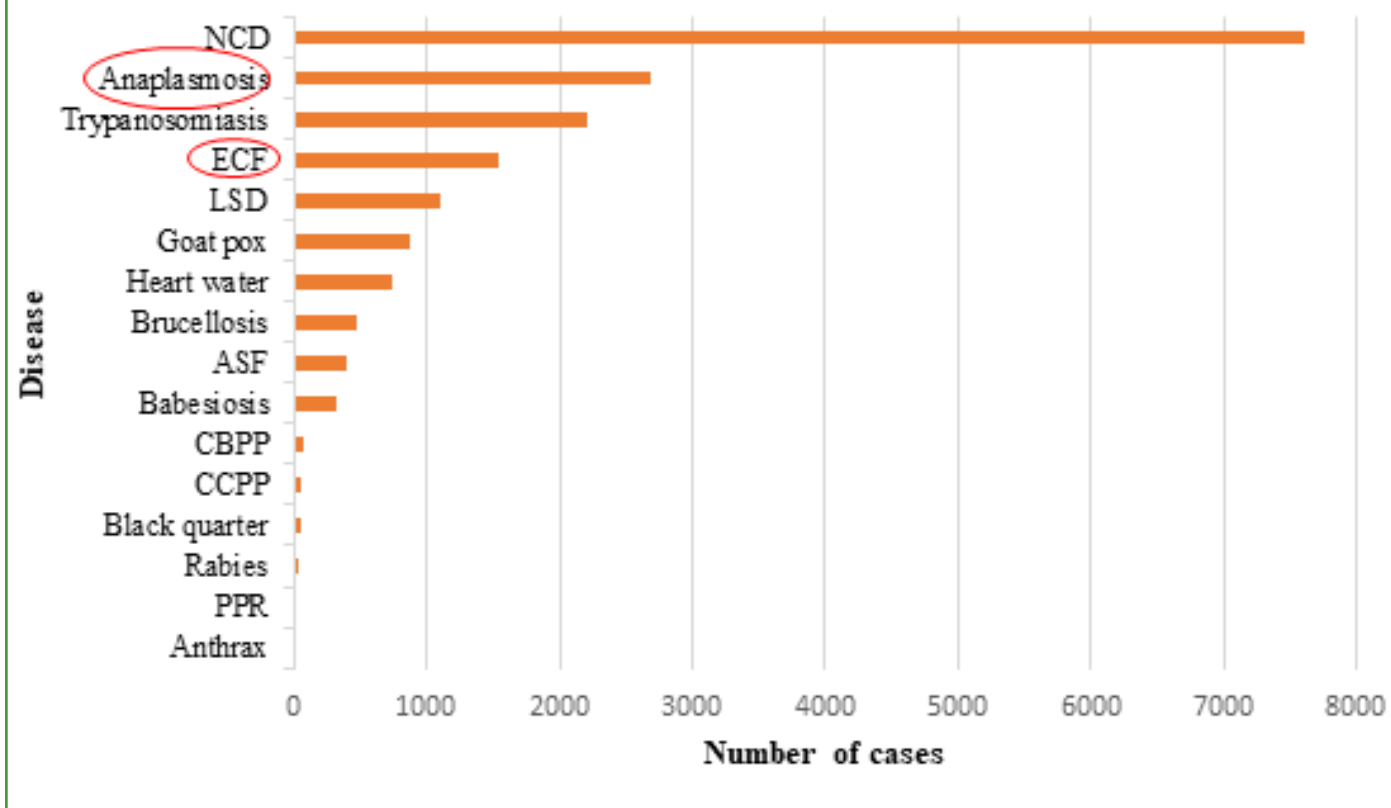
TICK BORNE DISEASES

Tick borne diseases predominantly ECF and Anaplasmosis remain the most prevalent diseases affecting cattle. This implies a heavy burden of ticks and TBDs across the country.

Map showing districts that reported tickborne diseases



Bar chart showing notifiable diseases reported during April - June 2022



Highest number of cases were recorded mainly by cattle corridor districts, especially in the northeastern part of Uganda, which is a climate marginalized area. The extensive movement of animals in search for pastures and water majorly in Karamoja greatly exposes the cattle to diverse ticks. The animals may also share grazing grounds with wildlife from game parks, which confounds tick epidemiology in the areas.

Acaricide testing:

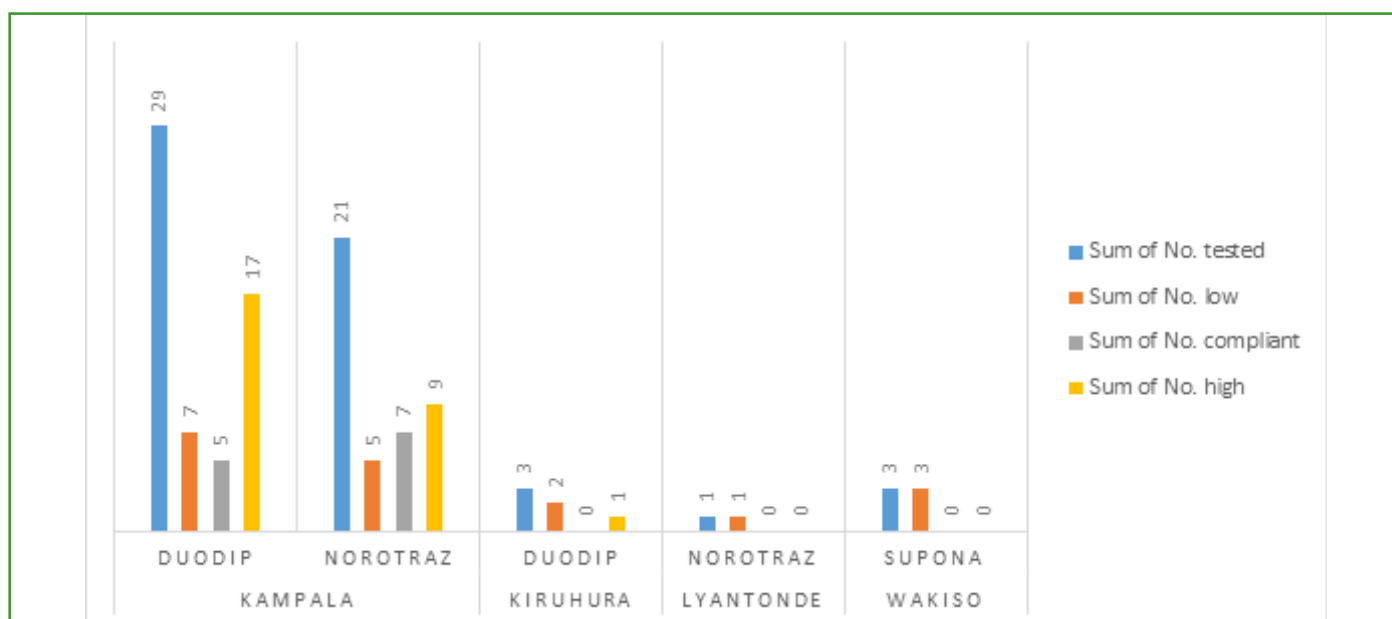
In relation to acaricides use,

the acaricide testing laboratory in NADDEC received 57 dip and spray wash samples from farmers during this period. 47% of the dip/spray wash samples analysed showed a high concentration, while 32% were of a low concentration (figure 1).

Chemical analysis of acaricide dilutions submitted by farmers showed quantities of active ingredients were largely higher or below the level recommended for effective treatment. Higher active ingredient concentrations than recommended could be a

result of adding more acaricide than recommended. Lower acaricide concentrations mean that the mixture is not strong enough to kill ticks and hence treatment fails. High acaricide concentrations could imply that many ticks are killed but due to selective pressure, few individuals survive and build up resistance against the acaricide. Farmers are encouraged to test the strength of their acaricides and seek professional advice on appropriate use of acaricides to limit spread of acaricide resistance.

Figure 1: Bar Chart showing number and type of acaricides tested at NADDEC, April-June 2022



Recommendations

- Increased monitoring and surveillance for TTBDs to be conducted continuously to facilitate timely detection of high-risk areas and emerging acaricide resistance as well as reduce inappropriate acaricides use.
- Improved extension services and sensitization of farmers on intergrated tick control measures, appropriate acaricide use to limit spread of acaricides resistance.
- Development and implementation of vaccines for the control of TTBDs

DISEASE SPOTLIGHT

ANTHRAX

Introduction

Anthrax is a serious infectious disease caused by gram-positive, rod-shaped bacteria known as *Bacillus anthracis*. It occurs naturally in soil and commonly affects both domestic and wild animals. People can get sick with anthrax if they are exposed to infected animals or contaminated animal products. Farmers, animal health practitioners or people involved in animal slaughter/hide industry, are at highest risk of becoming infected. Anthrax can cause severe illness and death in both humans and animals.

How do animals get infected?

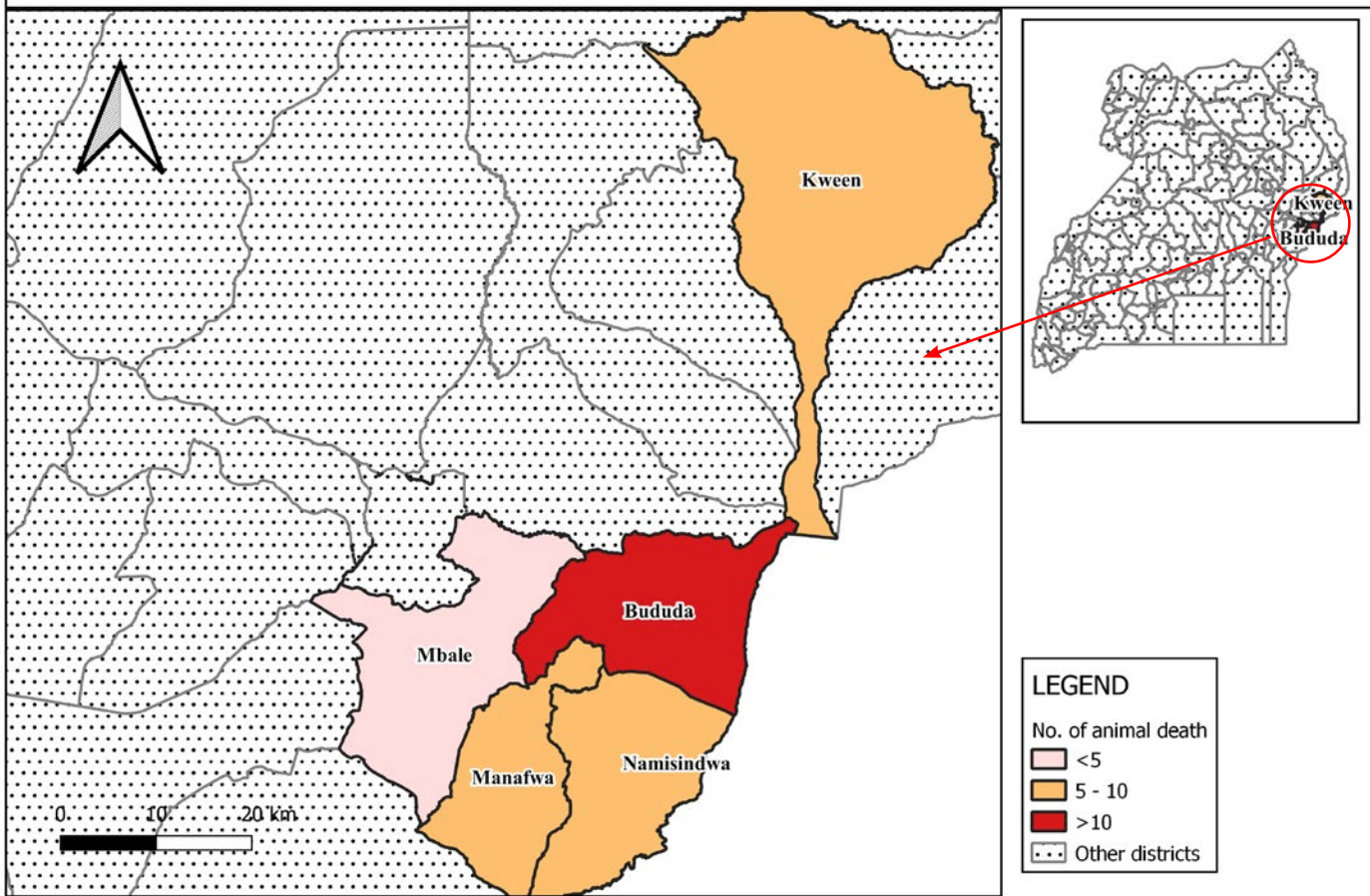
Domestic and wild animals can become

infected when they breathe in or ingest spores in contaminated soil, plants, or water. In areas where domestic animals have had anthrax in the past, routine vaccination can help prevent outbreaks.

Anthrax in Uganda

Anthrax is one of the seven zoonotic diseases that were identified as priority for Uganda. Recent outbreaks were reported in the Elgon region in the districts of Bududa (34 animal deaths and 1 human death), Kween (6 animal deaths and 1 human death), Manafwa (8 animal deaths), Namisindwa (9 animal deaths), and Mbale (2 animal deaths).

ANTHRAX OUTBREAKS IN THE ELGON REGION



Blood oozing from an animal carcass



Cutaneous anthrax lesions in humans



Challenges identified during outbreak investigation and response:

- Limited cooperation from the community despite intensive social mobilization
- No facilitation to the vaccination teams increasing the cost of vaccination to the farmers
- Limited access to and availability of vaccines (currently anthrax is not a public good disease)
- Inadequate facilitation/fuel to run response activities.
- Inadequate capacity by laboratory technicians to conduct sample collection

- Inadequate drugs (antibiotics) and other health supplies

Public Health Actions

- Line Ministries, together with partners-initiated response measures to control the outbreak and prevent further spread.
- Quarantine imposed by Commissioner Animal Health, MAAIF
- The Ministry of Health designated an Incident Commander from the Veterinary Health & Zoonoses department
- Joint Task force (Bududa, Manafwa and Namisindwa) meetings held regularly to harmonize response efforts.
- Active search of suspected cases in animals and humans by multidisciplinary teams on going.

- Continued risk communication and community sensitization to boost contact tracing and vaccination activities
- Vaccinations being undertaken in all affected districts through private sector partnership. Government has procured vaccines to be distributed to affected and high-risk areas.
- Training of district personnel on sample collection and transportation by MAAIF with support from FAO undertaken. This was in lieu of the ongoing anthrax outbreak to provide animal health service providers with basic concepts related to Biosafety and Biosecurity, sample collection, packaging, preservation, transportation, shipment and storage



Participants at training workshop on sample collection in Mbale



Practical sessions during training on sample collection



LABORATORY REPORTS

This section highlights the different districts and samples that have been submitted for disease confirmation at the Central Veterinary Laboratory (NADDEC) during quarter 2, 2022.

Region		Central			Eastern			Western			Northern			Total
Disease	No. of samples tested	No. of samples +ve	Positivity rate (%)	No. of samples tested	No. of samples +ve	Positivity rate (%)	No. of samples tested	No. of samples +ve	Positivity rate (%)	No. of samples tested	No. of samples +ve	Positivity rate (%)		
1	Brucellosis	451	82		104	0		719	21		0	0	0	1274
	Bovine	426	73	17	104	0	0	691	19	3	0	0	0	
	Caprine	24	9	38	0	0	0	28	2	7	0	0	0	
	Canine	1	0	0	0	0	0	0	0	0	0	0	0	
2	CBPP	337	10	3	0	0	0	518	25	5	15	3	20	870
3	East Cost Fever	387	64	17	0	0	0	34	11	32	0	0	0	421
4	Anaplasmosis	280	104	37	0	0	0	41	7	17	0	0	0	321
5	Peste des Petits Ruminants	83	16	19	104	2	2	126	45	36	5	0	0	318
6	Foot and Mouth Disease	68	14	21	0	0	0	66	7	11	0	0	0	134
7	Cowdriosis	78	0	0	0	0	0	0	0	0	0	0	0	78
8	Babesia	77	0	0	0	0	0	0	0	0	0	0	0	77
9	Trypanosomiasis	77	0	0	0	0	0	0	0	0	0	0	0	77
10	Capripox	60	0	0	0	0	0	0	0	0	0	0	0	60
11	CCPP	8	0	0	0	0	0	12	0	0	5	0	0	25
12	Leptospirosis	11	7	64	0	0	0	10	3	30	0	0	0	21
13	Helminths	16	0	0	0	0	0	0	0	0	0	0	0	16
14	African Swine Fever	0	0	0	0	0	0	3	3	100	0	0	0	3
15	Clostridia	0	0	0	0	0	0	3	3	100	0	0	0	3
16	Anthrax	0	0	0	10	8	0.8	0	0	0	0	0	0	10
TOTAL		1933	297		218	10		1532	125		25	3		3708

CBPP Contagious Bovine Pleuro Pneumonia, CCPP Contagious Caprine Pleuro Pneumonia

Key findings:

- The laboratory tested a total of 3,708 samples from different districts during the period of April to June, 2022 as shown in the table above.
- The most common diseases investigated were; Brucellosis (34 %), Contagious Bovine Pleuro Pneumonia, CBPP (23 %), East Coast Fever, ECF (11 %), and Anaplasmosis (9 %).
- The highest number of samples tested were from Western (52 %), Central (41 %), Eastern (6 %) and Northern (1 %) regions respectively.
- Over 90 % of samples tested were from cattle and goats.

DISTRICTS WITH LABORATORY CONFIRMED CASES

DISEASE	DISTRICTS WITH POSITIVE SAMPLES
Brucellosis	Bushenyi, Butambala, Gomba, Kazo, Kiruhura, Lyantonde, Masindi, Mubende, Mukono, Sheema, Kampala
CBPP	Bushenyi, Gomba, Nakaseke, Nebbi, Sheema, Kampala
RVF	Butambala, Gomba, Ibanda, Kabale, Kazo, Kiruhura, Lyantonde, Masindi, Mbarara, Nakaseke
PPR	Butambala, Kaberamaido, Kamwenge, Kazo, Kiboga, Kiruhura, Wakiso
FMD	Gomba, Kabarole, Ntungamo
Leptospirosis	Gomba, Kazo
ASF	Kasese
ECF	Gomba, Kabale, Kazo, Kiruhura, Mubende, Mukono, Nakaseke, Wakiso
Anaplasmosis	Gomba, Kabale, Kazo, Kiruhura, Nakaseke, Sheema, Wakiso
Clostridia	Kazo, Sheema
Anthrax	Bududa

CBPP Contagious Bovine Pleuro Pneumonia, PPR Peste des Petits Ruminants, FMD Foot and Mouth Disease, ASF African Swine Fever, ECF East Coast Fever

Since many zoonotic agents cause symptomatic disease in a number of host animal species, or are detectable by serology, PCR, or other diagnostic methods, it seems logical that the detection of a zoonotic disease infection in an animal could provide sentinel warning to humans.

This calls for integrated surveillance and reporting of disease events including zoonotic diseases; and establishing mechanisms of information sharing among stakeholders to facilitate early warning, detection and response.

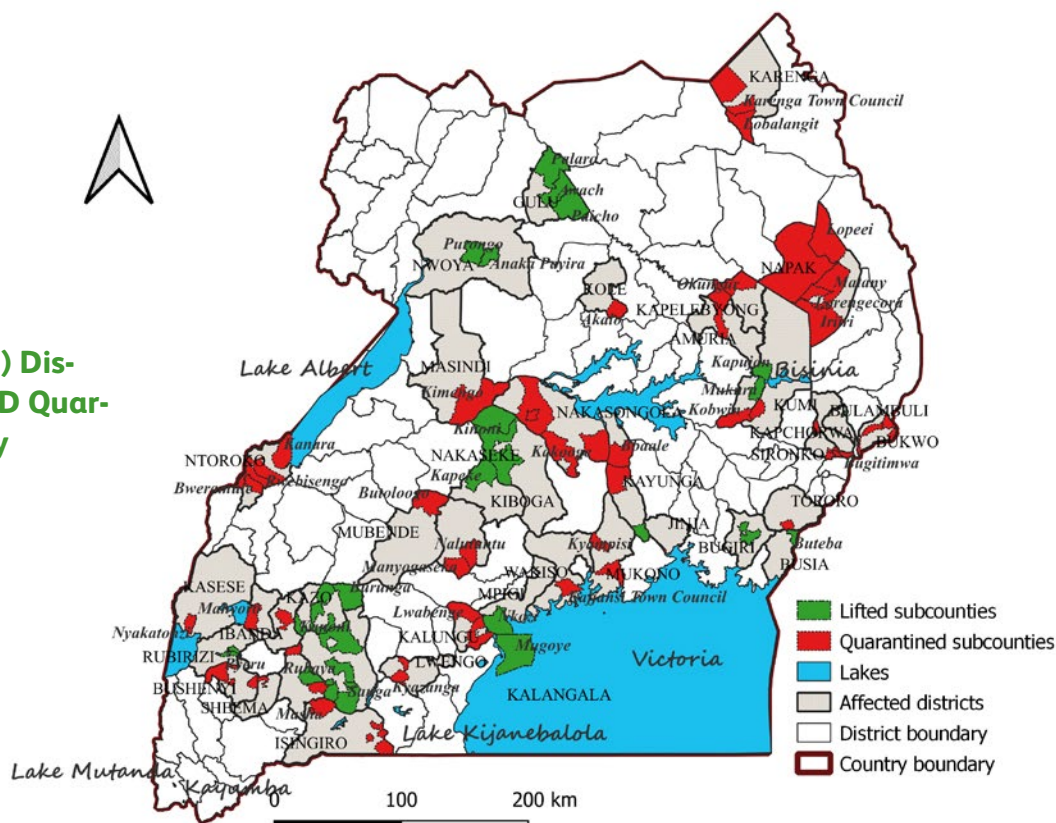
Areas with high positivity rates need more testing to be conducted, as the number of confirmed cases is likely to represent only a small fraction of the true number of infections. High positivity rates could possibly be an indication of an extremely low number of tests conducted for a particular area rather than a high number of infections as is observed for many diseases tested.

To facilitate timely confirmation of outbreaks and promotion of diagnostic stewardship, there is need to build infrastructural and human resource capacity of the regional and district laboratories.

FOOT AND MOUTH DISEASE COUNTRY STATUS

FMD QUARANTINE STATUS 1st January 2020-30th June 2022

**Twenty five (25) Dis-
tricts under FMD Quar-
antine currently**



Source: Department of Animal Health, Ministry of Agriculture, Animal Industry and Fisheries
Map drawn with QGIS V3.24.3

NUMBER OF EMAI REPORTS RECEIVED IN QUARTER 2 (APRIL – JUNE 2022)

DISEASE EVENTS	NUMBER OF REPORTS				
	Kibaale	Kitgum	Kyenjojo	Nakasongola	Total
Blackleg		1			1
Bovine babesiosis		1			1
East Coast fever		1	3		4
Helminthiasis	2		1		3
Infectious Bovine Keratoconjunctivitis (Pinkeye)		1	1		2
Newcastle disease				1	1
Orf	1				1
Trypanosomosis (tsetse-transmitted)		1			1
Total	3	5	5	1	14

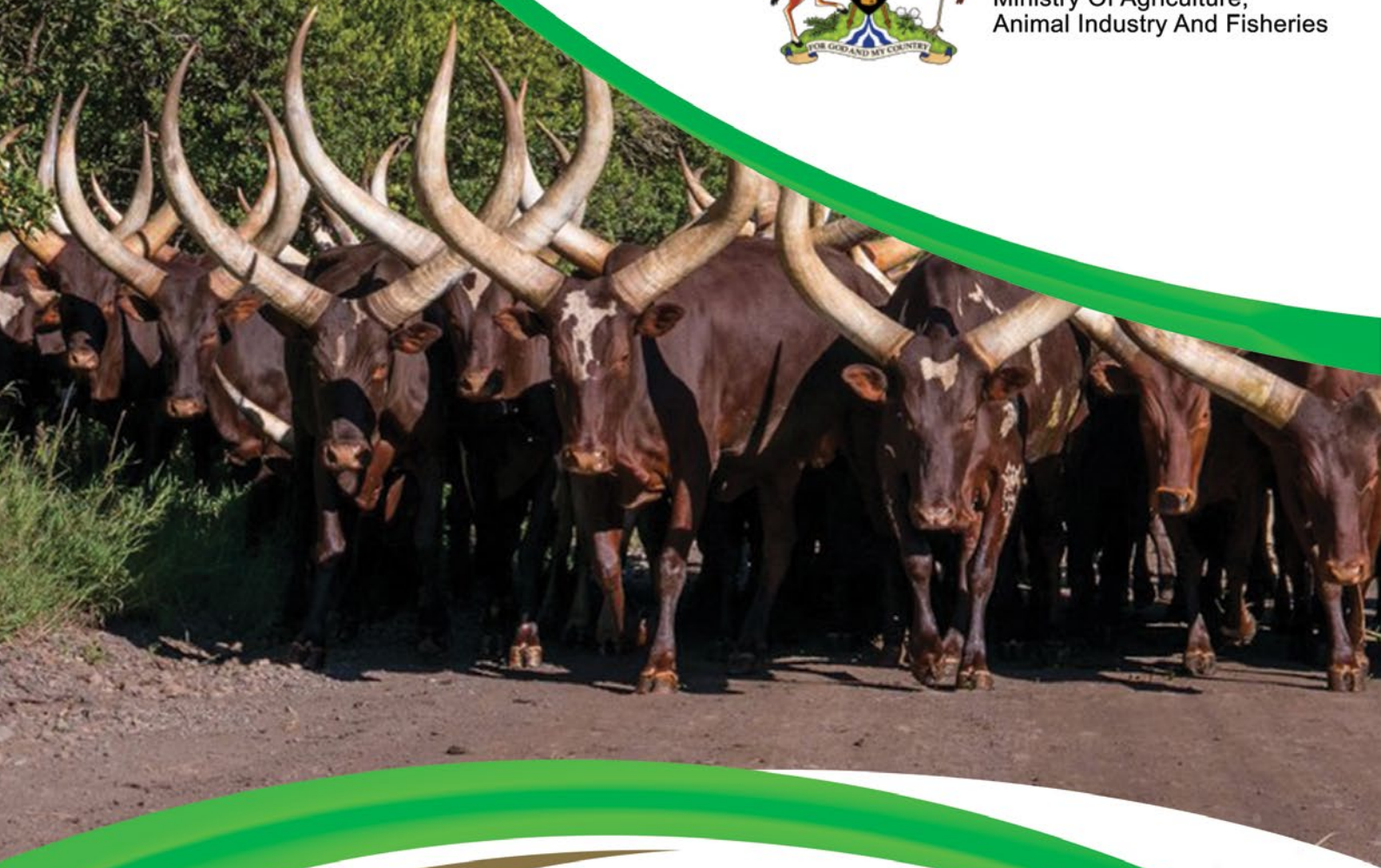
NOTIFIABLE DISEASE EVENTS REPORTED IN DISTRICTS IN QUARTER 2 (APRIL – JUNE 2022)

NUMBER OF CASES																
DISTRICT	Goat pox	CCPP	Rabies (dogs)	Black Quarter	NCD	ASF	Tryps	Babe-siosis	Anapla-mosis	ECF	Brucell-osis	CBPP	LSD	PPR	Heart water	Anthrax
Nakapiripirit		5			32		23		22	110	10	19	48			
Lira			5	5		9	31	2	58							
Koboko			8	7	436		10		16	119	44					
Lyantonde					200						295					
Kyenjojo								10					12			
Buhweju								5		19						
Manafwa	22		11	23		36	951	55	1291	376			499		20	5
Moroto	14	41						43		445	23	16			253	
Butaleja					12757											
Namayingo	5		2		893			13		53	2					
Ntoroko												3				
Bukedea				2	2000	350	17	4	8	62		33	101		2	
Buvuma	40				2000		1152	120	6	180			62			
Amudat	819															
Kween			6		350			13	10	20		10				
Rukungiri				8												
Bulambuli							12			4						
Jinja							8	2	3							
Hoima					80	6								20	20 (goats)	
Isingiro								51	69	144	94		282			
Nabilatuk									450				18		450	
Ibanda										14	3		1			
Rukiga										5			50			



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Your Feedback is valuable to us