VOL I, ISSUE NO.3

# THE QUARTERLY ANIMAL HEALTH EPI-LAB BULLETIN

## JULY - SEPTEMBER 2022

REPUBLIC OF UGANDA

MAAIF

Ministry Of Agriculture,
Animal Industry And Fisheries

## Dear Reader,

Welcome to the third 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 mechanisms across sectors.

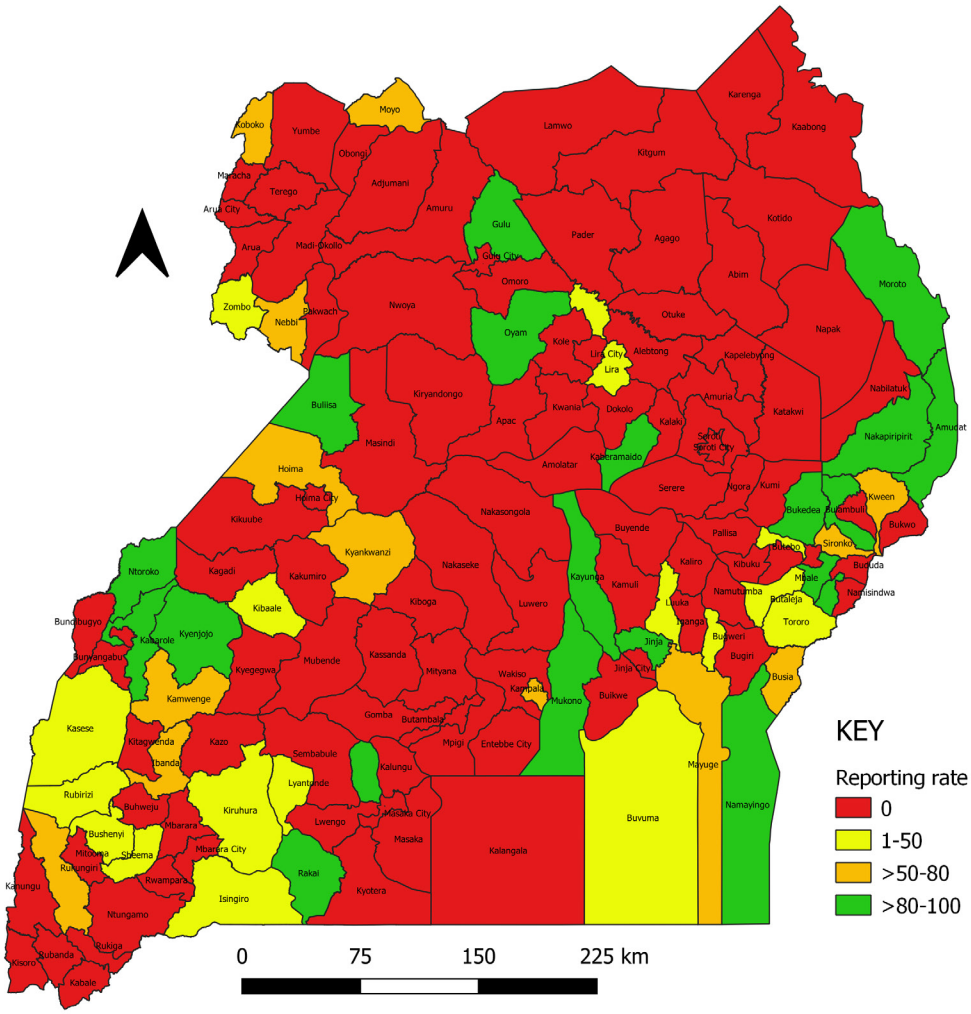
## What is presented in this bulletin?

This bulletin focuses on the status of animal disease reporting by the districts in quarter 3 centered on passive monthly and Event-based Mobile Application (EMAi) reporting. It also provides brief highlights of the disease situation based on clinical and laboratory confirmations.

## PASSIVE SURVEILLANCE MONTHLY REPORTING

Passive surveillance is utilized in form of routine monthly reports of animal disease occurrence in the districts. These reports are compiled by the District Veterinary Officers (DVO) at the subnational level and submitted to the Epidemiology Unit at MAAIF for compilation, analysis, and dissemination through the Chief Veterinary Officer (CVO).

### MAP OF UGANDA SHOWING REPORTING RATES BY DISTRICTS



## *TABLE 1:* REPORTING TIMELINESS OF DISTRICTS THAT SUBMITTED REPORTS

| DISTRICT | JULY | AUG | SEPT |
|---|---|---|---|
| Amudat | | | |
| Bugweri | | | |
| Bukedea | | | |
| Bukoman-simbi | | | |
| Bulambuli | | | |
| Buliisa | | | |
| Bushenyi | | | |
| Busia | | | |
| Butaleja | | | |
| Butebo | | | |
| Buvuma | | | |
| Gulu | | | |
| Hoima | | | |
| Ibanda | | | |
| Isingiro | | | |
| Jinja | | | |
| Kabarole | | | |
| Kaberamai-do | | | |
| Kampala | | | |
| Kamwenge | | | |
| Kasese | | | |
| Kayunga | | | |
| Kibaale | | | |
| Kiruhura | | | |
| Koboko | | | |
| Kween | | | |
| Kyankwanzi | | | |
| Kyenjojo | | | |
| Lira | | | |
| Luuka | | | |
| Lyantonde | | | |
| Manafwa | | | |
| Mayuge | | | |
| Mbale | | | |
| Moroto | | | |
| Moyo | | | |
| Mukono | | | |
| Nakapiripirit | | | |
| Namayingo | | | |
| Nebbi | | | |
| Ntoroko | | | |
| Oyam | | | |
| Rakai | | | |
| Rubirizi | | | |
| Rukungiri | | | |
| Sheema | | | |
| Sironko | | | |
| Tororo | | | |
| Zombo | | | |

### Legend

| No Report submitted | Report submitted on time | Report submitted late |
|---|---|---|

## KEY HIGHLIGHTS

- 49 out of 136 (**36%**) districts submitted at least one report during this period, with only 20 districts (15 %) that submitted all 3 reports.
- 102 out of 327 expected reports were received during this quarter (with the national reporting target at 80 %), an overall reporting completeness of **31.2%.**
- 56 reports were received on time indicating an overall reporting timeliness of **17.1%** this quarter.
- The overall completeness and timeliness both increased in quarter 3 compared to quarter 2 by about 4 % (12/327 reports) and 3 % (11/327 reports) respectively.
- The average reporting completeness and timeliness so far this year stand at **31.1%** and **13.5%** respectively.
- Diseases with the highest number of cases recorded include ASF in pigs, ECF in cattle, New Castle Disease in poultry, and Orf in small ruminants *(annex 2)*

## LINE GRAPH SHOWING NATIONAL MONTHLY REPORTING RATES

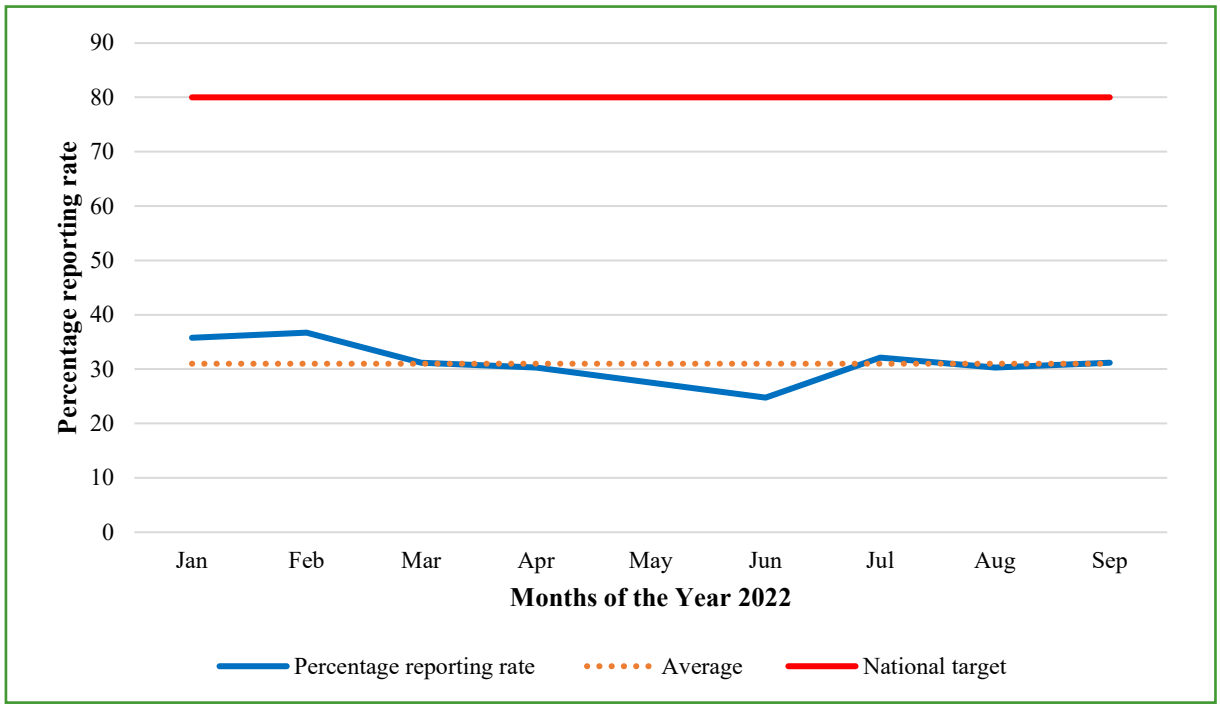



*Figure 1 National Monthly Reporting rates from January to September 2022*

The overall reporting completeness and timeliness remains extremely low despite the slight improvement over the past quarters, indicative of a huge gap in disease reporting within the animal sector. This trend in reporting grossly undermines disease control efforts as a result of incomplete, untimely and unreliable information leading to poor quality data for planning and decision-making. There is therefore dire need to understand the challenges affecting reporting within the animal sector and address these accordingly.

Districts are however encouraged to endeavor to submit their monthly reports routinely and on time to inform appropriate and timely response to animal and zoonotic disease emergencies. In addition to the districts, cities, now being autonomous, are also required to report disease occurrences within their areas of jurisdiction using tools provided by MAAIF.

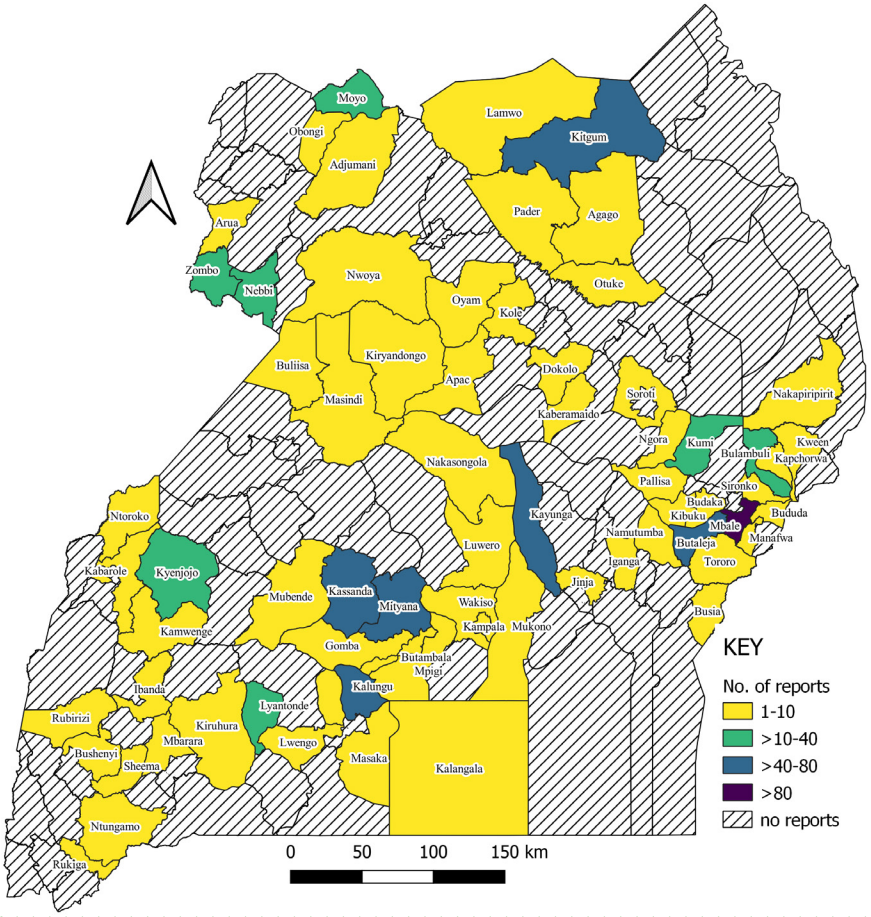
*Note:* In this bulletin, the reporting completeness is the proportion of all expected monthly reports submitted to MAAIF while reporting timeliness is described as the proportion of all expected monthly reports actually submitted to MAAIF on time (*15th of the next month*).

Continued training and motivation of animal health care providers on disease surveillance and reporting can help improve completeness, timeliness, data quality and accuracy of reporting.

# EVENT BASED REPORTING

MAAIF utilizes the Event Mobile application tool (EMAi) for capturing disease events reported in real time by districts. This facilitates early warning and rapid response to animal and zoonotic disease outbreaks.

## MAP OF UGANDA SHOWING THE NUMBER OF REPORTS RECEIVED THROUGH EMAi




### KEY HIGHLIGHTS

- 69 out of 146 districts and cities **(47%),** reported EMAi events an improvement of over 40 % from the previous quarter.
- A total of **820** reports were received during this quarter (*annex 1*).
- Mbale district recorded the highest number of disease events, with 172 reports received this quarter.
- Reports of Helminthiasis and Tick-Borne Diseases (TBDs) predominantly ECF and Anaplasmosis continue to be the most frequently reported disease events *(annex 1)*.

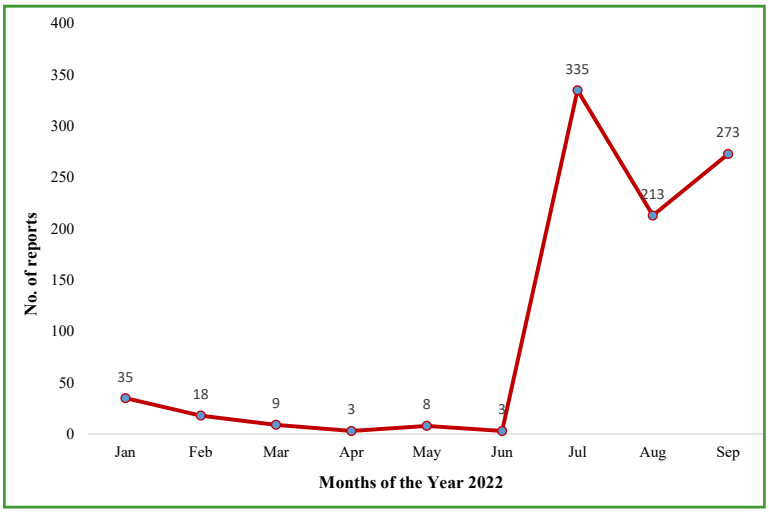



*Figure 2 Trends in EMAi reporting, January to September 2022*

Reporting rates using EMA-i exponentially increased during this quarter *(fig. 2)*, with an increase in the number of districts utilizing the tool for reporting. The observed increase is most likely attributed to a training that was undertaken by MAAIF with support from FAO during this period to scale out the use of the application in all districts countrywide, in an effort to improve animal and zoonotic disease reporting within the animal sector.

# *FIGURE 3-6:* SUMMARY OF DISEASES REPORTED DURING QUARTER 3 DISAGGREAGTED BY SPECIES

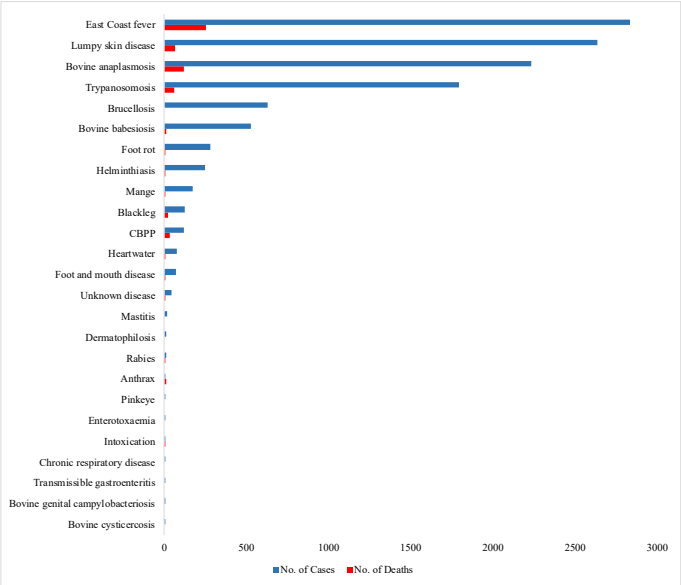



*Figure 3 Diseases reported in Cattle*

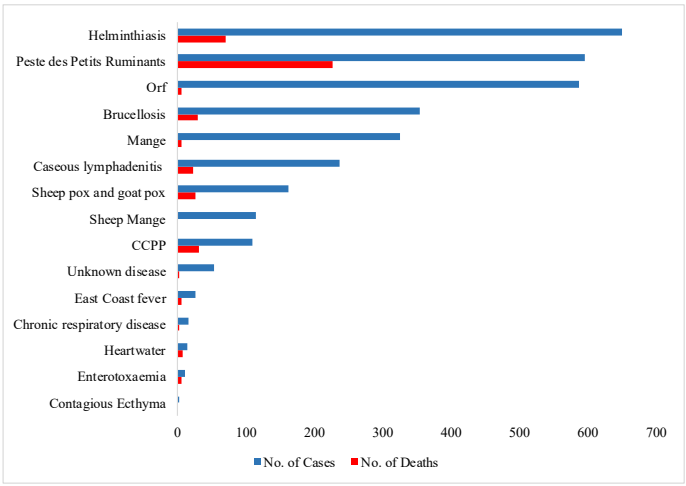



*Figure 4 Diseases reported in small ruminants*

Overall, ECF, PPR, ASF and New Castle Disease accounted for the highest case fatality rates of 10%, 38%, 84% and 82% in cattle, small ruminants, pigs and poultry respectively *(figures 3-6)*. Over 60% of the Helminthiasis cases reported were in small ruminants (goats and sheep).

About only 12% of the reported diseases were confirmed in the laboratory. This implies most of the diseases reported are based on majorly clinical manifestations. To understand the occurrence of disease in populations, surveillance systems rely not only on clinical surveillance which is a good basis for early detection, but on laboratory confirmations of disease causative agents as well to give a complete picture. However, challenges remain in veterinary laboratory infrastructure and human resource to facilitate laboratory diagnostic stewardship at subnational level.

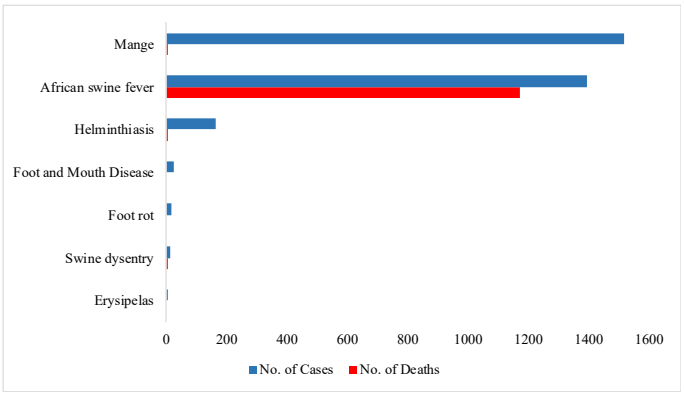



*Figure 5 Diseases reported in pigs*

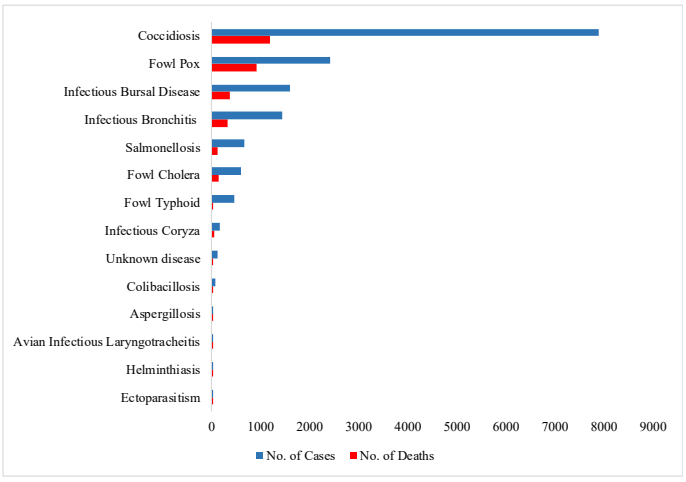



*Figure 6 Diseases reported in poultry*

# LABORATORY REPORTS

Being a national Reference laboratory for animal samples, NADDEC received samples from only 40 (28 %) districts for laboratory disease confirmation. A total of 3343 samples were received at NADDEC comprising of; whole blood, sera, tissues and swabs. Majority of the samples received were for Brucellosis (24.4 %) followed by PPR (18.1 %), Heamo-parasites/microscopy (ECF, Anaplasma, Theileria, Gram positive & Gram negative rods) making 15.3 % while the least was Rabies (0.1 %) as shown in the figure below.

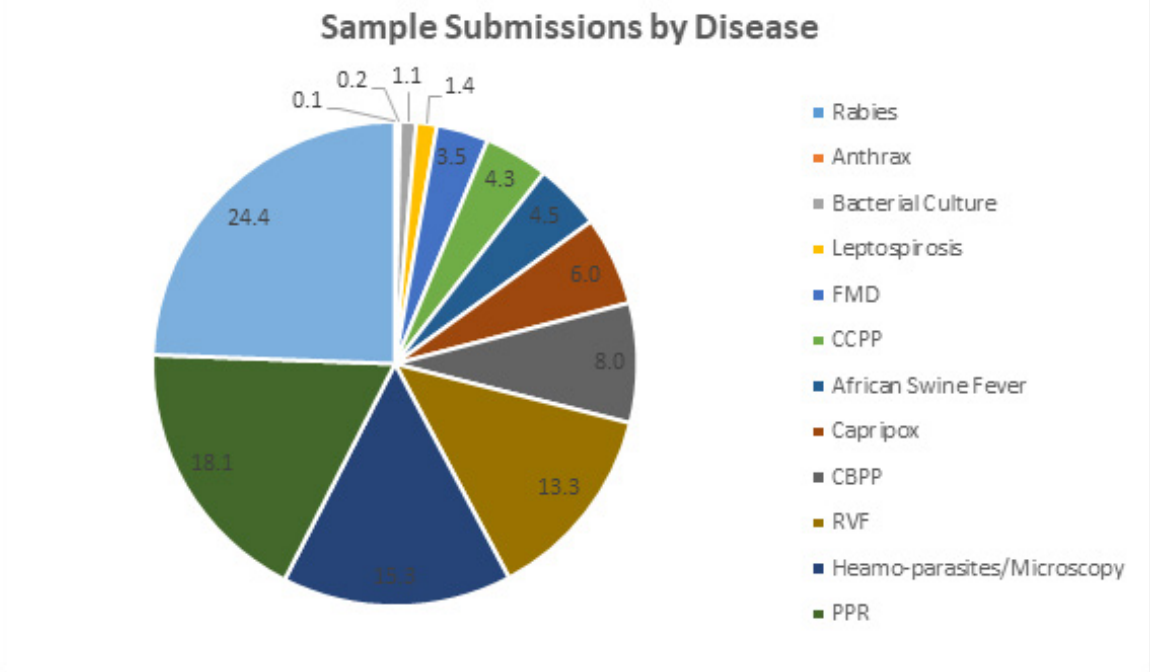



*Figure 7: Sample submission to NADDEC by Disease (%)*

The laboratory managed to only confirm cases whose samples were submitted to the laboratory either by the team from NADDEC, DVOS or farmers who delivered samples to the laboratory in Entebbe. For cases reported under the EMAi, the samples were never confirmed but remained suspected. Below is the summary

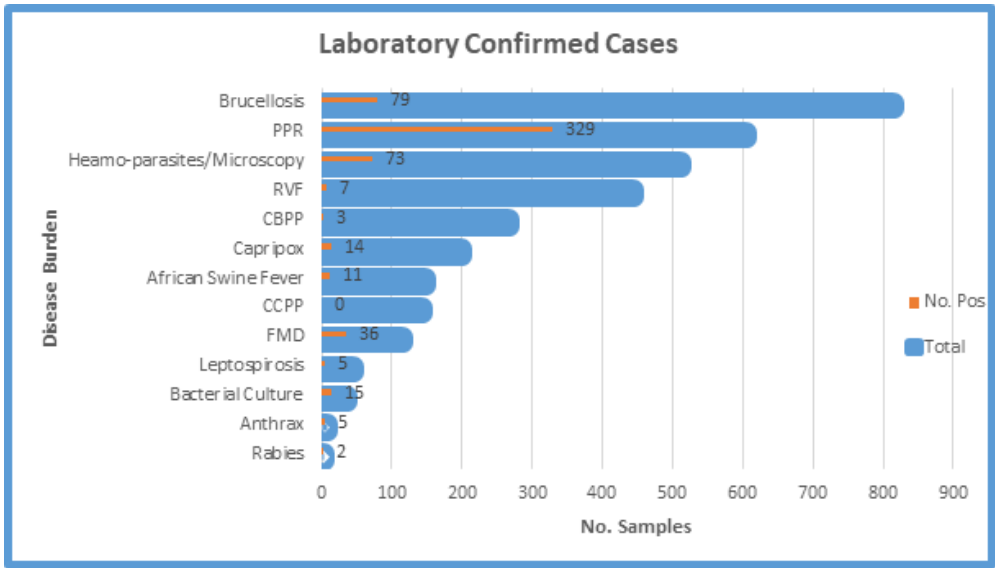



*Figure 8: Laboratory confirmed cases*

## *TABLE 2.* DISTRICTS WITH LABORATORY CONFIMED CASES

| | Disease diagnosed | Total number tested | Positivity (%) | Affected districts |
|---|---|---|---|---|
| | RVF | 444 | 1.6 | Adjumani, Moyo, Yumbe, Nakasongola |
| Zoonoses | Rabies | 3 | 66.6 | Kasanda, Moyo |
| | Brucellosis | 756 | 7.2 | Adjumani, Gomba, Kazo Kitgum, Moyo, Masaka, Mubende, Nakasongola, Masindi |
| | Anthrax | 10 | 60 | Kween |
| | Clostridia | 17 | 41.2 | Kiruhura, Kazo |
| | E. coli (food safety) | 2 | 0 | |
| | Leptospirosis | 43 | 11.6 | Mukono |
| | | | | |
| Animal diseases | PPR | 332 | 37.7 | Kamuli, Kanungu, Kazo, Kisoro, Kabaale, Moyo, Wakiso, Mukono, Pakwach, Mityana |
| | LSD | 2 | 0 | |
| | FMD | 96 | 38.5 | Kabarole. Masindi |
| | ECF | 3 | 33.3 | Gomba |
| | CCPP | 143 | 0 | |
| | CBPP | 339 | 2.1 | Sheema, Yumbe, Moyo, Adjumani |
| | ASF | 149 | 7.4 | Pader, Kween |

Zoonoses diagnosed during this quarter include rift valley fever (1.6 %), rabies (66.6 %), brucellosis (7.2 %), anthrax (60 %), and leptospirosis (11.6 %) (*Table 2*). rift valley fever (RVF) was detected mainly in the West Nile where some samples from Adjumani, Moyo and Yumbe returned positive results using ELISA, with only Nakasongola being the only district outside West Nile to register positive RVF results from samples submitted to NADDEC.

In the same quarter, anthrax was detected in Kween district, leptospirosis in Mukono and rabies was detected in samples from Kassanda and Moyo districts. Brucellosis had the highest number of affected districts ie., Adjumani, Gomba, Kazo, Kitgum, Moyo, Masaka, Mubende, Nakasongola, Masindi.

For the animals only diseases, Peste des Petits Ruminants (Kamuli, Kanungu, Kazo, Kisoro, Kabaale, Moyo, Wakiso, Mukono, Pakwach, Mityana), foot and mouth disease (Kabarole. Masindi), east coast fever (Gomba), contagious bovine pluero-pneumonia (Sheema, Yumbe, Moyo, Adjumani) and African swine fever (Pader, Kween) were detected through different tests carried out at the NADDEC.

The districts of Adjumani, Gomba, Isingiro, Kitgum, Lwengo, Sheema, and Luweero submitted the most samples to the national laboratory for different tests *(Figure 9).*

It should be noted that the increased sample inflow from West Nile Region has been majorly attributed to continued logistical support from FAO in terms of sample collection, packaging materials, refresher trainings in sample collection, preservation, packaging and transportation for personnel involved in delivery of Veterinary services as well as the to to improved Hub sample transportation system coordinated by IDI and MOH. The National Veterinary laboratory is therefore, encouraging other districts to leverage on this free service to regularly submit samples to the National reference Veterinary laboratory (NADDEC) for disease confirmation.

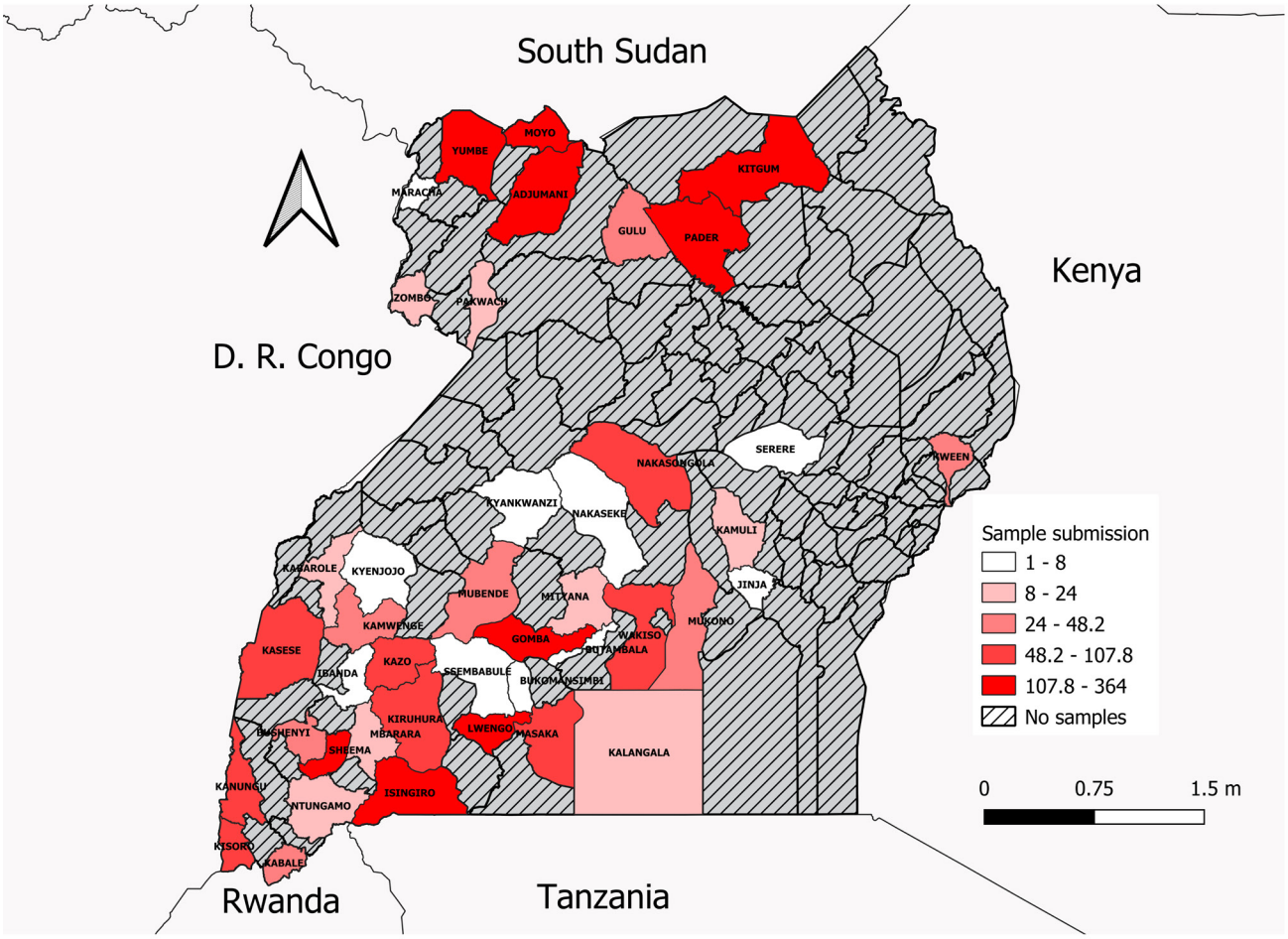



*Figure 9. The map of Uganda showing laboratory sample submission by district for the temporal window of July to September 2022.*

## DISCUSSION

The major diseases reported as well as tested in the laboratory have significant economic, trade and or food security and public health importance as well as easily spread across borders (transboundary in nature). This grossly undermines the contribution of livestock to the income and livelihoods of the farming communities especially given that about 1 in 5 people depend on production animals for their income and livelihoods. Losses are through death of the animals and losses in production for example milk, as well as additional expenses through treatment costs incurred and lost revenue through limited access to markets. Some of the zoonoses reported can cause death and decreased quality of life in human. There is crucial need for strengthening early warning, surveillance and diagnosis of these diseases to minimize their potential impact and promote information sharing among stakeholders.

## RECOMMENDATIONS

- Districts and now cities are encouraged to report all disease events using available tools as previously indicated. Districts with challenges in utilization of the application are encouraged to utilize the weekly reporting form provided by MAAIF to ensure continuity in reporting.
- Continued trainingof animal health practioners in disease surveillance and reporting to bridge identified gaps and challenges.
- Need for active surveillance for reported animal and zoonotic diseases to determine their true extent and magnitude to inform disease control interventions. This also calls for integrated surveillance approaches to promote information sharing.
- There is need to update the disease list on EMAi to include additional diseases previously not listed. This will help decrease on rate of

unknown diseases being reported.

- Leverage existing resources such as the Hub system for sample shipment.
- There is need for disease confirmation through laboratory diagnosis, as many diseases reported are based on clinical manifestations. This calls for establishment of appropriate laboratory diagnostic facilities at sub national level as well as training of personnel.
- Sensitization of farmers on integrated approaches to parasite control including appropriate use of antimicrobials to curb increasing prevalence of helminths and tick borne diseases.
- Routine vaccination of dogs especially in Rabies affected areas, as well as sensitization of communities on preventative measures.
- Research into acaricide and antihelminthic resistance is also needed to inform its extent and appropriate prevention strategies.

## HIGHLIGHTS OF WORKSHOPS

### GOOD EMERGENCY MANAGEMENT PRACTICES (GEMP) TRAINING

Group photo; gemp trainees

In Collaboration with MAAIF, FAO conducted One (01) training workshop on Good Emergency Management Practices (GEMP), from 29th August –2nd September 2022 in Mbarara for Central and Western Uganda. Thirty-six (36) participants were drawn from high-risk Districts *(Ibanda, Kisoro, Ntungamo, Rukungiri, Sheema, Mbarara, Kiruhura, Isingiro, Kalungu, Bukomansimbi, Masaka, Kazo, Kamwenge, Kyotera, Buliisa, Isingiro, Fort Portal City, Rakai, Kyegegwa, Kabarole, Kasese, Masindi and Bunyangabu)* and NADDEC with an objective of enhancing preparedness and capacity to manage zoonotic/ animal health emergencies. The training consisted of classroom presentations sourced from the FAO Emergency Management Center's revised GEMP Manual, group discussions and exchanges of experiences, table-top simulation exercises, development of contingency plans for managing high-impact zoonotic disease as well as Transboundary Animal Diseases (TADs). Trainees included veterinarians, veterinary paraprofessionals and other professionals working in the animal health diagnostic laboratories, environment and wildlife, as well as local staff involved in community administration, development and planning.

### ONE HEALTH TRAINING

Group photo; one health trainees

To support cascading One Health to sub-national levels and strengthen District One Health Teams (DOHT), FAO in collaboration with MAAIF conducted one sub-national level training workshop on One Health as part of the activities in the hills of the World Rabies Day (WRD) Celebrations in Tororofrom 26th-30th September 2022. Thirty five (35) animal health practitioners from various districts in Eastern Uganda were trained. The trainings equipped participants with knowledge and skills on the importance and use of the One

Health approach in management of high-impact zoonotic diseases. Training presentations were drawn from the One Health Training Manual that was developed through multisectoral and multidisciplinary involvement of all key One Health players in Uganda; including Academia, with support from FAO. The training involved both theoretical (lectures and exercises/case scenarios) and practical field sessions, with participants engaging in participatory disease search (PDS) among farmers using different PDS approaches such as proportional piling, seasonal calendars, and ranking to establish the common livestock diseases and other challenges affecting farming in the area.

## ANIMAL DISEASE DIAGNOSTICS

Group photo; laboratory diagnostics training in kabarole

FAO in close collaboration with NADDEC conducted a hands-on training on animal disease diagnosis with a focus on Priority Zoonotic Diseases in the Mt Rwenzori sub-region from 25th September 2022 to 1st October 2022. Fifteen (15) laboratory personnel and veterinary officers participated in the training. The main objectives of this training were to: (i) Strengthen the capacity of laboratory technicians in the diagnosis of Priority Zoonotic and Trans-boundary animal diseases; (ii) Inform and equip the laboratory technicians with modern techniques in diagnosing animal diseases; (iii) Enhance the understanding of biosafety measures in sample processing before analysis; iv) Enhance harmonization of Standard Operating Procedures (SOPs) in sample collection; and (iv) Improve proficiency in packaging, shipment and storage at sub-national level laboratories.

# HIGHLIGHTS OF MEETINGS

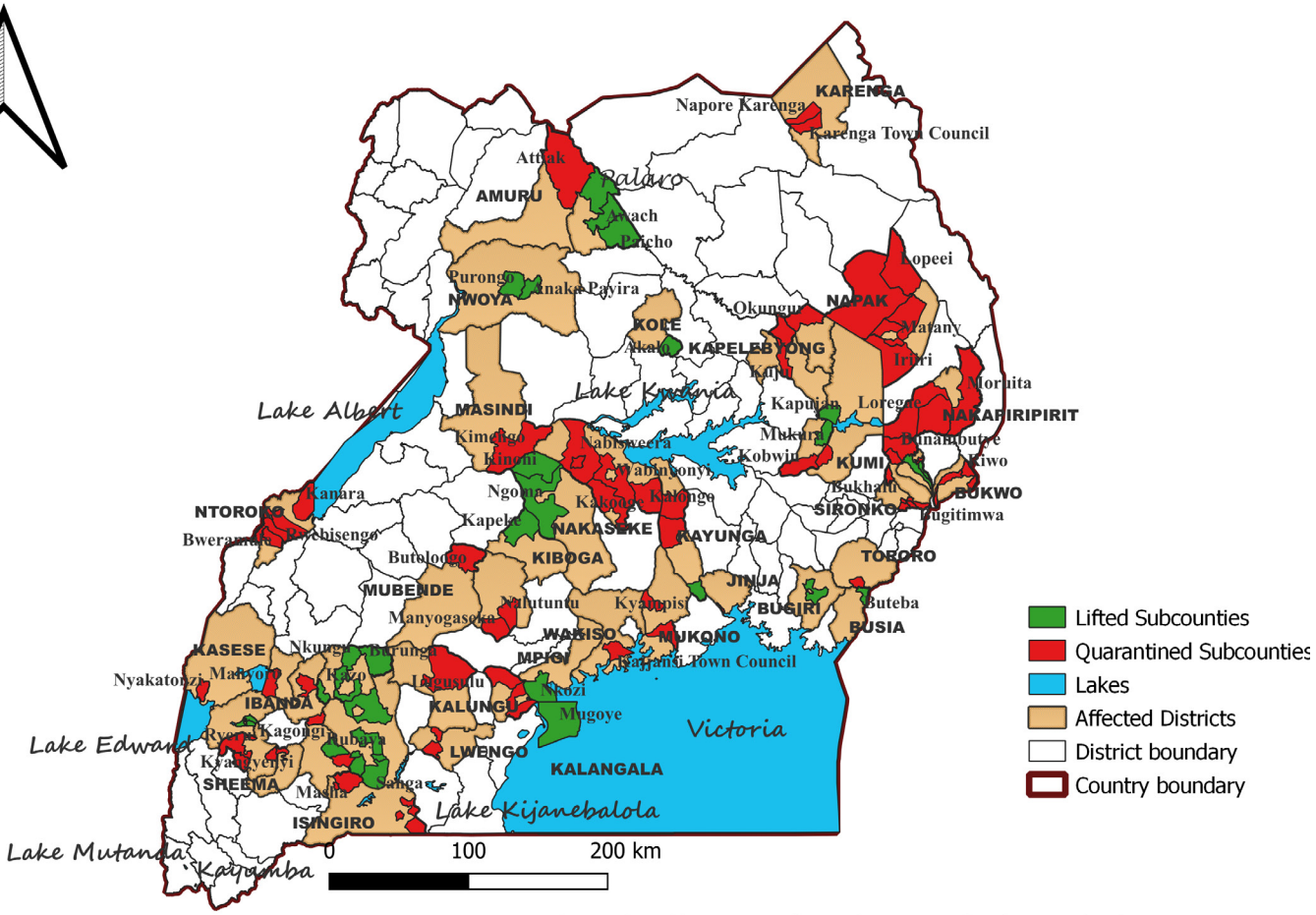
## UNAHN MEETING


Participants during UNAHN meeting in Tororo

FAO in collaboration with MAAIF, and Vétérinaires sans Frontières-Germany (VSF Germany) facilitated the 4th Uganda National Animal Health Network (UNAHN) meeting on 27th September 2022, in Tororo district. The network was established to enhance information sharing for improved animal disease control systems. The meeting was a forum for exchanging animal and public health information, strategizing on how to improve preparedness, contingency planning, detection, rapid response, effective control and recovery from animal and zoonotic health events. Critical issues related to animal movement control and disease reporting were also discussed. The meeting was attended by (93) participants from (72) district local governments, Ministry of Health officials, Private sector (pharmaceutical companies such as Eram (U) Ltd), Uganda Veterinary Association (UVA), Uganda Veterinary Board (UVB), and Makerere University College of Veterinary Medicine.

# FMD COUNTRY STATUS UPDATE

FMD QUARANTINE STATUS 1st Jan 2020 TO 31st OCTOBER 2022




Source: Department of Animal Health, Ministry of Agriculture, Animal Industry and Fisheries

| District | Subcounty |
|---|---|
| AMURU | ATIAK |
| BULAMBULI | BWIKHONGE |
| MASINDI | KIMENGO |
| NAKAPIRIPIRIT | KAWACH |
| NAKAPIRIPIRIT | NAMALU |
| NAKAPIRIPIRIT | LOREGAE |
| NAKAPIRIPIRIT | LORENG |
| NAKAPIRIPIRIT | LEMSUI |
| NAKASONGOLA | WABINYONYI |
| SEMBABULE | LUGUSULU |

Six more districts had their subcounties quarantined between July and October 2022 as shown in the table below. No lifting of the quarantine was done in any district.

# UPCOMING EVENTS

## ONE HEALTH DAY


November 3, 2022, marks the seventh annual One Health Day, a global campaign that celebrates and brings attention to the need for a One Health approach to address shared health threats at the human-animal-environment interface. A One Health approach can address a wide range of public health concerns like antimicrobial resistance, environmental health, food safety, mental health, vector-borne diseases, zoonotic diseases, and much more.

One Health Day provides an opportunity for experts and the community to join together in One Health education and awareness. Communication, coordination, and collaboration among partners working in animal, human, and environmental health as well as other relevant areas are an essential part of the One Health approach. Working together allows us to have the biggest impact on improving health for people, animals, plants, and our shared environment.

In Uganda, this year's commemoration will be spearheaded by the National One Health Platform (NOHP) in collaboration with other key stakeholders.

## WORLD ANTIMICROBIAL AWARENESS WEEK (WAAW)


World Antimicrobial Awareness Week (WAAW) is a global campaign that is celebrated annually (18-24 November) to improve awareness and understanding of AMR and encourage best practices among the public, One Health stakeholders and policymakers, who all play a critical role in reducing the further emergence and spread of AMR.

This year, the theme of WAAW is "Preventing Antimicrobial Resistance Together." We call on all sectors to encourage the prudent use of antimicrobials and to strengthen preventive measures addressing AMR, working together collaboratively through a One Health approach.

Uganda will join the World in commemorating the WAAW through a wide range of activities, with climax day celebrations that will be held in Nakasongola district.

# WORLD RABIES DAY CELEBRATIONS

Uganda joined the rest of the World in commemoration of the **World Rabies Day on 28th September 2022.** The event was held in Tororo district, with the Hon Minister of State Animal Industry C**ol Bright Rwamirama** as the Chief Guest.

The week was loaded with several activities that included vaccination of dog and cats, spays, castrations, school outreach, One Health trainings, Radio and TV talk shows.

*The theme this year was* "Rabies: One Health, Zero Death"

Government is committed to ending Rabies by the year 2030.

## *ANNEX 1:* NUMBER OF REPORTS RECEIVED ON EMA-I (JULY – SEPTEMBER 2022)

| DISEASES REPORTED | JUL | AUG | SEPT | TOTAL |
|---|---|---|---|---|
| Helminthiasis | 67 | 53 | 58 | 178 |
| East Coast fever | 47 | 15 | 39 | 101 |
| Bovine Anaplasmosis | 15 | 23 | 24 | 62 |
| Mange | 32 | 10 | 15 | 57 |
| Unknown disease | 17 | 16 | 18 | 51 |
| Trypanosomosis | 17 | 10 | 19 | 46 |
| Lumpy skin disease | 11 | 7 | 12 | 30 |
| Brucellosis | 9 | 4 | 7 | 20 |
| Newcastle disease | 16 | 1 | 2 | 19 |
| Mastitis | 6 | 7 | 5 | 18 |
| Sheep pox and goat pox | 3 | 7 | 5 | 15 |
| Coccidiosis | 3 | 2 | 9 | 14 |
| Rabies | 7 | 3 | 4 | 14 |
| Peste des petits ruminants | 3 | 3 | 8 | 14 |
| Heartwater | 3 | 7 | 3 | 13 |
| Foot and mouth disease | 11 | 1 | 1 | 13 |
| African swine fever | 4 | 4 | 4 | 12 |
| Dermatophilosis | 5 | 2 | 5 | 12 |
| Anthrax | 8 | 2 | 1 | 11 |
| Bovine babesiosis | 4 | 1 | 6 | 11 |
| Infectious Bovine Keratoconjunctivitis | 3 | 4 | 4 | 11 |
| Blackleg | 6 | 3 | 2 | 11 |
| Foot rot | 2 | 1 | 7 | 10 |
| Colibacillosis | 5 | 3 | 1 | 9 |
| Infectious Coryza | 5 | 3 | | 8 |
| Contagious caprine pleuropneumonia | | 6 | 1 | 7 |
| Enterotoxaemia | 2 | 1 | 4 | 7 |
| Orf | 3 | 1 | 3 | 7 |
| Chronic respiratory disease | 2 | 2 | 1 | 5 |
| Epizootic lymphangitis | 2 | | 2 | 4 |
| Fowl pox | 1 | 3 | | 4 |
| Intoxication | 2 | 1 | 1 | 4 |
| Swine dysentry | 2 | 1 | | 3 |
| Contagious bovine pleuropneumonia | 2 | | 1 | 3 |
| Ectoparasitism | 1 | 1 | | 2 |
| Parvovirus | | 2 | | 2 |
| Contagious Ecthyma | | 1 | | 1 |
| Avian infectious laryngotracheitis | 1 | | | 1 |
| Transmissible gastroenteritis | 1 | | | 1 |
| Erysipelas | 1 | | | 1 |
| Contagious agalactia | | | 1 | 1 |
| Bovine tuberculosis | | 1 | | 1 |
| Bovine cysticercosis | 1 | | | 1 |
| Aspergillosis | 1 | | | 1 |
| Bovine genital campylobacteriosis | 1 | | | 1 |
| Vesicular stomatitis | | 1 | | 1 |
| Infectious bursal disease (Gumboro) | 1 | | | 1 |
| Pullorum disease | 1 | | | 1 |
| Grand Total | 335 | 213 | 272 | 820 |

## *ANNEX 2:* DISEASES REPORTED THROUGH PASSIVE MONTHLY SURVEILLANCE

| DISEASE | No. Dead | No. Cases | CFR (%) |
|---|---|---|---|
| **ALL** | | | |
| Mange | 0 | 736 | - |
| **AVIAN** | | | |
| Coccidiosis | 543 | 6884 | 7.9 |
| Fowl Cholera | 152 | 597 | 25.5 |
| Fowl Typhoid | 33 | 458 | 7.2 |
| Gumboro | 367 | 1600 | 22.9 |
| Infectious Bronchitis | 315 | 1442 | 21.8 |
| Infectious Laryngotracheitis | 0 | 5 | - |
| NCD | 525420 | 639202 | 82.2 |
| Pox | 889 | 2379 | 37.4 |
| Salmonellosis | 110 | 656 | 16.8 |
| **BOVINE** | | | |
| Anaplasmosis | 99 | 2104 | 4.7 |
| Babesiosis | 8 | 507 | 1.6 |
| Black Quarter | 8 | 55 | 14.5 |
| Brucellosis | 0 | 589 | - |
| Caseous lymphadenitis | 0 | 19 | - |
| CBPP | 11 | 68 | 16.2 |
| ECF | 171 | 2581 | 6.6 |
| FMD | 0 | 29 | - |
| Footrot | 0 | 219 | - |
| Heart water | 0 | 62 | - |
| LSD | 35 | 2379 | 1.5 |
| Rabies | 1 | 1 | 100.0 |
| Trypanosomiasis | 36 | 1651 | 2.2 |
| **CANINE** | | | |
| Mange | 0 | 5 | - |
| Rabies | 24 | 121 | 19.8 |
| **CAPRINE** | | | |
| Brucellosis | 0 | 6 | - |
| Caseous lymphadenitis | 22 | 237 | 9.3 |
| CCPP | 16 | 56 | 28.6 |
| Footrot | 0 | 232 | - |
| Mange | 0 | 159 | - |
| Orf | 3 | 489 | 0.6 |
| Pox | 0 | 1 | - |
| PPR | 22 | 205 | 10.7 |
| Sheep Mange | 0 | 9 | - |
| **CAPRINE, OVINE** | | | |
| Orf | 0 | 66 | - |
| **OVINE** | | | |
| Sheep Mange | 0 | 105 | - |
| PORCINE | | | |
| ASF | 471 | 651 | 72.4 |
| Footrot | | 15 | 0.0 |
| Mange | 4 | 1451 | 0.3 |

## *ANNEX 3:* TABLE SHOWING OVERALL SUMMARY OF DISTRICTS REPORTING MAJOR NOTIFIABLE DISEASES

| NUMBER OF CASES | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Diseases** | **NCD** | **ASF** | **PPR** | **LSD** | **ECF** | **Sheep& Goat pox** | **Trypanosomosis** | **Anaplasmosis** | **Brucellosis** | **Blackleg** | **CCPP** | **CBPP** | **FMD** | **Heartwater** | **Babesiosis** | **Rabies** | **Anthrax** |
| | NUMBER OF CASES | | | | | | | | | | | | | | | | |
| Adjumani | | | | | | | | | 15 | | | | | | | | |
| Agago | | | | | | | | | | | | | | | 8 | 1 | |
| Apac | 52 | 2 | | | 50 | | | 1 | | | | | 6 | | | | |
| Amudat | | | | | | | | 80 | | 25 | | | | | | | |
| Arua | | | 15 | | | | | | | | | | | | | | |
| Budaka | | | | | | | 1 | | | | | | | | 4 | | |
| Bududa | | | | | | | | | | | | | | | | | 5 |
| Bukedea | | | 100 | 62 | 128 | | 5 | 30 | 3 | 4 | | | | | | | |
| Bukomansimbi | 125 | | | | 231 | 10 | 105 | 249 | | | | | | | 110 | | |
| Bulambuli | 420 | | | 266 | 29 | | 32 | 14 | 4 | | | | | | | | |
| Buliisa | | | | 76 | 3 | | | | | | | | | | | 1 | |
| Bushenyi | | | | | 102 | | | 18 | | | | | | | 14 | | |
| Busia | 1761 | 20 | | 910 | 22 | | 300 | 191 | | 52 | | | | | 124 | 56 | |
| Butaleja | | | | 8 | 4 | | 9 | 10 | 2 | | | 1 | | | | 4 | |
| Butambala | | | | | 2 | 18 | | 2 | | | | | | | 1 | | |
| Butebo | 623165 | | | | 309 | | | 298 | | | | | | | | | |
| Dokolo | | 7 | | | | | | | | | | | | | | | |
| Gomba | 50 | | | | 5 | | | | 15 | | | | | | | | |
| Hoima | | | | | | | | | 6 | | | | | | | | |
| Ibanda | | | | | | | | | | | | | 1 | | | 8 cattle | 1 |
| Iganga | 30 | | | | 1 | | | | | | | | 5 | | | | |
| Isingiro | | | | 371 | 225 | | | 70 | 109 | | | | | | 63 | | |
| Jinja | 30 | | | 56 | 1 | | | | 1 | | | | | | | | |

| NUMBER OF CASES | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Diseases** | **NCD** | **ASF** | **PPR** | **LSD** | **ECF** | **Sheep& Goat pox** | **Trypano somosis** | **Anaplas mosis** | **Brucel losis** | **Blackleg** | **CCPP** | **CBPP** | **FMD** | **Heartwater** | **Babesiosis** | **Rabies** | **Anthrax** |
| | NUMBER OF CASES | | | | | | | | | | | | | | | | |
| Rukiga | | 7 | 9 | | 1 | | | | | | | | | | | | |
| Kabarole | 318 | | | 1 | 30 | | | 8 | 26 | | | | 33 | | 2 | | |
| Kaberamaido | 180 | 50 | | | 95 | | | 38 | | | | | | | 46 | | |
| Kalangala | | | | | 10 | | | | | | | | | | | | |
| Kalungu | 37 | | | 23 | 20 | 5 | | 4 | 2 | | | | | | | 3 | |
| Kampala | | | 20 | | | | | | | | | | | | | | 1 |
| Kamwenge | | | | | | | | 1 | | | | | | | | | |
| Kapchorwa | | | | | | | 1 | | | | | | | 3 | | | |
| Kayunga | 883 | 346 | 11 | 43 | 225 | | 178 | 316 | 32 | 3 | | 3 | 13 | | 36 | 5 | |
| Kibuku | | | | | | | | | | | | | | | | | |
| Kiruhura | | 48 | | | | | | | | 1 | | | | | | | |
| Kitgum | | | 150 | 6 | 9 | | 6 | 24 | 1 | | | 1 | | 2 | 3 | | |
| Koboko | 138 | | | | 225 | | 24 | 2 | | | | | | | 10 | | |
| Kole | 30 | | | | 2 | | | | | | | | | | | | |
| Kumi | | | | 1 | 4 | | 3 | 14 | | | 2 | | | 1 | 2 | | |
| Kween | | 650 | | | | | | | | | | | | | | | 4 |
| Kyenjojo | 5 | | | | 11 | | | 5 | | | | | | | 12 | | |
| Kyotera | | | | | | | | | | | | | | | 3 | | |
| Luwero | | | 48 | | | | | | | | | | | | | | |
| Lwengo | | | | | 4 | | | | | | | | | | | | |
| Lyantonde | 200 | | | | 1 | | | 7 | 295 | 1 | | | | 1 | 0 | 20 | 2 |
| Manafwa | | | | 82 | 489 | | 898 | 679 | | 18 | | | | | 28 | | |
| Masaka | | 1 | | 1 | 1 | | | | | | | | 1 | | | | |
| Masindi | | | | | | | | | | | | | | | | | |
| Mayuge | | | | 87 | | | | | | | | | | | | | |
| Mbale | | | | | 12 | | 26 | 10 | 1 | 3 | | | | 6 | | | |
| Mbarara | 30 | | | | | | | | | | | | | | | | |
| Mityana | 300 | | | | 10 | | 1 | 1 | 2 | 1 | | | | | 2 | | |
| Moyo | 100 | 99 | 64 | 43 | 37 | | 42 | 32 | 18 | 10 | | | | | | 2 | |

| NUMBER OF CASES | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diseases | NCD | ASF | PPR | LSD | ECF | Sheep& Goat pox | Trypano somosis | Anaplas mosis | Bruce llosis | Blackleg | CCPP | CBPP | FMD | Heart water | Babesiosis | Rabies | Anthrax |
| | NUMBER OF CASES | | | | | | | | | | | | | | | | |
| Mubende | | | 20 | | 2 | | | | | | | | | | | | |
| Kassanda | 60 | | 6 | 68 | 71 | 5 | 2 | 3 | | | | 11 | 1 | | | | |
| Mukono | 7413 | | | | 364 | | 64 | 156 | 140 | | | | | | 49 | 4 | |
| Nakapiripirit | 113 | | | | 48 | 60 | 27 | 31 | 11 | | | 65 | | | | 1 | |
| Nakasongola | | | 51 | | | | | 2 | | | | | | | | | |
| Namayingo | 3548 | 18 | | | 66 | | | | | | | | | | 11 | | |
| Namutumba | | | | | | | | | | | | | | | | | |
| Nebbi | | | | 1 | 2 | | | | | | 107 | 51 | | | | | |
| Ngora | | | | | 15 | | | | | | | | | | | | |
| Ntoroko | | | | 6 | 2 | | | | | | | | | | | 1 | |
| Ntungamo | | | | | | | | | | | | | | | | 1 cattle | |
| Nwoya | 30 | | | | 12 | | | | | | | | 5 | | | | |
| Otuke | | | | | 2 | | | 2 | 1 | 2 | | | | | | | |
| Oyam | | | | | | | | 1 | | | | | | | | | |
| Pader | | | | | | | | 1 | | | | | | | | | |
| Pallisa | | | | | | | | 10 | | | | | | | | | |
| Rubirizi | | | 30 | | 2 | | | | | | | | | | | 1 | |
| Sheema | | 150 | | | 5 | | | | | | | | | | | 1 cattle | |
| Sironko | 280 | | | 92 | | | | | | | | | | | | | |
| Ssembabule | | | | | 2 | | | | | | | | 4 | | | | |
| Tororo | | | | | | | 1 | 1 | | | | | | | | | |
| Wakiso | 30 | | | | 2 | | | | | | | | 8 | | | | |
| Zombo | 699 | | 17 | | 6 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

MAAIF

Ministry Of Agriculture,
Animal Industry And Fisheries

This Quarterly Animal Health Epi-Lab Bulletin is published by the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) with support from the Food and Agriculture Organization (FAO), Uganda and USAID under the project OSRO/GLO/507 USA.

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