

Uganda Veterinary Capability Study



Executive Summary

The Republic of Uganda is a landlocked country in East Africa that shares borders with Kenya, South Sudan, the Democratic Republic of the Congo (DRC), Rwanda, and Tanzania. Though landlocked, Uganda contains many large lakes, including a substantial portion of Lake Victoria in the southern part of the country. Most of the important cities in the country, including the capital of Kampala, are located near Lake Victoria.¹

The total population of Uganda predicted to reach 35.8 million people as of July 2012.² The country is home to many different ethnic groups, none of whom forms a majority of the population. The official languages of Uganda are English and Swahili, although forty other languages are spoken in the country.³

Uganda's substantial natural resources include fertile soils, regular rainfall, and sizable mineral deposits of copper and cobalt. The country has largely untapped reserves of both crude oil and natural gas.⁴

Agriculture is one of the most important sectors in the Ugandan economy. In 2009, it contributed about 21% of the country's total Gross Domestic Product (GDP) and over 90% to total export earnings.

An estimated 80% of women and 60% of men are employed in agriculture. Overall, agriculture provides about 80% of employment as most industries and services in Uganda are based on it.⁵

Livestock provides an essential agricultural resource for Uganda. The country's populations of cattle, goats, and poultry are among the highest in Africa with 70% of Ugandan households engaged in some form of livestock rearing.⁶

Livestock is part of the vision of Uganda's leaders for economic development and poverty reduction. Uganda's *National Development Plan*⁷ (2010/11–2014/15) seeks an annual growth of 5.4% in the livestock sector, up from an average of 3% percent in recent years.⁸

⁴"Uganda's oil rush: Derricks in the darkness", *The Economist*, August 6th 2009, retrieved August 10th 2009.

⁵http://typo3.fao.org/fileadmin/templates/ess/documents/meetings_and_workshops/ICAS5/PDF/ICA_SV_3.3_126_Paper_Mayinza.pdf

⁶Ministry of Animal Agriculture, Animal Industries and Fishing (MAAIF) and Uganda Bureau of Statistics (UBOS), 2009

⁷http://planipolis.iiep.unesco.org/upload/Uganda/Uganda_NDP_April_2010.pdf

⁸National Planning Authority (NPA), 2010

¹<http://www.nbcn.com/index.php/uganda.html>

²<https://www.cia.gov/library/publications/the-world-factbook/geos/ug.html>

³<http://www.britannica.com/bps/search?query=uganda>

Uganda's Livestock Sector



June 15, 2010 Kampala Abattoir in Kampala, Uganda

In 2008, **The National Livestock Census** was carried out across Uganda. Approximately 950,000 households were interviewed and the resulting publication provided a significant source of detailed information on the country's livestock sector.^{9,10}

Uganda Domestic Livestock - 2008

Species/type	Country Population
Poultry	37,400,000
Goat	12,500,000
Cattle	11,400,000
Sheep	3,400,000
Pigs	3,200,000
Rabbits	370,000
Camels	32,870
Horse & Donkey	1,590
All Animals	68,304,460

Notifiable Cattle Diseases¹¹

- Foot and Mouth Disease (FMD)
- Contagious Bovine Pleuropneumonia (CBPP)
- Lumpy Skin Disease (LSD)
- Rabies
- Anthrax
- Rift Valley Fever (RVF)

Prevalent Poultry Diseases¹²

- Newcastle Disease (ND)
- Fowl Pox
- Salmonellosis
- Colibacillosis
- Fowl Cholera
- Gumboro
- Avian leucosis
- Coccidiosis

⁹ MAAIF and UBOS 2009

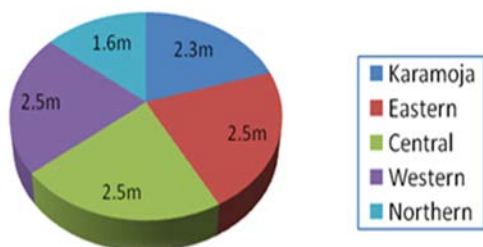
¹⁰ <http://www.ifpri.org/sites/default/files/publications/ifpridp01008.pdf>

¹¹ <http://www.agriskmanagementforum.org/farmland/doc/uganda-dairy-supply-chain-risk-assessment-february-2011>

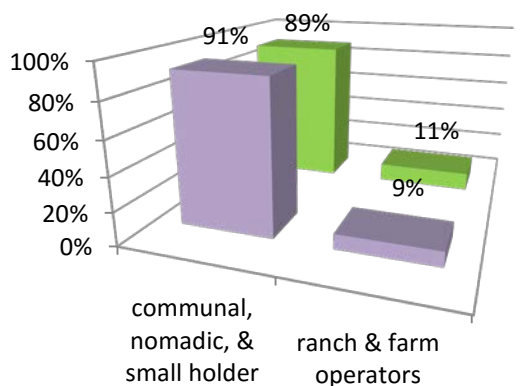
¹² <ftp://ftp.fao.org/docrep/fao/011/ai378e/ai378e00.pdf>

Beef Production

Cattle population by region (11.4 million total)



- Beef production contributes on average 18% to the agriculture GDP and 8% to the national GDP. The market for the export of hides and skins has shown rapid growth.¹³
- There is no orderly marketing system for beef. Rural areas lack abattoirs and meat is often sold on the side of the road.¹⁴
- Most beef production is of a subsistence nature, as farmers keep cows primarily to feed their families, selling any surplus. These small farmers and pastoralists own 91% of the nation's cattle and contribute to 89% of cattle slaughtered.¹⁵



¹³ <http://www.monitor.co.ug/Business/Prosper/-/688616/1369280/-/bomksp/-/>
¹⁴ <http://www.fituganda.com/manage/download/atm/marketreports/subsectorst/udybeef.pdf>
¹⁵ <http://www.mbeni.com/indy/agff/lvst/af/ug/p0005.htm>

Dairy Industry

- Accounts for approximately 9% of the national GDP and plays an important role as a source of food, income, and employment.¹⁶
- Uganda has five milk sheds that produce 1.5 billion liters of milk annually. There are 15 dairy processing plants.
- The rapid increase in population size coupled with a growing urban population is resulting in an increased demand for dairy products.¹⁷
- The Government of Uganda is dedicated to developing and stimulating the dairy sector through its regulatory department, the Dairy Development Authority (DDA).¹⁸

Pig Production

- More than 17% of Ugandan households are currently involved in pig rearing and the pork trade.¹⁹
- As the pig population rises and the demand for pork products increases, commercial pig keeping has the potential to become a high source of income for Ugandan farmers.²⁰
- Despite its potential, the pig sector remains poorly regulated, as the government has not focused on its development.
- It would be of utmost importance to deal with diseases such as African swine fever and cysticercosis.²¹

¹⁶ <http://www.snvworl.org/en/Documents/Report%20on%20Dairy%20Investment%20Opportunities%20in%20Uganda.pdf>

¹⁷ <http://allafrica.com/stories/201111050074.html>

¹⁸ <http://www.snvworl.org/en/Documents/Report%20on%20Dairy%20Investment%20Opportunities%20in%20Uganda.pdf>

¹⁹ <http://www.ilri.org/ilrinews/index.php/archives/category/countries/uganda>
²⁰ <http://chrismulindwa.blogspot.com/2011/12/some-important-pig-production-news.html>

²¹ <http://www.ilri.org/ilrinews/index.php/archives/category/countries/uganda>

Poultry Industry

- In 2010, the poultry population was estimated to be at 40 million.
- Chickens and eggs are in high demand in neighboring countries like South Sudan, the DRC, and Rwanda.
- The marketing chain is simple and undeveloped. Ugachick is the only chicken farm in the country that has a slaughter plant. The remaining poultry slaughter is carried out in make-shift small slabs, households, or restaurants.²²
- There are programs working in support of the poultry industry. For example, the National Livestock Productivity Improvement Program (NALPIP) provides vaccines for the control of Newcastle disease (ND). This program is funded by the African Development Bank.²³

Goat Production

- The most important role of goats is in the sale of their meat and skins.
- Goats are a good investment for farmers because capital investment is low, reproductive turnover is high and raising goats is not labor intensive. As the human population increases, the demand for goat meat in Uganda and the Arab world will increase.²⁴

²² <ftp://ftp.fao.org/docrep/fao/011/ai378e/ai378e00.pdf>

²³ <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/UG-2002-126-EN-ADF-BD-WP-UGANDA-AR-LIVESTOCK-IMPROVEMENT.PDF>

²⁴ <http://www.fao.org/Wairdocs/ILRI/x5473B/x5473b02.htmroduction>

Bee Keeping (Apiculture)

- The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) is committed to developing this industry because of the potential to compete in international markets.²⁵
- About 2.7% of all households in Uganda raise bees.²⁶
- Uganda is one of the countries allowed to export honey to the European Union because of its development of an Apiculture Export Strategy, a honey standard, and a National Residue Monitoring Plan.²⁷

Fishing (Aquaculture)

- Fish are Uganda's second major non-agricultural foreign exchange earner.²⁸
- More than 80% of Uganda's exported fish come from lakes Victoria, Kyoga, Albert, and Edward. In 2008, total exports were over US \$122M.
- From 1998-2008 the number of processing facilities rose from two to eighteen. In 2009, aquaculture directly employed 400,000 people and contributed to the livelihoods of nearly 1.5 million people.²⁹
- In recent years, the industry has suffered from corruption and illegal fishing. Uganda estimates losses of US \$250M annually due to the illegal fish trade.³⁰
- The Government is seeking to curb such losses by enforcing new licensing measures and developing a new fisheries bill.³¹

²⁵ <http://www.apinews.com/en/news/item/8245-uganda--beekeeping-the-untapped-goldmine&>

²⁶ <http://www.new-ag.info/00-5/focuson/focuson2.html>

²⁷ <http://www.pma.go.ug/docs/PMA%20Bulletin%20April%20to%20June%202010.pdf>

²⁸ http://www.fao.org/fishery/countrysector/naso_uganda/en

²⁹ <http://www.thefishsite.com/fishnews/10844/uganda-seeks-to-boost-fish-output-again>

³⁰ <http://allafrica.com/stories/201107081438.html>

³¹ <http://allafrica.com/stories/201112191747.html>

Livestock Slaughter and Marketing



June 17, 2010 Kampala Abattoir in Kampala, Uganda

Slaughtering and processing facilities are located throughout Uganda. They are often found in commercial areas and standards of operation are generally poor. Industry standards regarding meat packaging are not enforced and little attention is given to the disinfection of slaughtering instruments. Even though on-site incineration methods for destroying contaminated products are available, no special attention is given to them. Incineration sites have minimal security measures.

Animals are transported to slaughterhouses by trucks, motorcycles, bicycles, or on foot. Animals are housed in a holding area while awaiting slaughter.



June 17, 2010 Kampala Abattoir
Kampala, Uganda

Live animal markets are generally unregulated and lack veterinary presence. People often want to purchase sick animals because they are cheaper.³² Food-borne illness is a significant public health problem in Uganda because of the lack of basic sanitation measures. The Ministry of Health is working to develop strategies and to implement plans that address these food safety concerns.³³



June 17, 2010 Kampala Abattoir in Kampala, Uganda

³² Information was derived by private industry research analysts in the course of their normal research projects through discussions with knowledgeable individuals with good access to the information. The individuals providing information included Doctor's of Veterinary Medicine (DVM) serving as local and district veterinary officers, DVM faculty at Makerere University and private veterinary practitioners in Uganda.

³³<http://www.fao.org/docrep/meeting/008/ae191e.htm>

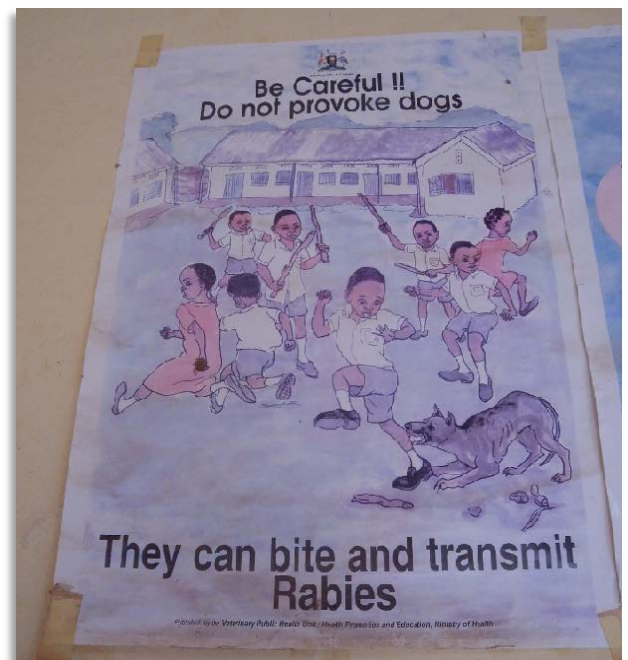
Disease Response Capabilities



June 23, 2010 Mpigi Town Council in Mpigi, Uganda

Relevant Government Departments

- The **Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)** is the government agency in charge of animal health.³⁴
- Within the MAAIF is the **Directorate of Animal Resources and Fisheries**, which supports sustainable animal disease and vector control, market oriented animal production, and food quality and safety.³⁵ It also oversees the Ugandan Public Animal Health Service.³⁶
- The **Livestock Health and Entomology Department** works under the Directorate of Animal Resources and Fisheries. It is responsible for all areas of animal health, including national animal disease prevention and eradication programs.³⁷



June 23, 2010 Mpigi Town Council in Mpigi, Uganda



³⁴ Ugandan Ministry of Agriculture - <http://www.agriculture.go.ug/>

³⁵ <http://www.agriculture.go.ug/index.php?page=sectors&id=81>

³⁶ <http://www.agriskmanagementforum.org/farnd/sites/agriskmanagementforum.org/files/Documents/UgandaDairy10.pdf>

³⁷ <http://www.agriculture.go.ug/index.php?page=departments&id=88>

Veterinary Response



June 20, 2010 Animal Care Center in Entebbe, Uganda

The Government of Uganda encourages the private delivery of veterinary services. Since 1994, the government has been encouraging veterinarians to leave public service and set up private practices.³⁸

Overall, the veterinary service in Uganda is understaffed, unorganized, and provides insufficient support and services to the populations that need it. This contributes to the country's relatively high presence of animal/zoonotic diseases and their vectors.³⁹

Uganda's national veterinary service is limited in its authority to regulate matters relating to the outbreak of animal/zoonotic diseases. It is hampered by a lack of policy and unavailable resources.⁴⁰

Veterinary Staffing Numbers 2007⁴¹

Employer	Number of Veterinary professionals
Central Government	50
Local Government	322
Private Practice	129
University/Lab/Research	94
NGO/Other Business	76
Para-professionals	1,216

³⁸<http://www.snvworld.org/en/Documents/Report%20on%20Dairy%20Investment%20Opportunities%20in%20Uganda.pdf>

³⁹ <http://www.enteruganda.com/brochures/vethome03.html>

⁴⁰ Information was derived by private industry research analysts in the course of their normal research projects through discussions with knowledgeable individuals with good access to the information. The individuals providing information included Doctor's of Veterinary Medicine (DVM) serving as local and district veterinary officers, DVM faculty at Makerere University and private veterinary practitioners in Uganda.

⁴¹ World Organization for Animal Health (OIE) Performance of Veterinary Services (PVS) Appraisal (2007)

⁴²http://covab.mak.ac.ug/index.php?option=com_content&view=article&id=49&Itemid=48

⁴³http://www.afenet.net/new/index.php?option=com_content&view=article&id=46%3Asecurities-and-financial-reporting&catid=46%3Aold&Itemid=151&lang=en

Veterinary Education

- The College of Veterinary Medicine, Animal Resources and Bio-security (COVAB), Makerere University offers a five year program leading to a Bachelor of Veterinary Medicine Degree⁴²
- Since most Ugandan veterinarians don't have adequate training in investigating and responding to disease outbreaks, Makerere University also offers a Master of Veterinary Preventive Medicine program to help strengthen their skills.⁴³

There are programs, laws, organizations, and standards regarding the control of animal, zoonotic, and food-borne disease events in Uganda. However, they lack proper support, consistent enforcement, and essential resources, which hinder their effectiveness.

- Programs do exist to alert the public to disease outbreaks but the information is not always accurate or distributed consistently.⁴⁴
- The National Livestock Resources Research Institute (NALIRRI) is dedicated to the research of livestock diseases but lacks essential technologies, resources, and personnel. The NALIRRI is unable to develop or produce the livestock vaccines that Uganda needs, forcing the country to rely on importation.⁴⁵
- The MAAIF is supposed to carry out nationwide animal vaccination campaigns each year and be prepared to supply the necessary vaccines in the event of an epidemic. The government lacks the funding to accomplish this independently and has to rely on outside assistance.⁴⁶
- The government also relies on outside organizations to implement disease surveillance programs.⁴⁷ The programs often cannot be maintained since the existing veterinary structure is generally unorganized and understaffed.⁴⁸ A lack or delay in reporting by veterinary officers contributes to the prevalence and increased spread of diseases.⁴⁹
- Uganda usually responds to disease outbreaks by implementing quarantines and restricting animal movement between districts and bordering countries.⁵⁰ In general, border security and animal inspection is considered weak. However, inspections and quarantines are more strictly enforced during known food-borne, animal, or zoonotic disease outbreaks. The government employs military assistance during those times.⁵¹
- Uganda is highly dependent on outside organizations like the World Health Organization (WHO), the Food and Agriculture Organization of the United Nations (FAO), the World Organization for Animal Health (OIE) and other countries for assistance before, during, and after an animal/zoonotic disease event. Uganda is forced to rely on these organizations because of its lack of essential resources and qualified, experienced personnel. This situation is unlikely to change unless Uganda improves the quality of its education and training programs and increases its funding of disease prevention measures.⁵²

⁴⁴ Information was derived by private industry research analysts in the course of their normal research projects through discussions with knowledgeable individuals with good access to the information. The individuals providing information included Doctor's of Veterinary Medicine (DVM) serving as local and district veterinary officers, DVM faculty at Makere University and private veterinary practitioners in Uganda.

⁴⁵ <http://www.performanceaudit.afrosai-e.org.za/sites/performanceaudit.afrosai-e.org.za/files/Uganda%20-%20Prevention%20and%20Control%20of%20Livestock%20Diseases,%202009.pdf>

⁴⁶ <http://ugandaradionetwork.com/a/story.php?s=25359>

⁴⁷ Information was derived by private industry research analysts in the course of their normal research projects through discussions with knowledgeable individuals with good access to the information. The individuals providing information included Doctor's of Veterinary Medicine (DVM) serving as local and district veterinary officers, DVM faculty at Makere University and private veterinary practitioners in Uganda.

⁴⁸ http://typo3.fao.org/fileadmin/user_upload/drought/docs/C&DPublicationLivestockDiseaseSurveillance2.pdf

⁴⁹ <http://www.performanceaudit.afrosai-e.org.za/sites/performanceaudit.afrosai-e.org.za/files/Uganda%20-%20>

[Prevention%20and%20Control%20of%20Livestock%20Diseases,%202009.pdf](http://www.performanceaudit.afrosai-e.org.za/sites/performanceaudit.afrosai-e.org.za/files/Uganda%20-%20Prevention%20and%20Control%20of%20Livestock%20Diseases,%202009.pdf)

⁵⁰ <http://www.enteruganda.com/brochures/euday08pace.htm>

⁵¹ Information was derived by private industry research analysts in the course of their normal research projects through discussions with knowledgeable individuals with good access to the information. The individuals providing information included Doctor's of Veterinary Medicine (DVM) serving as local and district veterinary officers, DVM faculty at Makere University and private veterinary practitioners in Uganda.

⁵² Ibid