



# Using Evidence to Prioritize SPS investments in Uganda: Policy Brief

## Introduction

Like many other developing countries, Uganda faces considerable demands to strengthen its sanitary and phytosanitary (SPS) capacity to boost exports of food and agricultural products, yet resources are limited. SPS capacity varies across countries, occasionally translating into trade related barriers. Within the COMESA region for example, it is estimated that 70 percent of the reported Non-Tariff Barriers are constituted by Technical Barriers to Trade (TBT) and SPS measures. COMESA further notes that low SPS capacity amongst the value chain actors limit intra-regional trade and undermines industry competitiveness for food and agricultural products. SPS issues matter; they are a priority for Africa and the African Continental Free Trade Area (ACFTA).

As part of an STDF regional project led by the COMESA Secretariat, in partnership with the EIF and AGRA, public and private stakeholders in Uganda came together to use STDF's evidence-based approach to Prioritize SPS Investments for Market Access (P-IMA). The aim is to leverage additional resources to address SPS capacity gaps under national investment frameworks for agriculture and trade, as well as from other sources. Uganda's livestock and honey, Horticulture and Grains, and Fish value chains are considered of great potential in boosting agriculture exports once the key SPS issues associated with their trade flows are addressed.

## About P-IMA

P-IMA is an evidence-based approach to inform and improve SPS planning and decision-making processes, developed by the STDF with other partners. P-IMA helps to show how different SPS investments are likely to impact policy goals like export growth, agricultural productivity and poverty reduction in order to inform decision-making and support resource mobilization. In the process, P-IMA encourages public-private dialogue, boosts transparency and accountability, and encourages greater efficiency in SPS investment decisions.

See: [www.standardsfacility.org/prioritizing-sps-investments-market-access-p-ima](http://www.standardsfacility.org/prioritizing-sps-investments-market-access-p-ima)

Mainstreaming SPS Investments into CAADP and other frameworks (STDF/PG/606)

Beneficiaries: Ethiopia, Kenya, Malawi, Rwanda, Uganda  
Implementing organization: Common Market for Eastern and Southern Africa (COMESA)

Partners: STDF, EIF, European Union, AGRA

Time frame: July 2018 - Dec. 2021

Donor funds: STDF (USD 221,025); EIF (USD 207,400)

Total budget: US\$502,425

[www.standardsfacility.org/PG-606](http://www.standardsfacility.org/PG-606)

“COMESA views the P-IMA framework as a unique planning and sector-wide engagement and resource mobilization tool”. “We encourage our Member States to use P-IMA to take stock of SPS capacity building needs, prioritize and cost investment options with the best returns and integrate them into national agriculture sector investment plans.”

COMESA Secretary General

– H.E. Chileshe Mpundu Kapwepwe



## Opportunities and challenges for Uganda's agri-food exports

According to the ITC Export Potential Trade Map agricultural products constituted about 63% of Uganda's total exports in 2018. The ITC Export Potential map further shows that agricultural products hold major export potential for Uganda (20 out of 25 ranked products). The three key Ugandan products with export's potential include coffee not roasted, not decaffeinated; cane or beet sugar and chemically pure sucrose; and maize seed for sowing. Other products with strong export potential include cocoa beans; beans "Vigna and Phaseolus"; grains of hides and skins of bovine; palm oil (excl. crude) and fractions; fish and fish products, cured; and hides and skins of goat or kids.

The markets with the greatest export potential for Uganda are regional markets in the East African region, mainly, Kenya, Rwanda, South Sudan, and the Democratic Republic of the Congo (DRC). Outside of the East African region, the United Arab Emirates (UAE) holds the largest export potential for Uganda. These five market destinations accounted for about 65% of total Ugandan export in 2018, although these countries altogether imported only 35% in 2009. Approximately 50.52% of Uganda's exports go to Africa at large, of which 35-49% go to East Africa, Sudan and the DRC. The export destinations that have seen the largest growth between 2009-2018 are the East African and UAE markets. The main markets for Uganda in the European Union are Italy, the Netherlands, Germany and Belgium. On the other hand, Hong Kong and India are the main markets in Asia.

Notwithstanding, Uganda's agriculture exports are the most threatened in the East African region due to SPS related interceptions and border rejections especially in the EU and US markets. Public and private Ugandan stakeholders confirmed that horticulture, livestock, dairy, fish and the grains sectors were most affected by SPS issues in Uganda. Various SPS compliance issues undermine Uganda's access to international markets, despite great export potential in the respective value chains.

### Key SPS challenges impacting Uganda's export growth

SPS issues are highly relevant in the pursuit of product and market diversification, particularly in high-value markets. Ugandan authorities have recognized the need to develop SPS capacity to promote growth of agri-food exports. For example, the Uganda's National Export Development Strategy recognizes the importance of SPS issues in market access. Furthermore, the Agriculture Sector Strategic Plan (ASSP) highlights identified SPS capacities as one of the main constraints to the Agriculture sector's growth and increased market access. *The ASSP presents the most singular potent entry point for*

*mainstreaming SPS into agriculture investment framework as it has demonstrated by inclusion of several SPS interventions.* In addition, Uganda's National Adaptation Plan for the Agricultural Sector stipulates actions to mitigate the impacts of climate change on the incidence of plant and animal pests and diseases. Specifically, the plan targets at promoting pests and disease surveillance, improved post-harvest and storage management as well as extension services, which are complimentary to interventions that address SPS constraints to export.

However, the 2019 Uganda Diagnostic Mapping of SPS System shows a high rate of SPS issues identified by importing markets concerning exports from Uganda over the past years. For instance, Uganda faces exports bans by the EU following several warnings to Uganda's National Plant Protection Organisation (NPPO) on the high number of interceptions of exports due to plant pests. Further, the EUROPHYT report listed over 250 interceptions of plant products exported from Uganda to Europe from 2017 to 2019. The RASFF portal issued 76 notifications against Uganda between 2009-2019. The SPS issues of concern ranged from aflatoxins, salmonella, and pests to several different substances/residues, in Nile Perch, chilli, sesame seeds, aubergines, etc. The U.S. also listed seven SPS notifications against Uganda, including on Nile Perch, Tilapia and other fish, and bananas due to hygiene and contamination issues.

### SPS issues in Livestock, Dairy and Honey Value Chains

Despite Uganda being declared BSE free, experience shows that the country is being faced by emerging and re-emerging diseases which are of public health concern. Disease surveillance is key in ascertaining the disease status in livestock across the different livestock farming systems. Antibiotic residues in milk and milk products are a serious public health hazard and are among SPS issues that currently hinder trade. Hygiene issues are highly associated with rejection of milk and milk products exports. Improving milk safety and quality checks enables farmers to produce clean and fresh milk to meet required standard for the market. Milk is also often contaminated through feeding livestock with aflatoxin contaminated grains.

Honey is usually contaminated with bacteria and pesticides which are the major SPS issues. There is need to develop and implement residue monitoring plans in meat, dairy and bee products (honey).

<sup>1</sup> COMESA Secretariat, Trade Flow Synthesis Report for Uganda

### SPS issues in Horticulture and Grains Value Chains

Pests and pesticide residues are some of the key SPS issues affecting horticulture products for export. Uganda's principal market for horticulture products is the European Union (EU). Most products are subject to constant interceptions into the EU market due to pesticide residues, including capsicum, which constituted a huge market potential for fruits and vegetables for export into the EU.

Although, currently, Uganda exports over US\$1.5 million Mangoes mostly to Kenya and Rwanda in 2017, there exists a potential market for mangoes from Uganda outside the East African region. However, compliance with fruit fly and mango seed weevil free produce is currently restricting exports to the regional and EU markets.

Other key SPS issues for Uganda include pests of bananas in bananas exports and aflatoxin in grains such as maize, sorghum and groundnuts.

### SPS issues on Fish and Fish Products

Uganda exports substantial amounts of fish and fish products, which hold great potential but are currently constrained by several SPS challenges, including hygiene controls. Rwanda, DR Congo, and Sudan are common destinations for Uganda's farmed fish. Though, these countries indicated they will require more rigorous proof of quality and safety of the fishery products for guaranteed access to their markets.

Small artisanal fishers dominate the fish sector but lack the capacity to produce fish with basic hygiene and/or manufacturing good practices, particularly in the wild capture. The US and EU often intercept fish exports due to production under unhygienic conditions. Heavy metals and other contaminants are SPS issues for aquaculture, especially in fish raised in controlled water tanks where pollution may be high.

### Key steps in the P-IMA process in Uganda

1. Collection and review of relevant existing information from sector-specific capacity needs assessments (18<sup>th</sup> December 2018)
2. High-level inception meeting (18<sup>th</sup> December 2018)
3. SPS stakeholder workshop to identify various SPS investment options (19-21<sup>st</sup> December 2018)
4. Sector Specific Core Team to review, "sift" and validate investment options (26-30<sup>th</sup> August 2019)
5. SPS stakeholder workshop to define decision criteria and weights to be used for priority-setting process (26-30<sup>th</sup> August, 2019)

6. Development of information cards for SPS investment options (September-October 2019)
7. Data analysis and ranking using decision criteria and weights (November-December 2019)
8. SPS stakeholders review draft report and findings (March-June, 2020)
9. Validation workshop to present preliminary findings to all stakeholders (17<sup>th</sup> November 2020)

### Stakeholder engagement

A wide range of stakeholders took part in a total of seven workshops aimed at mainstreaming SPS priorities into national policy investments, "sift" and validate investment options, and present the preliminary findings.

66 representatives participated from different government agencies, private sector groups, international financial institutions, international organizations, academia, media, donors and development partners. Stakeholders from the Dairy Sector (20), Grain Sector (20), Horticulture (18), Livestock and Honey Sector (27) and the Fish Sector (17) participated in the PIMA National Workshop held from 26-30<sup>th</sup> August 2019. 31 Stakeholders attended the Validation Workshop while 64 participated virtually due to the COVID-19 pandemic.

### Key questions asked in the sifting exercise - Step 4 on the P-IMA Process

- Is the problem recorded a real SPS issue?
- Is the option really related to trade?
- Is the option economically viable?
- Are the sectors concerned and the level of existing and/or potential exports substantive?

### Making the decision criteria explicit

When investment decisions concern complex issues, have major implications on resources and/or are likely to affect multiple stakeholders, identifying the range of decision-making options and decision criteria can help to promote transparency and clarity. This is the P-IMA approach.

In Uganda, stakeholders involved discussed and agreed on 11 key decision criteria related to costs, trade impact and domestic spillovers to drive the priority-setting process and assigned weights to them.

### Prioritisation Results

While stakeholders agreed on 33 capacity building options (CBOs), the following ranked better than others and, therefore, were identified as priorities. The table below details the priority CBOs and provides a breakdown of estimated investments costs, existing or potential funding and estimated financing gap.

<sup>2</sup> For more information on the decision criteria and assigned weights, see [Uganda's full P-IMA report](#).

Priority Investment Option	Estimated Implementation Cost (US\$)	Existing or Potential Funding	Financing Gap
<b>Livestock and Honey</b>			
<b>Technical capacity building in biosecurity, biosafety, and technology for beef, poultry and bee products:</b> support technical capacity building of regulators to ensure that livestock products are produced, handled and processed under safe environment.	451,559	140,311	311,248
<b>Support for private sector in cattle, apiculture and poultry associations in advocacy and self-regulation:</b> mobilize livestock value chain associations, develop their advocacy skills and enable them to carry out self-regulation.	130,000	26,000	104,000
<b>Surveillance of BSE, FMD, Avian Influenza (AI), and American Foulbrood (AFB):</b> Scaling up of disease surveillance activities to ensure that both animals and humans are protected in addition to maintaining foreign markets for animal products.	450,000	90,000	360,000
<b>Accreditation of BSE and FMD analysis laboratory:</b> Upgrade one Government and one private sector veterinary laboratories for accreditation to enable export of the highly demanded livestock and livestock products, especially meat of the Ankole Longhorn Cattle.	770,500	154,100	616,400
<b>Production of poultry vaccines:</b> Establish a local poultry vaccine manufacturing company to manufacture the most demanded vaccines that are suitable to the rural conditions and affordable.	1,863,324	372,664.8	1,490,659.2
<b>Management of veterinary drug residues and aflatoxins in milk and milk products:</b> Stringent control measures including testing, sensitization and training of dairy farmers to ensure continuous improvement.	772,900	-	772,900
<b>Capacity Building in GHPs &amp; GMPs for Milk and Milk Products:</b> improving milk safety and quality enables farmers to produce clean and fresh milk to meet requires standard for the market.	1,483,000	-	1,483,000
<b>Establishment of and Implementation of Cattle Identification and Traceability System:</b> aims at establishing a digitised traceability system for cattle for easy identification of cattle on the market .	2,510,649	-	2,510,649
<b>Sub-total</b>	<b>8,431,932</b>	<b>782,975.8</b>	<b>7,649,036.2</b>
<b>Horticulture and Grains</b>			
<b>Biocontrol of Aflatoxin Maize, Sorghum and Groundnuts:</b> Biocontrol of Aflatoxin contamination is a promising technology that will enhance the ability of smallholders to meet export market mycotoxin (and especially aflatoxin) limits through the use of a low-cost bio-control methods.	3,000,000	600,000	2,400,000
<b>Aflatoxin control in Grains (excl. biocontrol):</b> This requires a package of complementary interventions, encompassing five priority areas of awareness creation; advocacy and communication; management of the agriculture value chains; public health management; policy and legislations; and coordination, monitoring and evaluation.	5,200,000	1,040,000	4,160,000
<b>Pest management and control for capsicum exports:</b> covers a combined complementary approach of irradiation, pest free area/low areas of pests, and biological control	13,100,000	2,620,000	10,480,000
<b>Pest Management &amp; Control for Mango Exports:</b> covers a combined complementary approach of irradiation, pest free area/low areas of pests, and biological control	13,100,000	-	13,100,000
<b>Sub-total</b>	<b>34,400,000</b>	<b>4,260,000</b>	<b>30,140,000</b>
<b>Fish and Fish Products</b>			
<b>Establishment and implementation of surveillance system for fish:</b> For continuous monitoring and surveillance information management for future use	100,000	20,000	80,000
<b>Building capacity in residue and microbial monitoring for aquaculture and wild catch:</b> seeks to enhance the inspection and provide a certification system for value chain players that meets the requirement for exports.	110,000	22,000	88,000
<b>Design and implement Good Aquaculture Practices:</b> intends to build capacity for fish farmers and artisanal fishers on best practices in the industry to ensure that products meet international requirements.	135,000	27,000	108,000
<b>Promote and support improved processing methods in aquaculture and wild catch:</b> Focuses on implementing improved processing methods that ensures less contamination.	250,000	50,000	200,000
<b>Sub-total</b>	<b>595,000</b>	<b>119,000</b>	<b>476,000</b>
<b>Grand Total</b>	<b>43,426,932</b>	<b>5,152,075.80</b>	<b>38,274,856.20</b>

The Prioritisation of the investment options was conducted using the following three different models:

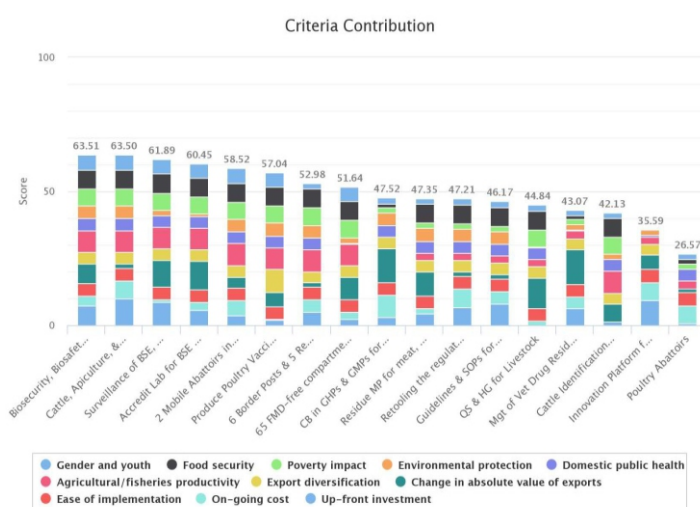
- Baseline model: reflects the weights assigned by participants at the stakeholder workshop
- Trade and costs model: only include decision criteria related to costs and trade impacts
- Equal weights: each of the weights has the same value.

## Findings

The study estimated a total cost of approximately **US\$74.8 million** needed to implement all 33 SPS investment options, which is estimated to generate about **US\$ 1.4 billion** worth of additional exports. In all, only **19%** of the top priorities for P-IMA Uganda are already being funded or being considered for funding (**US\$5,162,075.8**). Thus, **81%** of the top priorities require funding (**US\$22,654,387.2**). The P-IMA exercise and the financing gap analysis must be a work in progress. Once the top priorities are funded, a new set of priorities must be subjected to the financing gap analysis.

Figure I presents the main result of the baseline model. The result shows that technical capacity building in biosecurity, biosafety, and technology for beef, poultry and bee products; support for private sector in cattle, apiculture and poultry associations in advocacy and self-regulation; surveillance of BSE, FMD, Avian Influenza (AI), and American Foulbrood (AFB); and accreditation of BSE and FMD analysis laboratory, are the top four best ranked SPS investment options. On the other hand, establishment of poultry abattoirs ranks the lowest, followed by establishment and support for innovation platform for poultry value chain actors; and establishment of and implementation of cattle identification and traceability system

Figure I: Criteria Contribution – Prioritization of Livestock and Honey Products



<sup>3</sup> See all 33 CBOs in [Uganda's full P-IMA report](#)

<sup>4</sup> For more information on the estimated financing gap, see Uganda's CBOs financing gap analysis..



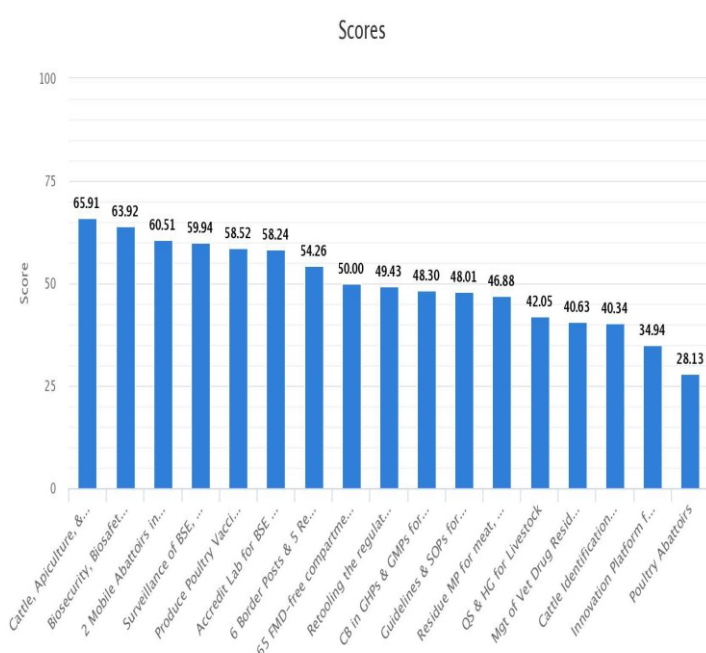
To test the robustness of the results from the baseline model, two sensitivity analyses were performed by setting the weights on all decision criteria equal (Figure 2) and running a cost and trade impact only analysis (Figure 3).

In the equal weights scenario presented in Figure 2, results present minor changes to the baseline model:

- The first and second ranked options in the baseline model have slightly switched places in the equal weights model.
- The bottom five investment options have not changed their positions.

The establishment of 2 mobile export abattoirs in FMD-endemic regions have moved from its fifth position to third position displacing surveillance of BSE, FMD, Avian Influenza (AI), and American Foulbrood (AFB); and production of poultry vaccines have gained one step upward.

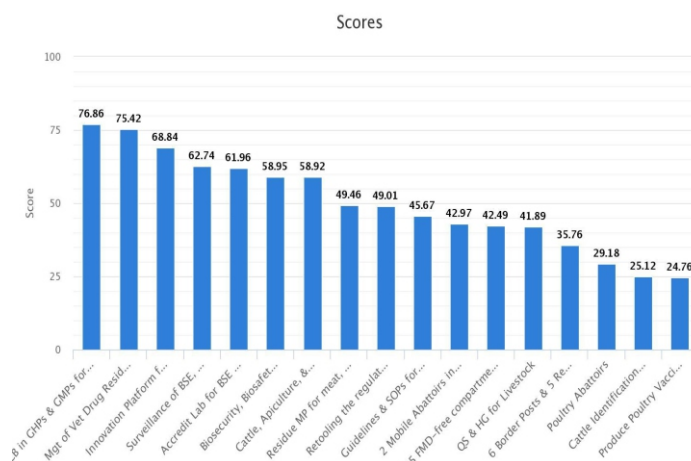
**Figure 2: Equal Weight Model – Prioritization of Livestock and Honey Products**



The cost and trade model, presented in figure 3, shows some drastic changes. For instance, capacity Building in GHPs & GMPs for Milk and Milk Products; management of veterinary drug residues and aflatoxins in milk and milk products; and the establishment and support for innovation platform for poultry value chain actors, have moved from the bottom half and final positions of the ranking to the top three, pushing downward the top three identified in the two previous models. Another notable change is the movement of production of poultry vaccines, which ranked sixth and fifth, respectively, in previous models, to the lowest rank. In the bottom, the establishment of and implementation of cattle identification and traceability system; and the establishment of poultry abattoirs, still ranked in the bottom

three just like previous scenarios. The establishment of 2 mobile export abattoirs in FMD-endemic regions have dropped from its usual fifth and third positions in the two previous models, respectively, to eleventh position in the cost and trade model.

These results, thus, show that the analysis is quite sensitive to particularly trade considerations.



### What do these findings mean for Uganda?

These results show that the analysis is sensitive, particularly, to trade considerations. Thus, if the priority setting is to be based on trade considerations only, then the priority options would be slightly different from those that are based on several objectives (i.e. decision criteria). Since the priority setting in this framework aims to consider all decision criteria, the following capacity building options consistently ranked in the top six positions of the first two models:

- Technical capacity building in biosecurity, biosafety, and technology for beef, poultry and bee products;
- Support for private sector in cattle, apiculture and poultry associations in advocacy and self-regulation;
- Surveillance of BSE, FMD, Avian Influenza (AI), and American Foulbrood (AFB);
- Accreditation of BSE and FMD analysis laboratory
- Production of poultry vaccines

At the other end, the following three ranked lower:

- Establishment of poultry abattoirs;
- Establishment and support for innovation platform for poultry value chain actors
- Establishment of and implementation of cattle identification and traceability system

It should, however, be noted that these rankings do not suggest that a low ranked option is not important for implementation, but rather, it simply shows that, in terms of priority, based on assigned costs and flow of benefits, a lower ranked option is not the best option to be implemented first given limited resources.

## Challenges

It must be noted that the results from this framework are based on the availability and quality of data. As such, the results must be revised in an on-going basis once a better data becomes available. In this regard, as part of the COMESA P-IMA project, a minimum of three (3) persons were trained as P-IMA National Experts to assist in subsequent revision/re-application of the framework. Over 15 were also trained on the framework but who could not be considered as experts.

It is also important to remember that this document is a 'living document', thus, it must be revised regularly, particularly, once new SPS challenges emerge.

## Next steps

Experiences with the use of the P-IMA framework show that the immediate outputs produced, including the prioritization itself as well as the information sheets, may be used in a number of ways. For instance, to:

1. Provide compelling evidence to support SPS project development.
2. Enable more coherent funding requests to be compiled. The prioritization provides a concrete basis on which to base requests for funding from bilateral and multilateral donors.
3. Guide the development of a national action plan for the enhancement of SPS capacity, based on clear and coherent evidence of the trade and other impacts of potential investments, and a clear and justifiable prioritization of these investments.
4. Improve SPS planning and decision-making processes. The framework can also be used to stimulate and/or inform discussions among relevant stakeholders about potential future SPS capacity-building needs.

Whilst the P-IMA framework is designed to be applied to the specific context of SPS capacity-building investments that cut across the areas of food safety, plant health and animal health, it can be easily adapted to other uses. For example, it might be applied only to SPS capacity-building investments within priority export commodities (e.g. fresh produce, milk and dairy products, fish and seafood, etc.), or to analyse the different options to solve a particular challenge (e.g. aflatoxin control).

## Data Sources

A wide variety of data and information sources were consulted and used for the P-IMA work. Key data sources included the following:

- Establishing Priorities for SPS Capacity-Building in Uganda Using Multi Criteria Decision Analysis (March 2013)
- Kiconco D. (2018). 'SPS Issues in the Livestock Sector.' PowerPoint Presentation
- Omanyi B. P. (2018). 'SPS Constraints and Fish Trade.' PowerPoint Presentation
- Sebutare G. (2018). 'SPS constraints in Maize Trade in Uganda.' PowerPoint Presentation
- Tumuboine E. (2018). 'Sanitary and Phytosanitary Constraints to Horticulture Trade.' PowerPoint Presentation
- COMESA (2019), Uganda Trade Flow Synthesis Report
- N. A. Kaaya and H.L. Warren (2005). A Review of Past and Present Research on Aflatoxin in Uganda. Peer Reviewed Article No. 5
- International Trade Centre (2018). Uganda: Company Perspectives. An ITC Series on Non-Tariff Measures
- World Bank (2019). Economic Development & Human Capital in Uganda: A Case for Investing more in Education. Uganda Economic Update, 13th Edition
- Uganda Agribusiness Alliance Limited (UAA) (2019). Diagnostic Mapping of the Sanitary and Phytosanitary System in Uganda
- World Bank (2019). Toward Scaled-Up and Sustainable Agriculture Finance and Insurance in Uganda
- World Bank (2013). Diagnostic Trade Integration Study (DTIS) update
- Ministry of Trade Tourism and Industry (2012) Study Report on the Assessment of the Capacity Needs of SMCA Service Providers in Uganda to Support Priority Product Value Chains

### *Official trade data from national and international sources*

- Trade Policy Review: East African Community, World Trade Organization (2019)
- ITC Export Trade Map: <https://trademap.org/>
- ITC Export Potential Map: <https://exportpotential.intracen.org/>

### *U.S. Import Refusal Report:*

<https://www.accessdata.fda.gov/scripts/ImportRefusals/index.cfm>

- EU Rapid Alert System for Food and Feed (RASFF)

## List of acronyms and abbreviations

- AfCFTA- African Continental Free Trade Area
- AGRA - Alliance for a Green Revolution in Africa
- BSE - Bovine Spongiform Encephalopathy
- CAADP - Comprehensive Africa Agriculture Development Programme
- CBOs - Capacity Building Options
- COMESA - Common Market for Eastern and Southern Africa
- EIF - Enhanced Integrated Framework
- EUROPHYT - European Union Notification System for Plant Health Interceptions
- GAP - Good Agriculture Practices
- GHPs - Good Hygiene Practices
- GMPs - Good Manufacturing Practices
- GVPs - Good Veterinary Practices
- HACCP - Hazard Analysis and Critical Control Points
- ITC - International Trade Center
- NPPO - National Plant Protection Organization
- P-IMA - Prioritizing SPS Investments for Market Access
- RASFF - Rapid Alert System for Food and Feed
- RSB - Rwanda Standards Board
- STDF - Standards and Trade Development Facility

