



Enhancing the Capacity of the Uganda's Fruit and Vegetable Sector to Comply with Phytosanitary Requirements for Export to the EU, other High-end Markets and Regional Markets

**INDEPENDENT END OF PROJECT ASSESSMENT
OCTOBER 2022**

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Project Summary

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| Recipient Country | Uganda |
| Donors | STDF, Royal Netherlands Embassy and Government of the Republic of Uganda |
| Project Code | PG 543 |
| Project Budget | Total Project Budget: US\$ 882,726 STDF Contribution: USD484,788 Royal Netherlands Embassy (RNE): USD252,565; and the ¹ Government of Uganda (MAAIF): USD145,472 |
| Lifespan | February 2019-January 2022 No cost extension: February-July 2022 |
| A list of targeted beneficiaries | Project targeted beneficiaries include the following; Uganda's (decision makers and/or politicians, farmers, transporters, handlers, extension workers, plant Health Inspectors, exporters, researchers in pest and disease control) East African Community Member states and the international Export Market Destination Countries. |
| Participating Organizations | Ministry of Agriculture Animal Industry and Fisheries (MAAIF), Uganda, Department of Crop Inspection and Certification (DCIC), CABI Africa, Uganda Agri Business Alliance (UAA), COLEACP, TechnoServe, CHEMIPHAR Uganda, National Agricultural Research Organization (NARO), Uganda Export Promotion Board (UEPB), Ministry of Trade, Industry and Cooperatives (MITC), Centre for Phytosanitary Excellence (COPE, Kenya), Exporter Associations, including Uganda Fruits & Vegetables Exporters and Producers Association (UFVEPA), Horticultural Exporters Association (HORTEXA), Uganda Horticulture Exporters and Processors Association (UHEPA;), Federation of Uganda's Associations of Exporters (FAUEX) and HortiFresh (Apex Body). |
| Managing Agency | Centre for Agriculture and Biosciences International (CABI) |

¹ Co-funding received from the Royal Netherlands Embassy (RNE) in Kampala strongly enhanced project delivery. RNE funded critical budget lines that were pertinent to addressing phytosanitary challenges such as pest surveillance, integrated pest management (IPM) and procurement of necessary inspection equipment. RNE funding synergized efforts on regulatory frameworks, capacity building, streamlined inspection processes, development of guidelines, pest fact sheets and standard operating procedures (SOPs) amongst other activities supported by the STDF.

Table of Contents

| | |
|--|-----|
| Acronyms | iii |
| 1.0 Executive Summary..... | iv |
| 2.0 Introduction | 1 |
| 3.0 Evaluation Methodology..... | 2 |
| 4.0 Findings | 3 |
| Relevance: did the project do the right things? | 3 |
| Coherence: how well did the project fit? | 4 |
| Effectiveness: did the project achieve its objectives? | 5 |
| Efficiency: how well were resources used? | 6 |
| Impact (where possible): what difference did the project make? | 7 |
| Sustainability (where possible): will the benefits last? | 10 |
| 5.0 Conclusion and Recommendations | 11 |
| 6.0 Lessons from the Project | 14 |

List of Tables

| | |
|---|----|
| Table 1: Intercepted consignments from Uganda, from 1 January 2015-30 September 2018 | 3 |
| Table 2: Values and quantities of FFVs rejected in the EU from 2015-2017, including capsicum. . | 3 |
| Table 3: Achievements of result areas (RA), activities and indicators, February 2019-July 2022 . | 5 |
| Table 4: Fruit and vegetable volumes, values and exporting companies, from 2014 to 2021 | 8 |
| Table 5: Specific challenges and recommendations for going forward | 13 |

List of Figures

| | |
|---|---|
| Figure 1: Intercepted consignments from Uganda reported to EUROPHYT-Interceptions, 2015 to August 2022. | 8 |
|---|---|

List of Boxes

| | |
|--|----|
| Box 1: Evidences that the project mainstreamed gender and environment | 6 |
| Box 2: Quotations from MAAIF about the project | 11 |
| Box 3: Key lessons from the project | 14 |

Acronyms

| | |
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| BOU: | Bank of Uganda |
| CABI: | Centre for Agriculture and Biosciences International |
| COLEACP: | Europe-Africa-Caribbean-Pacific Liaison Committee |
| COPE: | Centre for Phytosanitary Excellence, Kenya |
| DCIC: | Department of Crop Inspection and Certification |
| EU: | European Union |
| FFV: | Fresh fruits and vegetables |
| FMC: | False Codling Moth |
| GAPs: | Good Agronomic Practices |
| GoU: | Government of Uganda |
| HACCP: | Hazard Analysis Critical Control Points |
| HO: | Harmful Organism |
| HORTEXA: | Horticultural Exporters Association |
| IPM: | Integrated Pest Management |
| ISPM: | International Standards for Phytosanitary Measures |
| MAAIF: | Ministry of Agriculture, Animal Industry and Fisheries |
| MDAs: | Ministries, Departments and Agencies |
| MITC: | Ministry of Trade, Industry and Cooperatives (MITC) |
| MoFPED: | Ministry of Finance, Planning and Economic Development |
| MRLs: | Maximum Residue Levels |
| MSP: | Multi-Stakeholder Platform |
| NARO: | National Agricultural Research Organization |
| NCE: | No Cost Extension |
| NGOs: | Non-Governmental Organisations |
| NIMTF: | National Inter-Ministerial Task Force |
| NPPO: | National Plant Protection Organization |
| PCE: | Phytosanitary Capacity Evaluation |
| PIRT: | President's Private Investors Round Table |
| PMC: | Project Management Unit |
| PPP: | Public-Private Partnership |
| RNE: | Royal Netherlands Embassy |
| SDGs: | Sustainable Development Goals |
| SOPs: | Standard Operating Procedures |
| SPS: | Sanitary and Phytosanitary |
| SSMS: | specific survey and monitoring system |
| STDF: | Standards and Trade Development Facility |
| TWG: | Technical Working Group |
| UAA: | Uganda Agribusiness Alliance |
| UBOS: | Uganda Bureau of Statistics |
| UEPB: | Uganda Export Promotion Board (UEPB) |
| UFVEPA: | Uganda Fruits & Vegetables Exporters and Producers Association |
| WTO: | World Trade Organization |

1.0 Executive Summary

This report describes the results of the 3.5-year fresh fruit and vegetable (FFV) project that the Standards and Trade Development Facility (STDF), the Royal Netherlands Embassy (RNE) and the Government of Uganda co-funded with US\$882,726 from February 2019 to July 2022. The goal, as the project name (abbreviated STDF/PG/543) reflects, was to 'enhance the capacity of the Fruit and Vegetable Sector to comply with Phytosanitary requirements for export to the EU, other high-end markets and regional markets. The Centre for Agriculture and Biosciences International (CABI) and Department of Crop Inspection and Certification (DCIC) commissioned an independent end of project assessment to a document its relevance, coherence, effectiveness, efficiency, impact and sustainability. Main sources of data included a review of CABI's annual reports to the funders, end of project seminar presentations that took place from 29th-30th August 2022 in Kampala, interviews with key persons at the seminar, international and national databases, and the valuation workshop at Entebbe on 14 October 2022.

Relevance: Did the project do the right things?

The evaluation found that the STDF/PG/543 project did things right because it came at an appropriate time when Uganda needed it most to improve official controls necessary for addressing capsicum interceptions and rejections. When the project started in February 2019, there was no any other similar project as the majority of them started most recently in 2020. The STDF/PG/543 project is therefore one of the pioneer projects in Uganda to work in the phytosanitary sector related to FFVs. It is a project that has set the foundation, direction and lessons for going forward.

Coherence: How well did the project fit?

Growers, exporters and members of the Multi-Stakeholder Platform (MSP) corroborated during interviews that the STDF/PG/543 project was a good fit on the ground. It built on the work of the previous projects, co-existed well with other initiatives and received full support from the government, NGOs and the private sector across the country.

Effectiveness: Did the project achieve its objectives?

Descriptive analysis of the data in the logframe shows that the project has achieved 56 of the 64 indicators (87.5%) under its six result areas. All activities in result areas 1, 4 and 6 were fully completed. The majority of the activities not done in the other result areas were superseded and completed 100 percent externally by the government ministries and other stakeholders. COVID-19 was the major factor that affected implementation of activities. Meetings and trainings of DCIC staff, growers and exporters were put on hold for a good part of the second year, February 2020 to January 2021. Project staff continued to work remotely and in shifts during this period. A total of 35 activities were consequently behind schedule and shifted to the no cost extension (NCE) period from February-July 2022, which funders approved.

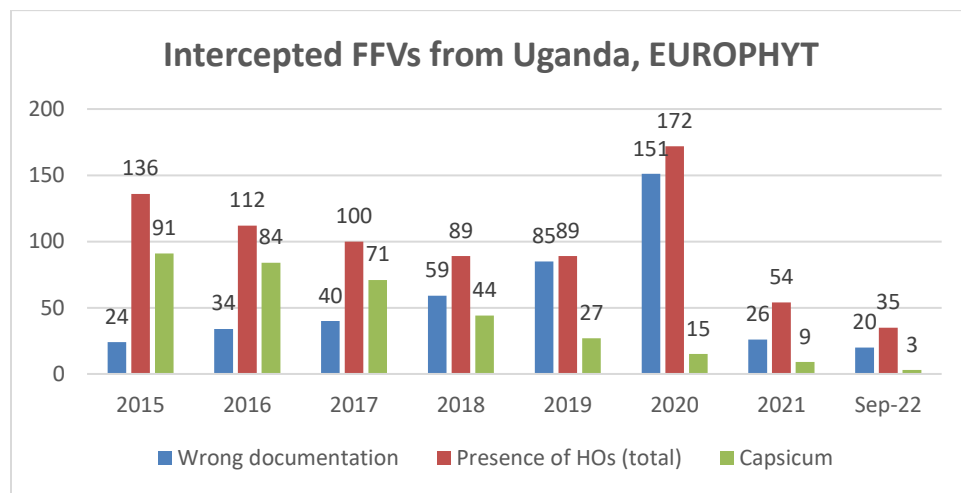
Efficiency: How well were resources used?

Interviews with staff at various levels reveal that the STDF/PG/543 project was implemented with a great level of efficiency. Funds were adequate and used as agreed with the funders. Based on a total budget of US\$ 882,726 and 1470 people served (e.g. 1,400 farmers and growers, and 70 DCIC staff), roughly the cost-benefit ratio is one of the lowest at US\$600 in 3.5 years. The

multiplier effect is huge as growers and exporters trained are cascading trainings to peers in their localities. DCIC, UAA, growers and exporters are all saying that CABI has managed the project well. CABI came into the project already with all the knowledge and experience of the FFV sector in Uganda, which negated the need to recruit and orient new staff.

Impact: What difference did the project make?

Through this project, Uganda has reduced, interceptions due to harmful organisms (HOs) from 89 in 2018 to 35 in September 2022 (Figure 1). Of these, only 3 are for capsicum, on which the project focused most, from 44 in 2018, representing a reduction of 93.2 per cent. DCIC and CABI are attributing these reductions to improvements in export inspection after increasing numbers and building capacities of staff, developing standard operating procedures (SOPs) and training of over 1,400 growers and exporters that helped to enhance phytosanitary compliance. In 2020 alone, the country exported 83,554 MT of FFVs and fetched US\$45.23 million, with the number of exporters increasing from 36 at the start of the project in 2019 to over 125.



Sustainability (where possible): will the benefits last?

Interviews and discussions conducted showed that sustainability was largely factored in at the design stage by having DCIC as the implementer. Now, DCIC is continuing with implementation of project-initiated activities as they already fall under its mandate being the NPPO for the country. Other indicators of sustainability are the structures like regulatory frameworks, horticulture Multi-Stakeholder Platform and an apex body of producers and exporters, all of which are continuing to ensure good synergies and coordination in the sector.

Conclusion and Recommendations: The evaluation recommends that DCIC should incorporate STDF/PG/543 activities into the MAAIF-NPPO work plan and seek government funding to continue implementing them in the years to come. It is also clear that compliance with phytosanitary measures will require continuation of a multifaceted and systems approach, with clear tasks that must be undertaken by all parties, from growers, exporters, Multi-Stakeholder Platform, Apex Body among others in order to continue collaborating and leveraging resources to ensure an upward trajectory in the quantity, quality and value of FFV exports.

2.0 Introduction

This report summarizes results of the 3.5-year fresh fruit and vegetable (FFV) project that the Standards and Trade Development Facility (STDF) of the World Trade Organization (WTO), the Royal Netherlands Embassy (RNE) in Kampala and the Government of Uganda co-funded with US\$882,726 from February 2019 to July 2022. The goal, as the project name (abbreviated STDF/PG/543) reflects, was to 'enhance the capacity of the Fruit and Vegetable Sector to comply with Phytosanitary requirements for export to the EU, other high-end markets and regional markets. The STDF/PG/543 project has contributed to the country's 2040 vision and Sustainable Development Goals (SDGs) related to economic growth, poverty reduction and food security in Uganda. Key implementers were the Department of Crop Inspection and Certification (DCIC), which is the National Plant Protection Organization (NPPO), under the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), and the Uganda Agribusiness Alliance (UAA).

The STDF/PG/543 had six expected result areas.

- Result 1: Diagnostic mapping to determine project's capacity building focus
- Result 2: Building capacity along the value chain to enable compliance
- Result 3: Enabling collaboration between private sector and public sectors and stakeholders
- Result 4: Setting up a specific survey and monitoring systems for priority pests
- Result 5: Based on a market study to assess opportunity to increase fruit and vegetable exports to both new and current markets with improved SPS compliance, a realistic Uganda Export Marketing Strategy for FFVs was to be developed and agreed upon by the key stakeholders of the FFV export value chain.
- Result 6: Creating awareness to stakeholders on EU requirements, systems that have been put in place, and good practices to be observed along the value chains.

The funders hired the Centre for Agriculture and Biosciences International (CABI) to manage the project, with its regional experience of working in the sector. CABI's roles in this regard included ensuring that the project was delivered in a timely, cost-effective and quality manner. CABI was also providing technical oversight on all project deliverables at various stages of the project.

As required at the end of the project, CABI commissioned external evaluators to conduct an independent and objective evaluation of the project at the end using the DAC criteria of relevance, coherence, efficiency, effectiveness and, where possible, sustainability and impact. The study was conducted as per STDF's evaluation guidelines. The evaluation also aimed at identifying lessons learned, best practices, successes and practical recommendations to guide decision making and the design of similar projects in future. It additionally looked at how the COVID-19 crisis from 2020-2021 affected activities and in what ways did the project mitigate the effected to maintain quality of service delivery and impact desired. Primary users of the results, besides CABI, DCIC and the funders, are the various public and private sector stakeholders involved in the design, implementation and monitoring of the project up to the end. Annex 1

presents an assessment framework with key questions, sources of data and methods used to gather it.

3.0 Evaluation Methodology

The evaluation applied mixed methods and participatory approaches to ensure that views and perspectives of all stakeholders were considered and that the findings were verified. The design was both retrospective, to respond to accountability, and prospective, to respond to organizational learning. Information was obtained through a rigorous review of the secondary data relevant to the project.

At the beginning of the end-of-project assessment, the consultant developed a detailed assessment framework, which set out parameters for a systematic and objective assessment of the project, based on the project proposal document and its logical framework with indicators to measure progress at different results-levels (goal, outcomes and outputs – see annex 1).

Main sources of data were in this regard:

- 1) Desk study of relevant documents, including the project proposal document and annual narrative reports the project sent to donors, published and unpublished papers in the sector and other FFV literature available in the public domain.
- 2) End of project seminar presentations by DCIC & CABI and key partners like UAA, HortiFresh, various projects, partners, all other key players from across the country and donors that took place from 29th-30th August 2022 in Kampala.
- 3) Interviews with key persons from DCIC, CABI, UAA, HortiMap, HortiFresh, growers and exporters in the sector (Annex 2)
- 4) Global and national databases and websites e.g. for Uganda Bureau of Statistics (UBOS), Bank of Uganda (BOU), DCIC, UAA etc. (see annex 3). Global databases of relevance were those for COMTRADE and EUROPHYT-Interceptions.

The end of project seminar presentations also raised awareness among politicians, decision makers, farmers, transporters, handlers, extension workers and inspectorates on the importance of the FFV export and significance and benefits of a well-functioning phytosanitary system for the export of FFVs and other export crops. Consultations were held with selected stakeholders at the end of each day during the seminar to triangulate information from the other sources. The consultations aimed to seek clarification to some areas and requesting them to share their presentations for further analysis and interpretation.

A validation workshop for the evaluation took place at DCIC in Entebbe on 14 October 2022. It was attended by 17 participants from across the sector, including the DCIC commissioners, assistant commissioners, senior inspectors and inspectors, CABI management staff, HortiFresh

and Shaga Greens (private company, see annex 4). The workshop gave a chance to get inputs and do further consultations with MAAIF and DCIC staff on certain areas.

4.0 Findings

Relevance: did the project do the right things?

1. To what extent did the objectives and design of the project respond to the SPS-related needs, policies and priorities of the beneficiaries, as well as other stakeholders involved?

Uganda is the second largest producer of FFVs in sub-Saharan Africa, after Nigeria, producing over 83,554 tonnes in 2020, for example, according to recent information by the Uganda Bureau of Statistics (UBOS). FFVs are major crops produced in all the districts of the country by smallholder farmers, 90 percent of whom are women. The sector contributes 24.2% of the Uganda's gross domestic product (World Bank, 2019) and creates employment opportunities for farmers, traders, exporters and other players. Capsicums that form the bulk of the exports were largely intercepted due to FMC. There was loss of trade and heightened concerns about possible complete ban of the EU market for Uganda. This project was uniquely relevant because it invested and responded to these problems of capsicum interceptions (Tables 1 and 2).

Table 1: Intercepted consignments from Uganda, from 1 January 2015-30 September 2018

| Reason for Interception | 2015 | 2016 | 2017 | 2018 |
|----------------------------|-------|-------|-------|-------|
| Presence of HOs (total) | 131 | 110 | 97 | 91 |
| <i>Capsicum</i> spp. (FMC) | 91 | 84 | 71 | 44 |
| Percentage (%) | 69.5% | 76.4% | 73.2% | 48.4% |
| Other species* | 28 | 17 | 25 | 36 |

Source: EUROPHYT-Interceptions. *Other species: *Momordica*, *Rosa*, *Annona* and *Mangifera*

Table 2: Values and quantities of FFVs rejected in the EU from 2015-2017, including capsicum

| | 2015 | | 2016 | | 2017 | |
|------------|----------|-------------------|----------|-----------------|----------|-----------------|
| | All FFVs | <i>Capsicum</i> * | All FFVs | <i>Capsicum</i> | All FFVs | <i>Capsicum</i> |
| Kgs | 30,090 | 27,504 | 18,303 | 17,579 | 18,786 | 15,365 |
| Value US\$ | 126,639 | 123,768 | 80,531 | 79,727 | 75,144 | 61,460 |

*The decrease between 2015 and 2016 is due to the temporary ban on chilli (*capsicum*) exports in 2016

Although the country was registering a downward trend in interceptions from 2016 through 2018, the EU was considering the decrease still appreciably high. The STDF/PG/543 project came at an appropriate time when the country needed it most to improve official controls and conditions necessary for export inspection and compliance. When it started in February 2019, there was no other similar project as the majority of them started most recently in 2020. The STDF/PG/543 project is therefore one of the pioneer projects in Uganda to work in the phytosanitary sector related to FFVs. It is a project that has set the foundation, direction and lessons for going forward. Export volumes and values as presented in the subsequent sections of this report show that the country is back on track in complying with phytosanitary requirements and is gaining market access. This contribution and value added are very relevant to the economic

growth of the country as envisaged in its Vision 2040. At the global level, the project has contributed to objectives of the Sustainable Development Goals (SDGs) like SDG 1 (no poverty), SDG2 (zero hunger) and SDG 17 on partnerships.

2. To what extent were there differences and trade-offs between different priorities?

The STDF/PG/543 project made important trade-offs among competing priorities to place resources where they were needed most and spur growth in the sector. Although exports of other FFVs like curry leaves, eggplants, custard apples, jack fruit, mango and okra were also intercepted in the EU, the project focused mainly on capsicum because it had higher market value and yet was more subjected to the EU interceptions than the other FFVs. It concentrated on phytosanitary requirements and minimized focus for sanitary issues like food safety, Maximum Residue Limits (MRLs) and good agronomic practices (GAPs) as they would need a different approach and additional investment altogether.

3. How were local contexts, ownership, processes and stakeholders taken into account in the design and implementation of the project?

It is evident from interviews and project reports that this project was about partnerships and inclusiveness. At the very design stage in July and August 2016, the project received letters of support from (i) government ministries: (a) MAAIF/DCR, (b) MAAIF/DCR/DCIC, (c) MITC, and (ii) the private sector (a) CABI, (b) Uganda Agribusiness Alliance, (c) Horticulture Exporters Associations of Uganda such as, HORTEXA, Uganda Flowers Exporters Association (UFEA), Uganda Horticulture Exporters Association (UHEPA), Uganda Fruits and Vegetables Exporters and Producers Association (UFVEPA) and KK Fresh Produce Exporters Ltd (KKFOODS). The Directorate of Crop Resources (DCR) under MAAIF, which developed the proposal, based it on public and private partnerships (PPP) to deliver the results. The project has achieved this, evidenced by various collaborations and partners it worked with, which helped to avoid overlaps.

4. To what extent did the project remain relevant, even if the circumstances changed over the course of implementation?

The project remained relevant to the FFV exports sector and economy although circumstances changed in the course of implementation like disruptions that came with COVID-19 in 2020 and 2021. A total of 152,323 MT of FFVs were exported during this period that fetched the country US\$89.71 million as reported by the Uganda Bureau of Statistics (UBOS).

Coherence: how well did the project fit?

1. How well did the project fit vis-a-vis other interventions?

The STDF/PG/543 project was a good fit on the ground looking at its activities, outputs and goal that were complementary to those of the existing projects (Annex 5).

2. To what extent did other interventions support or undermine the project, and vice versa?

The evaluation found that the STDF/PG/543 project collaborated well and received full support from the government, NGOs and the private sector. Good examples of partners that have added value to the project in many different ways by providing monetary, human and physical resources are COLEACP, Uganda Export Promotion Board (UEPB), Uganda Agribusiness Alliance (UAA), Afri-

Fruits Investment Ltd, the National Agricultural Research Organization (NARO), Chemiphar Uganda and Horticulture Market Acceleration Program (HortiMap), Kenya Plant Health Inspectorate Services (KEPHIS) and the Project Management Committee (PMC). Annual reports by CABI to the funders provide details of support that each one of them provided (see also Annex 6).

Effectiveness: did the project achieve its objectives?

1. To what extent were the project objectives achieved or are likely to be achieved (based on the indicators for expected outputs and outcomes identified in the project's logframe) including any differential results across groups?

Table 3 shows that the STDF/PG/543 project achieved 57 of the 64 indicators (89.1%) it had under its six result areas. All activities under result areas 1, 4 and 6 were fully completed. Under result area 2, the project did not fully undertake activities 2.3 and 2.5 related to the development of extension manuals and training of packhouses and transporters respectively; however, farmer and extension materials were developed under activity 6.3; and an audit on packhouses was conducted and the findings will be used to develop a training curriculum in the future.

Table 3: Achievements of result areas (RA), activities and indicators, February 2019-July 2022

| Results | Actual Performance | # of Indicators | Achieved | |
|-------------|---|-----------------|-----------|--------------|
| | | | Number | % |
| RA 1 | Indicator 1-4 (100%) | 4 | 4 | 100% |
| | Activity 1.1 -1.6 (100%) | 10 | 10 | 100% |
| | Sub Total | 14 | 14 | 100% |
| RA 2 | Indicators 1-3: 100% | 3 | 3 | 100% |
| | Activity 2.1-2.3 (100%, 100%, not conducted), Activity 2.4 (indicators 1-3: 100%, 40% and 100%), Activity 2.5 (not conducted), Activity 2.6-2.10 (100%) | 16 | 13 | 81.3% |
| | Sub Total | 19 | 16 | 84.2% |
| RA 3 | | | | |
| | Activity 3.1 indicators 1-3 (100%, Activities 3.2-3.3 & 3.5 (superseded), Activity 3.4 (100%), Activities 3.6-3.7, 3.9-3.10 (100%), Activity 3.8 (not completed) | 11 | 10 | 90.9% |
| | Sub Total | 11 | 9 | 81.8% |
| RA 4 | Indicator 1: 100% | 1 | 1 | 100% |
| | Activity 4.1-4.7 (100%) | 7 | 7 | 100% |
| | Sub Total | 8 | 8 | 100% |
| RA 5 | Indicator 1 (100%), Indicator 2 (superseded) and Indicator 3 (not achieved) | 3 | 1 | 50.0% |
| | Activity 5.1 (100%), Activities 5.2- 5.4 (superseded) | 4 | 1 | 100% |
| | Sub Total | 7 | 2 | 66.7 |
| RA 6 | | | | |
| | Activities 6.1-6.5 (100%) | 5 | 5 | 100% |
| | Sub Total | 5 | 5 | 100% |
| | Grand Total | 64 | 57 | 89.1% |

For result area 3, the project did not complete activity 3.5 on supporting development of the phytosanitary capacity evaluation (PCE) module. Conversely, the score of 66.7% for result area number 5 (in Table 4 above) represents the actual output by the project after activities 5.2-5.4 (on development of the Export Market Strategy) were superseded and achieved 100% externally by MITC. STDF approved reallocation of funds for these activities to be used for the development and duplication of communication materials.

2. What were the major factors influencing the achievement or non-achievement of the project objectives, outcomes and outputs?

COVID-19 was the major factor that affected timely delivery of activities in this project. Meetings and training of DCIC staff, growers and exporters were put on hold for a good part of the second year, February 2020 to January 2021. Other activities that delayed include farm demonstration of IPM for sustainable management of pests and procurement processes for the equipment to be used. Project staff continued to work remotely and in shifts as part of observing preventive measures. A total of 35 activities were all behind schedule and shifted to the third year and no cost extension (NCE) period from February-July 2022. The shift created work overload on the part of staff as they had to do both planned and carried over activities at the same time.

3. To what extent were horizontal issues (particularly related to gender and environment) adequately addressed in the project?

Box 1: Evidences that the project mainstreamed gender and environment

- i. Safety for humans during activities such as training, respect for all gender and emphasis to ensure women and youth enrolment in activities was done
- ii. The STDF/PG/543 project was about women inclusion because over 90 percent of rural women are farmers in Uganda.
- iii. A total of 80 farmers were trained on SPS compliance to facilitate trade, 20% were women and 80% were youth. The training focused on integrated pest management (IPM), food safety and awareness of SPS export requirements.
- iv. Trainings of growers on IPM and the use of permitted pesticides have contributed to meeting MRLs and making the whole project environmentally friendly.
- v. As of August 2022, the Multi-Stakeholder Platform (MSP) had 172 members from 23 at the beginning; 39 exporters, 15 producers, 27 other agribusinesses, 13 from MAAIF, 13 from other Ministries, Departments and Agencies (MDAs), 43 NGOs and 9 donors. Of the 172, 62 are women (36%), 47 youths (27%) and 38% men.

Efficiency: how well were resources used?

1. To what extent did the project deliver results in an economic and timely way?

Interviews with staff at various levels and review of project documents revealed that the STDF/PG/543 project has carried out its activities with great efficiency and exceeded expectations of standards in the sector. Funds were adequate and used well to implement approved activities in the project logframe. The quantity and quality of the results were both satisfactory. Actions that promoted value for money include 1) relying on MAAIF commissioners and inspectors, offices and laboratories and vehicles, which enabled the project prioritize and

invest money on core activities, 2) rescinding decisions and reallocating funds to other deserving activities when the ones on the plan were done by other stakeholders, and 3) trainings of growers and exporters that has imparted the necessary knowledge and passion for ensuring phytosanitary compliance. CABI, as the manager, maintained minimum staff on the ground and allowed DCIC to lead, which was good for capacity building and long-term sustainability of project activities.

2. What changes and risks, if any, occurred during project implementation, and how was the project able to adapt to these changes and manage risks?

The main unforeseen risk was COVID-19 as discussed above. The project mitigated implications by i) doing face-to-face trainings online for the first time, ii) asking staff to work remotely through zoom, iii) working in shifts at times, iv) requesting for the aforesaid no-cost-extension (NCE) to compensate for the lost time and lastly v) using the contingency funds to meet additional staff time needed as a result of time lost as a result of the pandemic, the time was used to support production of communication materials, and conducting some project management meetings online.

3. Was the project a cost-effective contribution to addressing the needs of the beneficiary?

With a total budget of US\$ 882,726 and 1470 people served (e.g. over 1,400 farmers and growers, and 70 DCIC staff) roughly the cost-benefit ratio of this project was one of the lowest at US\$600 in 3.5 years of its operation, translating to US\$171.6 each year. Since farmers and growers trained have started cascading trainings to peers in their respective districts, the project has a multiplier effect and high potential of registering additional impact in the years to come. It has already laid down a framework for public-private partnerships (PPP) through the Multi-Stakeholder Platform, which generated, for the first time, structured, transparent and all-inclusive dialogue between players in the sector besides supporting negotiations that led to the formation of an Apex body (HortiFresh). It is widely agreed in Uganda that these structures will continue to ensure cost-effectiveness and sustainability of project achievements.

4. How well was the project managed?

According to DCIC and UAA, key implementers involved, the STDF/PG/543 project has been managed well by CABI. DCIC did well to request funders to have CABI as the manager because of its experience in the field and knowledge of the Ugandan context, having been involved in other projects before. CABI has worked with STDF and MAAIF projects on phytosanitary before and came into this project with all the knowledge and experience from the very beginning, which negated the need to recruit and orient new staff.

Impact (where possible): what difference did the project make?

1. To what extent did the project generate, or is expected to generate, significant positive or negative, intended or unintended, higher-level effects?

Responses to interviews with key persons in the sector, various speakers at the end of project seminar presentations and representatives from DCIC and CABI during the validation workshop all corroborated that the STDF/PG/543 project has succeeded in reducing numbers of interceptions of capsicum due to FCM and fairly contributed to an increase in export volumes

and values despite operating within the COVID-19 era and global crisis partly due to the Russian-Ukraine war.

Reductions in the number of interceptions

According to the information from Europhyt, Uganda has reduced, interceptions due to harmful organisms (HOs) from 89 in 2018, before the project started, to 35 in September 2022 when it closed (Figure 1). Of these interceptions, only 3 were for capsicum, on which the project focused most, from 44 in 2018, representing a reduction of 93.2 per cent. DCIC and CABI attribute these reductions in interceptions, regardless of reduced trade due to COVID-19 lockdown restrictions, to improvements in export inspection after increasing numbers and building capacity of staff, development of standard operating procedures (SOPs) and training of over 1,400 growers, exporters and other key players that helped to enhance phytosanitary compliance. The problem of wrong documentation (reduced from 59 in 2018 to 20 in September 2022) has been solved by installing a computer-based system (e-phyto) at DCIC to replace manual transactions.

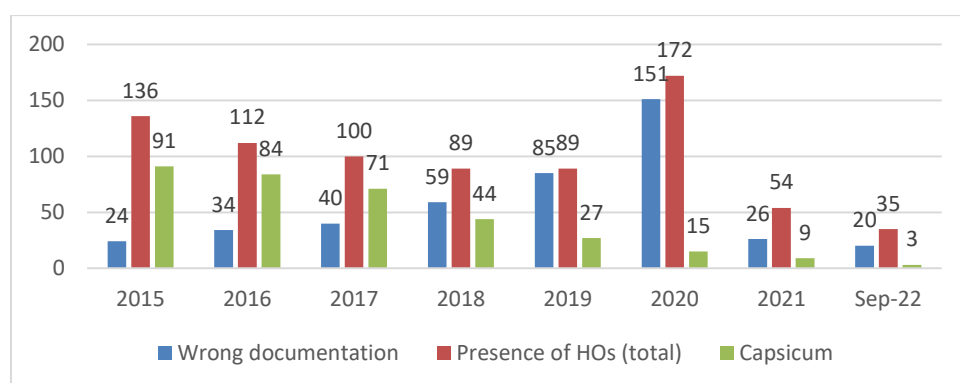


Figure 1: Intercepted consignments from Uganda reported to EUROPHYT-Interceptions, 2015 to August 2022. Further information about EUROPHYT-Interceptions is available on the website of DG Health and Food Safety: https://food.ec.europa.eu/plants/plant-health-and-biosecurity/europhyt/interceptions_en

Increasing trade

Current export volumes of fruits and vegetables from Uganda are estimated by the Uganda Bureau of Statistics (UBOS) to be almost 68,769 metric tonnes (MT) with a value of US\$44.48 million in 2021 (Table 4, see annex 7 also). In 2020 alone, the country exported 83,554 MT of FFVs and fetched US\$45.23 million, the highest during the project’s time.

Table 4: Fruit and vegetable volumes, values and exporting companies, from 2014 to 2021

| Trade Elements | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Export Volumes | 27,916 | 57,358 | 82,358 | 97,028 | 95,215 | 68,862 | 83,554 | 68,769 |
| Values (in US\$ million) | 20.77 | 32.10 | 43.20 | 38.46 | 40.62 | 36.11 | 45.23 | 44.48 |
| Exporting companies | 7 | 10 | 25 | 45 | 52 | 67 | 120 | 125 |

Source: <https://www.ubos.org/explore-statistics/10/>

Indicator 3 of the Result Area number 5 aimed at improving exports of FFVs to high-end EU markets by over 10,000 MT by year 3 of the project. Table 6 above shows that this target was not achieved in all the three years when compared to exports of 2018 at 95,215 MT. Reductions in export volumes in 2019 were due to a self-restriction ban that the government imposed in

November that year on the export of high-risk products, in particular capsicum. MAAIF intervened with value chain management strategies to comprehensively address root causes of high infestation with FCM during this time. It also audited exporting companies and approved on a case by case basis those that approved compliant. COVID-19 account for the reduction in exports from 2020 to 2021.

Table 4 also show that the number of active exporters has increased from 67 at the start of the project in 2019 to over 125 in 2021. DCIC embarked on bringing exporters on board by simplifying registration procedures, making information available on MAAIF website under crop export certification, orienting growers and exporters on inspection and certification procedures as well as making the whole process more transformed, structured and organized than before.

2. What real difference (expected and/or unexpected) has the project made, or is likely to have, on the final beneficiaries including on people's well-being, gender equality and the environment?

Analysis of qualitative and quantitative data from the evaluation show that his project has made a number of changes and outcomes desired in the FFV sector in Uganda. Notable changes include 1) Introducing inspection and certification procedures that have improved transparency, official controls and traceability of persons and products. 2) increasing capacity and compliance to SPS measures by the majority of the growers and exporters, 3) enhancing capacity of DCIC to conduct specific survey and monitoring systems for priority crop specific pests, which it could hardly do before, 4) transformation of DCIC in which growers and exporters are seeing it as a partner and not solely a plant protection enforcement agency, 5) strengthening collaboration through PPPs and 6) equipping inspectors with tools, PPEs and reagents to support inspections.

3. How did the project catalyse any other action or change, for instance raising awareness on SPS challenges and/or mobilizing additional resources for SPS capacity development?

Raising awareness on SPS challenges

Generally, there is an increased awareness about phytosanitary requirements through trainings of growers and exporters, and distribution of communication materials for top commodities and their harmful organisms (HOs). The project has simplified reference materials and included key messages of relevance on everything growers and exporters need to know about 5 key priority vegetables and fruits amongst which is *Capsicum* and the FCM at various stages of growth. It has additionally developed short videos and made the export certification process easy to access by uploading procedures and requirements on the website of MAAIF.

Mobilizing additional resources for SPS capacity development

Interviews with CABI and DCIC revealed that the STDF/PG/543 project mobilised additional resources to those provided by the funders through high-level advocacy with the Agriculture Committee of the President's Private Investors Round Table (PIRT), Office of the Prime Minister, Ministry of Finance, Planning and Economic Development (MoFPED) and the Minister of Agriculture at various forums where it talked highly about the FFV sector and the need to leverage efforts. Good examples of resources mobilized through these efforts include an increase in the numbers of inspectors and co-financing of trainings by MAAIF, provision of technical

experts and funding of some activities through collaboration with COLEACP and financial support to have regular MSP meetings by UAA until 2025. The project also benefited from co-funding by the Government of Uganda (GoU) and payment of salaries for the 25 additional staff recruited.

Sustainability (where possible): will the benefits last?

1. To what extent are the benefits of the project continuing, or are likely to continue over the longer term, after the end of STDF funding?

The evaluation has found benefits of the STDF/PG/543 project to be many and long term. The knowledge, capacities and working aids developed and provided, for instance, will go a long way in ensuring that inspection and training of growers and exporters continue to be done with a high level of competence and efficiency. Standard Operating procedures (SOPs), Regulations and Policies developed will continue to guide official Phytosanitary controls and provide guidance to value chain stakeholders in the private sector. The Regulations will also provide a basis for financial stability and sustainability. The trust and reductions in interceptions are good for the growers and exporters because they are assured of continued access to the EU and other high-end markets so long as they remain compliant. Large export volumes and values due to increased compliance and market access, both local and international, will in turn continue to make the sector grow and bring the much-needed forex, employment and wealth to Uganda for many years to come. Other indicators of sustainability are structures the project has put in place, e.g., the SPS MSP and Apex Body, which are enabling good coordination, communication and enforcement of compliance to SPS requirements. Reference materials, which the sector will continue using to ensure it does things right also ensure continuity of getting reduced interceptions.

2. To what extent was sustainability addressed at the design stage and during the project, and what are the major factors (including risks) influencing sustainability?

Interviews and discussions conducted showed that sustainability was factored in at the design stage by having DCIC as the implementer. Now, DCIC is continuing with implementation of the project activities as they already fall under its mandate and daily routine work being the NPPO for the country. The project also included in its logical framework at the design stage activities to develop regulatory frameworks to create an enabling environment, horticulture Multi-Stakeholder Platform and an apex body of producers and exporters, all of which are continuing to ensure good synergies and coordination in the sector. By the time it was closing, all these structures were set up, functioning and growing in size and capability to sustain themselves.

3. Are the necessary capacities and systems (financial, social, institutional, etc.) in place to sustain the project results over time?

Discussions with CABI, growers and exporters show that there are improvements in the capacities of the NPPO (DCIC) due to the increase in the numbers of staff (e.g. from 4 to 20 inspectors at the airport), trainings in inspection and certification, and provision of the necessary working aids such as laptops, PPEs and inspection kits. These capacities are enabling DCIC to be doing its work with much competence, motivation and accuracy.

Trainings of 1,400 growers in phytosanitary requirements is another way in which the project has enhanced capacities and growth in the sector.

5.0 Conclusion and Recommendations

In conclusion, DCIC, UAA and CABI have succeeded in enhancing compliance of FFV growers, exporters and other players with Phytosanitary requirements of the EU and other niche markets through well thought-off capacity-building activities in areas they identified gaps in and transformation of the whole sector. The project has used a four-fledged systems approach to phytosanitary compliance: (i) the use of integrated pest management approaches, including biocontrol options, cultural and physical practices for dealing with FMC and other HOs, (ii) formation of a strong public private partnership through the Multi-Stakeholder Platform and HortiFresh (Apex Body) that have improved coordination, collaboration and capacities of growers and exporters, (iii) mobilization of resources and leveraging investment in plant protection and health to ensure phytosanitary standards are achieved, and (iv) high level advocacy to enact relevant policy frameworks and create an enabling environment in the sector.

Descriptive analysis of qualitative and quantitative data show that Uganda has made noticeable steps towards redeeming its name in the international market arena after successful implementation of the project evidenced by an increase in export volumes and values as a result of reduced interceptions of capsicum due to FCM. To this end, goals of the STDF/RNE project remain relevant looking at the economic importance of the FFV sector to the country and require all parties, from growers, exporters, Multi-Stakeholder Platform, Apex Body and everyone in between to continue collaborating and spurring an upward trajectory of the FFV exports. Although the agenda of the project has been fulfilled, the implementation process was not without challenges. These challenges were presented by various speakers during the end of project assessment seminar in Kampala and vetted one by one by the validation workshop at Entebbe. Table 5 below presents key ones and specific recommendations going forward. The recommendations were also presented and refined during the validation workshop.

Box 2: Quotations from MAAIF about the project

“There are a lot of changes and motivation in staff after training and equipping them with inspection tool including PPEs and computers. Transparency of DCIC has improved tremendously from headquarters to district offices. Information is posted on the website and everywhere where it is needed. Growers and exporters who were scared before, now come forward to seek services. DCIC has transformed from policing to service delivery. More people aspire now to join us as inspectors, evidenced by the number of applications we are receiving,” Dr Calorine Nankinga and Brenda Kisingiri, MAAIF/DCIC.

“MAAIF is now deploying 20 inspectors to man Entebbe airport 24 hours 7 days. At the onset of the project, there were only 4 inspectors at the airport who also had to work at the pack houses and conduct field inspections. Advocacy and pressure from the project is what forced the Government of Uganda to recruit more inspectors,” Commissioner Paul Mwambu, MAAIF.

“As a company, we have become more compliant and our produce is of high quality because of close engagement with MAAIF. Structures are now in place. Compliance by growers is helping all of us to comply as well. It was difficult before to comply when deliveries by farmers were non-compliant,”
Muture Eric, Managing Director, Shaga Greens.

Table 5: Specific challenges and recommendations for going forward

| Gaps/Challenges | Recommendations |
|---|--|
| Delays in the gazetting and operationalization of new and revised laws like the Food Law, Revised Plant Protection and Health Regulations (with new fees schedule) and SPS policy because of bureaucracies are making it difficult for MAAIF to regulate the sector adequately. | <ol style="list-style-type: none"> 1. MAAIF should embark on further engagements and advocacy with government at a high level to speed up the gazetting process. 2. MAAIF should kick-start advocacy and lobbying for the review of Plant Protection and Health Act of 2015 to strengthen the regulatory framework. |
| The New EU plant regulation and the EU Audit of September 2019 came with more stringent SPS measures that the country must comply with. DCIC was still addressing recommendations of 2016 Audit and had at the same time to focus on the requirements of the new regulations and Audit. The stringent regulations are: <ol style="list-style-type: none"> 1. Regulation 2016/2031 2. Commission Implementation Regulation (EU) 2022/959 | <ol style="list-style-type: none"> 1. MAAIF should incorporate and intensify the implementation of ISPMs that are of relevance in meeting Phytosanitary compliance requirements as stipulated by the EU. 2. MAAIF should continue following and implementing recommendations by the EU on surveillance, inspections and management of FCM 3. Lead farmers to undertake self- policing of other farmers and be exemplary to ensure GAPs are adhered to and implemented at production levels. |
| Emergence of Potato Virus Y as of phytosanitary concern in capsicum in addition to the FMC | <ol style="list-style-type: none"> 1. MAAIF establishes routine surveillance programme targeting emerging and new pests. |
| HortiFresh is still new and young having been launched in November last year (2021). It is yet to be fully recognized as a national fruit and vegetable sector Apex body by other associations. It needs to bring other associations on board as it is currently not all-inclusive, more functional and effective as desired. | <ol style="list-style-type: none"> 1. DCIC should take lead in engagement processes with the private sector to facilitate negotiations among associations and have only one Apex body. 2. Funders should support Hortifresh to establish itself better, continue doing its roles and be sustainable to ensure successful PPPs in the sector. 3. Hortifresh should sustain advocacy and lobbying to ensure all associations merge under one Apex body |
| A lot was done on surveillance and monitoring. However, the gap is dissemination of materials like videos for trainings SOPs and phytosanitary inspection manuals to growers and exporters. | <ol style="list-style-type: none"> 1. COLEACP with EU funding has committed to disseminate the materials and should continue to do so 2. MAAIF should translate the Guides into an easily comprehended version by growers and exporters |
| DCIC has increased numbers of inspectors by recruiting, training and deploying additional ones. Nevertheless, there are still border post not manned. DCIC needs more than 500 inspectors to fill the gap. It has plans to add 168 more staff. | <ol style="list-style-type: none"> 1. MAAIF should advocate at a higher level to fast- track recruitment of additional inspectors and increase service delivery at the farm, pack houses and exit points. 2. MAAIF should extend inspection to FFVs grown and traded on the local markets after increasing numbers of inspectors |

6.0 Lessons from the Project

1. What lessons can be learned from the project regarding the process of project design and implementation?

Box 3: Key lessons from the project

1. **Flexibility is required to address external factors:** In this project, the funders, DCIC and CABI remained flexible and made timely adjustments to deal with external factors and new requirements by the EU. Although the project design did not envisage such factors coming and affecting its operations, the project remained vigilant and responded in the best ways possible. It strategized on mobilizing and leveraging resources to succeed.
2. **A systems approach for pest risk management has proven effective.** While most of the IPM work was specifically intended for the management of FCM in capsicums, it has been realized that such an approach can be used to manage pests in other FFVs for export.
3. **Multi-Stakeholder Public-Private Partnerships (PPP) are needed to facilitate dialogue and improve communication in the sector.** In this project, PPPs led to good networking and shared responsibility, which in turn have increased impact and sustainability.
4. **Learning from the horticulture systems in Kenya and Ethiopia helped to improve the enabling environment for FFVs in Uganda.** The project, as a result of the lessons, empowered DCIC to identify gaps, rethink and revitalize the phytosanitary environment. It has become evidently clear that a successful national horticulture sector requires an independent governance system, favourable policies and a functional private sector.
5. **High level task forces are needed to get things done:** Consolidation of all national horticulture associated taskforces into the National Inter-Ministerial Task Force (NIMTF) has provided a strong pillar for better collaboration, negotiations, advocacy and coordination of SPS matters in Uganda.

2. What lessons can be learned from the project, which may be of importance to the broader donor community, and which should be disseminated more widely?

Key lessons of likely major importance to donors learned from this project include:

1. The need for declaration and transparency by the NPPO to donors of previous projects to which a new project would build on. A section in the write up of the project document in this particular project clearly elaborated on previous projects for example, the CABI-Plantwise project implemented in Uganda. Declaration of this kind enables good continuity and rationalization of other upcoming donor-funded projects to avoid overlaps.
2. Secondly, the design of future projects should incorporate mid-term reviews with clearly defined scope, costed work plan and evaluation criteria to consolidate recommendations with those from periodic reviews to the funders on re-adjustments, corrective measures and incorporation of new strategies to be taken on board, where necessary.
3. The effects of COVID 19, which could not be foreseen during the project conception phase, is a great lesson to donors to allow for uncertainties to be captured and costed at an agreed upon percentage of contingency within the project design. COVID 19 dictated on the duration, mode of implementation and work ethics to be followed and therefore such eventualities should be planned for accordingly. Annex 8 provides additional information on lessons and best practices.

Annexes



Annex 1 Assessment
Framework.docx



Annex 2 A list of
people consulted.docx



Annex 3 A List of
documents and inform



**Annex 4 Attendance
to the validation work**



Annex 5 A full list of
previous projects.docx



Annex 6 Activities
done by partners of th



Annex 7 Statistics for
FFV export values and



Annex 8 Additional
lessons and best pract