

**FINAL PROJECT  
EVALUATION OF THE  
HORTICULTURE  
MARKET  
ACCELERATION  
PROGRAM  
(HORTIMAP)**

**FINAL REPORT**  
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## REPORT COVER PAGE

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## LIST OF ABBREVIATIONS

A2F	Access to Finance
BCs	Business Counsellors
CBOs	Community Based Organizations
COMESA	Common Market for Eastern and Southern Africa
CSA	Climate-Smart Agriculture
DAC	Development Assistance Committee
DCIC	Directorate of Crop Inspection and Certification
EA	Enumeration Area
EAC	East African Community
EKN	Embassy of the Kingdom of the Netherlands in Kampala
EF	Entrepreneurial Farmer
FAs	Farmer Associations
FFV	Fresh Fruits and Vegetables
FGD	Focus Group Discussions
GAP	Good Agricultural Practices
HCL	Horticulture Credit Line
HH	Household
HI	Household Interviews
HortiMAP	Horticulture Market Acceleration Program
ISSD	Integrated Seed Sector Development
KII	Key Informant Interview
MAAIF	Ministry of Agriculture, Animal Industries and Fisheries
MDF	Market Development Facility
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-operation and Development
PHH	Post-Harvest Handling
PPS	Probability Proportionate to Size
PO	Producer Organizations
PUM	Programma Utizendding Managers (Netherlands Senior Experts)
RE	Renewable Energy
SACCO	Savings Associations and Credit Cooperative
SHF	Smallholder Farmer
SMEs	Small and Medium-Sized Enterprises
SPS	Sanitary and Phytosanitary
ToR	Terms of Reference
TNS	TechnoServe-Uganda
UNBS	Uganda National Bureau of Standards
WUR	Wageningen University and Research

# 1 INTRODUCTION

TechnoServe has been implementing a four-year Horticulture Market Acceleration Project (HortiMAP) with financial support from the Embassy of the Kingdom of the Netherlands (EKN) in Uganda. The project has aimed to contribute significantly to poverty reduction, adequate food and nutrition security, and job creation in Uganda through an inclusive, competitive, and transformed horticulture sector. The project started in December 2020 and is due to wrap up by December 2024. It has been implemented by a consortium that also included Bid-Capital Partners, a Dutch impact investment advisory firm; PUM Netherlands, a volunteer organization that provides technical sector expertise; and Wageningen University and Research (WUR), a research institute that offers specialized training expertise in the horticulture sector and which works through ISSD, its partner in Uganda. This report follows the guidance and requirements of the Term of Reference for the final evaluation prepared by EKN.

The main purpose of the final evaluation was to evaluate progress and achievements obtained in implementing HortiMAP's objectives and outcomes, and to draw out lessons on how HortiMAP can be improved during the remaining period of implementation to achieve the intended outcomes. Both qualitative and quantitative methods were used to assess effectiveness and efficiency of the project interventions.

This final evaluation reviewed the approach taken and progress to date of HortiMAP and makes recommendations to guide the remaining period of implementation. Based on 118 semi-structured key informant interviews and 24 focus-group discussions, the evaluation team sought to understand whether HortiMAP was doing the right thing, in the right way, with what results, and how the future programming could be improved. The Final evaluation was expected to document lessons learned and to give recommendations regarding the remaining 6 months of the project and recommendations more generally on support to the horticultural sector.

## 2 RATIONALE, PURPOSE AND OBJECTIVES OF THE FINAL EVALUATION

The purpose of this final or summative evaluation was to assess the performance of the project and capture project achievements, challenges, and best practices. It offers a learning opportunity for all stakeholders. The evaluation identified key lessons learned, challenges, unintended effects and assessed the flexibility exhibited by the program to adapt, respond to the changes in context and achieve sustainability of the interventions.

The objectives of the evaluation were to:

1. Assess the performance of the project towards achieving the intended project objectives, results, and outcomes as agreed upon in the project document.
2. Assess the relevance and effectiveness of the HortiMAP project interventions (partnerships, training, technical assistance (TA), Market Development Facility (MDF), Horticulture Credit Line (HCL), etc., towards achieving the project outcomes/results, i.e., what worked - or did not work, and why.
3. Identify and assess critical lessons learned, challenges, unintended effects of the project and draw recommendations for future horticulture programs, also from the perspective of the IGG results and objectives.
4. Assess whether the risks identified in the project were the most important and appropriate ones. Were the risk management strategies/responses that were adopted by the project adequate?
5. Assess the likely sustainability and impact of the project-examining, particularly from the beneficiaries' perspective, how much of the project's knowledge and practice transfer efforts has been learned, adopted, used and institutionalized by the beneficiaries (women and men) and other stakeholders and partners.

The evaluators have presented Findings, Conclusions and Recommendations of the final evaluation based on an examination of the project's documents and interviews with people in the field, through a survey conducted among a sample of project participants – primarily farmers, and women farmers in particular – and by incorporating feedback on the obtained from validation workshops received from the stakeholders, to prepare a final version of the Evaluation Report.



### 3 DEVELOPMENT CONTEXT

The project aimed to contribute to the food policy of the Netherlands international development program as determined by the May 2019 Letter to Parliament of Netherlands entitled: ‘On the way to a world without hunger in 2030’, which places emphasis on supporting food systems that are ‘healthy, honest, climate neutral and circular’. The high-level results to which the Netherlands seeks to contribute are ‘improved income and improved productivity’.

The Netherlands government has singled out three issues of relevance to food system analyses: for its support through HortiMAP:

- Nutrition - quality as well as the safety to contribute to safe and healthy diets for young children and expectant mothers,
- Gender – women’s empowerment as a pre-condition for a world without hunger and employment, and
- Employment and income creation and value addition through the sustainable intensification of primary production and the strengthening of value chains.

The HortiMAP project responded to EKN’s Uganda Multi-Annual Country strategy, 2019 – 2022, and EKN’s Uganda Multi-Annual Country strategy, 2023 – 2026, in which food and nutrition security (FNS) and sustainable trade were key thematic priorities that aimed to enable the development of higher quality horticulture value chains in Uganda. The project is aligned with the following intermediate outcomes of EKN’s Multi-Annual Country strategy:

- Economic performance and resilience of farming systems increased. (*Indicator: # of farmers with increased productivity/ income*).
- Peoples’ nutrition improved (*Indicator: # of people with improved access to healthy/ diverse food*).
- Quality of private sector development for FNS increased (*Indicator: # of jobs created in agro food sector and # of businesses co-investing in FNS activities*).
- Quality of governance for FNS increased (*Indicator: # of Improvements in implementation of major national FNS policies/ laws*).

HortiMAP was also designed to align with:

- the Government of Uganda’s (GOU) “Vision 2040” which envisaged the creation of a profitable, commercial, and sustainable agriculture sector,
- the Third National Development Plan (2020 – 2025) focused on improving agro-industrialization as critical driver of jobs and economic growth, and
- the Agriculture Sector Strategic Plan 2020 – 2025, which prioritizes the production and export of fresh fruits and vegetables (FFV) as strategic commodities for income and employment within Uganda.

## 4 BRIEF DESCRIPTION OF THE PROJECT

HortiMAP is a EUR 10 million project that has been implemented in the Kigezi, Victoria Crescent, and Mt Elgon agro-ecological zones of Uganda.

HortiMAP's revised design (amended during project inception) provides more emphasis to smallholder farmers (SHFs) in addition to market-oriented farmers, after initially being oriented to support only market systems development (MSD) targeting market-oriented farmers. The project's focus on SHF as articulated in its logframe provides indicators, activities, outcomes and interventions (including market development facility (MDF) that allow for project benefits to trickle down to the smallholder farmers.

During the project's initial two-year period, it underwent a further change that saw it more fully deploy a smallholder farmer-centric MSD approach, which aligned with the EKN's new Uganda Multi-Annual Country Strategy for 2023-2026. HortiMAP's final design approach addresses challenges that threaten potential growth and long-term competitiveness of the horticulture sector in Uganda, particularly related to the production of Fresh Fruit and Vegetables - FFV at the farm and firm-level, particularly challenges related to resilience, quality, traceability, and food safety requirements for domestic, regional, and international markets. These challenges were to be tackled in six ways: at the farm level, as the agribusiness level, among micro-entrepreneurs, at the consumer level, within financial institutions supporting the horticultural sector, including FFV production by SHF, and among relevant actors within the Ugandan government.

TNS conducted an analysis in 2020 of regional (East Africa) market opportunities to create additional value in Uganda's horticulture sector in terms of the following FFV crops: onions, avocados, carrot, tomatoes, mangoes and pineapples. To tackle the challenges of accessing the regional markets, HortiMAP's approach looks to agribusinesses to, firstly, articulate their own needs. HortiMAP is then set up to support agribusinesses to precisely diagnose constraints and opportunities, to apply technical assistance and financial solutions that address firm-specific constraints and to demonstrate new models for replication and scaling up. In doing this, HortiMAP aims to target key leverage points to incentivize behaviour change among market actors, and broker partnerships that de-risk investment in business models and in new technologies that drive sector formalization, transformation, and inclusivity.

## 5 EVALUATION APPROACH AND METHODOLOGY

The HortiMAP final evaluation employed mixed methods that were designed and developed to inform a high-quality Final Evaluation of HortiMAP as per the TORs. The evaluation mainly focused on qualitative data collection, analysis and use. The quantitative data used was generated from a farmer household (HH) survey, various documents and reports, studies, database and the baseline survey that was previously conducted by TechnoServe. The tools and data collection plan (see Annex D “Data Collection Tools Used”) were agreed upon for the proper execution of the assignment. The data collection therefore strived to be in person, with the possibility of phone calls and other remote methods to interview stakeholders. A description of the processes that was undertaken follows below:

- Reviewed documents shared by TNS’s HortiMAP Team Leader and EKN; other relevant docs were obtained from HortiMAP partner’s and HortiMAP’s M&E staff.
- Reviewed HortiMAP project documents using key inquiry questions to ensure the project’s relevance within the project context in Central, Eastern and South-western regions of Uganda.
- Acquired qualitative and quantitative data from HortiMAP’s most recent reports, database and project documents.
- Prepared a HortiMAP stakeholder list for the three regions of Uganda, including those identified by TNS’s Team including the M&E lead, and HortiMAP’s other implementing partner, and then selected a list of priority stakeholder to be interviewed for this evaluation.
- Accessed contact information for all persons to be interviewed (as KIIs or in FGDs). For all interviews the questions were translated into the local language through an interpreter prior to data collection - for consistency and timeliness. Before all interviews, the persons’ consent was requested. All interviews were recorded, and all respondents were informed of this and asked to consent to being recorded at the opening of each interview.
- Conducted 118 key informant interviews (KIIs) targeting the project manager/ implementing partner(s), HortiMAP M&E staff, leaders of producer cooperatives, extension officers of district and local governments, representatives of the project implementers targeted those directly involved in the project. The KIIs were conducted in person or remotely by phone, WhatsApp and other available platforms. Phone calls were limited to cases where a key stakeholder was physically absent/unavailable in the selected project area.
- Randomly and scientifically selected 699 farmer households who were interviewed and held 24 FGD involving 357 people.
- Conducted an analysis of the qualitative and quantitative data collected from both primary and secondary sources, and
- Prepared a comprehensive final evaluation report responsive to the areas outlined in the TORs.

### 5.1 Data Collection Methods

This section provides information on the methodology that was undertaken to carry out this final evaluation of the HortiMAP project. The methodology was developed to support the collection of data using inquiry instruments to seek credible evidence that answers the evaluation questions in the TORs.

This section includes a description, and an explanation of the evaluation approaches used; the evaluation methodology and its application; a description of the methods of data collection used (desk and field-based) including a report on data collection numbers compared to plan. The evaluation approaches included –

- A literature review

- A survey of participants (presented in Annex C “Survey Data”)
- Key informant interviews-KIIs (the KIIs guides are presented in Annex D “Data Collection Tools Used”), and
- Focus group discussions-FGDs (the FGD guides are part of Annex D as well).

A description of sampling choices/methods and limitations regarding the representativeness of samples for interpreting evaluation results; and other important limitations is also provided.

## 5.2 Evaluation Design

A consultative evaluation methodology was used to implement this evaluation. Use of this approach was to ensure that stakeholders at different levels were fully informed of the evaluation process and would take ownership of the findings as much as possible, given that it was an external summative evaluation driven by the needs of the donor.

In addition, the evaluation made use of the Project’s Theory of Change, Logical Framework, and relied on four of the 2019 OECD-DAC Evaluation Criteria to guide the full evaluation process, as prescribed by EKN, the commissioning entity for the evaluation.

The evaluation data collection process involved a mixed method approach. The evaluation employed the use of qualitative and quantitative data collection methods and techniques to bring the perspectives of different stakeholders to bear on the entire evaluation process. Both qualitative and quantitative data were sought through the desk-based review of project documents, including project annual reports, and the HortiMAP database. These sources allowed us to gain an understanding of the project context, activities and implementation process. We also relied on the report of the Mid-term Review (MTR) and the tools that had been deployed to carry out that evaluation. We used all these information sources to inform the development of the tools to be used to conduct the final evaluation. The tools were included in the inception report.

## 5.3 Data Collection by Data Type

This section explains our data analysis plan (i.e., how the collected data was organized, classified, tabulated and presented relative to the evaluation questions).

### 5.3.1 Quantitative Data

Quantitative data – survey data – was collected between August 24 and the end of September 2024. In general terms, the data gathered from the survey was transferred to a server where it was aggregated and transferred to Stata/SPSS and Excel software and was analysed to generate frequencies, averages, means and percentages. Quantitative data that was entered into Excel was processed using simple univariate analysis. SPSS was used to generate simple statistical information including frequency distributions of the different variables of the study. These methods were used to detect possible outliers and errors in data entry, which were corrected. Cross tabulation of the data was prepared to provide a more comprehensive analysis. Tables, charts and graphs were produced from the frequencies which were then available for inclusion in the Final Evaluation report and Annexes.

### 5.3.2 Qualitative Data

The KIIs and FGDs were also conducted between August 24 and the end of September 2024. All the responses were manually recorded on interview record sheets. A content analysis method and thematic approach were used for our analysis of the qualitative data collected. It was aligned to the objectives and the questions of the Final Evaluation. A systematic review was conducted, and a

synthesis was prepared.

The qualitative analysis process started in the field with observations being noted. The evaluation team endeavoured to provide illustrations of key observations that demonstrate the lived experiences of SHFs and MSMEs. The notes of key informants and group interviews/discussions were summarized in an Evaluation Data Table - a matrix set up by themes derived from the different data collection tools to ease both the analysis and the process of deriving key conclusions.

Response categories for the open-ended questions were developed that were mutually exclusive and exhaustive based on the themes that emerged from the responses provided during the study. Themes and sub-themes were generated, and the data was disaggregated according to these themes. Discreet single categories were combined into more general categories. Categories were re-examined and after cross-examining the original responses, with some adjustments made to categories and coding. Categories were combined or deleted as deemed necessary, especially if a cell had an expected frequency of less than one. Finally, key quotes were selected from KII and FGD responses that represent the analysis, and these were included in the final evaluation report.

## 5.4 Evaluating Targeted Beneficiaries

For quantitative data, the evaluation used a survey methodology. We developed a Questionnaire that targeted a sample of the direct participants of the project (women, men and youths) to search for evidence of project impact on their livelihoods, and to answer the evaluation questions, where a survey was the best method to use.

The Questionnaire was administered by trained short-term data collectors/enumerators using the Kobo Collect tool on hand-held devices (tablets/phones) in a selection of the targeted Districts, more particularly focused on targeted participants and intended beneficiaries. The identity of the farmers, who contributed their experience and views to the evaluation, were kept strictly confidential and participation was voluntary. Each survey took approximately one hour and ranged from 45 minutes to 1.5 hours per survey. The evaluation focused on collecting data from men, women and youth beneficiaries of the HortiMAP project.

Other stakeholders of the project were interviewed to collect qualitative data using Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) to add context to the perceptions and experience of the intended beneficiaries and to collect data on project achievements intended to support the beneficiaries. KIIs targeted key project stakeholders (women, youths and men farmers, implementing partners, leaders of MSMEs and SMEs and financial institutions and other service providers) to search for evidence related to the achievement of project Outcomes and to answer the evaluation questions.

## 5.5 Population of the Survey and Determination of the Sample Size

### 5.5.1 For quantitative data

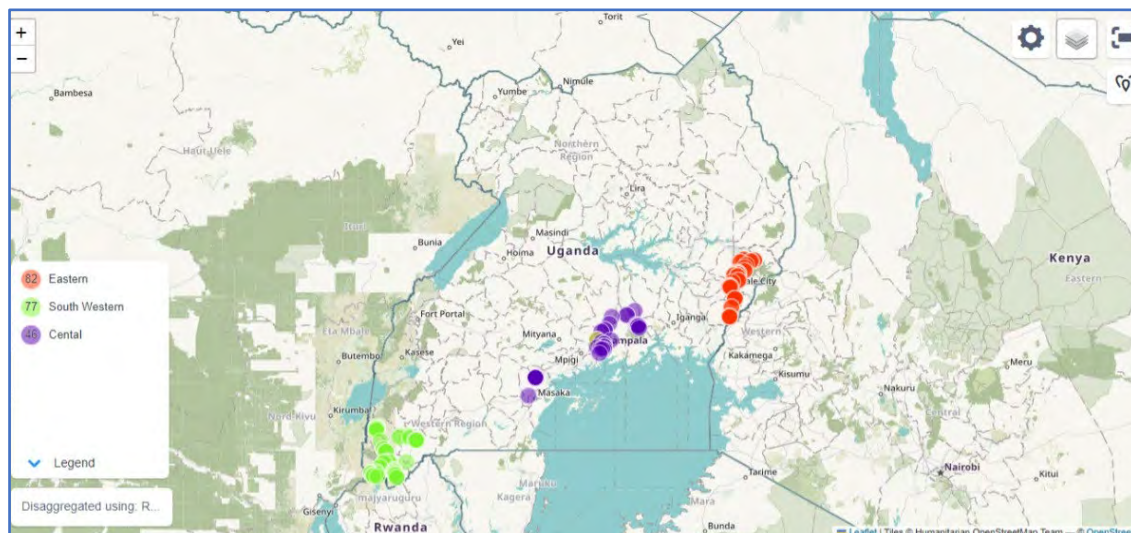
The population of the survey comprises direct beneficiaries/project participants (women, youth and men), Approximately 36,000 beneficiaries were targeted by the project across 48 districts in three regions of Central, Eastern and Southwestern Uganda with the goal of improving their income, their nutrition and the structures that support ongoing income generating through production and marketing in the horticultural sector.

Determining the survey sample size required using the names of directly targeted beneficiaries in the project's beneficiary list. The sample size was the same as that used for the MTR in 2023. The population of beneficiaries of the project was used to calculate the sample size at 95% confidence level with a population size of 36,000 beneficiaries and margin of error at 5%. The sample size



could be 381 if randomly selected. We rounded up the sample size to 450. However, due to the experience of data enumerators, data was collected from 699 respondents. The sample size allows for a high non-response and refusal rate and possible gaps in data collection, though this was not expected based on the MTR experience. This number was purposively and equally distributed across the districts selected for the survey. A map of the location of the questionnaires is provided as the GIS location of all households was recorded by the hand help devices.

**Figure 1: Map of geographic locations of Households Surveyed**



The study adopted random sampling, stratified and purposive sampling to select respondents. The total number of project participants were used to calculate the sample frame for each selected district, elaborating the number of clustered participants using project beneficiary's population proportional to sample (PPS) techniques. Each target district was divided into determined clusters of participants and the enumerated clusters were randomly selected. Based on the participants list and the number of samples allocated, the Evaluation team intentionally selected respondents from selected clusters with the primary farmer/project participant from a given household requested to respond to the Questionnaire.

### 5.5.2 For qualitative data

The sample size for the qualitative aspect of the study was determined purposively based on the kind of information needed to ensure that the evaluation questions were answered with sufficient confidence. The qualitative interviews comprised 118 KIIs targeting partners who implemented activities, community leaders and local organizations. 24 FGDs were also used to speak with 120 participants to pursue qualitative information not amenable to the survey technique. See **Table 1**, below.

Qualitative data was collected using semi-structured and unstructured interviews and facilitator guides were prepared specifically for this final evaluation. For each of the interviews, a trained facilitator and note recorder were engaged who understood the purpose of the evaluation, the local language where relevant and the skills needed to elicit quality response from respondents.

Audio recordings of KIIs/FGDs were uploaded to Google Drive or Dropbox or WeTransfer while transcripts and interview notes were provided within 48 hours of the field activity. All qualitative data was retrieved and placed into a main project folder.

**Table 1: Data Collection Plan and Actuals (including Summary of numbers)**

#	Group or person(s)	Population size	Planned Sample size	Actual Sample size (participants)	Type of data collection tool
1	HortiMAP staff	10	8	11	KII
2	Consortium partners	3	3	7	KII
3	MAAIF	4	4	3	KII
4	UNBS	1	1	1	KII
5	Implementing Partners	8	5	56	KII
6	SME MDF Beneficiaries	28	15	26	KII
7	Producer Organizations/Farmer Associations	13	7	13	KII
8	National Horticulture Stakeholder Platform and Learning Partner	1	1	1	KII
9	EKN, Gender, Climate and Food Security Advisors	3	3	0	KII
10	Farmers/Producers – project participants	24,187	450	699	Survey/Questionnaire
11	Market Vendors / Retailers	1217	100	327	FGD
12	Trained Extension Workers/Lead Farmers	274	20	30	FGD
13	Data Validation Workshops (3)	-	100	122	Workshop
				Summary of Numbers (Actuals)	
Total # of KIIs				118	
Total # of FGD participants				357	
Total # of FGDs				24	
Total # of people surveyed				699	
Total # of validation workshop participants				122	

**Table 2: Demographics of survey participants comparing final evaluation with MTR and baseline demographics**

<b>DEMOGRAPHICS</b>				
<b>CATEGORY</b>	<b>DISAGGREGATION</b>	<b>BASELINE VALUES</b>	<b>MIDTERM VALUES</b>	<b>FINAL EVALUATION</b>
Sampled farmers interviewed Region	Response Rate (RR). Results were analysed to produce a coverage estimate with 95% confidence interval	962 (100%)	946 (100%)	960 (100%)
Regions	Central	297 (31%)	349 (37%)	320 (33%)
	Eastern	375 (39%)	319 (34%)	320 (33%)
	South-western	290 (30%)	278 (29%)	320 (33%)
Gender of respondents	Male	499 (52%)	525 (55%)	462 (48%)
	Female	463 (48%)	421 (45%)	498 (52%)
Gender of household head	Male	803 (83%)	817 (86%)	907 (95%)
	Female	159 (17%)	129 (14%)	53 (5%)
Age of respondent	Youth 18-35 years	361 (38%)	329 (35%)	309 (32%)
	Adult 36 years and above	599 (62%)	617 (65%)	651 (68%)
Marital Status	Single	86 (9%)	78 (8%)	20 (2%)
	Married/co-habiting	812 (84%)	818 (86%)	798 (83%)
	Separated	17 (2%)	23 (3%)	67 (7%)
	Widowed	47 (5%)	27 (8%)	75 (8%)

## 5.6 Ensuring Data Quality

Ensuring high quality, comprehensive, and accurate data involves the following considerations and processes.

### 5.6.1 Quality of the Tools

For purposes of data quality control, all tools used were pretested and shared with EKN as part of the inception report before the commencement of the fieldwork.

### 5.6.2 Field Protocol

The data collection process was detailed in a field protocol to guide the data collection activities of enumerators, interviewers and interlocutors. The protocol provided guidance on consent taking, note taking, data labelling, data collection checklists, data tools and data security measures.

Informed consent was sought through written or verbal approaches after explaining the objectives of the evaluation study. Participation was voluntary, and respondents had the right to withdraw at any time during the interview. The benefits of participating in the study were communicated to the respondents in a manner that did not bias them to participate in the evaluation study.

### 5.6.3 Pre-field Training

Enumerators, interviewers and interlocutors engaged in this data collection activities were trained using the field protocol to ensure integrity, minimum bias and consistency in the use of data collection tools across the sites.

### 5.6.4 Data Storage and Retrieval

The survey was administered as an online survey using the Kobo Toolbox through the mobile



devices administered by enumerators. Primary data collected from project participants were entered into devices on site by the enumerators. This way, all responses went directly into the central survey dashboard and were available for validation at the backend in real time, and later was subjected to appropriate data cleaning/review to remove errors. Where data transmissions, power and other difficulties affect field data collection, all data were secure for transfer when connectivity was re-established. Once cleaned the data was analysed using relevant analytical frameworks and tools.

### **5.6.5 Data Analysis**

Descriptive analysis and, where needed, a test of association ( $\chi^2$ ) was done to determine the significance of results at  $p \leq 0.05$ . Cross tabulation of the data was done to determine gender disaggregation, spatial differences, as well as effects of income and perhaps education.

### **5.6.6 Validation of Findings**

Reviewing the findings of the data analysis was a crucial part of the final evaluation process. From experience, ownership of the final evaluation outputs is built on well-facilitated participation by stakeholders who review the findings. Following the preparation of a first draft of the evaluation's findings, three Validation Workshops were held with participants/beneficiaries drawn from the district in each region. A total of 122 people participated in the Field Validation Workshops. The Validation Workshops broadly focused on what worked well, what didn't work well, and why and what findings seemed to be outstanding from the presentations provided. They involved a presentation by the evaluators - providing results of the data analysis and key findings with a discussion aimed at validating key findings and to elicit participants' inputs while aiming to ensure broad ownership of the lessons learned, the conclusions and the recommendations. Comments and feedback from this session and input collected from the Validation Workshops were incorporated into the evaluation final Report.

A presentation of Preliminary Findings was held with the EKN and TNS teams on October 22 to elicit questioning and feedback. The discussion on Preliminary Findings explored the soundness of the findings while reviewing the data used to support them, as well as a review of draft conclusions, draft recommendations and draft lessons learned.

## **5.7 Gender consideration in the data collection process**

The consultant's approach and methodology took the following into consideration:

Data collection tools captured the experiences and perspectives of both women and men separately, and the experience of youths.

Language was used that was inclusive of and sensitive to gender issues and avoided reinforcing stereotypes and biases in the wording of questions.

The data collectors were trained before data collection and a protocol was developed to guide the exercise. The training of data collectors included discussion on issues requiring sensitivity. The evaluators understood that:

- the data that was collected could be understood by participants as private,
- the extractive nature of the data collection process required the voluntary participation of those surveyed,
- biases were held by enumerators who had had access to a higher level of education
- interactions with participants were respectful and non-discriminatory.

The field team were culturally sensitive and aware of local norms and customs that could affect gender dynamics. This awareness was essential for respectful engagement with respondents. The team composition was inclusive of women and men, and diverse in terms of other criteria (e.g.,

ethnicity/language, faiths, etc.).

Training of the enumerators focused on using handheld android phones/tablets to collect data using 'Kobo Collect' software - enabling online data collection by the Assistants. The Evaluators relied on a network of enumerators already conversant with collecting survey data using Kobo Collect and skilled in livelihood sector interventions in the three regions, which positively supported our efficient data collection.

Selection of data collectors formally commenced once the Inception Report was approved. Data was collected as early as possible thereafter, and the evaluators worked to the timelines provided in the Evaluation Workplan.

## **5.8 Ethical Considerations:**

**Informed Consent:** We ensured that participants fully understood the purpose of the study and their rights.

**Confidentiality and Safety:** We addressed concerns related to confidentiality and safety, especially when collecting sensitive information and ensured measures to protect participants' privacy. All respondent's identity were protected.

**Training:** All data collectors were appropriately trained on research ethics and to avoid expressions of bias.

## **5.9 Limitations and Disclosures**

There are no obvious limitations that faced the evaluators in carrying out this evaluation. The evaluators and the Commissioning entity recognized the time and budget constraints on this final evaluation. The budget for field data collection/surveying and the collection of qualitative information was constrained. Also constrained was the time for reflection in data analysis.

The consultants enjoyed the benefit of having known about the project through the Mid Term Review, enabling a more in-depth reflection on the data collected during this final evaluation.

The evaluators understood that EKN and TNS are eager to use the Final Evaluation report in the request for a project extension period and potentially for the development of a Phase 2 request to the Government of the Netherlands.

The Deputy Lead Evaluator, a Ugandan consultant, had previously declared his prior involvement in the Mid-term Review (MTR) of HortiMAP, an experience which was seen as an asset, not a liability. The Consultants took an open-minded approach to data analysis and based their findings on the newly gathered data, not on opinions formed previously or elsewhere.

## 6 FINDINGS

### 6.1 RELEVANCE: Are Project Interventions Doing the Right Things?

#### 6.1.1 Findings

This component of the evaluation sought to find evidence that related to these questions:

- How do the various stakeholders assess the relevance of HortiMAP to their needs and priorities? How has the project taken these needs and priorities into consideration?
- How are the objectives or interventions of the project consistent with beneficiaries' requirements and country needs?
- How could the project have been more relevant?
- How has the project addressed the underlying issues that led to the development of the project?
- How has the context of the project changed over time, and how has this influenced the project's relevance?

**Finding #1 - HortiMAP's is relevant to the target communities and their needs; it has addressed and continues to address critical challenges faced by SHF participants in the horticultural sector, such as lack of access to inputs, low market prices, and limited knowledge of sustainable agricultural practices. The relevance of the HortiMAP project is deemed to be high for its design and focus, and for its engagement strategy, though the time frame has been too short. HortiMAP became increasingly relevant by implementing most of the MTR recommendations.**

**Finding #2 - HortiMAP's efforts provided valuable trainings to farmers. The project's focus on GAPs contributed to awareness and use of sustainable farming practices, while specialized trainings on pre-and post-harvest handling, financial and business management, and integrated pest and disease management (IPM) have enhanced farmers' knowledge and skills in agriculture. However, rates of adoption of knowledge, innovation and technologies have not been well monitored or documented.**

#### Supportive data and Analysis

HortiMAP's integrated approach has attempted to address the very complex issues of production of fresh vegetables and fruits, markets, food security, financial access, gender and environmental protection. The relevance of the project's approach is borne out by the engagement of stakeholders, the ownership by participants of innovations brought about by the project and the uptake in project services. Overall, the achievements in the increased production of fruits and vegetables have seen the project readily embraced by participants as relevant to their lives and to the sector in which they are key participants.

The final evaluation established that the project responded very well to the recommendations of the MTR which were integrated into annual workplans and implemented to achieve project targets in the remaining period, making use of effectively trained HortiMAP and SME staff, lead farmers, and Master Trainers (ToTs) who in turn quickly provided training which supported more farmers with training tailored to the seasons and to the technology supplied by HortiMAP, and carry out additional needs assessments. The project hired an advocacy consultant to review policy gaps related to horticulture and TNS has indicated that it provided advocacy training to a cadre of people willing to build the capacity – reliability and skills – to advocate for horticultural farmers.

The Final Evaluation observed that:

**a) HortiMAP supported relevant training for SHFs:**

- The project targeted the right beneficiaries - smallholder farmers (SHFs) in all regions.
- Most farmers, 34,712 (88% of the target), received training in relevant areas, including climate smart agronomy, entrepreneurship, post-harvest handling-PHH, on-farm technologies, quality standards and nutrition. More specifically, 92% of the farmers participating in FGDs during the final evaluation in the three project regions reported receiving trainings on Pre-and Post-harvest handling. This specialized training covered best practices for handling crops before and after harvest, to ensure best quality produce and minimizing post-harvest losses. However, further review indicated that farmers produce still did not meet the market requirements. A contributing factor can be that trainings were not fully adopted or applied.
- Overall, 24,644 farmers (128% of target) across all districts received relevant training on Good Agricultural Practices or GAPs, which focused on techniques for sustainable farming, including soil management, crop rotation, and water conservation.
- Modern farming technologies were promoted, such as improved seed, irrigation, and proper use of fertilizer, conservation techniques, and timely planting. These were useful to farmers in addressing challenges of low yields coupled with recurrent impacts of climate change; this was highly needed and relevant to the targeted communities.
- SHFs and cooperative members were trained in relevant areas, including marketing skills. Marketing linkages which are relevant to farmers who face low and exploitative market prices were supported and somewhat improved.
- Multi-stakeholder platforms (MSPs) were instituted, as well as marketing structure which enabled SHFs and cooperative members to pursue the negotiation of prices.
- The final evaluation was no able to find evidence of an increase of prices of the horticultural produce. This was likely due to many factors including lack of aggregation, and poor product quality.
- Financial and business management training was reported by a small percentage of farmers. This training equipped farmers with essential knowledge in financial planning, record-keeping, and business management, empowering them to make informed decisions for their farming enterprises.

The project provided trainings which helped to transform horticultural crop productivity over the 4 years period. The majority of SHFs and cooperative members interviewed revealed that GAPs were highly needed and relevant due to low yields being realised prior to the project's intervention coupled with high negative impacts of climate change, which were addressed by the GAPs. For example, early and timely planting as well as row planting techniques for all supported value chains, and easy access to farm inputs through loans to address low crop yields are both still very fundamental. Also, training in compost manure making and application enhanced soil fertility, which in turn contributes to higher yields and improved soil health.

*Mr Twebaze Patrick, chairperson farmer group in Kabale District and Tukamushaba Jackline Secretary for production Rukiga district local government: testified that adoption of technology among members is high due to benefits they have seen. Jackline explained that the HortiMAP project is truly relevant as it has further motivated farmers to increase their horticultural production because of improved access to farm inputs and capacity building.*

**b) HortiMAP provided relevant training for Cooperatives and Farmers/Producers Associations:**

HortiMAP promoted capacity building in various aspects related to production, marketing, post-harvest handling and value addition initiatives in its effort to empower cooperative members to be independent.

The specific training included training on modern environmentally friendly farming techniques, such as terracing in Kabale and Kisoro districts, crop spacing; compost manure making and its application; post-harvest crop handling; marketing skills, farmer associations and/or VSLAs management and cooperative management, leadership and governance, including how to hold and the value/role of Annual General Meetings (AGM).

HortiMAP provided capacity building to cooperative members and leaders to ensure that the cooperatives remain vibrant with proper understanding of cooperative principles and promotion of sense of ownership among the members. The capacity building provided to producer cooperatives aimed to ensure that cooperatives are sustainable, profitable and gender equitable businesses in their communities, connecting women and men smallholder farmers to markets.

Information on the extent to which government officials have positive perceptions towards cooperatives and MSMEs is not readily available from HortiMAP project reports. While it has not been practically possible to collect such information during the fieldwork for this final evaluation, based on what was observed during the fieldwork, government officials from Ministry of Agriculture) and Ministry of Trade and Industry and especially from the Department of Cooperatives have supported the formation of cooperatives and are keen to see the cooperative sector develop, grow and survive. The main concern within government is that the 'path' previously adopted by cooperatives is more of 'development' (influenced and supported by NGOs which then stalled once the NGOs pull out and until another NGO comes in to again 'parent' the cooperatives) instead of adopting a 'business path' in which the cooperatives should be operating as 'market-oriented business entities.

**Finding #3 – HortiMAP's selection of enterprises was suitable to specific products grown in the three ecological zones and is considered a good strategy and commendable. Further, the horticulture sector and the specific products selected heavily involve women and youth.**

**Supportive data and Analysis**

The project strategically promoted crop value chains that are adaptable, tolerant, early maturing and high yielding in each zone, which are likely to help improve livelihoods of the beneficiaries. Horticultural value-chain crops that were promoted were highly demanded.

The project interventions directly benefited the horticulture sector. Horticulture is a sector that directly benefits SHFs, particularly youth and women farmers, as compared to other agricultural sectors that require large amount of capital as well as large expanses of land (e.g., perennial crops like coffee, banana, tea, etc.).

The project promoted enterprises that supported horticultural products specifically valuable for small producers in the specific zones, an approach that is recommended for replication in future programming initiatives.

**a) HortiMAP selected relevant farmer-facing MSMEs and provided them with relevant training**

The evaluation established that 168 farmer serving MSMEs (45% of the 375 targeted) are applying core recommended business management practices due to the project's training. This includes 10 SMEs and 50% of the input dealers. In addition, 7 POs out of the targeted 10 cooperatives were

applying core recommended business management practices. This achievement shows a high interest among MSME's and cooperatives in the continuing value of farmers as members and clients.

**b) HortiMAP selected relevant market facing MSMEs and provided relevant training**

The evaluation data showed that 192 market facing MSMEs (72% of target) are applying core recommended business management practices and technologies. It was however, established that there are missing market linkages between Uganda and the EAC and COMESA. Several countries in COMESA and EAC depend heavily on food imports. Canned fruits and vegetables, as well as fresh fruits and vegetables form a major part of their food chains, notably in their respective hospitality industries. There isn't enough market intelligence and market linkage efforts from government and others to connect FFV trade players to the available markets to close the demand gap. Future programming should address that.

Overall, the marketing of horticultural products faces many challenges, including the lack of marketing capacity in cooperatives, despite the presence of staff specific for this function. Strengthening the marketing component of the cooperatives may hold the key to the success of HortiMAP's other components.

**c) HortiMAP worked with MSMEs to directly address the needs of women and youth who have fewer assets on average.**

The horticultural enterprises that were selected were right for youth and women who do not own land but who can rent land. MSMEs engaged in the project accommodated smaller producers, and producers with less access to land and/or capital. This is good approach for leaving no one behind (supporting inclusivity) and represents good practice. This is also in line with stated government policy<sup>1</sup>.

The final evaluation's survey of participants showed that while over 88% of the respondents own their land, women own less land than men with an average of 2.6 acres, a figure that likely includes women headed households whose land was inherited from their husbands. This compares to an average of 3.0 acres owned by men. Women and youth still do not have sufficient access to land as their own land is limited land, and they do not have sufficient access to additional land.

**Finding # 4 - HortiMAP was highly relevant for its provision of finance into the horticulture sector, its support to healthy FFV and nutrition, and its support for job creation for SHFs. The project was particularly relevant also to the needs of women and youth. However, the availability of finance to smallholder horticultural farmers has been constrained so far and problems persist in SHFs accessing funds.**

**Supportive data and Analysis**

**a) HortiMAP provided Finance to farmers and into the horticulture sector**

- Increased access to financial services for smallholder farmers (SHFs) through VSLAs and SACCOs – an approach that responded to low-income levels of the targeted SHFs while also promoting a saving culture within households. A total of 2,463 farmers (25% of the 9,825 target) obtained catalytic finance from the project. They received Euro359,357 out of Euro2,700,000, or 13%, of the amount available for catalytic finance. More can be achieved in the time remaining. One crucial issue is that the financial institutions are still

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<sup>1</sup> MAAIF, Proposed Plan to Operationalize the Non-ATAAS Component of the Agriculture Sector Development Strategy and Investment Plan, November 2012.



operating on a business-as-usual basis and excluding SHFs that do not have collateral security for credit. The interest rates are still prohibitive at 36% per year.

- 1,379 farmers (48% of 2,900 targeted) have increased access to storage, transportation and processing infrastructure to meet market requirements, because of the MDF (finance) component of the project.
- The amount of finance obtained by farmers from external formal financial institutions was EURO226,944 (45% of the target of EURO500,000), which is an increase of 257% compared to the baseline of EURO63,584. Respondents involved in focus group discussions (FGDs) indicated a high level of appreciation for increased access to financial services, which in turn assisted farmers to acquire household assets such as houses roofed with iron sheets and permanent houses (brick walled houses), motorcycles for both domestic personal use and for commercial use as taxis (boda-bodas), and the purchase of goats, cows and other domestic livestock, among other assets. However, during FGDs, it was revealed that there are still persistent high levels of poverty, and many households are unable to meet financial needs such as school fees for their children. This suggests that additional efforts are still needed to increase access by SHF to finance that can contribute to higher incomes.
- The lack of capital remains a main challenge for the FFV sector. The project addressed this through HCL which should continue to be part of future programming though HCL's impact has not been established during this evaluation.
- The lack of a revolving fund for the FFV sector was a specific issue that was raised during MSP reflection meeting. The FFV sector involves a fast-moving chain of delicately handled fresh fruits and vegetables; a lot of cost goes into farming, handling, packaging, freight, and associated labour costs. These factors call for a certain level of liquidity and access to foreign exchange that is difficult to maintain for individual farmers, including SHFs or traders with low cashflow. Like other sectors intentionally targeted and funded by the government, the FFV sector needs a revolving fund or affordable credit lines that can be relied upon by the players involved in this sector. HCL should be further developed so that it has funds that are readily available as a highly responsive and easily accessing revolving fund.
- The final evaluation study nevertheless would confirm that HortiMAP has had a positive impact on the livelihoods of the beneficiaries from the participating farmers perspective. Our analysis is that the project contributed moderately to poverty reduction and improvements in people's livelihoods, though there is still a considerable way to go to complete the work that was started.

#### **b) HortiMAP supported improved Nutrition**

- HortiMAP aimed at increasing consumption of high-quality horticultural foods among farm families at least 3 times a week to complement and boost the horticulture sector.
- Cumulatively, through HortiMAP, 178,007 households (66% of the 270,000 targeted) had regular access to horticulture products that are healthy and diverse,
- Cumulatively, 16,198 households (52% of the target of 31,000) reported consumption of high-quality horticultural foods at least 3 times a week compared to a baseline of 2,272 households.

However, participants in FGDs, indicated that there are still high rates of malnutrition in their areas. This was similarly reported during MSP reflection meetings. These observations from

project participants are notable, though improved malnutrition rates in Districts were not an area of focus of HortiMAP.<sup>2</sup>

- Cumulatively, 2,755,000 consumers (or 276% out of the 1,000,000 targeted) were reached with information on safe, nutritious and quality FFV by the Program.

This is a significant achievement, which is attributed to several factors including the road shows and mass media outreach activities that should be replicated in future programming. The final evaluation was not able to establish the adoption rate of people (consumers) eating safe, nutritious and quality FFV. Future programming should put systems in place to track the effect of this intervention.

### c) HortiMAP supported job creation

- 9,268 Full Time Equivalent (FTE) jobs (116% of the target of 8,000 FTE) were created along the horticultural value chains, from a baseline of zero, including jobs for 5,371 men, 3,897 women and 5,555 youth, i.e., for 14,823 individuals. This is a commendable achievement. The final evaluation did not explore with TNS the location of these people by District or how the numbers were tallied.

### 6.1.2 Recommendations - Relevance

**Recommendation #1** - To increase the relevance of HortiMAP, project activities in the remaining period should shift away from production to emphasize post-harvest management (storage, grading, and packaging among others) and value addition (e.g., processing). There is overwhelming evidence of good production among the farmer associations and cooperatives with the support of the project. Much of the outcry related to marketing arises because the production is limited to raw products, though local markets exist for processed products, e.g., processed fruit juice, well packaged vegetables and fruits that have ready markets in supermarkets, and vegetables and fruits for nutritional rehabilitation projects that support under-nourished children e.g., UNHCR and USAID's Feed the Future.

**Recommendation #2** - Future programming should continue the focus on financial and business management training at farm level.

**Recommendation #3** - There isn't enough market intelligence and market linkage efforts from government and others to connect FFV trade players to the available markets to close the demand gap. Future programming should address that.

**Recommendation #4** - The project promoted enterprises that supported horticultural products specifically valuable for small producers in the specific zones, an approach that is recommended for replication in future programming initiatives

**Recommendation #5** - This review found that the lack of a revolving fund for the FFV sector is an issue that should be addressed in future programming. This is because the FFV sector involves a fast-moving chain of delicately handled fresh fruits and vegetables.

**Recommendation #6** - Consumer nutrition education is a significant achievement, which is attributed to numerous factors including the road shows and mass media outreach activities that should be replicated in future programming. To further enhance food safety and inform consumers on food safety, effective testing for chemical residues should be introduced, and integrated into consumer nutrition education.

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<sup>2</sup> The use of farming system approaches to achieving improvements in malnutrition have proved to be successful in other countries, for example in the well documented *Ekwendendi* program in central Malawi.



## 6.2 COHERENCE: How well does the intervention fit?

### 6.2.1 Findings

This component of the evaluation sought to find evidence that related to these questions:

- How are the project's achievements in line with policies and plans of the national and local authorities in the targeted areas? How was coherence achieved with other projects and programs (not funded by NL) in the targeted area? Could the project have been more coherent with these other projects?
- How was the design and implementation of HortiMAP coherent or consistent with NL strategy and project portfolio on food security in Uganda?

**Finding #5 – HortiMAP's support for the formation and facilitation of Multi-Stakeholder Platforms (MSPs) in three regions is a significant innovation towards the creation of coherence among multiple actors with a wide array of interests, roles and responsibilities. MSPs are creating a systemic change in the horticultural sector in these Regions for the specific value chains that are involved, though they are not formal structures.**

#### Supportive data and Analysis

The final evaluation reviewed the project framework for coherence and accountability with National and Local Government policies and programs. It was reported by District Officials that local government districts targeted by HortiMAP helped to identify the beneficiaries – motivated by project interventions that aligned with their priorities and needs. District officials and other local government workers participating in HortiMAP training were included as members of Multistakeholder Platforms (MSPs) and were used as facilitators in some of the trainings provided by HortiMAP (WUR/ISSD).

The project enjoyed a degree of political will and collaboration by officials in the Ministry of Agriculture, Ministry of Trade and Industry and among local governments. They promote the horticultural sector and food security in Uganda. HortiMAP engaged government officials in the districts through regional value-chain specific MSPs. (See below)

The project engaged public and private sector actors to facilitate local linkages resulting in the formation of MSPs in the three regions. The establishment of Multistakeholder Platforms (MSPs) was seen by beneficiaries as a vehicle for successful project intervention and involvement of stakeholders and for sustainable project interventions related to resolving identified and prioritized bottlenecks. These are mainly related to increasing inputs (seeds) and to spreading market information and increasing nutritional information. District Council representatives and RDCs spoke about this and have been active in problem solving.

More work is required to solidify the MSPs and to create other MSPs for additional specific crops/value chains.

- It was observed that the formation of MSPs fostered linkages with stakeholders such as input and output buyers and sellers interacting with farmers for business solutions and opportunities. This helped small producers to change their mind-set and change their marketing system. This changed from individual selling to collective marketing of produce, though not on a large scale. This change should be encouraged in the remaining period.
- The formation of specific MSP by value chain from producer to consumer is a current practice that was observed in SW Uganda - Pepper and Onion MSPs that were formed and supported by HortiMAP have started paying dividends to the beneficiaries according to reports shared during the MSP reflection meetings. Future programming should include

efforts to establish more value chain specific MSPs. The specific value chain MSPs promoted by HortiMAP are the future of horticulture in Uganda.

- The MSPs are still informal in nature and act as wide platforms where every topic is discussed regardless of whether it pertains to horticultural issues. The TORs for the operation of MSP should be determined and agreed/formalized. Registering current MSPs as entities will help to enforce some of the regulations and expand the capacity of participating companies to exercise more control over pesticides in the market, use new technology and ensure compliance.
- Strong SMEs need to be part of MSPs to systematically influence local value chains for horticultural products, and to influence government and donors. SMEs need to engage in partnerships with SHFs through POs and Coops, to improve input supply and market linkages.
- Adoption of the use of Participatory Monitoring and Evaluation by MSPs and local government/extension officers to direct the sector into commercial production are key for sustaining the project interventions. Similarly, good story telling supports project implementation and can be supported within the project's MEL component (Monitoring, Evaluation and Learning).

**FINDING #6 – HortiMAP farmers are using herbicides, pesticides and fertilizer extensively. However, there is a problem with fake and hazardous products (input) on the market along with a lack of enforcement of regulations concerning these products. This is affecting HortiMAP farmers who aren't assured of using effective products, which is lowering their yields. HortiMAP training has focused on the safe use of these products. MSPs have raised the issue of fake versus genuine products to influence bylaw enforcement at District level. However, the problem persists.**

### Supportive data and Analysis

It was established during this final evaluation and during the recent MSP reflection meetings that some traders, businessmen and other value chain actors continue to sell products that have been banned, e.g., pesticides. This is contrary to what the project is promoting. The availability of genuine agro-inputs is a very large and persistent problem in Uganda. During the FGDs and MSP reflection meetings, it was revealed that policy makers particularly at local government level have been lobbied to enforce the bylaws to address systemic problems affecting the horticultural value chains. For example, the prevalence of pests & diseases could be controlled effectively if genuine chemical inputs (pesticides, insecticides, fungicides, etc.) are used by farmers. Crop losses due to pests and diseases are estimated at 10-20% (pre-harvest); 20-30% (post-harvest); and up to 100% for perishable crops and export crops.

Uganda has been recognized as a hotspot for fake agrochemical production and where counterfeit pesticide levels may be over 40%. A 2022 survey prepared by the Anti Counterfeit Network indicated that 50% of the seeds and agro inputs in Uganda are fake. A presentation during the MSP reflection meetings, specifically noted that, based on the European Commission Regulation No 1107/2009, more than half (59%) of the 41 Highly Hazardous Pesticides (HHPs) identified under current official registration for use in Uganda are currently not approved for use across the European Union. Enforcement of agro chemical policy concerning the use of banned products: has not been effective.

It needs to be emphasized that training by HortiMAP on the safe use of pesticide, handling and safe disposal of contaminated materials and equipment as well as in prevention of toxic

contamination, and safety standards was addressed through TOT training in better product handling practices. This area of focus directly supported government avowed policy.

Expired products, lack of storage facilities and the lack of by-law enforcement by the local authorities compound the situation. Although Multi-Stakeholder Platforms (MSPs) have the capacity and have been informing local and higher levels of government regarding food safety, they have limited resources. This situation is exacerbated by the fact that the project hasn't been able to push the government at the highest level.

New methods are needed to find solutions for HortiMAP's participating SHFs, such as encouraging cooperatives to stock inputs for their members and establishing farmers groups to do the same. There is a need for consumer awareness. This is an area that requires more focus and resources in the remaining period and in future programming.

**FINDING #7 – While other agriculture extension and capacity building and livelihood programs exist in the same areas where HortiMAP has worked, few if any focus on horticulture. The farmers that HortiMAP works with are influenced by other projects in other aspects of their farm operations. HortiMAP's influence can be discerned because of its sole focus on horticulture. The other projects operate differently – not all of them aim primarily at benefiting SHF. HortiMAP's focus on benefiting SHF in the horticulture sector makes it stand out and of greater benefit to farmers. TechnoServe's extensive experience in the horticulture sector positioned it well as the executing agency.**

#### **Supportive data and Analysis**

The evaluation noted that some coherence related factors negatively affected the project. It was found that HortiMAP's interventions are being derailed by other actors such as market vendors and other NGOs that say they are supporting farmers but who are not promoting a cooperative model, their practices are inconsistent with those of HortiMAP's. Other bilateral programs and projects are being implemented by a range of non-government organizations and contractors, for example, FAs, VSLAs, local government extension service, projects funded by USAID, World Vision were working with farmers in the same geographic areas as HortiMAP. Many of the projects did not work with cooperatives. These projects promoted production, marketing, and financial services, but not through cooperatives that are member owned, member used, and member controlled. The messaging from these projects appeared to frustrate HortiMAP-supported farmers, who in some cases, became discouraged as the benefits, the proceeds, as benefits of their work through cooperatives (such as collective procurement of inputs, collective marketing of farmers produce) were not realized quickly.

The evaluators noted that in many cases these projects acquired more benefits for their implementing institutions than for small producers who derived few benefits. The model that HortiMAP implemented ensured that small producers were primary beneficiaries with access to financing, marketing services and business-focused solutions.

The final evaluation reconfirmed what was noted during MTR that many of the HortiMAP's innovations and approaches (e.g., good agricultural practices, irrigation initiatives) are also featured in the work of other NGOs (e.g., World Vision, Mercy Corps) and government projects (e.g., good agricultural practices including conservation farming is featured in many of the Ministry of Agriculture's projects). Most of these innovations target the same farmers. The progress and prospects of these innovations deserve an in-depth analysis, though it is unreasonable to expect HortiMAP to devote significant resources to this analysis. HortiMAP's relatively success also lies in supporting increased production along specific horticultural value chains, along with the provision of access to finance for production, and access to markets. Future programming should focus on attribution as this remains a challenge for monitoring and evaluation.

**FINDING #8 – HortiMAP’s attempts to influence Uganda’s horticulture policy environment through advocacy by cooperatives was largely not achieved due to the weakness of the cooperatives. However, gains were made in HortiMAP’s work with UNSB on standards and certification. HortiMAP has made recent strides in analysing Uganda’s horticultural policy. The hiring of a technical consultant and subsequent streamlining of the project activities under SO3 in the last year has been remarkable. More needs to be done in terms of lobbying and advocacy, building on the foundation that has been developed.**

### **Supportive data and Analysis**

HortiMAP attempted to influence Uganda’s horticulture policy environment through advocacy by cooperatives, though this was largely not achieved. The work done to engage the government to review and support the sector is of high importance to SHFs and cooperatives in Uganda. In the closing period of the project, it will be essential to find an audience among key government stakeholders, such as the Chairmen of relevant committees of Parliament, policy officers within the Ministry of Agriculture, Animal Industry and Fisheries, and the Ministry of Trade and Industry, among others, to ensure there is a robust policy on horticulture and horticultural co-operatives.

Policy conversations have been initiated with the Ministry of Agriculture (as custodian of agriculture producer policies) and the Ministry of Trade and Industry (as custodian of Cooperative policies) with a view to reviewing various policies and Acts. Of special interest is the need for Uganda to place horticultural cooperatives under an apex body of agricultural producers like UCUSCU, which is an apex body for informal financial institutions in Uganda.

The government is also engaged in activities that provide additional complementary benefits to SHFs. Local governments are improving the rural road infrastructure by grading the gravelled road and passing local by-laws to remove fake inputs on the market. Stakeholders especially farmers and producer cooperatives are taking initiatives such as transporting commodities to ensure timely delivery of the produce to the markets to maintain the quality, encouraging the adoption of organic manure for soil fertility improvement, and addressing climate change effects on agriculture to enable the continued production of healthy fruits and vegetables. The existence of government programs such as Operation Wealth Creation (OWC) and Parish Development Model (PDM) to support horticultural value chains among others, is a testament to the coherence of HortiMAP.

HortiMAP is coherent with the needs of the smallholder farmers and local authorities, and with the local enterprises that are designing innovations through new initiatives. However, these innovations have been limited by the lack of resources. These enterprises should be supported by other ongoing programs, such as HCL being offered by PCP.

HortiMAP worked well with Uganda National Bureau of Standard, UNBS, to achieve guidelines/standards for over 30 vegetables and strengthened its staff related to horticultural food safety, certification and testing agreements, certifying over 12 organizations, while also supporting 2-3 initiatives. The continuing presence of fake inputs on the market affects the production of healthy horticulture products. This issue was discussed during a recent MSP reflection meeting. It is recommended that Ugandan National Bureau of Standards (UNBS) continue to enforce standards as mandated by the law and strengthen the enforcement of food safety regulations.

Relations with the Government were not all smooth. TechnoServe acquired an MOU with Uganda government only recently, so at one level there were bureaucratic barriers. Similarly, in SO3, bureaucratic barriers stood in the way of Ministerial adoption of some tools developed by HortiMAP. The hiring of a technical consultant and subsequent streamlining of the project activities, especially under SO3, in the last year has been remarkable.

The involvement of policy experts at the beginning of the project implementation should be a priority for future programming. A full-time policy expert to focus on training people to carry out advocacy activities vis a vis government in the fruit and vegetable sector is achievable, and to produce a cadre of lobbyists with the capacity (reliability, skills) to advocate for small-scale horticultural farmers is critical. It is recommended that future programming should consider recruitment of similarly dedicated staff from the onset of the project. The HortiMAP project team currently has staff supporting such functions as Program Coordinator, M&E Lead, but the team is missing activity specialists for private sector engagement and policy/advocacy.

The evaluation noted that despite the project's engagement of MAAIF and UNBS, it was only recently that an MOU was signed with TNS. This implies that achieving a better enabling environment responsive to the horticulture sector was achieved only late in the life of the project, and only modest progress was made engaging government. Despite the limited progress, there has been no progress in the evolution of government policy towards the horticultural sector. This negatively affected the achievement of planned outcomes in policy reform.

### **6.2.2 Recommendations - Coherence**

**Recommendation #1** - Formation of specific MSP by value chain from producer to consumer is a current practice that was observed in SW Uganda - Pepper and Onion MSPs that were formed and supported by HortiMAP have started paying dividends to the beneficiaries according to reports shared during the MSP reflection meetings. Future programming should include efforts to establish more value chain specific MSPs.

**Recommendation #2** - MSPs are an area that requires more focus and resources in the remaining period and in future programming. Specifically: a) interim funding should be provided to MSPs; b) strengthen stakeholder engagements as more partners come on board; c) expand district-based stakeholders' meetings to involve local participants; and d) address region specific challenges in MSP operations, with a focus on marketing.

**Recommendation #3** - Future programming should focus on attribution as this remains a challenge for monitoring and evaluation.

**Recommendation #4** - In the remaining 6 months, HortiMAP's exit strategy should lay out a monitoring system to keep track of the project's succeeded in introducing useful innovations among farmer associations and producer cooperatives including access to finance and irrigation kits. This monitoring should focus on sustainability.

**Recommendation #5** - It is recommended that Ugandan National Bureau of Standards (UNBS) continue to enforce standards as mandated by the law., and even increase its enforcement.

**Recommendation #6** - Future programming should consider recruitment of dedicated staff in other areas critical to the project from the onset of the project. HortiMAP should include in-house specialists such as Private Sector and Policy specialists, to complement the current HortiMAP project team

**Recommendation #7** - The involvement of policy experts at the beginning of the project implementation should be a priority for future programming. A full-time policy expert to focus on training people to carry out advocacy activities vis a vis government in the fruit and vegetable sector, to produce a cadre of lobbyists with the capacity (reliability, skills) to advocate for small-scale horticultural farmers is key in future projects.

**Recommendation #8** - Future projects should conduct a gap analysis to establish a policy framework to guide specific advocacy initiatives. Policy advocacy must be rooted in a solid analysis related to policies and regulations on horticulture marketing, transportation, etc. Future programming should facilitate the policy analysis process and produce policy briefs and roadmaps towards creating an enabling environment conducive to horticulture. The next step is to ensure a



roadmap for policy change is developed and accepted by the government. The policy and regulatory reform might require an extensive effort to get commitments from government, including building government capacity to implement the needed policies.

## 6.3 EFFECTIVENESS: Are interventions achieving the project's objectives?

### 6.3.1 Findings

This component of the evaluation sought to find evidence that related to these questions:

- How has HortiMAP achieved its intended objectives, its outcomes and outputs, as stated in the project results framework, in terms of quantity of outcomes and quality? Of outcomes (why was there over or underachievement) Are the outcomes entirely attributable to the HortiMAP project?
- What has changed for the target groups – e.g., SHF's access to horticultural inputs and products, productivity, agro-finance, household income and employment in horticulture jobs? How has the horticultural sector been transformed, particularly the extent to which the project has captured local and regional market opportunity, job creation along the horticultural value chains, and household access to horticultural inputs and products?
- How have HortiMAP's interventions (and approach) brought about positive changes among businesses of the horticulture actors?
- What unintended consequences emerged from the project? (positive or negative)
- Was the program logic adequate? ...consider the assumptions linking the outputs to the outcomes, and the risk assessment. Has the gender strategy been used to achieve gender-specific targets, and were the gender indicators, ok? How adequate was risk management and conflict sensitivity, and how has project implementation been adjusted (based on regular review of assumptions and risks)? How did the project strategy relate to the project context and the "political economy" of the project activities?

The Final Evaluation assessed whether the project achieved its intended objectives, and what major factors influenced the achievement/non-achievement of the project objectives, and what has changed for the target group. The evaluation also explored the level of understanding in communities about project achievements and how the change in their lives matched what the project had planned and implemented.

**FINDING #9 - HortiMAP beneficiaries – SHF, cooperative leaders, implementing partners and government stakeholders in the three regions – testified that there was increased horticultural crop production, improved marketing, improved livelihoods and improved nutrition. There was evidence that beneficiary farmers increased their yields due to increased capacity on the use of modern farming technologies, including GAPs for all supported value chains, and improved access to farm inputs. In many ways it was the farmers themselves who gained agency and made this project a success.**

#### Supportive data and Analysis

The evaluation results show that 18,397 farmers (74% of target) have an increase in income compared to the baseline of 0 (zero).

There has been a 48% average increase in horticultural crop yields per acre for both women and men in project supported value chains. In FGDs and MSP reflection meetings, farmers confirmed their increases in yields (see also Finding 15).

16,198 (52%) of project-supported farmer households reported consumption of high-quality

horticultural foods at least 3 times a week.

178,007 people (66% of the target of 270,000) have regular access to healthy and diverse FFV.

The value of the horticultural crop harvested for import substitution was EURO5,741,025 (40.3% higher than the target of EURO4,093,162.

Incremental increase in revenues realized by market facing MSMEs achieved EURO1,186,638 or 23% of target (EURO5,200.000) However, HortiMAP reported that most farmers did not sell to the SMEs they were linked to because of product quality issues. Middlemen and vendors dominated sales/purchases.

Incremental revenue realized by farmers and attributed to the project came to EURO2,461,073 or 38% of the target (EURO6.5M)

Cumulatively, 1,379 farmers (48% of the targeted 2,700 farmers) have increased access to storage, transportation and processing infrastructure to meet market requirements, as a result of the project.

9,268 Full Time Equivalent (FTE) jobs (116% of the target of 8,000 FTE) were created along the horticultural value chain, from a baseline of zero.

Here is the latest data from HortiMAP's M&E system (IPPT):

**Table 3: HortiMAP's performance data for Outcomes, October 2024.**

KEY INDICATORS	COMPONENTS	TARGET	BASELINE VALUES	MID TERM VALUES	FINAL EVALUATION
<b>IMPACT:</b> The program contributes to poverty reduction, adequate food and nutrition security, and job creation					
Number (% age) of farmers with an increase in income	Overall	25,000 (60%)	0 (0%)	5,109 (24%)	18,397 (74%)
	Female	10,000	0 (0%)	1,420 (15%)	6,955 (70%)
	Male	15,000	0 (0%)	3,696 (32%)	11,442 (76%)
	Central	8,334	0 (0%)	2,678 (33%)	6,502 (78%)
	East	8,333	0 (0%)	830 (13%)	5,234 (63%)
	Southwest	8,333	0 (0%)	1,607 (25%)	6,661 (80%)
Average annual income of surveyed farmers at baseline in Euros	Total number / average annual income in Euros		966	1,246	1,378 (43% incr.)
	Female		629	849	1,086 (77% incr.)
	Male		1,033	1,563	1,696 (64% incr.)
	Youth 18-35 years		953	1,363	1,509 (58% incr.)
	Adults 36+ years		971	1,221	1,316 (36% incr.)
	Central		1,251	1,684	1,945 (55% incr.)
	East		857	934	951 (11% incr.)
	Southwest		787	1,013	1,390 (77% incr.)
Number of consumer households with increased access to safe and nutritious fruits and vegetables		270,000	0	0	178,007 (66%)
Number of jobs created along the horticulture value chain		12,000	0	1,984	9,268 (77%)
<b>GOAL:</b> The project contributes to a horticulture sector that is transformed to an efficient, inclusive and competitive sector					

KEY INDICATORS	COMPONENTS	TARGET	BASELINE VALUES	MID TERM VALUES	FINAL EVALUATION
Views of horticulture sector influencers on the modernity, organization and relationship of farmers, POs and MSMEs within the sector	N/A	Narrative: Sector is organized	Narrative: Sector is disorganized	Narrative; Sector still disorganized	Narrative: Sector is still disorganized but noticeable improvements realized
Current Value of Horticultural exports		\$70.2 million (€60 million)	\$16,788 million (€ 14.349 million)	\$19,371 million (€ 16.556 million)	\$32,634 million (46%) (€ 27.893 million)
Percentage of female farmers that are progressively empowered.		65.7% (15,500)	16%	29.5%	43.8% (6,793)
Number of farmers resilient to shocks		12,400	0 (0%)	487 (2.3%)	4,894 (39.5 %)
Amt. of Investment in Euros by Farmers and MSMEs in the horticultural sector due to the project		€8,000,000	€0	€724,706	€4,702,543 (59%)
<b>Outcome 1: Productivity, production and supply of horticulture products sustainably improved for farmers (SO1)</b>					
Percentage change in average yield per acre of priority horticultural crops	Overall Average yield change per acre	20%	0%	11.1%	9.6%
Average yield per acre (in Kg) for selected crops	Tomatoes	6,119	5,099	4,342	5,294
	Cabbage	8,413	7,011	5,734	5,911
	Onions	2,828	2,357	4,602	5,148
	Passion fruits	2,815	2,346	1,800	2,609
	Carrots	2,222	1,852	1,875	1,907
	Egg Plant	3,980	3,317	6,597	2,106
	Pepper	4,204	3,504	3,917	2,206
<b>Outcome 2: Improved competitiveness of MSMEs, POs and farmers who have access to domestic, regional and export markets for nutritious horticulture products (SO2)</b>					
Incremental revenues realized by farmers attributable to the project		€6,500,000	€0	€47,893	€2,461,073 (38%)
Number of farmers reporting selling to quality differentiated domestic, regional and international due to the project		25,000	0	2,753	6,628 (26.5%)
Attributable revenue realized by market facing MSMEs and POs because of the project		€5,200,000	€0	€1,088,429	€1,186,638 (23%)
<b>Outcome 3: Service provision capacity of the public sector is strengthened (SO3)</b>					
Number of changes achieved in the institutional and regulatory framework servicing the horticulture		4	0	0	2 (50%)



KEY INDICATORS	COMPONENTS	TARGET	BASELINE VALUES	MID TERM VALUES	FINAL EVALUATION
sector.					

The activities of the three pillars were designed to be carried out simultaneously during the HortiMAP implementation period and the targets that were set to be achieved by the end of the project all look very ambitious, considering the state of farmer associations and cooperatives. HortiMAP is working with local institutions that were not well-developed and did not closely follow the cooperative functions and principles before the project started; the lack of horticultural cooperatives compounded the situation.

**FINDING #10 - HortiMAP initiatives created awareness of healthy, nutritious fresh fruits and vegetables (FFV) among consumers, as part of its efforts to develop the domestic market for horticultural producers.**

#### Supportive data and Analysis

The Final Evaluation observed that 178,007 households (66% of target) have regular access to horticulture products (FFV) that are healthy and diverse (non-certified organic) compared to zero at baseline. Participants on the FGDs conducted during the final evaluation indicated that there are still a high number of cases of malnutrition in the area.

The project demonstrated incremental change in consumer purchase preferences for nutritious and safe fruit and vegetable products in target markets with a change demonstrated by 73% of the target, i.e., a large majority of the 30% of consumers targeted.

Likewise, 207% of targeted market vendors (micro-retailers), 1,119 out of the 540 who were targeted, were certified by the project to display “healthy and safe branding” on FFV products and/or stalls. This is commendable and the project should work to sustain the intervention in the remaining 6 months.

**FINDING #11 - As a result of a robust training program implemented under HortiMAP, there was secondary evidence of a reasonable adoption rate – a good result. However, there needs to be further analysis using a more systematic approach.**

#### Supportive data and Analysis

Cumulatively, 18,331 farmers (73% of target) applied improved methods on their farms – Good Agric Practices-GAPs – and climate smart agricultural (CSA) practices and technologies. Of the target of 10,000 female farmers, a total of 9,715 (97%) females and 6,002 youths (80% of 7500 targeted) applied GAPs and CSA, a significant increase compared to 9% and 11%, respectively, applying those practices at baseline. However, these results need to be more rigorously determined using methodologies, such as Knowledge, Attitude and Practice-KAP, to determine behavioural change.

These benefits are attributable to the strong training program of HortiMAP. A total of 12,412 farmers (62% of target) were trained in climate smart agronomy, entrepreneurship, PHH, on-farm technologies, product quality standards and nutrition by private sector entities coordinated with by HortiMAP. A further 24,644 farmers (128% of target) were directly trained by the project - by ISSD and WUR/ISSD. A total of 37,056 farmers were trained, 94.3% of the target of 39,300 farmers to be trained.

**FINDING #12 – The project has good success supporting farmer-facing MSMEs to provide core business management advisory and/or financial linkage support services, achieving results well beyond targets. However, farmers were not able to sell to the MSMEs due to their low-quality produce, lack of aggregation and grading, compounded by the presence of middlemen and vendors who dominated and distorted the market, by offering immediate cash payments at lower prices, lowering farmers potential income.**

#### **Supportive data and Analysis**

The evaluation observed that 20 out of 25 farmer facing MSMEs received core business management advisory and/or financial linkage support service (80% of target). Cumulatively, 32,647 farmers (SHFs and Entrepreneur Farmers) (83% of target) were linked to farmer facing MSMEs to access recommended products and services. This is a significant achievement and is commendable. Further, District Commercial Officers (DCOs) have just reviewed and completed the business training curriculum which is now being rolled out. This training should be carried out during the remaining period of the project.

Sixty (60) POs and FAs (240% of target) received core business management advisory support and/or financial linkage support. This is attributed to the willingness of the POs and FAs to be involved, and the capacity-building initiatives promoted by HortiMAP.

Incremental income received by farmer facing MSMEs that is attributable to the project was EURO 1,332,126, surpassing the targeted EURO 1,000,000, or 133% of the target.

However, incremental revenue attributable to the project realized by market facing MSMEs, and POs came to EURO 1,186,638 or 23% of the target of EURO 5,200,000.

According to HortiMAP, most farmers did not sell to the SMEs they were linked to because of low quality produce, compounded by the presence of middlemen and vendors who dominated and distorted the market. Future programming should focus on formation of horticultural marketing arms within existing cooperatives that would provide market information, storage facilities and add value through processing, packaging and marketing.

**FINDING #13 – Farmers and, more particularly, members of producer cooperative have increased access to financial services and are increasingly meeting their financial needs. However, significant problems exist in the system for SHF to access finance. Credit remains very expensive. HortiMAP's short time frame meant that some interventions for farmers to access funds are just starting to provide financial services.**

#### **Supportive data and Analysis**

The Final Evaluation survey responses show that men (58%) and women (42%) were able to meet their financial needs.

Age-wise, youth (42%), adults (55%) and elderly (4%) indicated they were able to meet their financial needs.

By Region, Eastern (42%) and Southwestern (39%) farmers were able to meet their financial needs, whereas only 19% of farmers in Central region were able to meet their financial needs.

In addition, to meet their financial needs farmers used a range of coping mechanisms. – borrowing from SACCOs (men 48.4% and women 38%); and borrowing from relatives (32.3% for both men and women).

Coping mechanisms by Regional were similar. For example, borrowing from SACCOs in Central region: was 35.1%, Eastern was 51.4% and Southwestern was 48.7% - for an overall average of 43.9%; while borrowing from relative or neighbours in Central region was 30.1%, Eastern 27.9%

and Southwestern 38.8%, for an overall average of 32.4%. (Source: survey data). There represents an increase in access to finance by SHFs compared to MTR which was 33% from all sources.

Participation in VSLAs has strengthened farmer groups and farmer's income through increased and easier access to loans for buying farm inputs and investing in other income generating activities (IGAs). Members are now accessing loans from VSLAs, without involvement of collateral and they no longer must travel long distances to commercial banks to arrange loans.

A key achievement of HortiMAP is the strengthening and institutionalization of SACCOs within the project area that offer financial access, notably in southwestern Uganda where several SACCOs (including Rukiga SACCO, Ryamujungu SACCO, Akashenyi SACCO, and Kyahi Dukore SACCO) have received substantial amounts of funds for capitalization from PCP. This development promotes a steady income among their members.

HortiMAP worked to ensure that farmers establish relationships with SMEs and SACCOs. This resulted in a large demand among HortiMAP farmers for project-promoted interventions such as solar powered irrigation equipment, value addition initiatives (e.g., processing fruits and vegetables), linkages with financial institutions (for credit), input suppliers/storekeepers and storage facilities.

**FINDING #14 – HortiMAP was effective in its efforts to build new structures and systems to strengthen the Horticultural sector. But the sector remains weak. The key weakness is in the marketing of horticultural produce.**

#### **Supportive data and Analysis**

As noted under Coherence, regional multi-stakeholder platforms (MSPs) were created and quickly became effective. At the start of the project there was no MSP in place, whereas at end of the project, 3 MSPs had been established (100% of the target of 3), with each MSP having a lot of visibility across all stakeholders in that region.

At the end of project, two horticulture crops (67% of the target of 3) were piloted under the 'developed traceability system'. This means that 2 crops were traced from source of seeds, through production, marketing, up to the consumer, to ensure a proper mechanism is in place to trace the product right through the value chain, including knowing the attributes of the product at each step.

One private 'quality guarantee scheme' has been contracted to promote local GAP standards, which was piloted as Pure Grow Africa.

HortiMAP worked with two organizations – NARO and UNBS – signing MOUs with each, to strengthen their horticultural-related work. HortiMAP strengthened UNBS's certification system for horticultural crops. HortiMAP's work with NARO supported collaboration on research in southwestern Uganda at the Kachwekano Zonal Research Institute, which focused on breeding resistance and tolerance into selected horticultural crop seeds.

Further, HortiMAP did significant work to strengthen MAAIF's capabilities in SPS and horticultural field inspection, with 274 extension officers trained (of 100 targeted) – a major overachievement.

HortiMAP also aimed to have an impact on cooperatives, but there was low achievement as many cooperatives remain weak and transitioning from farmer associations. Cooperatives are still focusing on building strong institutions. HortiMAP worked with a total of 33 cooperatives, only 10 of which are strong. While none focused solely on horticulture, all supported horticultural farmers in some way.

**One coop member, a horticultural farmer, remarked that *members are very motivated due to increased access to income through VSLAs and cooperatives.***

**FINDING #15 – Participants were able to clearly articulate the top gains/benefits they acquired from HortiMAP. They gained skills and knowledge from training provided by the project; they accessed better markets for their produce, and they accessed improved and genuine seeds/inputs that are easier to access at reasonable prices.**

### Supportive data and Analysis

The final evaluation measured gains by HortiMAP among beneficiaries, as presented in the table below.

**Table 4: Top gains/benefits obtained from HortiMAP interventions indicated by farmers surveyed (respondents provided multiple responses)**

Project gains	Gender		
	Male (n=1043)	Female (n=810)	Total (N=1853)
Gain skills and knowledge from training provided by the project	34%	34.2%	34.1%
Accessed better markets for my produce	16%	14.8%	15.7%
Accessed improved and genuine seeds/inputs that are easier to access at reasonable prices	13%	13.0%	12.9%
Accessed better post-harvest storage facilities	9%	9.4%	9.3%
Finding fewer counterfeit products available on supplier shelves	10%	9.3%	9.9%
Accessed financial services	7%	7.4%	7.1%
Accessed knowledge on food safety and food handling	8%	10.0%	9.1%
Others	2%	1.9%	1.9%

The survey data analysis indicates that 62.7% women and men farmers indicated the following as their top benefit from HortiMAP: 34.1% said their biggest gain was skills and knowledge from trainings provided, 15.7% indicated their biggest gain was accessing better markets for their produce, and 12.9% of farmers indicated their biggest gain was accessing improved and genuine seeds at reasonable price. While women and men indicated equally that they ‘gained skills and knowledge’ and ‘accessed improved and genuine inputs’, men indicated somewhat more of a gain than women in ‘access to better markets for their produce’.

Many gains/benefits from HortiMAP were widely experienced by farmers. In FGDs, 312 farmers indicated how widely 10 gains/benefits were experienced:

- Increased and improved production (mentioned by 93% of FGD respondents)
- Planting on time (mentioned by 82% of FGD respondents)
- Sorting and value addition to the produces (mentioned by 69% of FGD respondents)
- Grading their produces before sell to the market improved quality of farmers produce (mentioned by 82% of FGD respondents)
- Buying and planting of improved and high-quality seeds (mentioned by 95% of FGD respondents)
- Increased quality products produced by the farmers (mentioned by 86% of FGD respondents)
- Increased capacity and knowledge on financial literacy (mentioned by 77% of FGD respondents)

- Improved post-harvest handling practices which increased shelf life of the produce (mentioned by 63% of FGD respondents)
- Easy access to financial institutions for credit as farmers became members of SACCOs (mentioned by 91% of FGD respondents).
- High production due to planting on time and use of quality seeds (mentioned by 98% of FGD respondents).

The final evaluation measured project effectiveness as high among coop stakeholders and farmers who were members of POs, FAs and EFs, as shown in **Table 5**, below.

**Table 5: HortiMAP project results summarized and quantified - from focus group discussions**

Area and Extent of achievement	Beneficiaries	
	Coop Member (n=38)	Members of POs, FA, EFs (n=38)
<i>Increased production</i>		
Very great extent	15.8%	13.2%
Great extent	52.6%	50.0%
Some extent	31.6%	31.6%
Very little extent	0.0%	5.3%
<i>Increased access to financial services</i>		
Very great extent	18.4%	18.4%
Great extent	52.6%	52.6%
Some extent	28.9%	26.3%
Very little extent	0.0%	2.6%
<i>Improved marketing</i>		
Very great extent	13.6%	18.4%
Great extent	55.3%	39.5%
Some extent	23.7%	39.5%
Very little extent	7.9%	2.6%
<i>Improved profitability</i>		
Very great extent	21.0%	21.0%
Great extent	60.5%	44.7%
Some extent	15.8%	31.6%
Very little extent	2.6%	2.6%
<i>Improved government policies</i>		
Very great extent	15.8%	23.7%
Great extent	52.6%	39.5%
Some extent	31.6%	34.2%
Very little extent	0.0%	2.6%
<i>Improved organizational sustainability</i>		
Very great extent	18.4%	15.8%
Great extent	50.0%	47.4%
Some extent	29.0%	34.2%
Very little extent	2.6%	2.6%
<i>Improved gender equality</i>		
Very great extent	23.7%	26.3%
Great extent	50.0%	39.5%
Some extent	23.6%	29.0%

Very little extent	2.6%	5.3%
<i>Increased resilience to climate change impacts and disasters</i>		
Very great extent	15.8%	21.1%
Great extent	42.1%	23.7%
Some extent	36.8%	50.0%
Very little extent	5.3%	5.3%

- The main benefits of the project to members of cooperatives were, to **a very great or great extent**: *improved profitability, improved gender equality and increased access to financial services.*
- The main benefits of the project to members of POs and FA, and EFs were, to **a very great or great extent**: *increased access to financial services, improved gender equality, and improved profitability.*
- The benefits of the projects to all participants surveyed were **to some or very little extent**: *increased resilience to climate change impacts and disasters, and improved marketing.*

**FINDING #16 – Participants were able to clearly articulate remaining barriers/challenges to production, productivity and marketing in the project area. The main barriers identified, based on choices provided, were high incidences of pests and diseases, limited access to markets and market information, and limited knowledge of agronomy / agricultural practices.**

### Supportive data and Analysis

The evaluation established several challenges and barriers still face women and men farmers. The key barriers/challenges to production, productivity and marketing by gender were measured. Slightly more women (37.6%) than men (35.6%) indicated pests and diseases, limited access to markets and market information (17.6%) as the key challenges/problems. Whereas men reported limited knowledge in agronomy/agricultural practices (15.9%), post-harvest handling methods/practices and poor road network were 14.6% and 15.9%, for women and men, respectively. See below.



Figure 2: Barriers/challenges to production, productivity and marketing by Gender

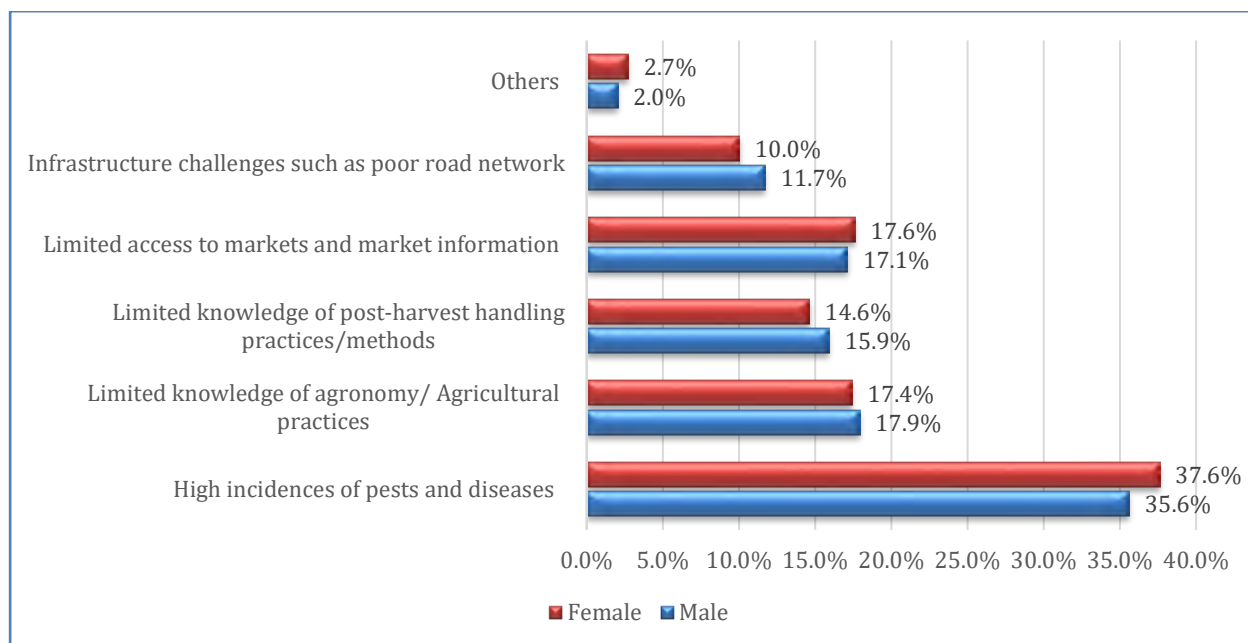


Table 6 presents the remaining challenges faced by farmers by level of education achieved.

- **High incidents of pests and diseases** were reported as the main challenge for 36.5% of farmers. Broken down by education levels, this was a main challenge for 38.4% of people with primary education, by 36% of people with secondary education, by 35.2% of people with post-secondary education and by 27.8% of people with no literacy.
- **Limited access to knowledge about agronomy/agric. practices** was the second main challenge for 17.6 % of people surveyed. Broken down by education levels, this challenge was indicated as a key challenge by 17.1% of people with secondary education, by 18.1% of people with post-secondary education, by 19% of people with no literacy, and 18.1% of people with primary education.
- **Limited access to markets and market information** was reported as the third main challenge for 17.3% of farmers. Broken down by education levels, this was a main challenge for 17.5% of people with primary education, 17.1% of people with secondary education, by 19.1% of people with post-secondary education and by 18.5% of people with no literacy.

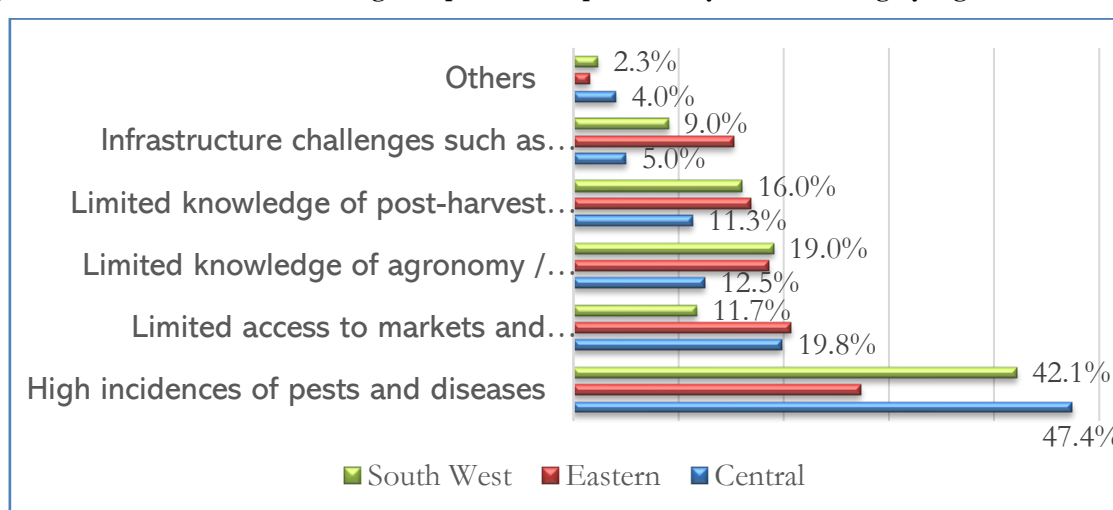
Table 6: The main barriers/challenges to production, productivity and marketing by level of education

	Educational Levels					
	Illiterate	Primary	Secondary	Post-secondary	Other	Total
High incidences of pests and diseases	27.8	38.4	36	35.2	43.5	36.5
Limited access to markets and market information	18.5	17.5	17.1	19.1	13	17.3
Limited knowledge of agronomy / agricultural practices	19	18.1	17.1	18.1	14.8	17.6
Limited knowledge of post-harvest handling practices/methods	18.1	14.3	16	15.2	13.9	15.3

Infrastructure challenges such as poor road network	14.2	9.9	11.3	11.4	10.2	11
Others	2.4	1.9	2.6	0.9	4.6	2.3
Total	100	100	100	100	100	100

Perceived barriers/challenges to production, productivity and marketing (**Figure 3**) were measured among survey participants and analysed by region. In the central region (47.4%) and southwestern region (42.1%) and eastern region (27.3) farmers reported pests and diseases as their main barrier to increasing production. Limited access to markets and market information was a key challenge to farmers in the central region (19.8%) and southwestern region (11.7%) and eastern region (20.6%). Limited knowledge in agronomy/agricultural practices was a key challenge to farmers in central region (12.5%) and southwestern region (19%) and eastern region (18.6%).

**Figure 3: Perceived barriers/challenges to production, productivity and marketing by region**



**FINDING #17 – HortiMAP beneficiaries have been able to access finance through HCL and various MDF grants. Although MDF grants have worked to provide finance, farmers are generally unable to access these funds directly due to co-sharing requirements.**

#### Supportive data and Analysis

Our survey showed that 57.9% of male farmers and 42.1% of female farmers were able to access finance through HortiMAP programs. This was attributed to the horticulture credit line (HCL) delivered through SACCOs supported by HortiMAP.

Several MDF (Market Development Fund) grant facilities were implemented by HortiMAP, including these four: Catalytic Matching Grants Facility, Micro-grants FOs & FG, Micro-Grants to individual EFs, and Product Certification Grants. All these grants were targeting the same group of beneficiaries, increasing the number of farmers able to access finance from one of the sources within the short time frame of the project. All these grants have enabled farmers to access finance.

The evaluation has established that HCL has taken off and can provide a pathway forward into the future as farmers have found ways to access these funds and pay them back. MDF grants target the same beneficiaries, but they can be consolidated and merged into HCL, which seems to be succeeding. (They offer very cheap grant finance but could distort the market of SACCOs.) A SACCO-specific strategy to support SHF (horticulture) is needed that would also ensure the sustainability of SACCOs while allowing them to keep their key operating principles.



Accessing MDF grants on a 50-50 co-funding basis is reportedly high (69% of survey respondents), yet it needs to be revised in future programming to relieve the stress it puts on horticultural farmers. Farmer preference is 25:75 co-funding. The final evaluation recommends that HortiMAP or future projects should consider revising loan sizes into smaller amounts to suit the needs of SHFs. With this approach, more SHFs would have an opportunity to participate, and the impact could be larger. In Ntungamo, for example, there is delayed construction of a storage facility for horticulture production as farmers have not contributed their co-shares. (Reported by the district agricultural officer during a recent MSP reflection meeting in Kabale.)

While working through cooperatives and SACCOs is a good approach (as recommended by the MTR), the final evaluation continues to observe the non-existence of horticultural cooperatives, and the number of participating SACCOs is not enough to reach the thousands of SHFs. In some areas, farmers belong to weak producer cooperatives and SACCOs that are not strong, viable and gender equitable in providing services to the beneficiaries, which is a concern.

SACCOs engaged in grant distribution were relatively strong but they do not cover HortiMAP's geographic area. As a result, many farmers belong to a SACCO that was not selected to take part in HCL. There is a need to select and support weaker SACCOs to increase the coverage, recognizing the risks involved. Finding an alternate financial institution that reaches farmers is not likely as none are available in the rural areas.

Future programming should consider supporting the formation of horticultural cooperatives and strengthen the existing producer and marketing cooperatives, addressing specific weaknesses in governance and leadership, record keeping, accounting and auditing, strategic plan and operational plan development. The Final Evaluation recommends that future programming consider categorizing SACCOs according to their capacities to deliver project interventions.

**FINDING #18 – HortiMAP provided investments in the horticultural sector on a cost sharing basis. The impact of these investments is not well assessed.**

**Supportive data and Analysis**

The amount of investment by the private sector on 50:50 basis including farmers, MSMEs and large processors and corporations (e.g., Syngenta) in the horticultural sector (because of the project) came to EURO 4,702,543, accounting to 59% of the target of EURO 8 million. (i.e., half of the EURO4.7M was from HortiMAP, or approximately EURO 2.35M). These investments were variously in MSMEs (USD2,698,815), Micro Infrastructure Grants (USD75,165), Investments by farmers (USD46,476) plus MSME investments in other geographical areas USD2,681,520, for a total of USD5.5M or EURO4.7M.

The final evaluation reviewed the record of investments and felt that the report should be clearer on the amount being reported, as it is both within and outside of the project areas, with around half of the reported amount invested outside of the project areas.

**FINDING #19 – The gender gap is reducing in governance of farmers associations and producer cooperatives, and in decision-making by horticultural farmers on farm-level money management. More women are participating in joint decision making, representing an increase in women's empowerment.**

**Supportive data and Analysis**

Improved gender equality in the governance of producer cooperative, including filling leadership

positions and decision-making, is highly promoted by development agencies globally. Women empowerment is key to development. Promotion of gender empowerment in HortiMAP is a fundamental objective and a welcomed approach given that women play key roles in horticultural production but have severely limited control of resources. HortiMAP's support for women's voices and capacity to take part in the development of farmer associations and producer cooperatives was well received by their household partners and fellow cooperative members (men).

It was also clear from HortiMAP's field team that at the beginning of the project gender was all about the man's role in terms of decision-making, looking for markets, when, what and where to plant FFVs, and holding leadership positions disregarding the fact that most of the farmer associations and producer cooperatives as well SHFs in general had more women than men. HortiMAP introduced a gender focus and provided specific training for lead farmers and training of trainers (ToT). According to stakeholders in the final evaluation, this approach changed the perception among participants on issues of gender inclusiveness, which was highly relevant for farmer associations and for good cooperatives management. This observation was made during the MTR.

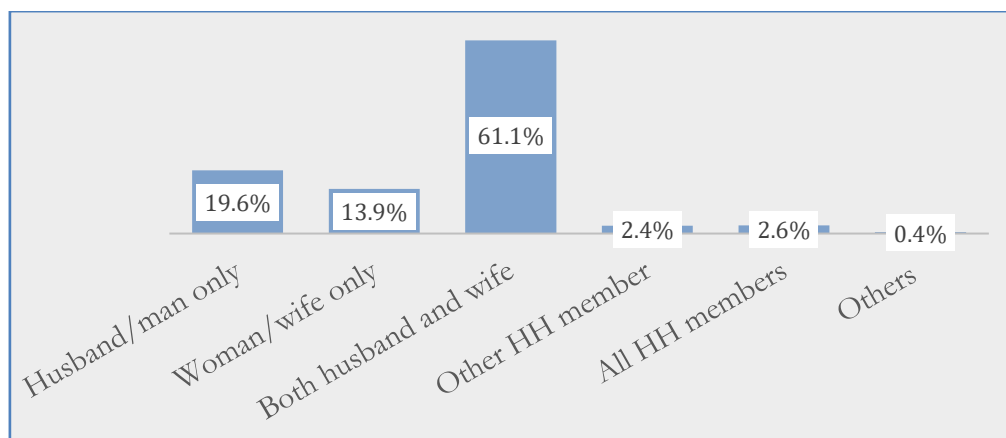
The final evaluation observed that at household level, 61.1% of the respondents indicate both husband and wife make joint decisions on whether to plant fruits or vegetables. In addition, men (19.6%) and women (13.9%) farmers make decisions by themselves on whether to plant fruits and or vegetables. Further results shows that both husbands and wives (64.1%) make joint decisions on when and where to sell Fruits and Vegetables. On the delivery of fruits and vegetables to buyers, husbands and wives (62%) make this decision jointly.

HortiMAP's baseline showed that 16% of women farmers empowered, which lacks clarity as to how it was measured. Future program should devise simple gender indicators that can be tracked independently or as part of the broader monitoring and reporting system, including changes in gender roles at the household level and the wider community.

Further analysis shows that the most notable achievement of HortiMAP is the investment in organizing various training for female and male farmers which were very useful especially for women to develop their potential. HortiMAP has begun to reap the rewards of various capacity-building activities. There has been improvement in women's knowledge and skills in various key areas, including applying GAPs and soil improvement management practices, financial literacy, and leadership. Female farmers reported that they have started applying the knowledge gained from the training.

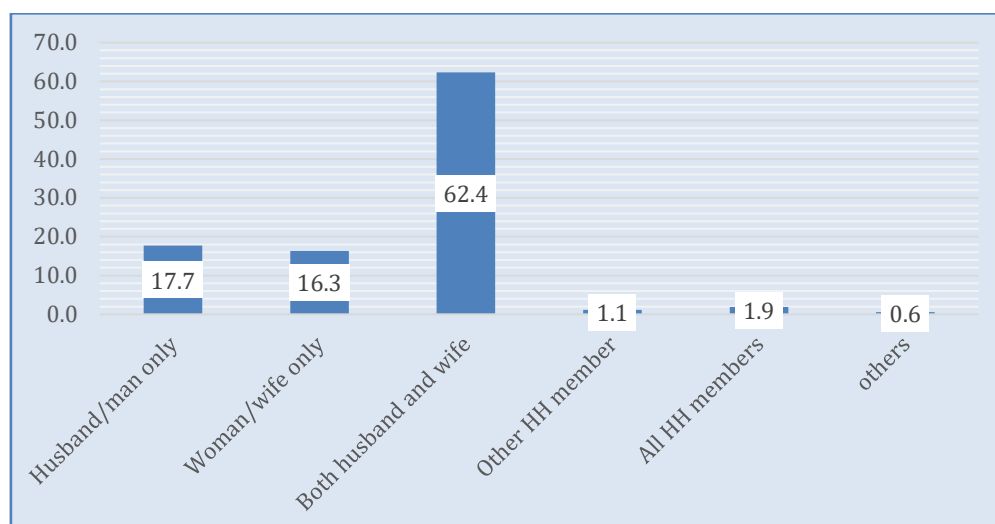
HortiMAP saw significant changes in women's self-confidence enabling them to speak up and take more active roles in the community and in HortiMAP activities. Qualified female farmers are also given opportunities to become local facilitators about which they feel proud. Although at the same time, it is worth noting that women are still facing cultural challenges such as domestic burden or negative perceptions in the community, especially for women who often travel outside their village (for example when they attend HortiMAP training taking place in other areas).

**Figure 4: Decision making on whether to plant fruits or vegetables**



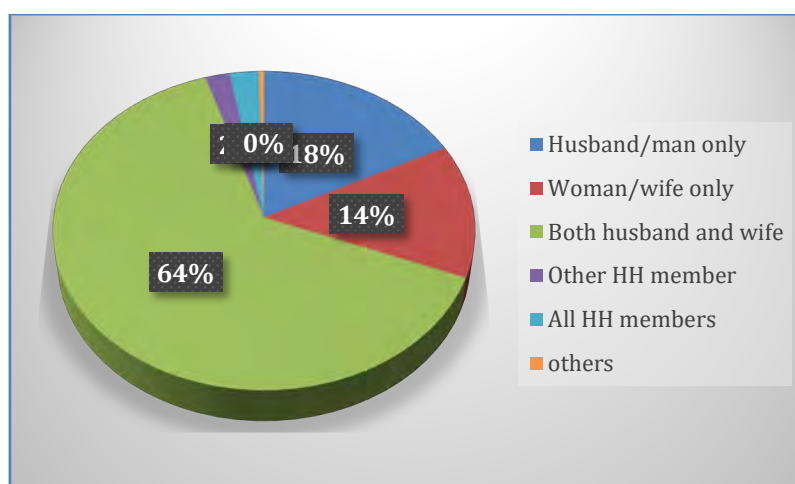
On decisions to spend the income from sales of Fruits and Vegetables, 62.4% of respondents make a joint decision compared to 17.7% and 16.3% men and women, respectively, who make decisions on spending individually.

**Figure 5: Decision making on spending money from the sale of Fruits and Vegetables**



**On decision making in spending money from the sale of Fresh Fruits and Vegetables**, the survey results show that 18% of the men and 14% women make their own decisions to spend money from the sale of fruits and vegetables while 64% of both men and women make joint decisions to spend the money. In general, men dominate in decision making.

Figure 6: Decision making on spending money from the sale of FFV



#### FINDING #20 – HortiMAP had Notable Unintended Outcomes.

- Additional Investments:** Investments in the horticultural sector by MSME and corporations outside of the project area were recorded by HortiMAP at around USD2.7M, which was largely due to the influential role of HortiMAP in supporting the horticultural sector.
- Pesticide Selection Tool (PST):** HortiMAP had not planned to develop a PST. But during implementation it was clear that such a tool would be good, and feasible, to help provide advice to farmers. Consequence a tool was developed by WUR and rolled out to farmers has been hailed as a success. HortiMAP wanted the Min of Agriculture to mainstream the use of the PST and support farmers to use it. However, after repeated advocacy to get this to happen, HortiMAP gave up as the Ministry was not cooperating, rather it was putting barrier to roll-out in place., rather wanting funds for a series of workshops on the PST. HortiMAP could prioritize the adoption and wide use of the pesticide selection tools (PST) and the responsible use of fertilizers using the Fertilizer Advice Tool among government extension workers, among lead and model farmers, and by private sector actors involved in selling fertilizer and pesticides.
- Interest expressed by other development partners:** There is an increasing interest among other donors wanting to work in that horticulture sector following the successful implementation of HortiMAP e.g., ABI Trust, COMESA, and World Bank. This is a positive development as this may benefit more SHFs but also grow the strength of the sector.
- Irrigation initiatives supported by HortiMAP have created conflict over water use in areas with water scarcity:** This has continued to be a thorny issue as was also discovered during MTR. While the intention of HortiMAP is to support irrigation for horticultural crops (100 irrigation kits were provided), there is competition for water for domestic use, causing conflict in water use, i.e., for both human and animal use water as well as for crops. In some areas, water has dried up which could be attributed to the lowering of the water table due to irrigation. Currently water committees are set up and operational and water storage tanks are in place for daily water sharing during the rainy season. Solar pumps are operational. Good practices for conflict resolution are needed as communities deal with scarcity.

- **Certification of cottage industries:** Originally SMEs were to be trained on food quality and safety. This training was intended to result in cottage industries being certified by UNBS. A total of 160 were trained of 300 targeted. While 40 were targeted for certification and 18 were certified, 6 cottage industries went ahead on their own to get certified. This is an unexpected outcome. Additionally, some cottage industries became aware of the existence of relevant apex bodies which they have joined as new members.
- **Outreach via radio increased demand.** The use of radio programs to reach out to farmers was initiated after the MTR. In HortiMAP's efforts to link farmers and producer organizations to various market players, it was discovered that a good number of SMEs were using radio to disseminate market information to farmers. Other topics covered in radio programs included best farming practices, soil management, nutrition, financial management at house level, and other topics. Radio programs, broadcast by various stations, include talk shows on various relevant topics. HortiMAP has made good use of radio since the MTR, and this was commended by stakeholders. The intensive use of radio and the application of proven, and appropriate methods of broadcasting that are well known by radio stations in the three regions of Uganda can – and will – enable SHFs to learn from other farmers with behavioural change outcomes contributing to the sustainability of project outcomes. Linking horticultural farmers to market information via radio and radio campaigns to expand education on GAPs and food safety standards is likely to continue and be sustainable.

### Overall Assessment of Effectiveness

Overall, the project has made considerable progress towards achieving the targeted outcomes in key performance areas (SO1, SO2), despite the limited time that was available from the 2023 MTR until the project's current end date, which was a real constraint. Although notable improvements were made in achieving the strategic objectives, some of them were performing better than others. The findings of this final evaluation indicate that performance in SO1 and SO2 was better than performance in SO3 but there was a marked improvement in SO3 in the period since the MTR.

These survey results enabled the final evaluation to assess the impact of HortiMAP's support for farmer associations and cooperatives and its impact on the lives and livelihoods of beneficiaries. Participants consulted during evaluation fieldwork appreciated the impacts that HortiMAP project has supported.

In general, the project's main impacts derived from (1) good agricultural practices resulting in higher productivity and production – e.g., planting in lines and row spacing contributes to high production, but lack of markets negated more positive impacts, (2) the VSLAs are making great contributions to women's access to finances, and (3) capacity building interventions/training is appreciated by both men and women. The FGD were able to list the project's impacts as: asset accumulation, child education, improved food security (reduced food shortages,) good nutrition (diversified foods) and increased incomes. Further, the project made achievements in terms of training, introducing innovative ways of accessing financing (through SACCOs) and managing weather related risk (climate smart practices, soil improvement practices etc.).

Farmers consider the most important topic/problems addressed adequately by HortiMAP were a) products reaching the market due to improved knowledge of post-harvest handling, and b) understanding increased variation in the rainfall pattern and experimenting with adaptive responses - including variations in planting times. They also named two areas that needed to be addressed more, including a) irrigation schemes and materials, and b) strengthening of farmer cooperatives and SACCOs.

Farmer associations and cooperatives felt that HortiMAP carried out its activities well, though they feel the need for technical guidance remains high. *Kangulunmila* ACE (a cooperative) specifically

stated that HortiMAP assistance was still needed to develop the capacity of its cooperative members who are not yet accustomed to providing input (giving opinions) to determining the direction of cooperative policies and programs. The ACE acknowledged the effectiveness of the MDF grants and the TA. ACE especially noted the value of Master Trainer Training technique (ToTs and Lead farmers) and PST tool for farmer associations and cooperatives. It strongly recommended popularizing the PST tool to government extension staff and commercial offices.

### 6.3.2 Recommendations - Effectiveness

**Recommendation #1 - Access to financing.** The evaluation has established that HCL has taken off and can be a way to proceed in the future as farmers have found ways to access these funds and pay them back. But as MDF grants target the same beneficiaries, they can be consolidated and merged into HCL, which seems to be succeeding. (MDF grants offer very cheap finance but distort the market of SACCOs). A SACCO-specific strategy to support SHF (horticulture) is needed that would also ensure the sustainability of SACCOs while allowing them to keep their key operating principles. The use of SACCOs to access financing is an innovation that must be promoted and given time to develop. A review is nevertheless needed on how the VSLAs should be managed in future programming. In particular, the current government position on VSLAs is that government does not encourage VSLAs for many beneficiaries have lost their meagre resources, but it does not stop VSLAs either, according to discussions with the commercial officers, suggesting lack of government policy on VSLAs. One area of policy engagements in the remaining period of the project would be in relation to the VSLAs to provide a legally secure position for the participants of the VSLAs in this project and beyond.

**Recommendation #2 - SACCOs:** Future programming consider categorizing SACCOs according to their capacities in intervention.

**Recommendation #3 - Formation of horticultural units within the existing cooperatives -** Future programming should focus on the formation of horticultural units within the existing cooperatives and on strengthening the ability of cooperatives to provide market information, storage facilities and add value through processing, packaging and marketing.

**Recommendation #4 - Loan sizes -** HortiMAP or future projects should consider revising loan sizes into smaller amounts to suit the needs of SHFs. With this approach, more SHFs would have an opportunity to participate, and the impact of the intervention could be larger.

**Recommendation #5 - Revise or drop MDF grants.** Accessing MDF grants on a 50-50 co-funding basis is reportedly high (69%), yet it needs to be revised in future programming to relieve the stress it puts on horticultural farmers.

**Recommendation #6 - Future focus -** The project promoted enterprises that supported horticultural products specifically valuable for small producers in the specific zones, especially for women producers, an approach that is recommended for replication in future programming initiatives.

**Recommendation #7 - Future programming** should consider supporting the formation of horticultural cooperatives and strengthen the existing producer and marketing cooperatives, addressing specific weaknesses in governance and leadership, record keeping, accounting and auditing, strategic plan and operational plan development.

**Recommendation #8 - A strategic communication plan is needed** specifically designed for each targeted stakeholder, i.e., government, private sector, financial institutions, farmers and community, to maximize efforts to achieve pillars 1, 2 and 3. At present the branding and



promotion of HortiMAP project activities is lacking. Future programming needs to be more active in disseminating information on project activities to the public, for example through social media, Facebook, Twitter, printing leaflets, newsletters, facilitating ‘community of practice’ forums, dialogue forums with the government and think-tank groups.

## 6.4 SUSTAINABILITY: Will the benefits last?

### 6.4.1 Findings

This component of the final evaluation sought evidence to address these questions:

- What are the foreseen long-term effects of the HortiMAP project - including contribution towards the intended impact, positive or negative impacts, or intended or unintended changes? Will the changes that have been implemented by HortiMAP last? What are the key blockages to sustaining the project’s effects? Why or why not? Does HortiMAP have an effective exit strategy?
- Do relevant stakeholders have a sense of ownership for the different activities? Were they active in ensuring the sustainability of the different activities?
- Specifically for value chain activities: How are activities in the chain developed to assure sustainability and economic viability? How are investments triggering new investments and are repeatable without project support?
- How was knowledge (generated during the project) transferred to relevant local actors and government to ensure sustainability?

**FINDING #21 – Though direct policy advocacy was a late undertaking by HortiMAP, good progress has been made and can still be made to the end of the project. Policy changes in favour of the FFV sector are crucial for the sustainability of HortiMAP’s initiatives. So far, the right actors are engaged, and the policy analysis has involved appropriate information sources.**

#### Supportive data and Analysis

The final evaluation analysed whether mechanisms were put in place to ensure the benefits of HortiMAP - and the capacity that was built - are sustained beyond the project, the effectiveness of the exit strategies, and approaches to phase out assistance provided by the project. This section also assessed the capacities that were strengthened, and how - at the farmer and cooperative member level. Factors that will influence sustainability of the HortiMAP project were highlighted by stakeholders during KIIs.

In general, the project’s impacts are coming from three sources: (1) GAPs resulting in higher productivity and production of horticultural crops – e.g., climate smart practices and use of improved seed which are contributing to higher production even as a lack of markets negate some of the positive impacts, (2) the external finance linkages and HCL’s efforts increase women access to finances (from A2F-Access to Finance), and (3) capacity building interventions/training with all stakeholders. HortiMAP’s sustainability will also draw on these three areas of impact.

The final evaluation noted that the policy review work and issues review prepared by the policy consultant opened the way for action under SO3. It detailed the many policy components that HortiMAP is dealing with and the state of play regarding evolving issues. Many organizations in the Ugandan context have been drawn into conversation on current policy issues and have contributed to the analysis of the space available for policy dialogue. They include the EU office in Uganda, Hortexa, UVEPA, Feed the Future (USAID), Uganda Packaging Union, MAAIF, NARO, Certification Houses (Chemiphar), Uganda AgriBusiness Alliance, HortiFresh, Ministry of Internal

Affairs, Civil Aviation Authority, Cargo Handling Bodies, Academia, UFZA, TechnoServe), and multiple exporting and aggregating entities.

HortiMAP's capacity building efforts have been focused on the FFV exporters, farmers, and sector service providers - which are permanent actors in the FFV space and will be there long after the project has been completed. They are the right base groups to work with in terms of policy change strategy. They are being and will continue to be equipped in the remaining period to influence policy in the horticultural sector. The owners of these entities make up part of the advocacy and lobby committees with which the consultant has directly dealt.

This is an unfinished area that HortiMAP must support to the end of the project to make the best use of time to make policy gains in favour of the FFV sector.

**FINDING #22 – The project facilitated consultation at the national level, and an increased collaboration at the district level with Ministry of Agriculture officials in a bid to increase awareness of the project and benefits for farmer associations and cooperatives. However, the Ministry of Agriculture only recently signed an MOU with TechnoServe to implement HortiMAP, signalling persistent and ongoing bureaucratic issues. Now that the MOU is in place, there is an opportunity for future programming and space for policy dialogue.**

#### **Supportive data and Analysis**

The project has built and strengthened partnerships that are crucial for the sustainability of the project benefits. The project engaged MAAIF's extension workers and Agricultural Officers (AOs) who benefited from the training provided by the project to help them to effectively help the farmer associations and cooperatives beyond the project lifespan. At baseline, extension workers were not working with the producer cooperatives as independent institutions, but now they are. This will ensure sustainability as small producers (cooperatives) now know who to ask if they need support. Apart from the government extension workers, HortiMAP project used properly trained lead farmers (ToTs), who coordinated the GAPs and used the model where lead farmers provide good agricultural practices' mentoring and advisory services. Much of this is due to effective coordination by ISSD as the lead partner in training.

Increased positive perception of government extension staff on working with producer cooperatives is crucial to attain increased chances of sustainability. Perceptions of financial cooperatives remain positive in the area. There is an increased positive perception among government staff with very good collaboration in extension service delivery at district level. This is a contributing factor towards ensuring the continued support of extension staff after the project phases out. This perception was expressed by a District Agriculture Officer (DAO) who is a member of an MSP representing extension services.

**FINDING #23 - HortiMAP interventions with cooperatives have focused on governance, leadership and strengthening the financial capacity of producer cooperatives. This approach has been both crucial and positive for the long-term stability of the cooperatives. While there are no existing horticultural cooperatives, existing producer cooperatives include farmers producing horticultural products and embracing the marketing of horticultural products. It was not established whether HortiMAP interventions have attracted new membership to the cooperatives, or to farmer associations.**

## Supportive data and Analysis

There has been a significant investment by HortiMAP in capacity building/strengthening of the producer cooperatives. The producer cooperatives can now initiate various processes on their own. Some cooperatives can make contracts with the input suppliers and others are able to access loans on their own. For example, *Kangulumira Area* cooperative enterprise (KACE) in Kayunga district has accessed loans from financial institutions for a while now due to its good leadership and capacity to manage the loans. Its 'moderately easy' access to important services motivates members; information on access to finance encourages more people to join the producer cooperative. Producer cooperative leaders also agreed that there is a general improvement in the organizational sustainability of the cooperatives.

HortiMAP project intervention focused on governance of producer cooperatives to strengthen them. Good governance is at the heart of any successful business. The HortiMAP project provided training on cooperative governance to all targeted producer cooperatives. It is essential to achieving organizational objectives and drive improvement, as well as to maintaining good legal and ethical standing in the eyes of shareholders, regulators and the wider community. Governance is a concern for any business or organization of any shape or size. The cooperatives were trained in general cooperative management, distribution of roles in the cooperative, group dynamics, marketing and financial management among other key areas. This knowledge and skills have been put into practice during the lifespan of the project and are likely to continue. The cooperatives are also holding annual general meetings (AGMs) as expected by the regulations and this has increased transparency and accountability of the cooperatives at all levels.

The evaluation documented the following key interventions as contributing to the sustainability of the cooperatives:

- a. The provision of training to the leadership and entire membership of the farmer associations and producer cooperatives. The cooperative member education, for example, is a crucial, intensive and knowledge rich resource for all members of a cooperative and it forms a good foundation upon which the cooperative is built and everyone in the cooperative is guided on their responsibilities and benefits.
- b. The linkages with district-based government officials and the use of lead farmers (ToTs); there will be readily available sources of extension services that the SHFs would need from time to time beyond the project's lifespan.
- c. Provision of financial services; the linkage between SHFs and producer cooperatives and financial cooperatives (SACCOs) has proven to be instrumental in acquiring various services of the cooperatives including financial advisory and credit and savings services.
- d. Benefits and interventions of HortiMAP project that were reported by the SHFs and members of producer cooperatives that they will continue themselves were: good agricultural practices, produce aggregation and collective marketing (which was reported by beneficiaries). It was further noted that SHFs and cooperative members now appear to have a purpose as they have been trained in farming business and they have properly documented business plans which increases their vision and provides a longer-term perspective of what they will do, hence ensuring sustainability.

**FINDING #24 – HortiMAP's direct engagement of women – focusing of women empowerment and enhanced gender equality - has been a crucial aspect of successfully engaging horticultural farmers – SHFs, who are predominantly women. The engagement of women has enhanced the project's sustainability. While women were targeted, and the training was on strengthening of business-oriented group of farmers; there was no training**

of gender issues.

### Supportive data and Analysis

HortiMAP has deliberately focused on women empowerment activities and enhanced gender equality in the farmer associations and cooperatives. This has improved joint decision-making processes among men and women in the home, in the cooperative and the community. Interviews with cooperative leaders and other key stakeholders indicated that important changes have been made regarding how women now view themselves: *‘they are now more confident, participate in leadership roles, are actively participating in decision-making processes and their decisions are heard’*. The evaluation also noted that HortiMAP identified lead farmers to carry out ToT trainings for members of farmer associations and/or cooperatives, to continue as role models in the cooperative and lead the community on gender equality concerns. These people motivate community members, and it is envisaged that their work will continue even after the project phases out as they reside among and are a part of the communities engaged in HortiMAP.

The emphasis on gender equality is somewhat novel for this project. Discussion with senior HortiMAP staff at TNS clarified that gender equity was not the main aim, rather the focus was on engaging women and youth. The project did not have an effective strategy for achieving gender outcomes even though it intentionally targeted women. The project left it to the discretion of staff to interpret and operationalize what the staff called ‘gender mainstreaming’. There was a no gender work plan and budget complicated by the apparent lack of gender programming skills among HortiMAP staff. This compromised the achievement of real gender progress.

### Climate Change Impacts

**FINDING #25 – The effects of climate change are now understood by most farmers who realize their production potential is at risk as climate change impacts become increasingly severe, potentially destroying gains made by the project. HortiMAP farmers appreciate the project interventions, specifically around irrigation, as the need for water is large, GAPs, and other adaptive responses including a focus on the critical issue of improved soil management.**

### Supportive data and Analysis

Survey data shows that 90% of SHF are aware of climate risks and climate change.

The final evaluation has noted that the small producers in the cooperatives face various climate change effects. Producer cooperative leaders also agreed that an improvement in the organizational sustainability of the cooperatives has increased the resilience of members to climate change impacts and disasters.

The most reported effects of climate change have been unpredictable rainfall patterns. For example, the dry season in 2024 was long; the August rains did not come. There has also been flooding due to heavy rains. To ensure increased adaptability to climate change impacts, the project trained the SHFs and members of producer cooperatives in good agricultural practices and conservation farming. In this regard, farmers are now able to plant early, produce and use compost manure to maintain soil moisture and improve soil texture, plant drought resistant and early maturing horticultural crop varieties, plant certified seeds, and making box ridges in Kabale, Kisoro and Mt Elgon areas among other activities. Due to the high adoption rate of the interventions by farmers, the activities will continue to be sustained but also the government is promoting the same technologies.

The Final Evaluation **recommends** more emphasis be given to this in future programming. Scaling up irrigation, for example, requires a comprehensive approach using integrated water resources

management and must be an intentional focus of a program in horticulture. A comprehensive review of best approaches to climate change adaptation, and best methodologies for risk management among others will benefit the horticultural farmers, their families and the broader communities in which they live.

When members of producer cooperatives were asked about the extent to which the interventions have increased the resilience of producer organisation members, the following were the responses (Table 7).

**Table 7: Extent of interventions on resilience of producer organisation members.**

<i>Interventions increased the resilience of producer organization members. (N=38)</i>		
	Very great extent	18.4%
	Great extent	52.6%
	Some extent	26.3%
	Very little extent	2.6%

**FINDING #26 – HortiMAP has engaged in building sustainable marketing structures and systems for horticultural goods, and it has a been good working experience in marketing related to the sector and is making changes, but this requires additional efforts.**

#### **Supportive data and Analysis**

During FGDs, it was revealed that despite HortiMAP's work to build up marketing structures and systems, marketing remains a big challenge to SHFs and producer cooperatives due to existence of middlemen that distort the market. Based on what was discussed and observed, there is a need to do more in terms of marketing. The absence of a sub-contracted 'marketing partner' in the project is a contributing factor. Of course, marketing of farmers' products is a national problem for Uganda and is not unique for this project. However, it was a problem that HortiMAP aimed to address through cooperatives. There is a need to focus in future programming on enhanced marketing.

The domestic market for horticultural products has not been exhausted and future programming should address these opportunities. HortiMAP efforts to increase market access included both domestic and export markets, especially regional markets, where there remains a high potential for the sale of horticultural produce.

**FINDING #27 – The project engaged strong implementing partners. Had a stronger partnership model been in use, there would potentially have been more synergies among the partners and additional benefits may have accrued for the targeted beneficiaries.**

#### **Supportive data and Analysis**

The project has the potential to leave a long-term impact despite its delayed implementation. The implementing partners have a wealth of knowledge and experience and are rooted in the Ugandan context. Both local and international partners blend well with each other. ISSD staff have knowledge and skills gained from its roots as an implementing entity of WUR, and which is now independent. ISSD is passed on its extensive knowledge to beneficiaries through Master Trainings and TOTs., as observed in both the MTR and the final evaluation.

TNS has prepared studies, including a consumer study and a pesticide study, which can influence the government to provide an enabling environment. The consumer study report noted, however, that there is an information gap regarding the demand for horticulture crops among consumers. It is not known how big the demand is and there is a need for this market information.



The project's implementing partners – TechnoServe, ISSD/WUR, PUM, Bid Capital each brought a wealth of relevant skills and experiences into the project. This is positive. However, the Final Evaluation noted partnership coordination and joint planning challenges constrained the ability of each to contribute to their potential. Clearer roles and responsibilities related to collaborating effectively could have been adopted within a partnership model to facilitate the best contribution from each partner.

During HortiMAP, there was no partners workshop, no interface among the partners. There is value, however, in knowing what other implementing partners are doing and in discovering synergies among the partners. This will bring benefits for participants; it is necessary to choose a partnership model for learning, planning, collaboration and, possibly, for project governance.

- WUR developed and tested its curriculum, contributed additional value, and worked effectively. WUR wanted to be more engaged, more involved in the project design and the review of strategy. TNS hoped that WUR would monitor the impact of its training more rigorously and adopt a more practical approach in its curriculum, along with more quality control reporting on the training provided.
- BP Capital worked on due diligence with SMEs that had been selected to carry out work, but SMEs need a deeper review. The assessment of SMEs is a bigger job than what was originally envisaged. While an SME's books may be spotless it is possible there is little to show on the ground. Deeper verification was required of the SMEs though was outside of BP Capital's methodology. An ongoing close liaison with the SME is needed by project staff to verify that activities are done, and the quality of their work better monitored.

Nevertheless, the implementing partners are commended for skilfully navigating the complexities involved in partnership as it was set up.

#### 6.4.2 Recommendations - Sustainability

**Recommendation #1** - Future programming should adopt an **Integrated Cooperative Model (ICM)** that is holistic in nature, and the **Participatory Integrated Planning (PIP)** approaches as the foundation for subsequent project interventions. Future programming should put emphasis on farmer cooperatives and other farmer institutions as opposed to SMEs in the previous phase. Working with cooperatives enhances the localization agenda of the Netherlands embassy, integrating new and existing horticulture producer organizations (HPOs). HortiMAP should continue to work with producer cooperatives that have production and marketing units, and which also operate VSLAs. Further, Micro Insurance is an innovation that should be incorporated into the ICBM model in future programming; it requires study and time to become established and grow; it needs close monitoring of its progress, but micro insurance has proven to have benefits for SHFs.

**Recommendation #2 - Project delivery strategy.** For more complex projects like HortiMAP, partnerships involving a range of local partners have begun to emerge as effective/efficient implementation arrangements. If this is a way of promoting local empowerment and ownership and the need for the cooperatives to set their own agenda and measure of progress, then it must be encouraged in full in the next phase. A review is required to identify relevant partners and to sub-contract in full all the technical aspects of the project. Five key productive technical alliance or partnerships can be pursued in Production, Cooperative Development, Marketing, Access to Finance, and Agricultural Insurance (identify key partner). The role of TNS would be focused on coordination, backstopping and progress monitoring and reporting.

**Recommendation #3 - Marketing.** This remains a challenge and must be a major area of emphasis in the remaining period of the project. Three things must be emphasized (a) engagement



of a local marketing partner, (b) storage and warehousing (c) marketing innovations, e.g., adoption of an Area cooperative enterprise to support ongoing learning. ‘Marketing’ associations’ can be developed at sub county level (bringing together all Cooperatives in a sub county and stationing a project agribusiness and marketing specialist in each sub county).

**Recommendation #4 - Farmer Institutional Strengthening, Cooperative Development and Empowerment.** Capacity building activities in the remaining period should place significant emphasis on empowerment and sustainability of the producer cooperatives through investing their own resources (e.g., shares) and accessing the resources for production and related activities. There is much work to be done in converting these cooperatives into viable, sustainable, independent and multipurpose entities.

**Recommendation #5 - Exit strategies.** It is noted that producer cooperatives remain weak, that farmer associations are not registered and there is a large potential to stall once the current support is phased out. The remaining period should place significant effort in figuring out what happens to the farmer associations and cooperatives once the project comes to an end and putting a strong sustainability or exit strategy in place.

**Recommendation #6 - Climate Change:** The Final Evaluation recommends more emphasis be given to climate change adaptation in future programming. The immediate focus should be on continual adaptation to climate change impacts by building adaptive capacity, based on community vulnerability and capacity assessments, including identification of hazards and risk.

**Recommendation #7 - Future project:** It would be useful to consider a second phase of 4-5 additional years that focusses on marketing – while also consolidating the gains of HortiMAP.

**Recommendation #8 - Focus future programming on enhanced marketing.** A follow-up horticultural project needs to go further than HortiMAP to directly support Cooperatives in marketing of horticultural produce for SHFs. It is the marketing component that strategically holds the key for success of the other elements (i.e., production, access to finance and agricultural insurance). The absence of a sub-contracted ‘marketing partner’ in HortiMAP has been a contributing factor to the weakness of HortiMAP. It was a problem that HortiMAP aimed to address through cooperatives. Of course, marketing of farmers’ products is a national problem for Uganda and is not unique for this project.

## 6.5 Further Recommendations

A few additional recommendations for future programming emerged out of this review and are presented here for EKN’s consideration.

- **Facilitate formation of small-scale business units for women:** under the management of cooperatives and as part of women economic empowerment. By establishing women’s business units, women cooperative members could start applying the knowledge gained from various training such as managing business finances, developing business plans, communicating and negotiating with prospective buyers, etc. By training women to become independent business entrepreneurs, training of knowledge and skills will be sustainable; and women will earn their own income and play an active role in supporting the household economy.
- **Engage with renewable energy companies:** In terms of collaboration with other projects, future projects should engage with active players in the renewable energy (RE) sector to provide support for SHFs and cooperatives. This can help to mitigate climate

change effects and related shocks and hazards, assist with adaptation and provide sustainable power to horticultural enterprises.

- **Build networks with local institutions/organizations** that are competent in their fields, so that problem solving can be followed-up locally, immediately, and not rely on distant experts who cannot be present when urgently needed. This should be part of a project's exit strategy and needs to be developed early on.
- **Literacy and functional educational initiatives:** There are still many farmers with low levels of education who cannot read and write. For this reason, HortiMAP, the farmer associations and cooperatives must think of innovative ways to provide training material so that knowledge transfer can be applied to this vulnerable group. For example, producing training material with infographics, posters, or videos.
- **Include environmental education and initiatives for environmental quality** such as prevention of water pollution. Include environmental education in all aspects of relevant training materials and socialize these materials widely through farmer associations and cooperatives, using facilitators, follow-up sessions, forums, etc. The POs and Cooperatives are advised to be environmental agents of change. Some activities include provision of trashcans, warning boards ('Do Not Litter'), posters, leaflets and other ways to increase public awareness on the importance of maintaining environmental cleanliness. These initiatives should include safe handling of chemicals, forest protection, and other measures consistent with GAP training.

## 6.6 Lessons Learned

1. Policy work is a patient and sometimes painful intervention, but persistence is key. In future programming a policy aspect should be given a long time to make an impact. The advocacy issues must be well articulated. The involvement of policy experts at the beginning of the project implementation period should be a priority. A full-time policy expert to focus on training people to carry out advocacy activities vis a vis government in the FFV sector, to produce a cadre of lobbyists with the capacity (reliability, skills) to advocate for small-scale horticultural farmers is key. Reviewing policies and developing a suitable advocacy strategy suitable is essential. Key actors, such as horticultural producers and traders, must be involved in policy discussions.
2. Project participants understood questions about 'lessons learned' to imply that they should indicate what they learned from the training that the project provided. The bigger lesson, though, is that having a common understanding at the onset of the project among all participants, implementers and donors, is highly useful for the progress of the project. The evaluation has provided insights into challenges still faced by SHFs at production, marketing and financial access. The project provided project participants opportunities to learn lessons and identify innovations that emerged within HortiMAP that have the potential innovation for up-scaling.
3. The formation of MSPs was relatively easy but sustaining it will be a huge task as MSPs are largely informal. Coordinating the Technical Working Group to serve is always a month-to-month activity. Priority interventions are identified and TNS is informed, but there are no mechanisms to make a follow up, to ascertain whether the identified interventions will be prioritized by TNS. The beneficiaries expect a lot from having raised issues and MSPs can disintegrate due to poor management and information unless it is anchored to enterprise. Here are lessons about accountability to the MSP. MSPs need a thoughtful

sustainability strategy. MSPs are a venue for information dissemination, vaguely called the best agricultural university in the world.

4. MDF grants supported innovation and enabled early adopters. The selection of a few organizations that were trained and accessed the funds has had more impact than selecting many organizations. Small numbers and achieving more and better results appear more important than arrangements where many organizations are involved, where the learning, innovation and commitment is less.
5. Engaging local trainers/facilitators from the co-ops is an effective way to achieve soft skills development and to ensure the sustainability of the knowledge transfer. The local trainers are responsible for providing follow-up and information sharing sessions on the rolled-out training to community residents in the villages where co-op members live. These local trainers will also be rotated and will co-facilitate training in other districts.
6. HCL provided significant benefits for SHFs; HCL is a readily available source of finance for small-scale horticultural farmers, who can borrow and pay back. This is indirectly strengthening the cooperatives as members access it through cooperatives. HCL helps SHFs to meet various needs, especially better seeds, fertilisers and other inputs.
7. The final evaluation reconfirmed that a focus on Good Agricultural Practices (GAPs) continues to be an important lesson, as was also established during MTR. GAPs are still playing a critical role in increasing production and productivity. Imparting Good Agricultural Practices (GAPs) to small scale horticultural farmers through capacity building initiatives is highly beneficial; sustainable extension services that focus on GAPs are crucial to farmer's success.

## ANNEXES

## Annex A: Terms of Reference

Terms of Reference (ToR) for the Horticulture Market  
Acceleration Program (HortiMAP) project final  
evaluation

12<sup>th</sup> April 2024



## 1. Introduction

These Terms of Reference (ToR) are for the Horticulture Market Acceleration Program (HortiMAP) final evaluation. The evaluation will be implemented under the supervision of EKN.

## 2. Background to HortiMAP

The Embassy of the Netherlands in Kampala (EKN) finances several projects in Food and Nutrition Security (FNS). Horticulture Market Acceleration Program (HortiMAP Project) is one such project implemented over period from December 2020 – December 2024) by TechnoServe (TNS) as the contracting party, in a consortium with BiD Capital Ltd. (a Dutch impact investment advisory firm), Wageningen University and Research (principle technical assistance provider) and PUM Netherlands senior experts. In addition to the consortium partners, the project is implemented in close collaboration with PCP as a finance enabler and other local business development service providers.

This EUR 10 million project is being implemented in the Kigezi, Victoria Crescent, and Mt Elgon agroecological zones of Uganda. The activity contributes to the BHOS food policy as determined by the Letter to Parliament 'On the way to a world without hunger in 2030' (May 2019), with the emphasis on food systems that are 'healthy, honest, climate neutral and circular'. The results to be contributed are improved income and improved productivity.

The Netherlands government has singled out three issues of relevance to food system analyses:

- Nutrition (quality as well as the safety to contribute to safe and healthy diets for young children and expectant mothers);
- Gender (women empowerment is a pre-condition for a world without hunger and employment);
- Employment, income and value addition creation through the sustainable intensification of primary production and strengthening of value chains.

The activity supports all three issues.

The HortiMAP project is responsive to the EKN's Uganda Multi-Annual Country strategy for 2019 – 2022 and EKN's Uganda Multi-Annual Country strategy for 2023 – 2026, in which food and nutrition security and sustainable trade were key thematic priorities, borne out in the development of higher quality horticulture value chains. The activity is aligned with the following intermediate outcomes:

- Economic performance and resilience of farming systems increased. (*Indicator: # of farmers with increased productivity/income*).
- Peoples' nutrition improved (*Indicator: # of people with improved access to healthy/diverse food*).
- Quality of private sector development for FNS increased (*Indicator: # of jobs created in agro food sector and # of businesses co-investing in FNS activities*).
- Quality of governance for FNS increased (*Indicator: # of Improvements in implementation of major national FNS policies/laws*).

The activity is aligned with the Government of Uganda's (GOU) "Vision 2040" to create a profitable, commercial, and sustainable agriculture sector; the Third National Development Plan (2020 – 2025) focused on improving agro-industrialization as critical driver of jobs and economic growth. Lastly, it aligns with the Agriculture Sector Strategic Plan 2020 – 2025, which prioritizes the production and export of fresh fruits and vegetables as strategic commodities for income and employment.

Initially, the project was designed with a market systems development (MSD) approach targeting market oriented farmers. However, during the inception period, EKN held several meetings with HortiMAP and reoriented the project to give more emphasis to smallholder farmers (SHFs) in addition to market oriented farmers. Consequently, the project was advised to revise the logical framework to include the indicators, activities, outcomes and interventions (including market development facility (MDF)) that would allow project benefits to trickle down to the smallholder farmers. During the initial two-year period, the project underwent a series of changes to deploy a smallholder farmer-centric MSD approach in alignment with the EKN's Uganda Multi-Annual Country Strategy for 2023-2026.

The activity is focused on addressing challenges that threaten potential growth and long-term competitiveness of the horticulture (Fresh Fruit and Vegetables - FFV) sector in Uganda, particularly related to farm and firm-level resilience, quality, traceability, and food safety requirements for domestic, regional, and international markets, including:

- At farm Level

Where there is limited knowledge of critical, crop-specific, and climate-smart GAPs and harvest, postharvest handling, and storage practices. Also the ability and/or willingness to invest in inputs (hybrid seeds and fungicides) to mitigate harmful organisms (HOs) (e.g. moths, locusts, fruit flies), as well as technologies (e.g. traps, tarpaulins, crates, shade nets) is limited. There is a poor integration of farmers into commercial chains and weak linkages with their direct buyer (e.g. informal trader

or processor), as well as gender- sensitive service provision from micro-entrepreneurs, government extension agents, and other buyer agronomists.

- Agribusinesses

Agribusinesses (small and medium) in the FFV sector include a mix of service providers (inputs, transport, logistics) and end markets (processors, supermarkets, traders, and exporters) within fragmented and poorly organized value chains. Most agribusinesses lack affordable finance. Processors struggle with uneven supply. Exporters lack food safety certifications or traceability certifications. Insufficient cold chain infrastructure and access to simple postharvest handling solutions increase losses and waste.

- Micro-entrepreneurs

Micro-entrepreneurs are a critical segment of mainly informal businesses, such as rural buying agents, aggregators, traders, agrovets, farm input sprayers, small-scale processors, and market and roadside vendors (mainly women). They have little to no education or training on basic business and financial skills. For aggregators and traders, a major constraint is a lack of access to appropriate finance. They still need support to organize, formalize, and improve integration into commercial supply chains.

- Consumers

Consumer knowledge of food safety is low, limiting demand for safe FFV

- Financial institutions

Financial institutions engaged in agricultural portfolios still find the sector risky, often a result of information asymmetry and a lack of support to understand the client segments and their various needs.

- Government actors

Government actors struggle to provide demand-driven services to producers and agribusinesses, particularly ensuring equal access for both men and women. For example, the flow of critical information on quality standards, food safety, and trade opportunities are stymied by inefficient communication systems, poor inter-ministerial coordination, and limited district and farm-level engagement.

### ***Opportunities.***

Based on TNS analysis in 2020, the following opportunities to create additional value in Uganda's horticulture sector were identified:

- **Capturing onion market share from Tanzania** - Capable of year-round production, Uganda is the leading producer of onions in East Africa (Uganda - 360K MT; Kenya - 126K MT; Tanzania - 115K MT; Rwanda - 14K MT). In spite of this huge production, Uganda is a net importer. Meanwhile, Tanzania is exporting substantial volumes of onions to Uganda (18K MT), Kenya (23K MT), and Rwanda (1.5K MT). Uganda has the opportunity to move to a net exporter and capture some of Tanzania's market share in Rwanda and Kenya by promoting availability and adoption of higher-yield, larger onion varieties, more mechanized harvesting, and better organized aggregation.
- **Avocados** - Kenyan and Tanzanian avocado exports (mostly sea freight via the Kenyan port of Mombasa) have grown significantly in recent years, serving markets in Europe and the Middle East. Kenya exports ~70,000 MT (40 percent compound annual growth rate (CAGR) over three years), and Tanzania exports ~7,000 MT (42 percent CAGR over 5 years), while Uganda reported exports of 337 MT in 2018 (54 percent CAGR over 5 years), mostly to South Sudan with some air freight export. There is an opportunity to pack Ugandan avocados into refrigerated containers for export via Mombasa.
- **Carrot import substitution** - Uganda imports increasingly large quantities of carrots from Kenya (~15K MT in 2018, ~12 percent CAGR over 4 years), and does not export any carrots. There is an import substitution opportunity to increase production and focus on serving domestic markets.
- **FFV into Kenya** - Uganda has seen substantial growth in mango, melon, pineapple, and tomatoes sales to Kenya, even while Ugandan production has remained generally flat. This presents the opportunity to build on the momentum, increasing production to serve both the local and Kenyan markets.
  - **Tomatoes** - Uganda benefits from two seasons of tomatoes a year. Additionally, if irrigation is applied, tomatoes can be grown year round (up to four harvests). Uganda exports a significant proportion to Kenya.

- o **Mangoes** - With mango production on the rise, Uganda has the opportunity to further benefit from its unique peak harvest period of June / July (not available in Kenya or Tanzania) and help fulfil growing international demand.
- o **Pineapples** - Uganda has a comparative advantage versus its neighboring countries with its year round production of pineapples, as well as with their perceived better taste and demand in Kenya.

The project intended to tackle the aforementioned problems as follows:

- HortiMAP looks to agribusinesses to articulate their own needs, support them to precisely diagnose constraints and opportunities, and apply bespoke technical assistance and financial solutions that address firm-specific constraints while demonstrating new models for replication and scale by other businesses.
- HortiMAP targeted key leverage points to incentivize behaviour change among market actors, brokering partnerships that de-risk investment in business models and new technologies that drive sector formalization, transformation, and inclusivity.

## 2.1 HortiMAP Theory of Change/Results Framework

Therefore the goal of the project is to transform the horticulture sector to a modern, efficient, competitive, technology, and knowledge-driven sector through increased productivity, reduced food losses, improved access to rewarding markets, strengthened resilience to shocks, and a strong and facilitating government.

The overall impact the project aims to achieve is:

- 250,000 households with increased access to horticultural products;
- 25,000 farmers with increased income (50% youth, 40% women);
- 8,000 jobs created along the horticultural value chain.

HortiMAP's Theory of Change (TOC) narrates that

IF farmers improve their capacity to demand for and make on-farm and climate-smart investments, THEN farmers will invest in and apply improved on-farm and regenerative/climate-smart practices, technology, and infrastructure, WHICH LEADS TO improved productivity and reduced losses at farm level WHICH LEADS TO increased volumes of vegetables and fruits produced and sold

AND

IF farmer serving micro small and medium enterprises (MSMEs), Farmer Associations and Producer Organizations (FAs and POs) have increased technical and financial capacity, THEN the MSMEs (including young entrepreneurs) and FAs/POs will adopt new extension, sales, and sourcing models to deliver improved products and services to farmers WHICH LEADS TO more farmers reached with recommended on farm services, products and technologies ` WHICH ALSO LEADS TO increased volumes of FFV produced and sold

AND

IF market-facing MSMEs (including market vendors, FAs/POs, and farmers) have increased technical and financial capacity to invest in practices and technologies that maintain or guarantee quality and safety of FFV, THEN the market-facing MSMEs and farmers will adopt new models and techniques to maintain or guarantee FFV quality, safety, and distribution, by adhering to quality and food safety standards adding value to horticultural products and reduce losses along the value chain WHICH LEADS TO improved competitiveness, including business sustainability of MSMEs (including entrepreneurial farmers) who access new markets.

AND

IF Market vendors capacity to inform and or educate their consumers on the health and nutritional benefits of FFV is increased AND Farmers themselves as consumers are trained on FFV nutritional benefits, coupled by their improved production and supply of safe FFV products in the market, THEN consumer awareness and demand for quality and safe FFV is increased WHICH LEADS TO Increased access to safe and quality FFV products AND ULTIMATELY RESULTS IN increased and sustained consumption of nutritious FFV products by consumers in Uganda

AND

IF Public and private sector actors, have improved capacity to deliver services that disseminate, regulate and enforce compliance to the quality standards for fruits and vegetables THEN Public and private sector actors will be supported to successfully pilot and demonstrate improved service delivery in FFV quality standards dissemination and compliance enforcement, to value chain actors, that includes roll out of UGA GAP and SPS compliance systems WHICH LEADS TO Public sector actors being convinced of the successful demonstrations/pilots conducted AND THEN Public Sector actors institutionalize the recommended changes in service delivery and information dissemination THAT CONTRIBUTES TO strengthened institutional and regulatory changes among public sector actors in the horticulture sector

AND If all the above are achieved, THEN

The horticulture sector will be transformed into an efficient, inclusive, and competitive sector driving improved business performance, improved resilience of businesses and farmers, WHICH ULTIMATELY CONTRIBUTES TO poverty reduction, adequate food and nutrition security in consumer households, and increased job creation within a sector characterized by prosperous horticulture farmers and businesses.

HortiMAP operates at three levels or domains:

- Under Strategic Objective 1 (Improved productivity and supply), HortiMAP intends to deploy strategies that strengthen the capacity of farmers to invest in productivity and quality, support producer organizations to deliver services and link producers to markets, and support SMEs and micro-entrepreneurs to reach farmers with products and services that enhance productivity and reduce loss.
- Under Strategic Objective 2 (Increased competitiveness and access to markets), HortiMAP intends to build the capacity of market-facing SMEs to deploy new business models that reach consumers with increased volumes of healthy, safe, quality products, while generating consumer demand through increased awareness.
- Under Strategic Objective 3 (Strengthened institutional and regulatory framework) the project intends to build the capacity of public sector actors to deliver improved services to horticulture sector actors, with a focus on facilitating public-private partnerships that address critical systemic constraints that limit sector growth.

The HortiMAP results framework is given below:

<b>Results hierarchy</b>	<b>Indicator(s)</b>
<b>Impact:</b> The project contributes to poverty reduction, adequate food and nutrition security, and job creation	<ul style="list-style-type: none"> <li>• # farmers with increased income (% women, % youth)</li> <li>• # households with increased access to horticulture products</li> <li>• # of farmers that progressively realize a Living Income</li> <li>• # jobs created along the horticultural value chain (% women, % youth)</li> </ul>
<b>Goal:</b> The horticulture sector is transformed to a efficient, inclusive and competitive, sector through increased productivity, reduced food losses, improved access to rewarding markets, strengthened resilience to shocks, and a strong and facilitating government.	<ul style="list-style-type: none"> <li>• Views of horticulture sector influencers on the modernity,</li> <li>• Value of Horticultural Exports in Euros</li> <li>• Amount of Investment in Euros by Farmers, MSMEs and large processors in the horticultural sector, (as a result of the project)</li> <li>• # farmers resilient to shocks.</li> </ul>
<b>Outcomes</b>	
<b>SO 1: Productivity and supply of horticultural products sustainably improved</b>	
<b>Outcome 1:</b> Productivity and supply of horticultural products sustainably improved	<ul style="list-style-type: none"> <li>• Percentage change in average yield per acre of priority horticultural crops</li> <li>• Incremental Volume of vegetables and fruits produced by HortiMAP farmers in MT</li> <li>• Number of farmers that progressively decrease the yield gap of priority horticultural crops</li> <li>• Incremental revenue by farmer facing MSMEs attributable to the project in Euros</li> </ul>
<b>Intermediate Outcome 1.1:</b> Farmers invest in and apply on-farm and climate smart practices and technologies	<ul style="list-style-type: none"> <li>• Number of farmers applying improved on farm and climate smart practices and technologies</li> <li>• Number of farmers accessing credit from external formal financial institutions</li> <li>•</li> </ul>
<b>Intermediate Outcome 1.2:</b> Farmer serving MSMEs and POs invest in and apply improved practices to reach farmers with products and services	Number of farmer-serving MSME and POs applying core recommended business management practices (as a result of the project) Amount of finance obtained by farmer serving MSMEs and POs in Euros
<b>SO 2: Improved competitiveness and access to domestic, regional, and (limited) export markets for horticultural products.</b>	
<b>Outcome 2:</b> Improved competitiveness of MSMEs , POs and farmers who have access to domestic, regional and export markets for nutritious horticulture products	<ul style="list-style-type: none"> <li>• Incremental revenues realized by market facing MSMEs and POs attributable to the project in Euros</li> <li>• Value of horticultural crop imports targeted for import substitution in Euros</li> <li>• Number of farmers reporting selling to competitive domestic, regional and or international markets (as a result of the project)</li> <li>• Incremental volume of nutritious vegetables and fruits sold by farmers in MT</li> </ul>

<b>Intermediate Outcome 2.1:</b> Market-facing MSMEs, POs and farmers adopt practices and inclusive business models to meet market requirements	<ul style="list-style-type: none"> <li>• € of incremental, attributable sales sold by farmers.</li> <li>• # POs and SMEs certified on compliance with quality control and food safety standards (Q-Mark).</li> <li>• # SMEs applying core recommended business management practices.</li> </ul>
<b>Intermediate Outcome 2.2:</b> Ugandan consumers have increased awareness of FFV safety/quality concerns, including through enhanced capacity of market vendors to reach them with food safety and quality information and education	<ul style="list-style-type: none"> <li>• Percentage incremental change in consumers in target markets who demonstrate purchase preference of nutritious and safe fruit and vegetable products</li> <li>• Number of market vendors (micro-retailers) certified by the project to display “healthy and safe branding” on FFV products and or stalls</li> </ul>
<b>SO 3: Service provision strengthened within the horticultural value chain</b>	
<b>Outcome 3:</b> Service provision capacity of the horticultural public sector is strengthened	<ul style="list-style-type: none"> <li>• Number of changes achieved in the institutional and regulatory framework servicing the horticulture sector</li> </ul>
<b>Intermediate Outcome 3.1:</b> Public sector actors pilot delivery of improved services and information to value chain actors	<ul style="list-style-type: none"> <li>• Number of horticulture crops piloted to be traced under the developed traceability system</li> <li>• Number of new technology-enabled information dissemination models deployed</li> </ul>

HortiMAP activities were designed to contribute to the above strategic objectives through three primary mechanisms:

#### ***Mechanism #1. The Market Development Facility (MDF)***

The MDF is HortiMAP's primary mechanism for achieving SO1 and SO2. To increase reliable and high-quality supply and access to markets, the MDF was to provide a mix of TA and catalytic finance to 30 growth-oriented SME partners. This is to be achieved through sourcing a mix of input and technology companies, commercial farms, processors, exporters, retailers, and logistics and transport companies. Given the varying types and needs of SME partners, there would be no one-size-fits-all TA or finance solution. Rather, TNS intended to co-design bespoke bundles of TA and finance that support MDF clients to address core business constraints, as well as pilot and scale more inclusive business models.

#### ***Mechanism #2 – Market Acceleration Support.***

Beyond the supply chains of MDF SME clients, HortiMAP intended to equip a broader range of market actors with the skills and tools they needed to benefit from an evolving horticulture sector. These could include:

- Horticultural skills training for emerging FFV or diversifying entrepreneurial farmers (**SO1**). Under this mechanism, HortiMAP intended to build the capacity of farmers who need to apply improved skills and practices to increase productivity, improve quality, and reduce loss. These include farmers who have the potential to access new markets and buyers but were not within MDF client-supplier footprints.
- Entrepreneurship training for micro-entrepreneurs that provide services and sell products to farmers (**SO1**), particularly youth. TechnoServe's **Strengthening Rural Youth Development through Enterprise (STRYDE)** curriculum was developed in partnership with the Mastercard Foundation to help rural young men and women transition to economic independence. STRYDE offers a comprehensive package of services to youth, including soft skills, entrepreneurship, and agribusiness skills.
- Delivering gender-sensitive entrepreneurship training.

The project also intended to conduct retail and food safety training for market vendors (**SO2**). TechnoServe would use its existing suite of trainings that are specifically tailored for micro-retail entrepreneurs. Training content on financial management, investment, and inventory management would also be undertaken to support micro-retail profitability. Training on food safety, quality, and consumer education was intended to position these micro-retailers as important partners in driving demand for improved handling of nutritious foods.

#### ***Mechanism #3. Market Ecosystem Support***

Primarily through **SO3**, HortiMAP intended to address priority systemic constraints that affect a broad range of market actors and stifle sector growth. HortiMAP would support government actors to develop partnerships with the private sector to improve the delivery of services to stakeholders along the horticulture value chain. Based on the needs and goals of government and private sector, HortiMAP support was to include brokering public- private partnerships (PPPs) that expand lab testing services, test solutions for disseminating information on standards at scale, and streamline systems that match horticultural product buyers and sellers.

## Target groups

No.	Category
1	Farmers (smallholder and medium scale farmers)
2	Marketing Input suppliers, Processors & aggregators such as ACES/Unions, seedling businesses, and all service providers that offer Horticulture services, etc.
3	Implementing Partners of the project
4	Financial access (SACCOs)
5	Local government officials, especially from natural resources departments (Agriculture and environment).
6	Representatives of other relevant programs
7	Non-Governmental Organisations (NGOs) active in food security and CSA

HortiMAP was designed to support value chain actors in three regions:

- Lake Victoria Crescent (for rural (informal), urban (Kampala), and EU markets),
- Kigezi region (for local, DR Congo, and Rwandan markets), and
- Mt Elgon region (for local, Kenyan, and South Sudan market).

## 3. Objectives of the Evaluation

The purpose for this evaluation is to assess the performance of the project and capture project achievements, challenges, and best practises. On the other hand, it offers a learning aspect for all stakeholders. The evaluation will also identify key lessons learned, challenges, unintended effects and the flexibility of the programme to adapt and respond to the changes and sustainability of the interventions.

The objectives of the evaluation are to:

1. Assess the performance of the project towards achieving the intended project objectives, results, and outcomes as agreed upon in the project document.
2. Assess the relevance and effectiveness of the HortiMAP project interventions (partnerships, training, technical assistance, market Development Facility (MDF), Horticulture Credit Line (HCL), etc towards achieving the project outcomes/results. What worked (or did not work) and why.
3. Identify and assess critical lessons learned, challenges, unintended effects of the project and draw recommendations for future horticulture programs, also from the perspective of the IGG results and objectives.
4. Assess whether the risks identified in the project were the most important and appropriate ones. Were the risk management strategies/responses that were adopted by the project adequate?
5. Assess the likely sustainability and impact of the project-examining, particularly from the beneficiaries' perspective, how much of the project's knowledge and practice transfer efforts has been learned, adopted, used and institutionalized by the beneficiaries (women and men) and other stakeholders and partners.

In annex 1 specific questions are formulated with respect to: relevance, coherence, effectiveness, and sustainability. These questions may be complemented by the consultant.

## 4. Methodology

The evaluation will follow a mixed-method approach, including the following:

- Elaboration of the methodology for the evaluation presented in an inception report.
- Desk review of all relevant program documentation, such as project document, mid-term review, annual reports, baseline, midline and endline reports, etc.
- Undertake fieldwork in project intervention areas, interviews with key local stakeholders; such as (in)direct beneficiaries, (local) government, civil society, and project staff and implementing partners.
- Stakeholder consultations at local and national level.
- Qualitative and quantitative analysis based on results of the evaluation activities, including field work in the targeted areas. Specific attention needs to be given to probing beyond 'expected answers' to get to underlying opinions.
- Qualitative analysis to enable the formulation of an opinion on the impact of the project.
- Presentation of the key findings to EKN and the project.



- Preparation of a draft evaluation report for review by EKN containing the mission's main findings and recommendations.
- Elaboration of the final report, including an executive summary, and related annexes.
- Any subsequent adjustments required by EKN, as needed for final approval of the reports.

In annex 2, a table with the main stakeholders is presented.

The evaluators will design and decide on the program of the evaluation and to be visited partners, beneficiaries, areas, etc. TNS will offer support based on the developed program, if required.

## 5. Deliverables

- An inception report, including workplan, detailed methodology and risk assessment, to be delivered within two weeks after signing the contract
- A discussion based on inception report with EKN, before the start of fieldwork
- A presentation of initial results and draft recommendations, to be presented to EKN and HortiMAP upon the completion of fieldwork.
- A draft report, (maximum 45 pages, excluding annexes) to be submitted within 10 days after completion of the fieldwork
- A final report, to be submitted within 10 days after receipt of feedback from the EKN.

## 6. Required expertise

The team of three consultants for this evaluation (including at least one local consultant) must cover the relevant expertise areas and have the minimum level of experience:

- The team leader should hold minimum a Master's degree in Agricultural Economics and development, Horticulture, Entrepreneurship, Marketing, Financial Management, Sustainable Development studies, Business Administration, Socio-economics, natural resources management, project management or related field
- Team leader with at least 10 years international experience with implementing/reviewing agricultural development and horticultural programs, agricultural productivity, and marketing interventions in Africa.
- Broad experience with food security and smallholder agricultural development
- Strong knowledge and experience in social research techniques, both quantitative and qualitative.
- The team of evaluators need broad experience at least 5 years in East Africa, preferably Uganda
- Excellent English writing skills

All organizations that are part of the framework agreement evaluations 2020 can submit an Expression of Interest. However, proposed evaluators should have no previous or present involvement in the design and/or implementation of HortiMAP. This includes research, monitoring and advisory services.

## 7. Planning

The evaluation will start not later than 17<sup>th</sup> June 2024. The draft report has to be submitted by 16<sup>th</sup> September 2024. It is foreseen that the evaluation will take 80-100 person-days. At least 65% of the required persons-days will be allocated for field work. The maximum budget is 100,000 Euro(including VAT). The budget should mention daily fees of consultants as well as specify other costs, as transport, visa etc.

## 8. Logistics

The consultant is responsible for arranging visas, travel and insurance.

Lodging is to be arranged by the consultant. HortiMAP can be asked to help to book lodging in the project areas. Transport will be hired by the contractor.

## 9. Submission process (adjusted)

Expression of Interest (EOI)	
Invitation to submit EOI	22/04/2024
Submission of EOI	29/04/2024 by 12.00 EAT

Submission of concept notes	15/05/2024 by 12.00 EAT
<b>Full proposal</b>	
Invitation to submit full proposal	30/05/2024
Submission of full proposal	11/06/2024 by 12.00 EAT
Selection of proposal	18/06/2024 deadline
Sending selection/rejection letters	20/06/2024 deadline
Call-off contract	21/06/2024 deadline
Signing contract and first payment	15/07/2024
Start of contract	25/07/2024
Submission of draft report	24/10/2024

## Annex 1: Detailed questions to be answered

### **RELEVANCE: IS THE INTERVENTION DOING THE RIGHT THINGS?**

Description of the criterion<sup>1</sup>:

*The extent to which the intervention objectives and design respond to beneficiaries', global, country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change. Note: "Respond to" means that the objectives and design of the intervention are sensitive to the economic, environmental, equity, social, political economy, and capacity conditions in which it takes place. "Partner/institution" includes government (national, provincial, local), civil society organizations, private entities and international bodies involved in funding, implementing and/or overseeing the intervention. Relevance assessment involves looking at differences and trade-offs between different priorities or needs. It requires analyzing any changes in the context to assess the extent to which the intervention can be (or has been) adapted to remain relevant.*

Specific questions to be answered:

- How do different stakeholders (community members of different (socio-economic) background, private sector, national and local government at different levels), assess the relevance of the HortiMAP project to their needs and priorities?
- To what extent has the project taken the different needs and priorities of different groups into consideration?
- To what extent has the project addressed the underlying issues that led to the development of the project?
- To what extent are the objectives and interventions of the project consistent with beneficiaries' requirements, country needs, and partners' and donors' policies.
- How has the context in which the project was implemented changed over time, and how has this influenced the relevance of the project and its components?
- Could the relevance of the project have been made higher? If so, how?

### **COHERENCE: HOW WELL DOES THE INTERVENTION FIT?**

Description of the criterion:

*The compatibility of the intervention with other interventions in the country, sector or institution. Note: The extent to which other interventions (particularly policies) support or undermine the intervention, and vice versa. Includes internal coherence and external coherence: Internal coherence addresses the synergies and interlinkages between the intervention and other interventions carried out by the same institution/government, as well as the consistency of the intervention with the relevant international norms and standards to which that institution/government adheres. External coherence considers the consistency of the intervention with other actors' interventions in the same context. This includes complementarity, harmonization and co-ordination with others, and the extent to which the intervention is adding value while avoiding duplication of effort.*

Specific questions to be answered:

- To what extent was the design and implementation of HortiMAP coherent with the broader NL policy, NL strategy for food security, relevant food security projects in

<sup>1</sup> All descriptions are found in [www.oecd.org/dac/evaluation/revised-evaluation-criteria-dec-2019.pdf](http://www.oecd.org/dac/evaluation/revised-evaluation-criteria-dec-2019.pdf) [accessed 20-01-2022]

the Netherlands embassy portfolio as well as the relevant NL thematic areas (eg refugees, SRHR, gender, climate change, private sector development etc) ?

- To what extent are the project's achievements in line with policies and plans of the national and local authorities in the targeted areas?
- To what extent was coherence sought and achieved with other relevant projects and programs (not funded by NL) in the targeted area?
- Could the coherence of the project have been made higher? If so, how?

#### **EFFECTIVENESS: IS THE INTERVENTION ACHIEVING ITS OBJECTIVES?**

Description of the criterion:

*The extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups. Note: Analysis of effectiveness involves taking account of the relative importance of the objectives or results.*

Specific questions to be answered:

- To what extent has the HortiMAP project achieved its intended goal and objectives as stated in the project results framework?
- To what extent did the project achieve its outcomes and outputs, both in terms of quantity and quality? (Analyse reasons for over-/underachievement)
- Are outcomes reached entirely attributable to the HortiMAP project?
- To what extent was the program logic (particularly the assumptions linking outputs to outcomes, and the risk assessment) adequate?
- Has the gender strategy been used in the reaching of gender-specific indicators?
- To what extent was risk management and conflict sensitivity adequate, and to what extent has the implementation of the project been adjusted based on regular assessments of assumptions and risks?
- Were there any unintended positive or negative consequences of the project?
- How did the project translate the understanding of the context and the political economy in the project strategy and activities?
- What has changed for the target groups in relation to access to horticultural inputs and products, productivity, agrifinance, household income and employment in horticulture jobs?
- To what extent has the horticultural sector been transformed, particularly the extent to which the project has captured local and regional market opportunity, job creation along the horticultural value chains, and household access to horticultural inputs and products?
- How has HortiMAP's interventions and approach induced positive changes among the businesses of the horticulture market actors?

#### **SUSTAINABILITY: WILL THE BENEFITS LAST?**

Description of the criterion:

*The extent to which the net benefits of the intervention continue, or are likely to continue. Note: Includes an examination of the financial, economic, social, environmental, and institutional capacities of the systems needed to sustain net benefits over time. Involves analyses of resilience, risks and potential trade-offs. Depending on the timing of the evaluation, this may involve analysing the actual flow of net benefits or estimating the likelihood of net benefits continuing over the medium and long-term.*

Specific questions to be answered:

- What are the foreseen long-term effects that have resulted from HortiMAP project interventions including contribution towards the intended impact, positive or negative impacts, or intended or unintended changes?
- Will changes induced by HortiMAP last? Why or why not? And do we have an effective exit strategy?
- To what extent do relevant stakeholders have a sense of ownership for the different activities?
- To what extent are relevant stakeholders active in ensuring the sustainability of the different activities?
- To what extent were tools knowledge generated during the project transferred to relevant local actors and government to ensure sustainability?
- Specifically for value chain activities: How are activities in the chain developed to assure sustainability and economic viability? How are investments triggering new investments and are repeatable without project support?
- Overall, what key blockages are foreseen in sustaining the effects of HortiMAP?

## Annex 2: Table with the main stakeholders

Market Development Facility - Illustrative Clients, Needs, and Support Areas		
Illustrative Partner	Current Business Needs	Illustrative MDF Support Area (TA and Finance)
<b>Input suppliers</b>		
<b>Home Harvest ( Bakkar Brothers) and Syngenta BV</b>  <b>Ssali net; Timo Nusery,</b> Small seed company	<ul style="list-style-type: none"> <li>· Need to expand their rural farmer client base for improved seed varieties</li> <li>· Want to work more with youth as seed sales agents and farmer advisors.</li> <li>· For tomatoes have a bacterial wilt-resistant seed but needs uptake</li> </ul>	<ul style="list-style-type: none"> <li>· TA to demonstration sites (and associated field days) for EF training and testing of high-quality seed varieties (along critical points in the cycle);</li> <li>· TA to youth entrepreneurs (running demos, selling seeds, and advising)</li> </ul>
<b>Aggregation</b>		
<b>ZIKA Cooperative</b>  Large PO growing and trading in traditional cash crops (maize, beans, etc.)	<ul style="list-style-type: none"> <li>· Need market linkages to incentivize diversification and investment into horticulture crops</li> <li>· Management and governance challenges within PO can compromise a POs growth and viability</li> </ul>	<ul style="list-style-type: none"> <li>· Linkage to larger buyer/processor that de-risks diversification into horticulture and information about quality production</li> <li>· FFV GAP training to farmers</li> </ul>
<b>Processing</b>		
<b>Newman Foods</b>  <b>Medium-sized processor Athari; Dani Agro;</b>	<ul style="list-style-type: none"> <li>· Invest in more farm-level storage equipment aggregation sites</li> <li>· Support to upgrade their product testing and inspection facilities</li> </ul>	<ul style="list-style-type: none"> <li>· TA and catalytic grant for storage and aggregation infrastructure</li> <li>· TA and catalytic grant for upgrading of their quality testing equipment, allowing other, smaller processors and farmers to use their testing facilities for a fee</li> </ul>
<b>Macdough Foods</b>  Medium-sized juice and sauce processor	<ul style="list-style-type: none"> <li>· Capital to expand manufacturing capacity, process more volumes, and sell into lucrative regional markets.</li> </ul>	<ul style="list-style-type: none"> <li>· Catalytic grant to catalyze expansion loan, tied to inclusive sourcing arrangements. Support linkages to regional buyers (South Sudan, DRC).</li> </ul>
<b>Exporters</b>		
<b>United Pearl Exporters Limited (UPEL)</b>  Small exporter	More opportunities to sell into reputable EU chains if they can achieve certification, which will require professionalizing their out-growers	<ul style="list-style-type: none"> <li>· TA and catalytic grant for market- required certification and linkages to lower-cost, faster private sector lab services</li> <li>· BDS to their supplying farmers to organize them into better-governed POs and invest in transport and storage</li> </ul>

<b>Tropical Dynasty Horticulture</b>  Medium-sized exporter via anchor farm sourcing from network of smallholders	<ul style="list-style-type: none"> <li>· Successfully exporting to EU, Middle East, and EAC markets</li> <li>· Opportunity to expand sourcing footprint and sell more into a greater number of domestic, regional, and export markets</li> </ul>	<ul style="list-style-type: none"> <li>· BDS TA to negotiate better-aligned financing package with lower interest rate and repayment grace period</li> <li>· TA and catalytic grant to install farmer tracking system, acquire Global GAP food safety certification, and additional coolers</li> <li>· GAP training to strengthen farmers GlobalGAP compliance</li> </ul>
		·
Illustrative Client Profiles	<b>Illustrative Needs</b>	<b>Illustrative Support Areas</b>
Vegetable cooperative (chili pepper)	<ul style="list-style-type: none"> <li>· Farmers have adopted pesticide application, but not other GAPs that would improve productivity and quality and reduce Loss</li> <li>· While pesticide application is a positive step, farmers need increased awareness of acceptable MRL levels</li> </ul>	<ul style="list-style-type: none"> <li>· Deliver training on climate-smart agronomy practices, including correct application of pesticides</li> <li>· Improve access to FCM traps through linkages with input agro-dealers and/or youth entrepreneurs</li> <li>· Link to Horticulture Credit Fund to facilitate investment in technology</li> </ul>
Youth farmers group (tomato)	<ul style="list-style-type: none"> <li>· Members struggle to access capital needed to invest in high-quality inputs. Bacterial wilt has the potential to severely damage yield.</li> <li>· Periodic drought reduces yield.</li> <li>· The group exclusively sells to the local market and struggles to diversify their market.</li> </ul>	<ul style="list-style-type: none"> <li>· Deliver training on improved seeds and GAP</li> <li>· Link to Horticulture Credit Fund to facilitate investment in improved seeds and drip irrigation kits</li> <li>· Explore aggregating demand with other farmer groups for bulk ordering</li> <li>· Link farmers to additional buyers (e.g. retail or processors) to expand their buyer options in addition to local markets</li> </ul>
Youth entrepreneurs (or aspiring entrepreneurs) with the potential to deliver inputs or services to farmers	<ul style="list-style-type: none"> <li>· Need soft skills and business skills to identify a business opportunity and start or expand an enterprise</li> <li>· Need access to capital to fund business activities or invest in productive assets</li> </ul>	<ul style="list-style-type: none"> <li>· Deliver TechnoServe's STRYDE entrepreneurship training</li> <li>· As part of STRYDE, support youth to save, access working capital, and make investments.</li> <li>· Link youth with the private sector (e.g. as sales agents for input companies)</li> </ul>
Women trader entrepreneurs	<ul style="list-style-type: none"> <li>· Need business skills and soft skills to improve revenues and enhance relationships with multiple stakeholders at borders and in supply chains</li> <li>· Need improved trading</li> </ul>	<ul style="list-style-type: none"> <li>· Deliver STRYDE entrepreneurship training to women traders, as well as technical training (trading protocols, product safety, inventory management, customer education, etc.)</li> <li>· Deliver gender-sensitive information and training to One Stop Border Post stakeholders to facilitate improved relationships</li> </ul>

	information to support legal trade routes	
Women market micro-retailers	<ul style="list-style-type: none"> <li>· Undifferentiated products/marketing</li> <li>· Opportunity to improve safe handling and reduce loss</li> </ul>	<ul style="list-style-type: none"> <li>· Deliver training to market vendors (e.g. financial management, investment, inventory management, food safety, and customer education)</li> <li>· Link vendors to producers with reliable supply of high quality and safe produce</li> </ul>
<b>Implementing partners</b>	<b>Role in the project</b>	
TechnoServe	Lead implementer of the project, coordinates all implementing partners and project activities. It also provides technical assistance in horticultural training and development	
BiD Network	Is a Dutch impact investment advisory firm that supports SME client sourcing, due diligence, and investment readiness and identify additional sources of financing for select SME clients	
PUM NETHERLANDS	Is a Dutch volunteer organization with access to a network of senior experts in vegetable? and fruit cultivation. HortiMAP leverages and draws upon the expertise of PUM to deliver TA to Horticultural actors.	
WAGENINGEN UNIVERSITY AND RESEARCH (WUR)	Takes care of the technical capacity of the HortiMAP team through curriculum development and training of trainers to ensure that the right skills are available and have the capacity to pass on the Knowledge.	
Pearl Capital Partners (PCP)	Establishes long-term sustainable and commercial financing tools through low-cost commercial lenders. Works through SACCOs to develop unique financial products for horticulture and provide customized horticulture credit lines for the smallholder farmers and SMES in horticulture.	

Note: The MTR was conducted for the project, and it pointed out some key lessons learnt at midterm period. The report will be attached as an annex for reference.

## **Annex B: People interviewed in KIIs and participating in FGDs**



## Annex B – People interviewed in KIIs and participating in FGDs

<b>List of Key Informant interviews conducted</b>			
<i>S/N</i>	<i>Names of People interviewed</i>	<i>Additional details (location, institutional name, phone number etc.)</i>	
	<b>Technoserve/ HortiMAP staff</b>		
1	Juliet Kyokunda	Country Director	Ntinda
2	Annette Kawooya	Market Development Facility (MDF) - Lead HortiMAP	Ntinda
3	Regina Bamugye	Market Development Facility (MDF) - Lead HortiMAP	Ntinda
4	Albert Kihangire	MEL Manager	Ntinda
5	Patrick Aluku	Senior Value chain Advisor(HortiMap)	Ntinda
6	Gugulu Elly	Business Advisor	Ntinda
7	Grace Byamugisha	Business Advisor	Western region
8	Sarah Gamisha	Business Advisor	Bulambuli
9	Monica Tamale	Finance Manager	Ntinda
10	Ponsiano Teretere	Partnership Advisor	Ntinda
11	David Maraka	Ex-MDF Lead	Ntinda
	<b>Consortium partners</b>		
1	Jan Van Den Berg	outgoing director of PUM (Netherlands NGO)	Netherlands
2	Edwin vander Maden	Represents an implementing partner of HortiMAP (Wageningen University and Research)	Netherlands
3	Patrick Oyee	Chief of party, ISSD	
4	Fiona Ibudi	ISSD	
5	John Senkayi	Agronomist, ISSD	
6	Mark Mutaahi	Managing Director, Bid Capital Partners	
7	Tom Borghols	Country coordinator- Uganda	Netherlands
	<b>MAAIF</b>		
1	Peter Dhamuzungu	Principal Agriculture Officer	
2	Dr. Alexander Samula	Senior inspector, Quarantine and Phyto Sanitary	MAAIF / Mukono ZARDI
3	Mutayomba Amos Justus	Horticulture Scientist	MAAIF / Kachwenkano ZARDI
	<b>UNBS</b>		
1	Abubaker Bakulumpagi	Principal Certification Officer	
	<b>Implementing Partners</b>		
1	David Wangolo	Investment director	Kampala
2	John Bosco Abaho	Project coordinator	Kampala
3	Peter Businde	Team Leader	

4	Fred Zaaake	Chairman	
5	Dr. Ananais Bagumire	Executive Director	
6	John Walugembe	Executive Director	Kampala
7	Solomon Kagaba	CEO	DEMIS Consults Ltd
8	Rachael Kemigosa	Community Development officer	Mbale
9	Mukasa Zaka Nsubuga	Senior Agricultural officer	Mbale
10	Arinda Clinton.	Field agronomist	Mbale
11	Karusya Frank	Coordinator, Caritas Kabale	Kabale
12	MUKHWANA AGGREY	Associate Agronomy advisor	Mbale
13	Orishaba Alex	Agricultural officer	Mbale
14	Nantabu Mayimuna	District Environment Officer	Mbale
15	Kitaayi Cissy	Assistant Agric Officer	Mbale
16	Tumwembaze Annet	Sub county community development officer	Mbale
17	Niyogaba dian	Community development officer	Mbale
18	Mbarushimana isabella	Agroinput dealer	Kayunga
19	Ivan	Agriculture officer	Sironko district
20	Niyezere joseph	Chair person (local government)	Sironko district
21	Deus Karisa	Managing Director (United Pearl Exporters limited)	Wakiso district
22	Alia Franco	Business Development Manager, Home Harvest	Mukono
23	Stephen Niwagaba	Chief Executive Officer	Wakiso
24	Isaac Owino	Production and marketing coordinator, Simlaw Seeds	Mukono district
25	Washuku Micheal	Chair person	Bulambuli
26	Omukama Geofrey	Agro dealer	Mukono district
27	Mulongo Samuel	Agricultural officer	Sironko
28	Massa Erisa	Associate agronomy advisor	Sironko
29	Namuwenge Rebecca	Assistant agricultural officer	Sironko
30	Chesanga Bornface	Agricultural officer	Sironko
31	Niwahereza Annah	Physical planner	Tororo
32	Sumba Ronald rupiny	Branch supervisor	Bulambuli
33	Musene musugu emmanual	Agronomist	Bulambuli
34	Shamim ijovi	Suppling inputs to farmers	Tororo
35	Mubiru Gustine	Chair person board	Sironko
36	Kaddu Syliver	Bank manager	Sironko
37	Cheptoyek martin	Contact person	Tororo
38	Turyasingura Obed	Agricultural Officer	Tororo
39	Namukowa Benard	Agricultural Officer	Tororo
40	Wanakina George Davidson	District production officer	Mbale
41	Linda Nakayiwa	Non Governmental Organisation-BRAC Kangulumira	Sironko
42	Natasha Namboze	Community Development officer	Sironko
43	Amanya rolland	Agronomist, Seeds from Sygenta	Sironko
44	Kanyesigye john	Agriculture officer	Kween
45	Amutuheire Seth	Loan's officer	Kween
46	Gerald	Agricultural officer muko sub	Kween

		county	
47	James	Community Development officer	Kween
48	Byaruhanga Emmanuel	Manager	Kween
49	Sobimana eugene	Community development officer chahafi town council,	Sironko
50	Kyomukama Betty	Community development officer	Sironko
51	Mugabirwe Robert	Agriculture officer	Sironko
52	John Baptist	Agriculture extension worker chahafi town council	Sironko
53	Nuwarinda Editor	Field extension officer	Sironko
54	Sobomana Nelson	Credit officer Dukore sacco	Ntungamo
55	Kanyange Aphia	Subcounty councilor	Tororo
56	Nsabimana Richard	Chairperson local council three	Sironko
	<b>National Horticulture Stakeholder Platform and Learning Partner</b>		
<b>1</b>	Steve Hodges	CEO, Uganda Agribusiness Alliance (UAA)	Kampala
	<b>PRODUCER ORGANIZATIONS / FARMER ASSOCIATIONS</b>		
1	Seryazi Abdul	Manager, Multipurpose Youth Cooperative Society Ltd, Luweero (ZIKA)	Ziobwe Kalagala
2	Mugisha Crescent	Manager, Kigezi Potato Farmer Cooperative Society Limited,	Rukiga
3	Bernice Imaikorit	Chairperson, Popular Knowledge Women's Initiative Farmer to Farmer Co-operative L'td	
4	Kadooli Lawrence	Chairperson, Pioneer Model Farmers Group	Mbale
5	Yefusa Muleme	Chairman, Khabutoola Intergrated Farmers Cooperative Society Limited	Manafwa
6	Chemonges Shamim	Chairman, Wagagai Agripreneur Farmers Group	Kapchorwa
7	Kutosi Robert	Chairman, Buwekanda Oil Seed Cooperative	Bulambuli
8	Nsereko Fred	Chairman, Busana Tomato and Vegetable Growers Association	Kayunga
9	Mike Ssali	Chairman, Nakifuma Farmers Development Group	Mukono
10	Kaweesi Jimmy	Chairman, Tusimbudde Development Group	, Kyotera
11	Silver Safari	Chairman, Kiyebe Multipurpose Cooperative Society Limited	Rubanda
12	Tinkamanyire James	Chairman, Rweshande Modern Farmers Association	Ntungamo
13	Orimwesiga Duncan	Chairman, Kanungu Fres Fruits	Kanungu

		and Vegetable Exporters Group,	
	<b>SME MDF BENEFICIARIES</b>		
1	Deus Karisa	Managing Director	United Pearl Exporters Limited (UPEL)
2	Pascal Kahesi	Country Representative Uganda	Syngenta Seed BV
3	Moses Oburu	General Manager	Vermipro Ltd
4	Dr. John Wasswa Mulumba	Managing Director	Dani Agro
5	Leeroy Sigombe	General Director	Real Integrated Pest Management (IPM)
6	Fr. Vincent Byaruhanga	Managing Director	Caritas Kabale
7	Phoebe Ayot	Research and Development Manager	Xclusive Biological Control (U) Ltd
8	Balame Twinamatsiko	CEO	Transform Abafrica Products Ltd
9	Chris Muwanika	CEO	NARO Holdings Ltd
10	Ssemwanga Muhammed	CEO	AGRENES
11	Aliya Hajee	CEO	Agricado Farms
12	Zunena Tibenda	CEO	Zunie Agri
13	Edson Twinamatsiko	General Manager	Grow Front Enterprises
14	Rogers Muhendo	CEO	Skylernmax
15	Joyce Atuhairwe	Managing Director	Athari Ventures
16	Joel Barasa	Project Lead	Negonja
17	Malou Van Meijl	Strategic Project & Sourcing Manager	Fiber Foods
18	Musa Kiggundu	Managing Director	Frutrac
19	Ibrahim Nganizi	Managing Director	Macdough Foods
20	Nasser Ssegujja	CEO	Newman Foods
21	Karizha Rukuuka Peter	Managing Director	Rudii International Ltd
22	Noella Ojara	Managing Director	Divine Organic Foods
23	Philemon Kamuntu	Business Development and Marketing Manager	INPUTI
24	Allan Kigonya	Agronomist	Chemiphar
25	Arnold Nabongo	Director	Flona Commodities
26	Jamal Odongo	Managing Director	Riverway Fresh Limited

Focus Group Discussions Held			
	<i>Group name or ID</i>	<i>SS# of participants</i>	<i>Location</i>
	<b>Market Vendors / Retailers</b>		
	<i>Group name or ID</i>	<i># of participants</i>	<i>Location</i>
	<i>Farmers FGD</i>		
1	Bukhatelema Farmer's group	13	Eastern
2	Mbale-Budwale Farmers	9	Eastern
3	Kangulumira area Cooperative Enterprise	14	Central
4	Katugunda Turinde Itaike farmers field School	17	South Western
5	Ruhago Vegetables farmers	7	South Western
6	Byamukama Group	8	Central
7	Biva Muntuyo Farmers Group	21	Central
8	Kagarama fruit and vegetables	7	South Western
9	Kanungu Mashroom Growers	19	South Western
10	Ruhago fruit Farmers Association	20	South Western
11	Watika Farmers and Savings Group	22	Eastern
12	Butta Farmer's Group	16	Eastern
13	Nkoma Namanyonyi Farmer's Group	9	Eastern
14	Bunatsushi Vegetable Farmers	15	Eastern
15	Omukibaare Tukwataniise Group	8	South Western
16	Walubira Farmers Group	11	Central
17	Tukolerewamu Farmers Group Ntunda	19	Central
18	Lusenke Farmers Association	10	Central
19	Kungu Butunda Development Association	8	Central
20	Habushuro Tutore Namani	27	South western
21	Bukalasi United	10	Eastern
22	Abamwe Onion Growers	7	South

			Western
23	Rwabakyeneka Organic Farmers	18	South western
24	Fuluma Tubaana Farmer's and Savings Group	12	Eastern
	<b>Total</b>	<b>327</b>	
	<i>Group name or ID</i>	<i>Location</i>	
	<b>Trained Extension Workers/ Lead Farmers</b>		
1	Kyomuhangi Mary	South western	
2	Ayebare Vanansio	South western	
3	Kyarisiima Immaculate	South western	
4	Arinaitwe Abel	South western	
5	Nuwagaba Ronald	South western	
6	Kirabyo Rebecca	South western	
7	Bashaija Benison	South western	
8	Orikunda Agatha	South western	
9	Nsiimenta Magretti	South western	
10	Baguma Benson	South western	
11	Kamanzi Inocent	Central	
12	Nagadya Agness	Central	
13	Ssengonzi John	Central	
14	Ssendegeya Nalasis	Central	
15	Ssebutinde Emma	Central	
16	Namugambe Irene	Central	
17	Nampeebwa Jesca	Central	
18	Namuli Pauline	Central	
19	Muwanga John Paul	Central	
20	Nakyazze Lazia	Central	
21	Cherotich Hellen	Eastern	
22	Yeko Patrick	Eastern	
23	Kibet James	Eastern	
24	Chebet Fasira	Eastern	
25	Cherukut Irene	Eastern	
26	Bushedich Francis	Eastern	
27	Chebet Isaac	Eastern	
28	Sande Joel	Eastern	
29	Chebet Emily	Eastern	
30	Chemutai Diana	Eastern	
	<i>Group name or ID</i>	<i>Location</i>	
	<b>Preliminary Findings Validation Workshops (3) – Participants List</b>		
1	Kamanzi Innocent	Central	
2	Nagadya Agnes	Central	
3	Ssengonzi John	Central	
4	Ssendegeya Nalasis	Central	
5	Ssebutinde Emma	Central	
6	Namugambe Irene	Central	
7	Nampeebwa Jesca	Central	

8	Kyomuhangi Mory	Central
9	Ayebare Vanansio	Central
10	Kyarisiima Immaculate	Central
11	Mutumba Lawrence	Central
12	Katumba Deborah	Central
13	Katende Rashid	Central
14	Kizito Ronald Mugube	Central
15	Nakaye Teddy	Central
16	Kabengwa Moses	Central
17	Othieno Deo	Central
18	Obondi Gabriel	Central
19	Omooge Possiano	Central
20	Ssenabulya Frank	Central
21	Mbonabyose Pius	Central
22	Arinaitwe Abel Julius	Central
23	Nuwagaba Ronald	Central
24	Kirabyo Rebecca	Central
25	Basheija Benison	Central
26	Orikunkunda Agatha	Central
27	Nsiimenta Magretti	Central
28	Baguma Benoni	Central
29	Tumukurate Elias	Central
30	Zzimbe Habibu	Central
31	Tusubira fredrick Ndinda	Central
32	Namalembo Jane	Central
33	Gidudu Abdu	Central
34	Igulu Majid	Central
35	Osukira Emanuel	Central
36	Kavuma Leuben	Central
37	Natural Marriam	Eastern
38	Mafabi Laimu	Eastern
39	Wazisi Fazali	Eastern
40	Guranka Sawedi	Eastern
41	Wanyeze Safina	Eastern
42	Zuliati Nambafu	Eastern
43	Webisa Ibrahim	Eastern
44	Mayeku Jowali	Eastern
45	Muduwa Joyce	Eastern
46	Madina kituyi	Eastern
47	Nambozo Sylvia	Eastern
48	Nambozo Janat	Eastern
49	Gidongo Patric	Eastern
50	Kanagwa Samuel	Eastern
51	Birya Ivan	Eastern
52	Nabuduwa Abiba	Eastern



53	Wamboga Sharif	Eastern
54	Namuwenge Caroline	Eastern
55	Namahe Aidah	Eastern
56	Nadunga Azena	Eastern
57	Abbo Teddy	Eastern
58	Nabwami Simon	Eastern
59	Acheng John	Eastern
60	Nyaburu Joyce mary	Eastern
61	Lamunu Lucky	Eastern
62	Adongo Scovia	Eastern
63	Nambuya Jozephine	Eastern
64	Aketch Felister	Eastern
65	Ayuda Florence	Eastern
66	Namutosi Lorna	Eastern
67	Namasaba Stella	Eastern
68	Mwima Kalimu	Eastern
69	Kulusumu Giduyi	Eastern
70	Apio Judith	Eastern
71	Akoth Peter	Eastern
72	Buubi Yunusi	Eastern
73	Beatrice Kafuna	Eastern
74	Felix Turyagumanawe	South Western
75	Kyarimpa Dinnah	South Western
76	Nasiima Lauriano	South Western
77	Twesiime Vastine	South Western
78	Ntegyereize Paulo	South Western
79	Asiimwe Medard	South Western
80	Kwesiga Caleb	South Western
81	Kihembo Moreen	South Western
82	Niwahereza Innocent	South Western
83	Arineitwe Joseph	South Western
84	Nasiima Apophia	South Western
85	Kyoheirwe Justina	South Western
86	Kemigisha Gloria	South Western
87	Kyarikunda Giladis	South Western
88	Tusingweire Edita	South Western
89	Kusiima Marion	South Western
90	Ahaboona Blessing	South Western
91	Biryomumisho Jackson	South Western
92	Ninsiima Provia	South Western
93	Topaco Joyce	South Western
94	Maniragaba Gloria	South Western
95	Mutabazi Tomu	South Western
96	Bekunda Micheal	South Western

97	Rwihandagaza David	South Western
98	Natukunda Sarah	South Western
99	Turyakyira Apophia	South Western
100	Kyasimire Geresi	South Western
101	Atuheire Evelyn	South Western
102	Mbonanampa John	South Western
103	Bagyenya Stanslas	South Western
104	Bizimana Matata	South Western
105	Safari Bigira Richard	South Western
106	Tusingwire Dinnah	South Western
107	Twakire Jovita	South Western
108	Ayebare Alice	South Western
109	Kyatuheire Annet	South Western
110	Twinobusingye Aida	South Western
111	Friday Habert	South Western
112	Habyarimana George	South Western
113	Thursday John	South Western
114	Arineitwe Annah	South Western
115	Evas Kyomuhendo	South Western
116	Mujawimana Kedres	South Western
117	Nsabuwera Norah	South Western
118	Ntawiha Joy	South Western
119	Nyirabaramuzi Jostinah	South Western
120	Nyirahabineza Penina	South Western
121	Kahimakazi Polina	South Western
122	Hategekimana Feresian	South Western
123	Burengera Bernard	South Western

**Annex C: Survey Data**

## Annex 3 - Survey data acquired from project participants

### 3.1 Demographic characteristics of the respondents

We present the demographic characteristics of the respondents in the three regions of study. Table 1 (see Annex 1) presents characteristics of households studied. There were more men (57%) than women (43%) in the study and this could be attributed to the time and season when the data was collected. At the start of the rainy season women as always spend most of the time in gardens compared to men. Also, with HortiMAP supported value chains becoming lucrative enterprises with returns higher than other crops, the value chains tend to be men's crops due to gender imbalance in families. Men tend to claim ownership of enterprises that bring in incomes at home.

#### 3.1.1 Respondents by Gender

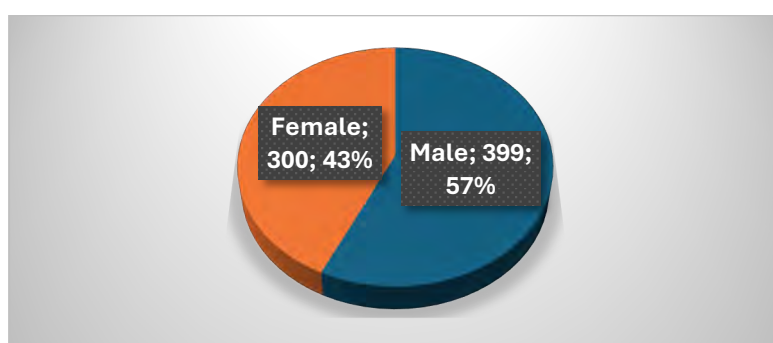
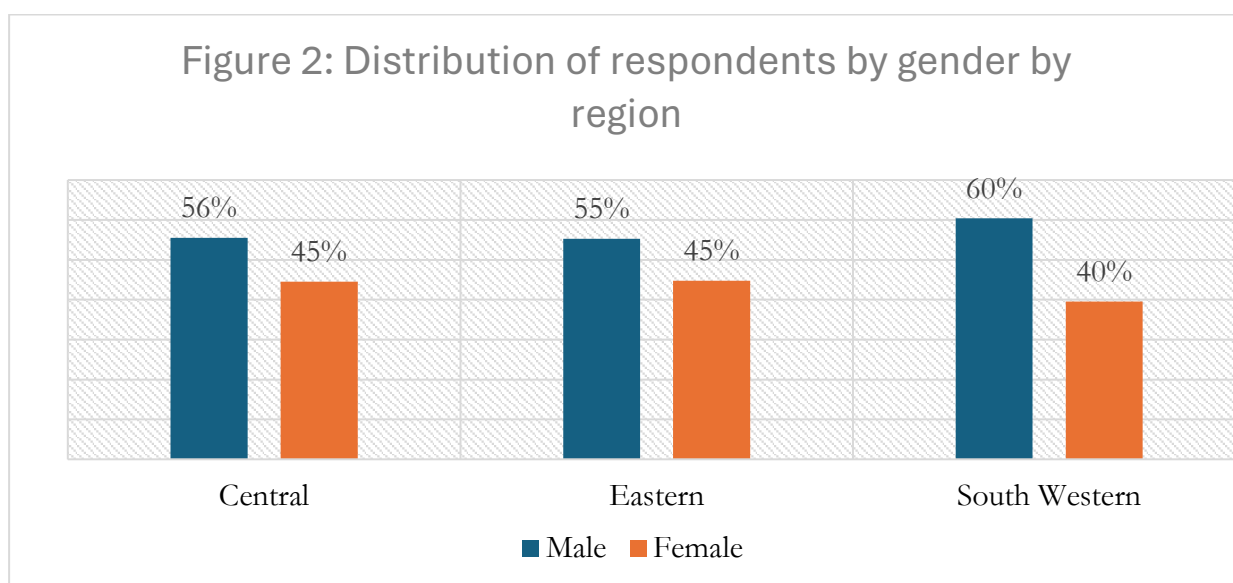


Figure 1: Respondents by sex



Figures 1 indicates the distribution of respondents surveyed by gender overall while Figure 2 indicates the distribution of respondents surveyed by gender in each of the three regions. In all regions, more men than women participated in the study. Fewer women participated in the South Western region, 39.5 percent compared to 44.7 percent and 44.5 percent for the Eastern and Central regions, respectively.

## 3.2 Membership to Farmer Organization and Household Head

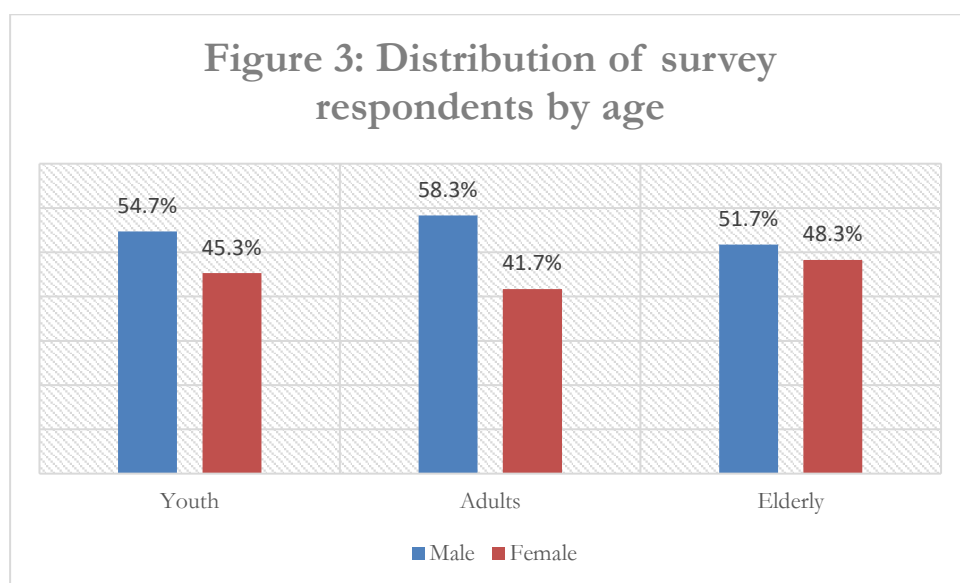
Tables 1 below, indicates the membership in either farmer organizations or cooperatives, while Figure 2 indicates household heads, respectively. Out of 699 respondents 91.4% were members of either a farmer organization or a cooperative supported by HortiMAP, while the rest were individual farmers not belonging any to cooperative or farmer association and 438 (68.5%) were household heads.

**Table 1: Membership to any farmer organization**

	N	Percent
Respondents(n=699)	639	91.42%
Household heads (n=479)	438	68.5%

**Table 2: Respondents by Farmer Membership and Household Head**

Are you a member to any farmer organization	Are you the Household Head?		
	Yes	No	Total
Yes	438	201	639
	68.54	31.46	100.00
No	41	19	60
	68.33	31.67	100.00
Total	479	220	699
	68.53	31.47	100.00

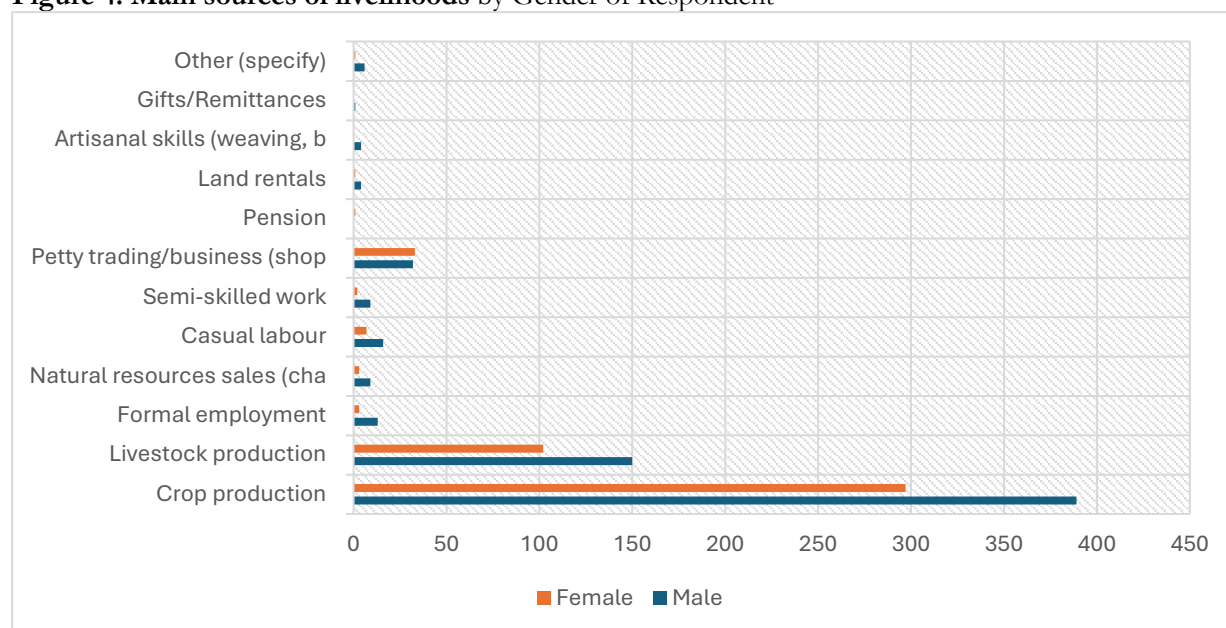


A majority of the farmers surveyed, 62.3%, were adults between 36 and 64 years old, of which 41.7% are women. - Youth (aged 18 to 35 years), Adults (aged 36 to 64 years), and Elderly (age 65 and older).

## 3.3 Source of livelihoods

We asked survey respondents to indicate their sources of income by livelihood activity. Each respondent was allowed to indicate more than one income sources.

**Figure 4: Main sources of livelihoods by Gender of Respondent**



The main source of livelihood for Youth, Adults and Elderly were **crop production** as reported by 32%, 62.6% and 4.6%, **livestock production** as reported by 26%, 67% and 6.7% of the Youth, Adults and Elderly, respectively, and **petty trading**, which was reported by 3.5% of youth, 5.7% of adults, and 0.3% of Elderly, respectively.

**Table 3: Main Sources of livelihoods by Age of Respondent**

Enterprise/Livelihood	Youth	Adults	Elderly	Total
Crop production	224	430	32	686
Livestock production	66	169	17	252
Petty trading/business (shop	24	39	2	65
Casual labour	14	9	0	23
Formal employment	7	8	1	16
Natural resources sales (cha	4	7	1	12
Semi-skilled work	4	7	0	11
Other (specify)	3	4	0	7
Land rentals	1	4	0	5
Artisanal skills (weaving)	2	2	0	4
Pension	0	1	0	1
Gifts/Remittances	1	0	0	1
Total	350	680	53	1083

The main sources of livelihoods were Crop Production, Livestock Production and Petty Trading/business in declining order. All these livelihood areas are dominated by adults (aged 36 to 64 years) and by youth (aged 18 to 35 years).

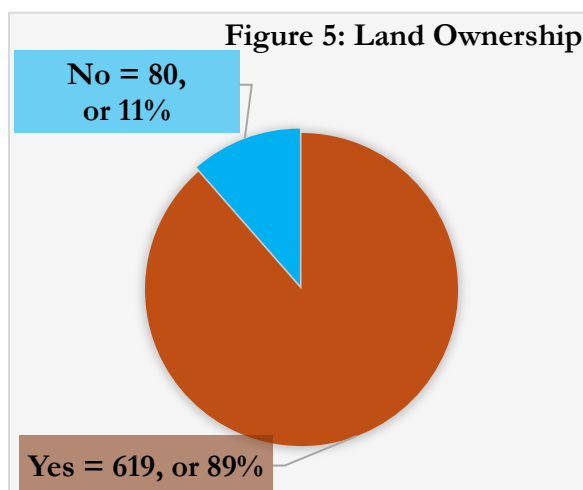
**Table 4: Main sources of livelihoods by region**

Main enterprises	Central	Eastern	South West	Total
Crop production	216	240	230	686
Livestock production	125	83	44	252
Petty trading/business (shop ??	31	19	15	65
Casual labour	10	2	11	23
Formal employment	9	1	6	16
Natural resources sales (cha ??	8	1	3	12
Semi-skilled work	5	2	4	11
Other (specify)	2	0	5	7
Land rentals	3	0	2	5
Artisanal skills (weaving, b ??	2	1	1	4
Pension	0	0	1	1
Gifts/Remittances	1	0	0	1
Total	412	349	322	1083

The main sources of livelihoods in all three regions were Crop Production, Livestock Production and Petty trading/business in declining order. While Eastern and South Western regions were dominated crop production, respectively. There were more farmers in Central region who engaged in livestock production and Petty trading/business, followed by Eastern region.

### 3.4 Land ownership and Livelihoods

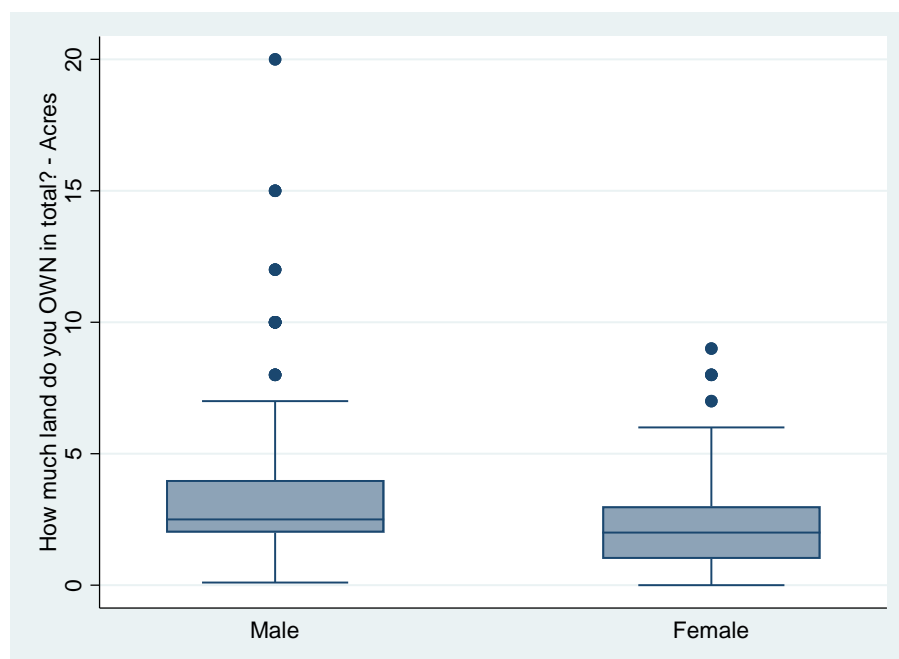
Figure 5 presents the extent of land ownership in the three regions. Over 88% of the respondents own land.





**Table 5: Description of Land ownership by gender**

Gender	N
Male	365
Female	254



Women own less land with an average of 2.6 acres compared to 3.0 acres by men. There are higher variations in ownership of land among men than women.

**Table 6: Land ownership among respondents by gender**

	M	F
Number of respondents owning land by gender:	365	254
Male and Female		

**Table 7: Land ownership by Education level**

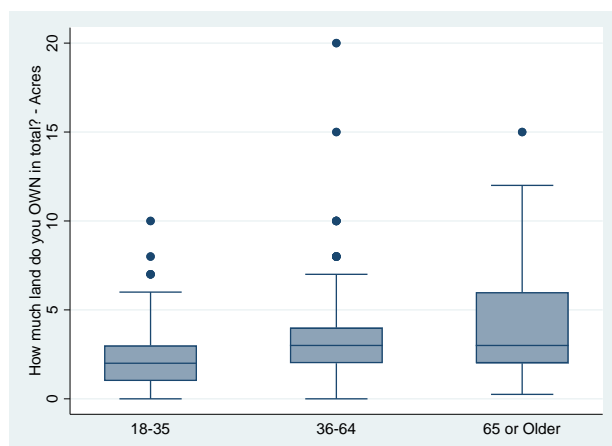
Level of Education	N
Illiterate	54
Primary	287
Secondary	199
Post secondary	35
Others	44

***Number of observations = 579***

Majority of participants who own land have primary level of education. However, on average illiterates and other groups of people are more likely to own land than the rest.

**Table 8: Summary statistics: max and mean**

age	max	Mean
Adults	20	2.9
Elderly	15	4.6
Youth	10	2.3



On average the elderly farmers own more land with 4.6 acres compared to the adults with 2.9 acres on average and the youth with 2.3 acres on average. However, the gap between the least and most land owned is very high among the elders.

**Table 9: Extent of land ownership by gender**

	Margin
Gender	
Male	3.0131
Female	2.5833

**Number of observations = 619**

On average, each woman owns 2.5 acres (Table 9) of land compared to a man who owns 3.00 acres, holding age, level of education constant.

**Table 10: Extent of land ownership by level of education**

	Margin
Illiterate	3.5358
Primary	2.6920
Secondary	2.7550
Post-secondary	2.7630
Other	3.3514

**Number of observations = 619**

The results indicate that on average, educated farmers on average own 2.7 acres of land compared to illiterate farmers who own 3.5 acres (Table 10), holding age and gender constant. The evidence further shows that on average, elderly persons own 4.5 acres of land compared to adults and youths who own 2.9 and 2.3 acres, respectively, holding level of education and gender constant.

On average, each elderly person who is illiterate owns 5.2 acres, suggesting that while elderly persons did not obtain significant education, they did obtain relatively more land.

Table 10c (Annex 1) shows the ownership of land by age. On average, farmers own 3.1 acres of land in Central region compared to farmers in South Western and Eastern regions who on average own 2.8 and 2.6 acres, respectively, holding age, level of education and gender constant.

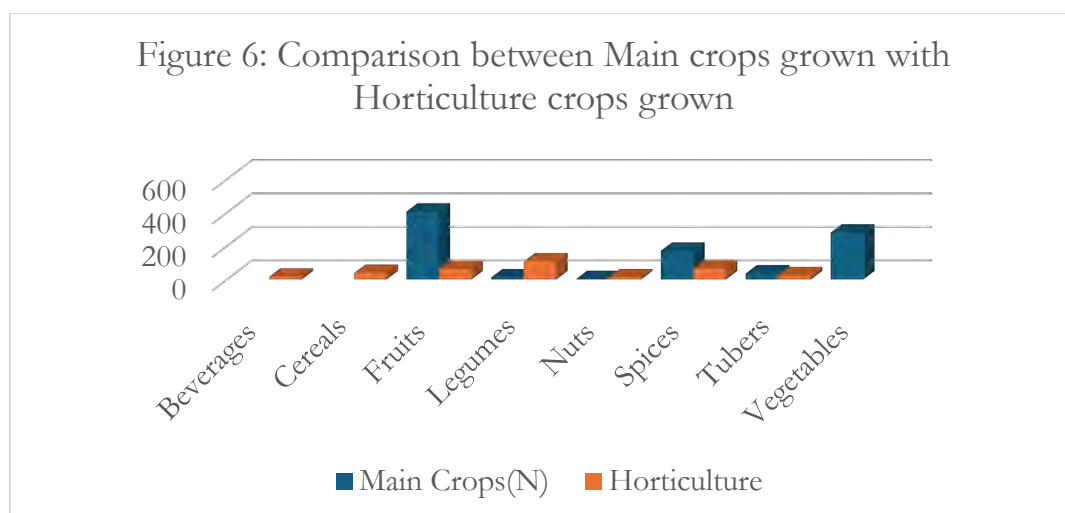
### 3.5 Main enterprise in the study area

The survey data show that the main enterprises/crops grown include coffee (100% of the farmers), cereals where maize was reported to be grown by 89.5% of the farmers, bananas by 34.7%, legume crops/beans which are grown by 91% of the farmers, ground nuts (86.4%), onions (45.2%) and carrots (64%). Field observations noted the presence of a wide range of vegetables from root vegetables/tubers (carrots, beetroot), leafy vegetables (black night shade, spinach, cabbage) to fruit vegetables (eggplant, and cauliflower). The fruits were mainly passion, pepper, tree tomato, berries and papaws.

The fruits and vegetables (Table 11) grown mainly for market include vegetables (onions, tomatoes, cabbages, carrots, passion fruits) (27.8%), bananas (34.7%), pineapples (15.3%), water melon (6.9%), avocado 9.7%, and jack fruit (4.2%) among other.

**Table 11: Horticultural crops grown for selling in the market.**

Crops	N	%
<b>Beverages</b>		
Coffee	16	100.0%
<b>Cereals</b>		
Maize	34	89.5%
Rice	1	2.6%
Sorghum	3	7.9%
<b>Fruits</b>		
Avocado	7	9.7%
Bananas	25	34.7%
Jack fruit	3	4.2%
Oranges	1	1.4%
Passion	20	27.8%
Pineapple	11	15.3%
Watermelon	5	6.9%
<b>Legumes</b>		
Beans	101	91.0%
Cow peas	6	5.4%
Soya Beans	4	3.6%
<b>Nuts</b>		
Ground nuts	11	84.6%
Sunflower	2	15.4%
<b>Spices</b>		
Green pepper	39	37.5%
Hot pepper	18	17.3%
Onions	47	45.2%
<b>Tubers</b>		
Beetroot	3	12.0%
Carrots	16	64.0%
Cassava	1	4.0%
Potatoes (Irish/Sweet)	4	16.0%
Yams	1	4.0%

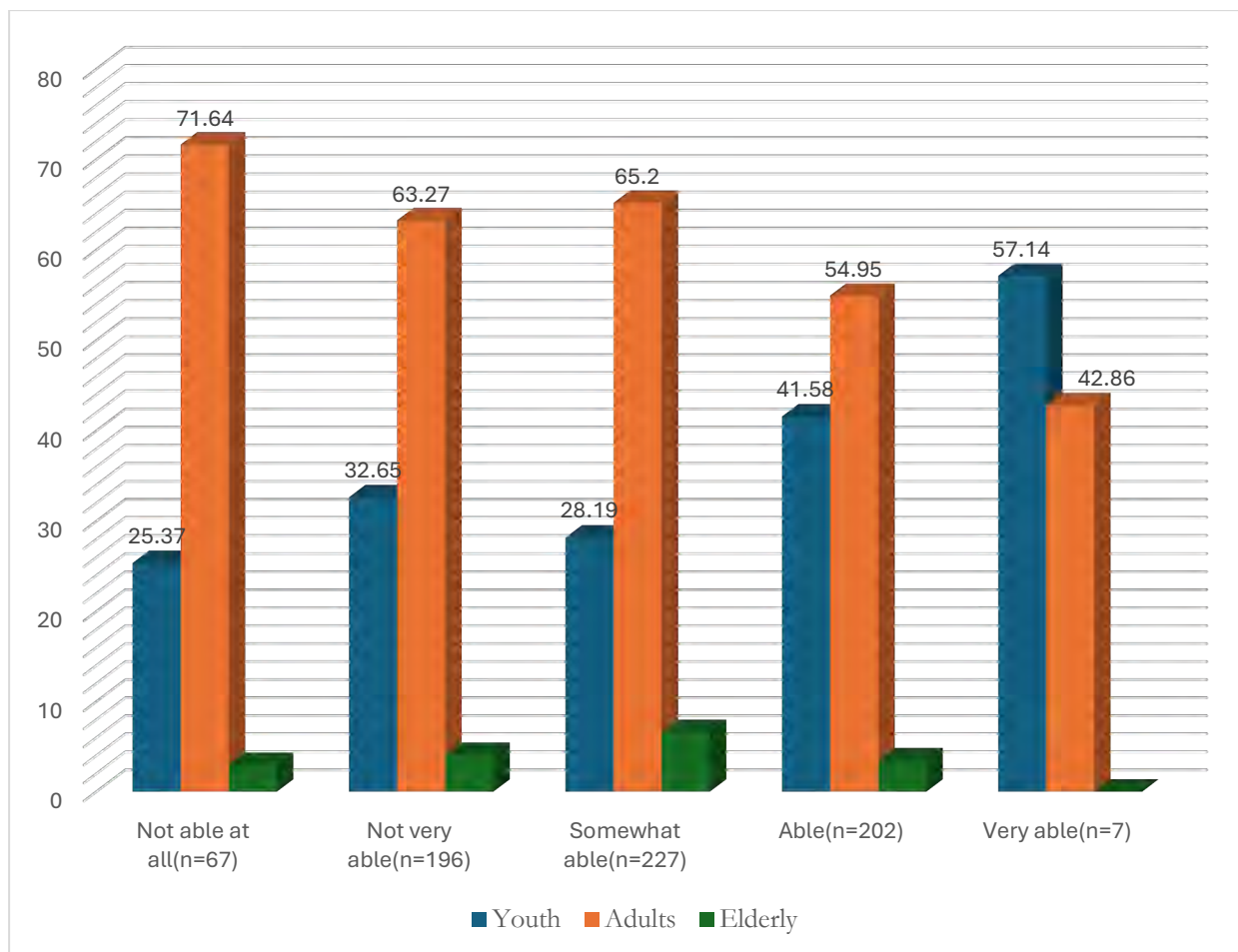


### 3.6 Financial Access

The common existing and identified financial products and services for the farmers interviewed were school fees loans, irrigation finance, solar loans, home improvement loans and horticulture credit line loans.

#### Financial access by age

The study evidence (see Figure 7 and Table 12, below) show that among the Adults 54.95% were able and 41.5% were very able to meet their financial needs while among Youths 57.14% were able and 42.86% were very able to meet their financial needs, whereas among male farmers 57.92% and 42.08% were able and very able, respectively, to meet their financial needs and among female farmers 85.71% and 14.29% were able and very able respectively, to meet their financial needs.



**Figure 2: Financial access by age**

**Table 12: Financial access by gender**

How able is your household to meet its financial needs?	Sex		
	Male	Female	Total
Not able at all	29 43.28%	38 56.72%	67 100.00%
Not very able	111 56.63%	85 43.37%	196 100.00%
Somewhat able	136 59.91%	91 40.09%	227 100.00%
Able	117 57.92%	85 42.08%	202 100.00%
Very able	6 85.71%	1 14.29%	7 100.00%
Total	399 57.08%	300 42.92%	699 100.00%

The first row has *frequencies* and the second row has *row percentages*

Table 13, below, presents the survey evidence of how farmers' access finance by region. Of the farmers that are "Not able at all" to access finance, 37.3% were in the central region compared to 53.73% and 8.96% in eastern and southwestern regions, respectively. On the other hand, 18.81%, 42.08% and 39.11% "were able" to access finance in the Central, Eastern and South Western regions, respectively. Further, 57.14%, 14.29% and 28.57% were "very able" to access finance in the respective regions of Central, Eastern and South Western Uganda.

**Table 13: Financial access by region**

How able is your household to meet its financial needs?	Region			
	Central	Eastern	South Western	Total
Not able at all	25 37.31	36 53.73	6 8.96	67 100.00
Not very able	58 29.59	58 29.59	80 40.82	196 100.00
Somewhat able	93 40.97	66 29.07	68 29.96	227 100.00
Able	38 18.81	85 42.08	79 39.11	202 100.00
Very able	4 57.14	1 14.29	2 28.57	7 100.00
Total	218 31.19	246 35.19	235 33.62	699 100.00

### Coping mechanism by farmers

In Table 14, below, evidence on coping methods by farmers is explored. The two main methods used by farmers for coping with financial challenges include borrowing from SACCOs and borrowing from relatives/neighbors. More males (48.40%) than female (32.30%) borrow most from SACCO. Equal proportion of both male and female borrow from relatives/neighbors. Adults are the largest number of borrowers from SACCO, while the elderly are the largest number of borrowers from relatives and neighbors.

**Table 14: Coping methods by gender**

Methods of coping	Male (n=393)	Female (n=290)
Borrow from relatives/neighbors	32.30%	32.40%
Borrow from SACCO	48.40%	37.90%
Remittances from relatives	2.80%	5.20%
Borrow from informal money lenders	4.10%	4.80%
Sale of household assets	5.60%	5.90%
Exploit natural resources (e.g., make charcoal, fishing)	2.30%	1%
Wage labour/piece work	2%	2.40%
Do nothing	1.50%	2.40%
Others	1%	7.90%

### 3.7.1 Savings

The three main methods of saving money include using commercial banks, SACCO and saving clubs (VSLA) (Table 15). A higher proportion of women (47.3%) than men (33.9%) save using VSLAs, while more men than women save using SACCOs. As shown in Annex X, the survey indicated that the largest proportion of Adults saved using SACCOs (41.4%) and the highest proportion of the elderly saved used VSLAs (44.7%).

**Table 15: Saving methods by gender**

Method of saving money	Gender	
	Male(n=413)	Female(n=309)
Commercial bank	11.6%	8.1%
SACCO	44.8%	36.9%
Savings clubs (VSLAs)	33.9%	47.3%
In form of livestock	3.1%	2.6%
In form of jewelry	0.5%	0%
At home (e.g., in a jar)	5.3%	4.8%
Other specify	0.7%	0.3%

The total number of responses was 722.

Table 16, below, shows that a higher proportion of farmers with primary education and below saved most using VSLA. While a higher proportion farmer with secondary education and above saved most using SACCOs. Farmers with low or no education, constituting about a 10% of the responses, saved primarily at home in secret places such jars.

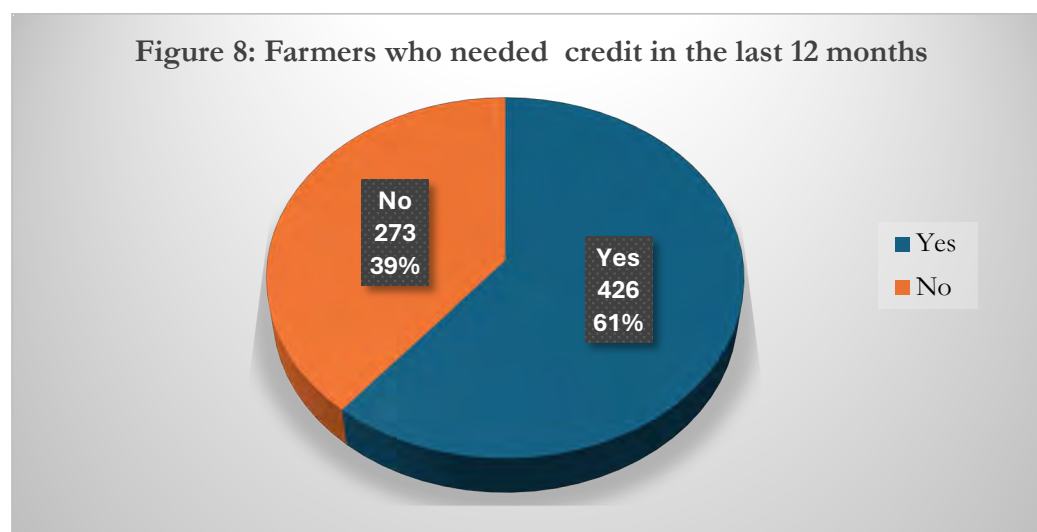
**Table 16: Saving methods by Education**

Saving method	Level of education					Total (n=722)
	Illiterate (n=38)	Primary (n=328)	Secondary (n=250)	Post- secondary (n=42)	Other (n=64)	
Commercial bank	10.5%	6.4%	9.2%	16.7%	28.1%	10.1%
SACCO	34.2%	37.8%	45.2%	45.2%	46.9%	41.4%
Savings clubs (VSLAs)	42.1%	42.4%	40%	38.1%	23.4%	39.6%
In form of livestock	2.6%	4.3%	2%	0%	1.6%	2.9%
In form of jewelry	0%	0.3%	0.4%	0%	0%	0.3%
At home (e.g., in a jar)	10.5%	7.9%	2.8%	0%	0%	5.1%
Other specify	0%	0.9%	0.4%	0%	0%	0.6%



### 3.7.2 Credit Activity

Figure 8 shows the number of farmers who obtained credit in the past 12 months for various reasons as presented in Table 16.



**Table 17: Credit access**

Reasons for obtaining credit	Male (n=391)	Female (n=308)
To buy agricultural inputs	56%	55.2%
Borrowed for business	13.3%	12.7%
School fees	21%	20.8%
Health expenditure	6.4%	7.8%
To service another loan	1.3%	0%
For construction	1.3%	0.7%
Other specify	0.8%	2.9%

#### Gender (N=699)

Evidence from Figure 8 shows that 61% of the horticultural farmers needed credit in the last 12 months while 39% did not need credit. The majority of men (56%) and women (55.2%) needed credit for buying agriculture inputs while credit was accessed for paying children's school fees by both men (21%) and women 20.8%. Women did not borrow at all for servicing other loans while a few men did (1.3%) (Table 17).

The results show that a higher proportion of youth (58.4%) needed credit for agriculture inputs than among adults (55.1%) and the elderly (46.9%) (Table 17 in Annex 1). In decreasing order of the proportion, the youth needed credit for agriculture inputs (58.4%), school fees (15.7%), business (14.7%) and health expenditure (8.1%), respectively.

In decreasing order of the proportion, the adults needed credit for agriculture inputs (55.1%), school fees (22.8%), business (12.8%) and health expenditure (6.2%), respectively. So also, the evaluation established that in decreasing order of the proportion, the elderly needed credit for agriculture inputs (46.9%), school fees (25.0%), business (15.6%) and health expenditure (12.5%), respectively. The elderly did not borrow for construction and servicing loans compared to a few adults.

#### Effect of education on credit access by farmers

The majority of farmers with post-secondary education accessed credit primarily for buying agricultural inputs (61.8%), business (20.6%) and school fees (11.8%) and no one borrowed for loan servicing, construction and other needs (Annex 1 Table 17a). On the other hand, farmers with secondary and lower

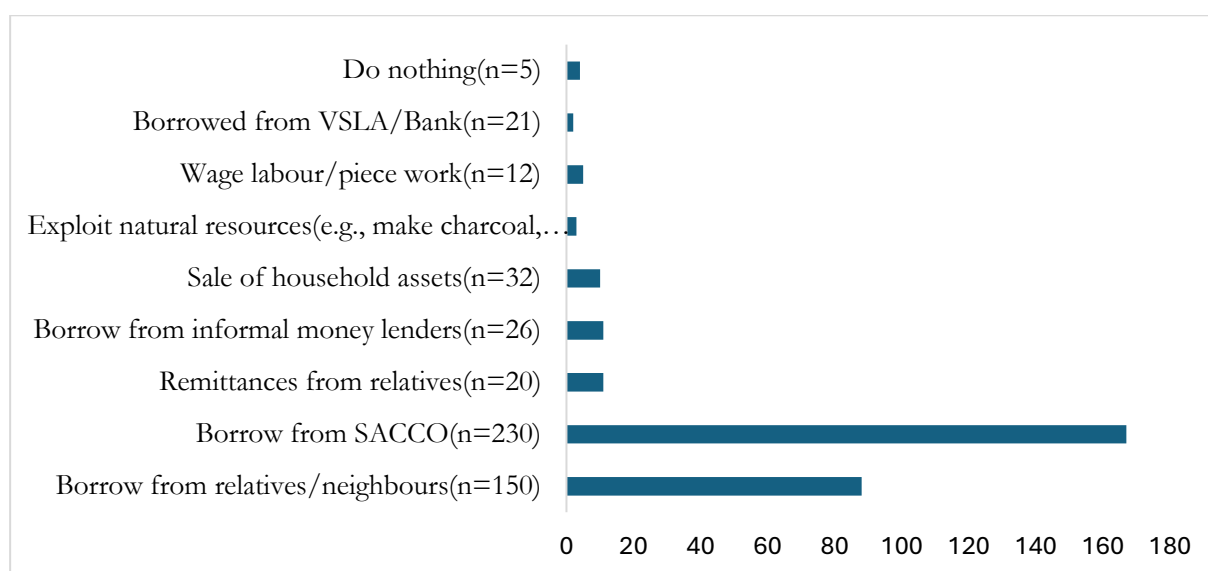
education levels had a similar pattern of reasons for accessing credit: buying agricultural inputs, paying school fees, boosting their business. However, people who are illiterate borrowed most for health expenditure compared to the rest of the groups.

### Coping mechanisms employed by farmers

SACCOs and relative/neighbors are the most frequent sources of credit for survey participants. Survey evidence indicated that the majority (73%) of farmers who belong to and save with a SACCO borrow from SACCOs, compared to 27% of non-members who borrowed from SACCOs. Among farmers who are SACCO members also 59% borrow from relatives/neighbors.

**Table 18: Membership of SACCO and Coping up with financial hardship**

Coping up with financial hardship	Membership of SACCO	
	Yes	No
Borrow from relatives/neighbors(n=150)	59%	41%
Borrow from SACCO(n=230)	73%	27%
Remittances from relatives(n=20)	55%	45%
Borrow from informal money lenders(n=26)	42%	58%
Sale of household assets(n=32)	31%	69%
Exploit natural resources (e.g., make charcoal, fishing) (n=8)	38%	63%
Wage labor/piece work(n=12)	42%	58%
Borrowed from VSLA/Bank(n=21)	10%	90%
Do nothing(n=5)	80%	20%



**Figure 9: Coping up with financial hardship when a farmer is a member of SACCO**

Table 19 presents the logistic regression results for the coping strategies employed by SACCO members.

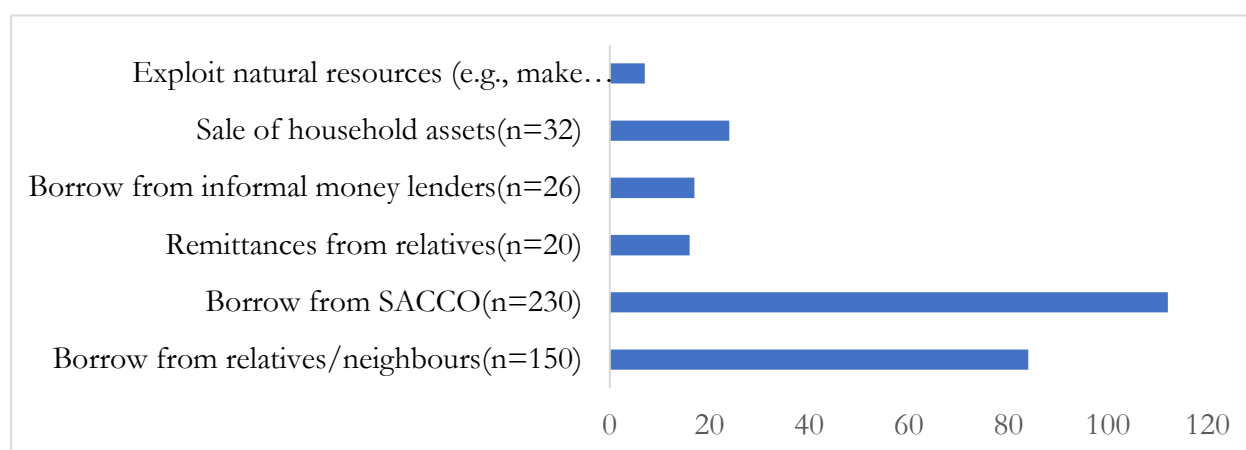
The odds of a farmer who is a member of a SACCO coping with financial hardship by borrowing from a SACCO are approximately 7 times higher than a non-member borrowing from a SACCO. This suggests that saving with a SACCO is a positive risk factor (a benefit) for coping with hardship by borrowing from a SACCO.

The odds of a farmer who is a member of a SACCO coping with financial hardship by borrowing from relatives/neighbors are approximately 2 times higher than a SACCO non-member. This suggests again that saving with a SACCO is also a positive risk factor (a benefit) for coping with hardship, but less so for borrowing from relatives/neighbors.

While some farmers have accessed help from VSLAs to cope up with financial hardships, VSLA members indicated that they also borrow from SACCOs and relatives/neighbors.

**Table 20: Ways of coping with financial hardship for VSLA members**

Ways of coping with financial hardship	Savings clubs (VSLA)	
	Yes	No
Borrow from relatives/neighbors(n=150)	56%	44%
Borrow from SACCO(n=230)	49%	51%
Remittances from relatives(n=20)	80%	20%
Borrow from informal money lenders(n=26)	65%	35%
Sale of household assets(n=32)	75%	25%
Exploit natural resources (e.g., make charcoal, fishing) (n=8)	88%	13%



**Figure 10. Coping up with financial hardship for VSLA members**

Table 22 presents survey data the relationship between borrowing and use of the funds for the intended purpose. The results imply that there is a statistically significant association between obtaining the credit and using the money specifically for horticultural crops. Further, it means that the differences observed in data are unlikely to be due to random chance alone and suggest a real relationship between obtaining credit and borrowing specifically for horticultural crops.

**Table 22: Relationship between borrowing and the use of the money to support horticultural crops**

		Have you ever borrowed money specifically to grow horticultural crop		
		Yes	No	Total
	Yes	293	104	397

Did you manage to obtain the credit?	No	10	19	29
	Total	303	123	426
Pearson chi2(1) = 20.3467 Pr = 0.000				

Table 23 presents the sources of credit and its intended use. Results show that farmers obtain credit for growing horticulture value chains and general household needs. The higher percentage of farmers use credit from VSLA for addressing household needs (43%) and horticultural farming (39%) compared to 49% and 41%, respectively, who access credit from a SACCO. However, the percentage of farmers using credit for horticultural farming is slightly less in both cases.

However, it should be noted that a higher proportion of farmers (10%) who obtain credit from the banks/MFI, friends/family members and from suppliers for horticultural farming is higher than those who obtain credit for household needs (1%).

**Table 23: Source of credit for general household needs and horticultural crops**

	Household needs		Horticultural crops	
	N	%	N	%
VSLA	208	43%	186	39%
SACCO	240	49%	194	41%
Banks/MFI	6	1%	48	10%
Family/Friends	23	5%	33	7%
Informal money lender	2	0%	1	0%
Supplier of inputs or vegetable/Fruits	0	0%	9	2%
Others	7	1%	2	0%

### Challenges faced by farmers to access credit

Table 24 presents challenges faced by farmers in accessing credit for both household needs and horticulture farming. The survey evidence shows that the top three obstacles or challenges in obtaining credit include high interest rates (35.09% of respondents), lack of collateral or security (16.9% of respondents) and fear of the financial institutions (15.73% of the respondents) (e.g., fear of failure to payback). It was also revealed that smallholder farmers don't have formal accounts with the commercial banks as was reported by 12.32 % among others. When gender was considered, all three challenges affected more women than men. The effect of a lack of collateral or security was higher than any other challenges.

**Table 24: Challenges in accessing credit**

Obstacles/challenges	Frequency	Percent of responses	Percent of cases
High interest rates	299	35.09	86.92
Lack of collateral or security	144	16.9	41.86
Fear of the financial institutions (e.g., in case of failure to payback)	134	15.73	38.95
Don't have formal accounts with the commercial banks (especially for smallholders)	105	12.32	30.52
Financial products are not appropriate for agriculture	84	9.86	24.42
Financial institutions are far away	77	9.04	22.38
Others	9	1.06	2.62

### Obstacles/challenges to access to credit by gender

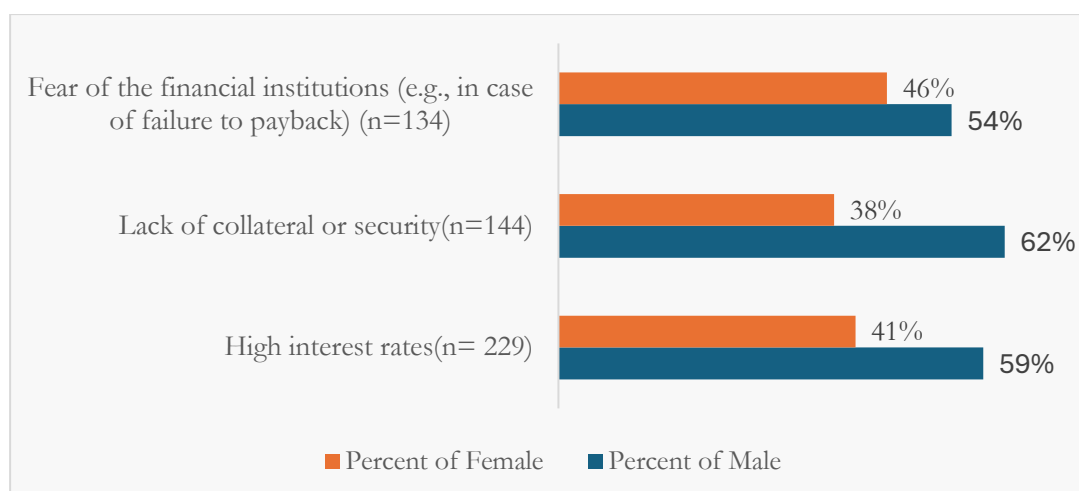


Figure 11: Farmers challenges to access credit by gender

### Obstacles/challenges to access credit by age

Results (Annex1) show that high interest rate (66%) is an obstacle to access credit by adults, followed by fear of the financial institution (65%) in case of failure to pay back and lack of collateral or security (64%), while for both the fear of the financial institution (31%) and lack of collateral security (31%) were the obstacles/challenges to accessing credit followed by high interest rate (30%).

Further analysis according to regions show that the majority of farmers in eastern region and South Western region (refer to Annex 1 Figure 12) mentioned that fear financial institution (47%) and high interest rates (47%) were the major obstacles as compared to other regions.

**Annex D: Data Collection Tools Used**

## Annex D - Data Collection Tools Used

### 4.1: Participant Farmer Survey Questionnaire

#### Participants Survey

##### INTRODUCTION

My name is \_\_\_\_\_ I am conducting the final evaluation survey of farmers who participated in the HortiMAP project.

You have been selected to participate in this assessment and I would like to ask you some questions about you and your household in relation to this project. This discussion will take about 30 mins.

We are conducting a Final Review to provide project partners and stakeholders with an independent assessment of the project's implementation and its achievement of results. This will help the evaluators assess the strategies and approaches used by the project - partnerships, training, technical assistance, Market Development Facility (MDF), Horticulture Credit Line (HCL), changes in access to credit for farmers, among others. This information will help us to determine if the project performed as expected and if it achieved its intended outcomes and its targets. The results of the survey will be used to inform decisions about the project's future and provide recommendations to increase its impact and the sustainability of its achievements.

All of the answers you give will be confidential and will not be shared with anyone other than members of our evaluation team. You don't have to be in the evaluation, but we hope you will agree to answer the questions since your views are important. Do you feel comfortable taking part in this Survey?

Interviewers Name \_\_\_\_\_

Location: GPS coordinates

Village \_\_\_\_\_

Parish \_\_\_\_\_

District \_\_\_\_\_

Date \_\_\_\_\_

Start time \_\_\_\_\_

End time \_\_\_\_\_

Phone number of respondent, for follow-up or clarifications \_\_\_\_\_

Date \_\_\_\_\_

Start time \_\_\_\_\_

End time \_\_\_\_\_

##### SECTION A: BACKGROUND INFORMATION

A01. Name of the respondent (Optional).....

A02. Gender of the respondent (*(DO NOT ASK. Just mark answer)*) - 0. Male; 1. Female.

A03. Marital Status of the respondent - 1. Single; 2. Married; 3. Separated/divorced;

4. Widowed; 5. Other (specify).....

A04. How many years have you lived in this village?.....

A05 Who is the household head? - 1. Husband; 2. Wife; 3. Other, specify.....

A06. Primary occupation/employment of the respondent .....

(Check codes below).

**Codes:** 1. Farming (crop + livestock); 2. Salaried employment; 3. Self-employed (off-farm); 4. Casual labourer (on/off-farm); 5. Business/non-farm income-generating enterprise; 6. Other, specify.....

A07. Are you a member to any farmer organization? e.g., a producer organization, a Cooperative, a SACCOs, etc., Yes or No. If not, why?

A08 What is your main source of livelihood? **(Mention up to 3, in order of importance)**

1	Crop production	7	Petty trading/business (shops, etc.)
2	Livestock production	8	Pension
3	Formal employment	9	Land rentals
4	Natural resources sales (charcoal, firewood, timber etc.)	10	Artisanal skills (weaving, brewing, carpentry etc.)
5	Casual labour	11	Gifts/Remittances
6	Semi-skilled work	12	Other (specify)

A08. Please check the education level of the Household head.

EDUCATION LEVEL (please check)	
Household Head	
Illiterate	<input type="checkbox"/>
Primary	<input type="checkbox"/>
Secondary	<input type="checkbox"/>
Post-secondary	<input type="checkbox"/>
Other: please specify	<input type="checkbox"/>

A09. Age of the respondent

- a) 18-35
- b) 36-64
- c) 65 or older



## SECTION B: LAND OWNERSHIP AND LIVELIHOODS

B1. How much land do you have in total? (including both upland and wetland) \_\_\_\_\_Acres.

B2. Source of land/How land was acquired.

- a) Purchase
- b) Heritage
- c) Leased privately
- d) Government
- e) Received in donation from relative
- f) Rented
- g) Others (specify)

C1. List the main enterprises/crops grown and or livestock kept on the farm.

- a) Fruits and vegetables
- b) Bananas
- c) Maize
- d) Coffee
- e) Goats
- f) Cattle
- g) Pigs
- h) Others (specify)

C2. What are the main fruits and vegetables do you grow mainly for market? (onions, tomatoes, cabbages, carrots, passion fruits, pineapples, etc.)

C3. Of your total land owned, how much land is allocated to fruits and vegetables per season? - a quarter of an acre or less? half of an acre? Up to one acre, more than one acre?

C4. What are the main barriers to increasing production and productivity and marketing for each of the enterprises listed in C2?

Crop	Barrier to Increasing Production/Productivity/Marketing
A	1.
	2.
	3.
B	1.
	2.
	3.

C	1.
	2.
	3.
D	1.
	2.
	3.
other	

**Codes:** 1. Limited access to quality seed; 2. Limited access to fertilizer; 3. Low labour availability; 4. Lack of access to extension services; 5. Poor/erratic rainfall pattern; 6. Pests and diseases; 7. Lack of reliable markets; 8. Other (specify)

.....

C5. Which of the following on-farm agronomic practices did you apply on your fruit and vegetable farm in the last two seasons (Season B 2023, Season A 2024)?

1. Used improved seeds; 2. Planted early/timely; 3. Safely applied fertilizer; 4. Safely applied pesticides 5. Safely applied fungicides; 6. Mulched 7. Planted in lines 8. Crop rotation 9. Irrigation 10. Others (specify).....

What changes did you make in practices you used from one planting to the next? Why?

C6. Which of the following post-harvest handling practices did you apply on your fruit and vegetable farm in the last two seasons (Season B 2023, Season A 2024)?

1. Harvesting on time; 2. Drying on tarpaulins; 3. Grading; 4. Sorting; 5. Washing; 6. Packing; 7. Others (specify).....

What changes did you make in practices used from one harvest to the next? Why?

C7. Main source of inputs

Input	Source
Seeds	
Labour	
Inorganic Fertilizer	
Organic fertilizer	
Pesticides	
Others (specify)	

\* Input Sources: 1. Local agro-dealer; 2. Farmer association/co-operative; 3. Gov't Program e.g., NAADS;  
4. NGOs; 5. Other, specify\_\_\_\_\_

C8. What are the challenges/problems encountered at the input (and equipment) level?

- a) Low access to agricultural inputs
- b) High costs of buying the basic/minimum inputs
- c) Availability of counterfeit inputs in the market

C9. How long have you been participating in HortiMAP project activities? Months? Years?

C10. What have you gained from being involved in the HortiMAP project activities?

- a) Gained skills and knowledge from training provided by the project (which training? please specify)
- b) Accessed better markets for my produce
- c) Accessed improved and genuine seeds/ inputs that are easier to access at reasonable costs
- d) Accessed better post-harvest storage facilities
- e) Finding fewer counterfeit products available on supplier's shelves
- f) Accessed financial services
- g) Accessed knowledge on food safety and food handling
- h) Others (specify)

C11. What are the challenges you encountered at the production level of fruits and vegetables?

- a) High incidences of pests and diseases
- b) Limited knowledge of agronomy / agricultural practices
- c) Limited knowledge of post-harvest handling practices/methods
- d) Limited access to markets and market information
- e) Infrastructure challenges such as poor road network
- f) Others (specify) .....

C12. What benefits have you obtained at the production level of fruits and vegetables due to HortiMAP project interventions or activities?

- a) Gained knowledge about controlling / preventing the prevalence of pests and diseases in my crops?
- b) Gained knowledge and skills of agronomy
- c) Gained knowledge and skills of post-harvest handling practices/methods
- d) Gained or Improved access to markets
- d) Gained better or improved access to market information (e.g., selling prices, input prices, post-harvest storage opportunities, buying dates, trucking costs, buyers names, co-op/bulk selling opportunities (for better prices, etc.)
- e) Gained improved / new opportunities to market my produce to markets (or buyers changed significantly/for the better.
- f) Gained access to market information through various, e.g., cell phones, radio, etc.

C13. How has the project helped you to ease the challenges at the processing level?

- a) Received trainings to improve skills in processing of horticultural crops
- b) Received Help to secure needed equipment
- c) Received support towards renting equipment so that it becomes easier to access, e.g., tractors, processing machine, etc.)
- d) Received funds towards wages for labour so that labour and wages are stabilized

- e) Was connected to suppliers through producer cooperatives so that supplies were easier and cheaper to get
- f) Received Help to access credit (e.g., was linked to a cooperative, a SACCO, a VSLA establishment, an Off-takers/aggregators, a SME value chain financing opportunity, a Bank)

C14. How has HortiMAP project helped you at the distribution / marketing level –

- a) Helped to link me to producer and marketing cooperatives/associations to market my produce
- b) Helped to link me with SMEs or Off-takers/aggregators and exporters of horticultural products
- c) Helped to reduce middlemen that have been exploiting market information gap among farmers to undercut farmer leveraging power
- d) Middlemen were stopped from acting in ways that kept my earnings low
- e) Helped link me to an establish multi-stakeholder horticultural platforms where discussions to promote the industry and share important issues take place
- f) I see that farmers in the horticulture sector are now better organized in producer cooperatives/associations
- g) There is better enforcement of internal compliance rules in the horticultural industry
- h) There are better agreed standards – which are being maintained
- i) Increased access to credit/Agri-finance (links to SACCOs, Banks, Off-takers/aggregators, exporters etc., for access to horticultural credit)

C15. Where do you sell your fruits and vegetables?

- a) In the nearby local/village market
- b) Market cooperative
- c) Through middlemen
- d) Other farmers
- e) On contract
- f) Others (specify).....

C16. Complete the table below - based on 2023/2024 production season (Refer to farmer's record book, if available. Repeat this table for each fruit and vegetable produce for sale.

#	Parameter	Unit	Vegetables and fruits		Was this the expected figure? 1= Yes 2=No	If No, Explain
			Season 1; 2023 B	Season 2; 2024 A		
QC16a	Reported size of garden	Acres				
QC16b	Units of seeds planted	KGs				
QC16c	Units Harvested	KGs				
QC16d	Units Sold	KGs				
QC16e	Selling Price per KG	UGX				
QC16f	Total Revenue	UGX				

## SECTION D: FINANCIAL ACCESS

- D1. How able is your household to meet its financial needs? ..... **1. Not able at all; 2. Not very able; 3. Somewhat able; 4. Able; 5. Very able.**
- D2. How do you cope when you are in financial hardships (financial coping mechanisms)?  
1..... 2..... 3..... 4.  
..... 5. .... 6..... 7. ....  
1. Borrow from relatives/neighbours; 2. Borrow from SACCO; 3. Remittances from relatives; 4. Borrow from informal money lenders; 5. Sale of household assets; 6. Exploit natural resources (e.g., make charcoal, fishing); 7) Wage labour/piece work; 8. Other, specify.....
- D3. Do you (or any member of your household) currently save money? .....  
(0=No; 1=Yes)
- D4. If yes, where do you save your money?..... 1. Commercial bank; 2. SACCO, 3. Savings clubs (VSLAs); 4. In form of livestock; 5. In form of jewellery, 6. At home (e.g., in a jar); 7. Other (specify).....
- D5. In the past 12 months did you or any household member need any credit? ..... (0=No; 1=Yes)
- D6. Why did you need the credit? ..... 1. To buy agricultural inputs; 2. For business; 3. School fees; 4. Health expenditure; 5. Other, specify.....
- D7. Did you manage to obtain the credit? ..... 0=No ( $\rightarrow$ F17); 1=Yes
- D8. If yes, where did you obtain the credit? ..... 1. VSLAs; 2. SACCO; 3. MFI; 4. Family/friend; 5. Informal money lender; 6. Other, specify..... 999. Not Applicable
- D9. What type of collateral was used for Formal Loan Taking:  
a) No collateral used  
b) Land used as collateral  
c) Other type of collateral used
- D10. If No (to D9) why did you not manage to obtain the credit? ..... 1. No collateral; 2. Not a member of a SACCO; 3. Not a member of a VSLA; 4. Already had credit that was being serviced; 5. Other, specify.....
- D11. Do you have any challenges accessing financial institutions? ..... (0=No; 1=Yes)
- D12. What are the key obstacles and challenges influencing access to finance?  
a) High interest rates  
b) Don't have formal accounts with the commercial banks  
c) Lack of collateral or security  
d) Financial institutions are far away  
e) Fear of the financial institutions (e.g., in case of failure to payback, his property will be sold)  
f) Financial products are not appropriate for agriculture (especially for smallholder farmers), or not available  
g) Others specify .....
- D13. What has the HortiMAP project done to help you to access a financial institution in your area?
- D14. What more needs to be done to access a financial institution in your area?
- D15. Which horticultural crops do you grow?
- D16. Have you ever borrowed money specifically to grow horticultural crops? \_\_\_\_ (0=No; 1=Yes)

D17. If yes, from who?

- a) VSLA
- b) SACCOs
- c) Banks
- d) Friends
- e) Supplier of inputs or Vegetable/fruits aggregator
- f) Others, specify

## SECTION E: RESILIENCE TO CLIMATE CHANGE AND ADAPATION

E1. What have you done to address any of the challenges of climate change, such as Increase in temperature/excessive heat? E.g., Change in rainfall patterns - prolonged droughts, flooding? Increase in pests and diseases? Increased wildfires in your area? Reduced groundwater? Others?

Which Challenge is the biggest? Second biggest?

- a) Irrigation
- b) Good agricultural practices such as soil and water conservation
- c) Agroforestry/Planting of trees
- d) Crop insurance
- e) Conservation farming
- f) Energy saving stoves   g) Others (specify)

E2. How has the HortiMAP project helped your household to cope up when you had a poor harvest due to agricultural or climate shock? [**Rank**]

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

E3. What would make your household more resilient to the effects of climate-related shocks (e.g., drought – see also above, E1)?

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E4. What needs to be improved on going forward, (What are your thoughts about the project?)

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## **SECTION F: Gender and Decision Making**

F1 Who makes most of the decision on the following during or following the harvest season for Fruits and Vegetables?

F1A. Who decides whether to plant Fruits and Vegetables,

1. Husband/man only
2. Woman/wife only
3. Both husband and wife
4. Other HH member
5. All HH members
6. Other external people (specify)

F1B. Deciding when and where to sell Fruits and Vegetables,

1. Husband/man only
2. Woman/wife only
3. Both husband and wife
4. Other HH member
5. All HH members
6. Other external people (specify)

F1C. in the delivery to buyer Fruits and Vegetables,

1. Husband/man only
2. Woman/wife only
3. Both husband and wife
4. Other HH member
5. All HH members
6. Other external people (specify)

F1D. Keeping the money from the sale of Fruits and Vegetables,

1. Husband/man only
2. Woman/wife only
3. Both husband and wife
4. Other HH member
5. All HH members



6. Other external people (specify)

F1E. Spending money from sale of Fruits and Vegetables

1. Husband/man only
2. Woman/wife only
3. Both husband and wife
4. Other HH member
5. All HH members
6. Other external people (specify)

F2 (SPECIFIC TO FEMALE RESPONDENTS)

F2A Rate your level of involvement in your household decision making process in the last one year?

- 1= High
- 2= Medium
- 3 = Low
- 4= Not participating at all

**End of the Survey Tool**

## 4.2: Interview Guidelines for KIIs and FGDs with Producers and Agribusiness owners

### **Guidelines for KIIs with farmers, producers and agribusiness owners:**

- a. What are the main benefits obtained from the project? [Probe for; Individuals, Farmers, Producers, and Agribusiness owners that benefitted]
- b. What do you consider the important topic/problems that were addressed adequately by the project? [Probe for: Problems not addressed adequately?]
- c. What are the areas of notable (high) and weak or under (low) achievement by HortiMAP project? [Probe for: Reasons for notable (high) and weak or under (low) achievement. What could have been done different?]
- d. What are the main challenges faced by you and by other actors in the agriculture/horticulture sector in your region (e.g., crop productivity, soil fertility, access to markets and finance, etc.) and how do these problems affect you? [Probe for; How HortiMAP addressed these problems? Sustainability of the solutions to the problems]
- e. How do challenges in the Horticultural sector vary between women and men and what mechanisms/strategies has the project employed to address/overcome these issues/challenges?
- f. How conversant are you with HortiMAP? How unique/different was HortiMAP's from other projects? How has this approach significantly contributed to the benefits of this project. How sustainable are these benefits?
- g. What specific areas/aspects of the HortiMAP require improvement so that you can be in a better position to adequately overcome the challenges discussed above?
- h. Do you think the HortiMaP's training and capacity building approaches were clearly understood and adopted by the beneficiaries, participants (women, men, youth) and local partner organisations? [Probe; Knowledge sharing, skills, technics, etc.] Which approaches were specifically understood? [Probe for approaches that weren't very clear and how could the approaches have been improved?]
- i. In what ways were the capacities of project participants (farmers, agri-business operators, extension workers, etc.) strengthened, if at all? Are these capacities likely to last? Do you think this new capacity can be maintained after the project comes to an end? If so, why? If not, why not?
- j. Engagement with the private sector and other non-governmental stakeholders, how did this work out? Do you think these new relationships or linkages will be maintained after the project comes to an end? If so, why? If not, why not?

**End of Tool**

## 4.3: Interview Guide for KIIs with Leaders of Producer Organisations and Associations, Cooperatives, SACCOs

### Interview Guide for Leaders of Producer Organisations and Farmer Associations, Cooperatives and SACCOs

#### INTRODUCTION

My name is \_\_\_\_\_ I am conducting the final evaluation survey of farmers who participated in the HortiMAP project.

You have been selected to participate in this assessment and I would like to ask you some questions about you and your household in relation to this project. This discussion will take about 30 mins.

We are conducting a Final Review to provide project partners and stakeholders with an independent assessment of the project's implementation and its achievement of results. This will help the evaluators assess the strategies and approaches used by the project - partnerships, training, technical assistance, Market Development Facility (MDF), Horticulture Credit Line (HCL), changes in access to credit for farmers, among others. This information will help us to determine if the project performed as expected and if it achieved its intended outcomes and its targets. The results of the survey will be used to inform decisions about the project's future and provide recommendations to increase its impact and the sustainability of its achievements.

All of the answers you give will be confidential and will not be shared with anyone other than members of our evaluation team. You don't have to be in the evaluation, but we hope you will agree to answer the questions since your views are important. Do you feel comfortable taking part in this Survey?

Interviewers Name \_\_\_\_\_

Location: GPS coordinates

Date \_\_\_\_\_

Start time \_\_\_\_\_

End time \_\_\_\_\_

#### SECTION A: RESPONDENT DEMOGRAPHICS

1.	Respondents Name	
2.	ID Number (If available)	
3.	Birth Year	
4.	Sex	1=Male      2=Female
5.	Marital Status	1=Single/never married   2= Married   3= Divorced/ Separated   4= Widowed
6.	Respondent is a member of which producer organization/ association?	
7.	Respondents gendered household type?	1= Male and Female Adults, 2= Adult Female no Male, 3= Adult Male no Female, 4= Child no Adults, 5= Other
8.	Respondents total arable land size (collect this unit in acres)	



## SECTION B: EFFECTIVENESS

1. To what extent have you been able to achieve some changes, and to what extent has your producer organisation/association been able to achieve some changes [**Probe; a)** Increased production, **b)** Increased access to financial services, **c)** Improved marketing, **d)** Improved profitability of the producer organisation/ association, **e)** Improved government policies towards producer organisation, **f)** Improved gender equality in producer organisation governance, and **g)** Increased resilience of producer organisation/ association members to climate change impacts and disasters]
2. What has been the main impact of HortiMAP on producer organisation members? Do members (male/female), have improved wellbeing?
3. Are there other beneficiaries? If so, who are they?
4. To what extent was the training provided by HortiMAP applied (used) by project participants (m/f) and producer organisation/association?
5. To what extent did the training contribute to change in production, marketing, etc., Was the change positive? significant?
6. What HortiMAP interventions contributed the most to the improved wellbeing of you as a producer organisation member (m/f)? to your household/family? Your association?
7. Was there a change in your knowledge of the market in which you operate? [**Probe for;** the changes in knowledge, How did this change your production, How did this change your marketing strategies, How did it change the prices you got for your products?]

## SECTION C: RELEVANCE

1. During the period when HortiMAP has been implemented, were the activities important ones, and did they provide benefits for producer organisation members and their families? (**Be specific**).
2. Did HortiMAP activities change and adjust to address new needs of producer organisation members as they came up? (**Be specific**).
3. Can you recall the most helpful HortiMAP activities or benefits across the 3 years of HortiMAP project? The respondent should be specific and provide responses such as the following *training, marketing study, provision of tools and inputs and when*. [probe for; Year 1, 2 and 3]

## SECTION D: SUSTAINABILITY

1. To what extent have the interventions increased the resilience of producer organisation members (male/female)
2. What are the main changes in climate that you are facing?
3. How has your ability to adapt to climate change changed?
4. What new capacities do you as producer organisation members (male/female) have now?
5. What services, benefits and interventions of HortiMAP project do you envisage to continue into the future?

## SECTION E: COHERENCE

1. What other programs similar to (or the same as) HortiMAP have you benefitted from? Heard about?
2. Is HortiMAP fulfilling a Govt of Uganda policy or support a Ministry of Agric program?
3. Does HortiMAP complement or support another program that's different but is available to you, of interest to you, that you are benefitting from?
4. What links to other programs or resources would have increased the benefits of HortiMAP for you?

## SECTION F: LESSONS LEARNED

1. What were the main lessons that producer organisation/Association members learned from the HortiMAP project? (**Focus on lessons learned in these areas**) [**Probe; a)** Producer organisation Governance, product marketing, **b)** Access to credit, production, and marketing, **c)** Improvements that should be kept up/maintained, **d)** The activities that contributed most to achieving benefits and outcomes for producer organisation members, **e)** Gender – what is important about gender equality in producer organisation development, and measures such as gender training, recruitment

of women leaders, promotion of gender equality and labour sharing in households?, and f) Focus on climate change impact and way to adapting to climate change; increasing capacity to adapt.

2. What recommendations do you want to make to TechnoServe from your experience with HortiMAP?

**End of Tool**

## 4.4: Interview Guide for KIIs with Implementing Partners

My name is \_\_\_\_\_ I am conducting the final evaluation survey of farmers who participated in the HortiMAP project.

You have been selected to participate in this assessment and I would like to ask you some questions about you and your household in relation to this project. This discussion will take about 30 mins.

We are conducting a Final Review to provide project partners and stakeholders with an independent assessment of the project's implementation and its achievement of results. This will help the evaluators assess the strategies and approaches used by the project - partnerships, training, technical assistance, Market Development Facility (MDF), Horticulture Credit Line (HCL), changes in access to credit for farmers, among others. This information will help us to determine if the project performed as expected and if it achieved its intended outcomes and its targets. The results of the survey will be used to inform decisions about the project's future and provide recommendations to increase its impact and the sustainability of its achievements.

All of the answers you give will be confidential and will not be shared with anyone other than members of our evaluation team. You don't have to be in the evaluation, but we hope you will agree to answer the questions since your views are important. Do you feel comfortable taking part in this Survey?

Interviewers Name \_\_\_\_\_ Date \_\_\_\_\_

Start time \_\_\_\_\_ End time \_\_\_\_\_

### SECTION A: RESPONDENT DEMOGRAPHICS

1.	Respondents Name	
2.	Sex	1=Male 2=Female
3.	Name of Department	
4.	Position or Role	
5.	Number of Years supporting the HortiMAP project?	

### SECTION B: EFFECTIVENESS

1. To what extent were HortiMAP's anticipated targets met or achieved? **[Probe for:**
  - a) What factors explain the gap (under/over achievement)?
  - b) Did TechnoServe/the implementing partner anticipate the gap? How?
  - c) How could results have been achieved differently?
  - d) Have HortiMAP interventions added value to the efforts of small producers/association members (m/f)? to the association? (changes in production, marketing, credit access, etc.) **How?]**
2. Have HortiMAP interventions added value to the efforts of small producers/association members (m/f)? to the association? (changes in production, marketing, credit access, etc.) How
3. Do we have a clear picture of how women and men have benefitted from HortiMAP? **[Probe for:**
  - a) If the results for men and women are similar, how was that achieved?
  - b) If not, what's the gap?
  - c) What factors explain the similarity/differences in results achieved for men and for women?]

4. What unexpected or unanticipated outcomes or results have been identified?
5. Were HortiMAP tools, methods and approaches adopted widely by other producer organisations/associations? any other entities? Why? [**Probe for:** If so, was this transfer planned and supported? Or Unplanned?]
6. Did HortiMAP project leverage resources from other sources to assist the producer organisations/associations and partners in carrying out their work? What data do we have on this?
7. What changes – in government support, services, programs and advice to producer organisations – were due to HortiMAP interventions?

## SECTION C: RELEVANCE

1. Did HortiMAP (its planned activities/outputs; its implementation) respond to the needs and priorities of the intended beneficiaries/local participants (m/f), and to the needs, priorities and priorities of partners and horticulture sector institutions?
2. How did the needs, and priorities of intended beneficiaries/local participants change during the implementation (life) of the project? (***Be specific.*** *Did the project respond to these changes?*)
3. How well did the project respond to the broader context in which it took place, i.e., to the economic, environmental, equity, social, political and capacity conditions? In what ways did it fill in well? Not so well?
4. How well received were the recommendations of the Baseline Survey? The recommendation of the Mid-term review? How well were they implemented?

## SECTION D: IMPACT

1. What is the need for replication or scaling to see the HortiMAP interventions applied more widely? [**Probe for:** **a)** Scaling out to reach other producer organisations/associations, **b)** Scaling across to influence other value chain partners, and **c)** Scaling up to influence government regulations, programs and policies or other institutions supporting producer organisations.]

## SECTION F: SUSTAINABILITY

1. To what extent are the benefits/results of the HortiMAP project likely to continue in the long term (beyond the life of the project)? [**Probe for:** the specific results? And on what basis is this claimed?]
2. What were the key changes in producer organisation/association governance achieved by the HortiMAP project?
3. What changes do producer organisation/association leaders see in producer governance as a result of HortiMAP?
4. Which HortiMAP's intervention(s) has contributed to sustainability within producer organisation? In the Sector?

## SECTION G: COHERENCE

1. How did other interventions, e.g. by national/regional and relevant sector institutions, support (or undermine) the HortiMAP project interventions?
2. How were HortiMAP project activities and outputs consistent with (similar to) those of other actors in the same context? Was there much/little “coherence” with other projects?
3. Were the linkages (e.g. marketing) supported or advocated by HortiMAP also being supported or advocated by key stakeholders? by other projects?
4. What inconsistent activities or measures (highly different or contradictory) were being promoted or introduced elsewhere by other agencies in the same context?
5. How were HortiMAP interventions actually coordinated (harmonized) with the interventions of other actors or partners?



## SECTION H: LESSONS LEARNED

1. What lessons were learned by project partners and stakeholders? *Focus at least on these specific areas:* **[Probe; a)** Production and productivity/ Production increases attainable  
b) Marketing **c)** Finance/credit (HH and/or producer organisation level) **d)** Weather or disaster insurance, **e)** Gender equality measures, **f)** Commercialization/specialization of producer organisation **g)** Conservation/sustainable farming methods and **h)** Climate change adaptation measures
2. What recommendations would you make for future TechoServe programming in the Horticulture sector?

**THE END**

## 4.6: Interview Guide for KIIs with TechnoServe

### Guidelines for KIIs with Project team members, (and with Partners, Implementation and Contributing Stakeholders)

#### 1. Project effectiveness

- a) Has the project achieved its expected outcomes, both in terms of quantity and quality? Explain reasons for over/underachievement - what evidence?
  - o Are the outputs contributing to the achievement of the immediate outcomes of the project?
  - o Is the project's progress likely to deliver the planned project outcomes within the remaining life of the project?
  - o Have the interventions generated any unidentified / unintended outcomes or effects?
    - o Is there any observable impact based on the intermediate results that have been achieved so far?
- b) Does a six-month extension to the project provide a realistic opportunity to achieve its expected outcomes?
- c) How did the different HortiMAP project strategies and approaches contribute to the achievement of the project's outputs and outcomes (results)? And did they provide *effective* pathways towards achieving the results? Consider partnerships (both direct and indirect interventions), training, technical assistance, MDF, HCL, etc.
- d) How did the project supports perform? the MDF grants, TA provision, Access to markets, HortiMAP's micro-infrastructure grants and the HCL? What worked well – what didn't work well and why? What should have been improved?
- e) Did the interventions consider inclusion sufficient (inclusivity) – to reach poor horticultural farmers, youth and women farmers?
- f) What changes are visible so far (improvements) for the target groups in relation to each of the project's strategic objectives (\*increased productivity and improved supply of high-quality horticulture products, \*increased market access, \*increased competitiveness and improved institutional/regulatory support). How have the HortiMAP project interventions contributed to achievements? How is this contribution known? Are the project contributions well known? How are they communicated within communities (in selected cells and sectors)?
- g) How well did the project perform in terms of creating an enabling environment for the implementation of the activities and uptake by male, female and youth beneficiaries.
- h) Does it appear that opportunities and barriers were sufficiently/adequately assessed in the preparation of the HortiMAP project's design to ensure a high likelihood that the project would build sustainable horticulture markets for the women, men and youth from the target communities?
  - o What new opportunities and barriers have arisen since the start of project implementation?
  - o How effective has the project management been at responding to new opportunities and barriers?
  - o What process has been used to continually monitor opportunities and barriers? Was this process effective?
- i) Were roles defined and responsibility shared among different project partners or stakeholders, including beneficiaries? How did these roles and shared responsibilities support the achievement of the project's outcomes or results?
- j) Which elements were omitted and yet could have contributed to a higher impact, if they had been included?
- k) What did the project do to increase the likelihood of achieving the planned outcomes/impacts?

- l) What recommendations if there was a Phase 2? What are the key interventions (best practices) that should be concentrated on to assure its achievements? and why? What should be scaled up and why? Which interventions should be dropped and why?
- m) Have the interventions generated any unidentified/unintended outcomes or effects?
- n) If yes, what is the extent to which the intervention has generated or is expected to generate significant positive or negative, intended or unintended, higher-level effects.
- o) Are there any unintended consequences or outcomes (positive or negative) that have been observed or generated as a result of the project interventions? If so, which ones?
- p) How have you collaborated with the private sector to identify constraints and opportunities and their activities to ensure they do not have unintended consequences or reinforce existing inequalities.
- q) Were there any unintended positive or negative consequences of the project?

## **2. Relevance of the project**

- a) To what extent are the current partnerships relevant to the needs and priorities of HortiMAP and its beneficiaries? ...providing direct training, indirect training, and technical assistance.
- b) To what extent has the project addressed the underlying issues that led to the critical need for the project?
- c) How has the context in which the project is being implemented changed since the project's conception and its start? and how has this influenced the relevance of the project and its components? Did the project respond appropriately to the changes in the context?
- d) Are the interventions still responding to the initial problem/challenge?

## **3. Sustainability**

- a) What are the indications that the project will achieve long term change – i.e., beyond the time frame of the project? How likely will HortiMAP's results be sustainable?
  - o Which results are most likely to be sustainable? and why? (Think in terms of local ownership, and the economic/institutional/environmental/socio-political conditions that support sustainability.)
  - o What is expected after the project closes?
  - o What is likely to sustain continued change?
- b) What evidence exists that partners are committed to implementing the HortiMAP project interventions on a sustained basis once the project is completed?
  - o What exit plan is in place related to the project interventions that accounts for the needs of the key partners/stakeholders?
  - o What capacity did TNS build among partners to strengthen their service delivery?
- c) How well have the project interventions (access to finance and markets, linkages to business support services, etc.) contributed to the sustainability of HortiMAP project's achievements?
- d) What immediate actions need to be and can be taken, if any, to increase the likelihood of the project achievement being sustainable?

#### **4. Coherence**

- a) How well do the program/project interventions and implementation strategy align with national, regional and local development priorities?
  - o Did the project align to the government priorities in fostering men, women and youth participation and enhancing economic growth?
  - o How was the District Local Government (DLG) engaged to ensure there is continued government and community support to the project initiatives?
  - o To what extent were the project activities and outputs accepted among beneficiaries and local government?
- b) And how well did the project align with the development objectives of the Embassy of the Kingdom of the Netherlands-EKN in Uganda?
- c) Are there project synergies with other related programs/projects in the geographic zones of the HortiMAP project, e.g., other EKN initiatives, Government initiatives such as the Livelihood Programs, Parish Development Model OWC etc.?
- d) How well did the project/program leveraged synergies of similar or other related projects/programs in the regions where it is being implemented? Which other project?

#### **5. Risk Management**

- a) Can HortiMAP project management validate whether the risks identified in the project document were the most important/appropriate ones to mitigate. If not, explain why.
  - o What changes to the country's context, partner and beneficiary capacities or identified needs triggered a change in the key project risks identified? What was learned from that experience?
- b) Were the risk management strategies/approaches adopted by the project adequate/effective at mitigating the known risk?
- c) Describe any additional risks that emerged. What mitigation strategies were adopted to strengthen the project's adaptive management approach?
- d) Are there any unintended consequences or outcomes (positive or negative) as a result of the project interventions? If so, which ones? What was positive? What was negative?

#### **6. Lesson Learned**

- a) What have been the key lessons learned from project implementation so far – lessons that can be capitalized on to improve project delivery - enhancing the participation of – and benefits for –women, men and youth through employment in horticulture? What recommendations would you make for changes in the project's implementation approach?
- b) What project success stories/lessons have been documented so far? Are there success factors which can be documented further?

#### **7. Environment and Climate Change**

- a) How successful has the project incorporated elements of environmental protection into the implementation of its activities?
- b) Is there any evidence that the project participants and partners are ready and able to face the challenge of climate change? Is evidence being collected on adaptive capacity of these groups?
- c) To what extent was the cross-cutting themes of climate adaptation been embedded and acted on through project interventions? If not, why not?

#### **8. Project Monitoring and Evaluation**

- a) Were the monitoring and evaluation indicators appropriate?

- b) Did the M&E framework monitor and track the financial aspects of the project across the targets for the various components? What did they show?
- c) Did the Monitoring, Evaluation, Accountability and Learning (MEAL) systems provide good information on results and achievements to allow for reflection? What reflection was undertaken?

## **9. The change process:**

- a) **To what extent did the assumptions in HortiMAP's theory of change hold true?** (i.e., economic stability, partners' cost sharing, interest of the beneficiaries and government ministries to participate, etc.)
  - o What new assumptions and risks are emerging that may positively or negatively affect the project sustainability?
  - o Was the theory of change clear and was it appreciated by the project stakeholders? How could it have been improved?
  - o Have the project interventions responded to the initial problem / challenge up to now?
  - o To what extent are the project results/achievements aligned to the Theory of Change (ToC)? If not, what explains the deviations?

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