

Niassa and Inhambane Utilising Sweetpotato for Nutrition and Development Project

Interim Phase

Annual Technical Report
January–December 2017

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January–December 2017**

Contract Number: 8/Grant/12/Mozambique for Irish Aid

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TABLE OF CONTENTS

Abbreviations and Acronyms.....	iii
Acknowledgment.....	iv
Executive Summary.....	v
1. Introduction.....	1
2. Project Background.....	1
2.1 OVERALL OBJECTIVE OF THE PROJECT	1
2.2 TARGET AREA/GROUP.....	2
2.3 MAIN ACTIVITIES AND ACHIEVEMENTS MADE.....	3
3. Project Management and Partnerships.....	7
3.1 STAFF STRUCTURE.....	7
3.2 PARTNERSHIPS.....	7
3.3 MONITORING AND EVALUATION (M&E).....	8
3.4 EVENTS.....	8
3.5 COORDINATION.....	8
4. Project Progress: Implemented Activities and Outputs Achieved against Work Plan	8
4.1 OBJECTIVE 1: EVIDENCE BASE AND CAPACITIES OF GOVERNMENT AND PARTNERS CONSOLIDATED FOR EFFECTIVE INTEGRATION OF OFSP IN PLANNING AND PROGRAMMING IN NIASSA.....	8
4.1.1 <i>Conduct surveys and in-depth assessments of OFSP production and utilisation in the eight current Niassa districts</i>	<i>8</i>
4.1.2 <i>Review meeting with government and NGO partners to analyse evidence generated over the past 4 years and identified key lessons for uptake</i>	<i>10</i>
4.1.3 <i>In partnership with SETSAN, provide technical support for integration of OFSP promotion in agriculture and health sector planning at provincial and district levels</i>	<i>11</i>
4.1.4 <i>Technical meetings with NGOs to advise on best practice programming for OFSP</i>	<i>11</i>
4.2 NEW LOCATIONS WITH HIGH DEMAND FOR OFSP IN INHAMBANE ASSESSED AND PREPARED FOR SCALING OUT OFSP ACTIVITIES DURING 2018-2021	11
4.2.1 <i>Rapid assessment of OFSP potential in communities in Massinga, Govuro, and Mabote districts</i>	<i>11</i>
4.2.2 <i>OFSP varietal demonstrations and participatory evaluations carried out.....</i>	<i>12</i>
4.2.3 <i>DVMs trained.....</i>	<i>14</i>
4.2.4 <i>OFSP planting material distributed to 2,000 HH.....</i>	<i>15</i>
4.2.5 <i>Nutrition education delivered to 2,000 HH.....</i>	<i>15</i>
4.2.6 <i>Training of 50 government and NGO staff carried out.....</i>	<i>15</i>
4.3 SPECIFIC OBJECTIVE 3: INTEGRATED 4-YEAR PROGRAMME CO-DESIGNED BY GOVERNMENT, CIP, AND OTHER STAKEHOLDERS FOR INCREASED INVESTMENT IN OFSP IN NIASSA AND INHAMBANE.....	15
4.3.1 <i>Capture pertinent information base and expert views on sweetpotato potential and development pathways for Niassa and Inhambane</i>	<i>15</i>
4.3.2 <i>Consultative meetings held to capture perspectives from agricultural, health, and marketing stakeholders.....</i>	<i>16</i>
4.3.3 <i>Strategy and implementation documents drafted by small team with CIP's facilitation.....</i>	<i>17</i>
5. Key Issues	17
6. Significant Developments in the Sector	18
7. Case Studies.....	18
8. Financial Report.....	18
9. Conclusion and Lessons Learnt	18

Annexes

- Annex 1: ISTRC—AB poster presentation
- Annex 2: CoP Seed System poster presentation
- Annex 3: Niassa and Inhambane work plan 2017
- Annex 4: OFSP roots yield measurement
- Annex 5: Annual review meeting 2017
- Annex 6: Work plan for Niassa SDAE field technicians 2017
- Annex 7: Work plan for Niassa SETSAN focal point at district level 2017
- Annex 8: Training material for field technicians and focal points
- Annex 9: Varieties introduced to Inhambane for OFT in 2017
- Annex 10: Protocol of on-farm trials for Inhambane 2017
- Annex 11: Work plan for Inhambane SDAE field technicians 2017
- Annex 12: Niassa project Lessons learned 2013-2017

Tables

- Table 1. Main activities planned and the achievements made during project implementation: Nutritious OFSP for Niassa and Inhambane provinces 3
- Table 2. Sweetpotato varieties recommended for storage root production, root, and leaf taste preference in Govuro, Mabote, and Massinga districts in Inhambane Province 14

Figures

- Figure 1. Intervention zones in Niassa and Inhambane provinces. 2
- Figure 2. Average yield (t/ha) in eight districts with the two models..... 9
- Figure 3. Average yield (t/ha) per variety..... 9
- Figure 4. Changes in action results registered during the in-depth assessment. 10
- Figure 5. Behaviour changes registered during the in-depth assessment. 10
- Figure 6. Storage root yield of improved sweetpotato varieties grown under OFTs in Govuro..... 13
- Figure 7. Total sweetpotato storage root yield (t/ha) results of OFTs in Massinga District..... 13
- Figure 8. Storage root yield (t/ha) of improved sweetpotato varieties grown under OFTs experiments in Mabote District..... 14

ABBREVIATIONS AND ACRONYMS

APOIAR	Associação Portuguesa de Apoio a África
CIP	International Potato Center (Centro Internacional de la Papa)
DPASA	Director Provincial da Agricultura e Segurança Alimentar
DVM	Decentralised vine multiplier
FOFEN	Forum das Organizações Femininas do Niassa
GoM	Government of Mozambique
HH	Household(s)
IIAM	Instituto de Investigação Agraria de Moçambique
M&E	Monitoring and evaluation
MBT	Mother–Baby trials
MLE	Monitoring, learning, and evaluation
NGO	Non-governmental organisation
OFSP	Orange-fleshed sweetpotato
OFTs	On-farm trials
SDAE	Serviço Distrital de Actividade Economicas
SETSAN	Secretariado Técnico de Segurança Alimentar e Nutricional
SNV	Smart Development Works
WFSP	White-fleshed sweetpotato

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CIP thanks, all partners, direct or indirect, for their significant contributions to the start-up of the project and effective implementation during the year 2017.

We also acknowledge the support of the partners who continue to support their beneficiaries on OFSP, including Associação Progresso, Anglican Diocese of Niassa, and União dos Camponeses e Associações de Lichinga e Forum das Organizações Feminino do Niassa on vine distribution; Ajuda de Desenvolvimento do Povo para Povo and WeEffect on sensitization about OFSP at their community-based organisation beneficiaries; Padaria Sanjala and Padaria de Mandimba on demand creation of OFSP for urban consumption; and international non-governmental organisations like Smart Development Works, Mundukide, and Associação Portuguesa de Apoio a África extending OFSP production beyond the intervention zone.

Special thanks to all CIP technical experts and colleagues for their continuous advice and commitment to supporting the project over its implementation. Finally, we thank all the beneficiaries; it is for them that we measure our achievements and our hope to eliminate food insecurity and improve the nutrition of all households in Niassa and Inhambane provinces.

EXECUTIVE SUMMARY

Malnutrition among young children and pregnant mothers is one of the most significant health threat in many developing nations. Mozambique's Niassa Province has the highest number of households (HH) with malnourished children under 5 years. To help address this problem, Irish Aid funded a 3.5-year project, "Nutritious Orange-fleshed Sweetpotato for Niassa," implemented by the International Potato Center (CIP) and partners, up to December 2016.

The project was extended and given an interim 1-year "design phase" which is being implemented by CIP and partners in 11 districts, 8 in Niassa Province (Lago, Sanga, Muembe, Chimbunila, Lichinga, Mandimba, Cuamba, and Mecanhelas) and 3 in Inhambane Province (Massinga, Mabote, and Govuro) from January 1st to December 31st, 2017. The objectives of the project are to (1) support stakeholders in Niassa Province and to respond to corresponding demand for orange-fleshed sweetpotato (OFSP) in Inhambane Province; (2) co-design with stakeholders a 4-year "Scaling-up" programme (2018–2021); and (3) strengthen capacity of provincial and district public and private institutions in planning, implementation, and evaluation of agriculture and nutrition interventions in order to overcome malnutrition and poverty.

This report summarises the activities during 2017 in Niassa and Inhambane provinces. The activities accomplished included:

- Detailed work plan developed following approval of the proposal by Irish Aid.
- A review meeting to present the lessons learned in Niassa and to develop a plan to be implemented by District Service of Economic Activities (SDAE) partners. The lessons from this implementation will be considered during the 4-year programme design.
- In-depth assessment of Niassa conducted by enumerators from SDAE under CIP supervision, with indicators to behavioural change in HH, diet improvement, market opportunity, HH investment, and contributions of extension agents in diet information access by the community.
- The opening of the project office in Inhambane, the recruitment of CIP staff for the project, signing of sub-grant agreements with partners, and purchase and acquisition of different project assets and equipment.
- A baseline survey in Inhambane Province was conducted in the three districts that are amongst the most affected by drought in southern Mozambique. The overall results of the baseline showed that farmers tended to use the lowland for agricultural-related activities. In the districts of intervention in Inhambane, 13% of the responding HH already grow OFSP and 28% of them conserve their vines for subsequent plantings.
- Introducing 20 OFSP varieties in Inhambane Province by CIP/IIAM (Instituto de Investigação Agrária de Mocambique) in May 2017, the establishment of 36 participatory on-farm trials (OFTs), participatory leaf taste test on 32 OFTs, and yield assessment and participatory root taste test on 17 OFTs. About 1,023 participants (640 females) contributed to leaf and root evaluation. About 662 participants (411 females) were involved in leaf tasting and 361 (229 females) in root tasting. Awareness of the advantages of OFSP on human diet was done at each site of evaluation.
- Identifying the decentralised vine multipliers (DVMs) in Inhambane to ensure that the OFSP vines were multiplied.
- Capacity building on participatory planning, establishment of OFTs, yield measurement, and data collection with more than 118 staff from partners staff—65 in Inhambane (16 females) and 53 in Niassa (9 females)—in 11 districts. Each technician received training materials for his/her awareness campaign and capacity building.

- Awareness of the importance of OFSP was the first step in the community selection process. The communities were selected if more than 50% of HH were interested in OFSP production and nutrition. Each SDAE technician selected two communities for the implementation of the lessons and in-depth assessment.
- Consultation workshop was held in Vilankulo and Maputo to co-design the new phase of the project in a participatory way with stakeholders.

1. INTRODUCTION

Vitamin A-rich, nutritious orange-fleshed sweetpotato (OFSP) varieties are an effective tool for improving nutrition and food security in northern Mozambique. The International Potato Center (CIP) has been implementing the “Nutritious Orange-fleshed Sweetpotato for Niassa” project from 2012 to 2016, with financial support from Irish Aid. The project reached 28,000 households (HH) and demonstrated that OFSP production and consumption can result in increased food security, healthier diets, and increased incomes for poor and vulnerable populations in the province. In response to this success, stakeholders, including provincial and district governments, committed to making OFSP universally available in the province to help reduce malnutrition and poverty.

OFSP is now well established in Niassa and considered one of its main crops (as explicitly mentioned in Objective 4 of Plano de Acção Multi-sectorial para a Redução da Desnutrição Crônica, led by the Secretariado Técnico de Segurança Alimentar e Nutricional (SETSAN). Planting material for OFSP varieties is multiplied at all the districts of Niassa Province under the government’s initiative.

CIP is implementing a 1-year programme of work to support SETSAN’s efforts in Niassa Province, as well as to respond to the corresponding demand for OFSP in Inhambane Province. During this year, CIP will co-design with stakeholders a 4-year scaling-up programme that will strengthen the capacity of provincial and district institutions to plan, implement, and evaluate agriculture and nutrition interventions to overcome malnutrition and food insecurity.

2. PROJECT BACKGROUND

2.1 OVERALL OBJECTIVE OF THE PROJECT

The purpose of the interim phase is to co-develop an integrated strategy and programme for scaling up OFSP by stakeholders in Niassa and Inhambane provinces aimed at making OFSP a primary source of vitamin A nutrition and contribute to food security and income in the two provinces.

There are three specific objectives and main activities of this phase:

1. *Objective 1: Evidence base and capacities of government and partners consolidated for effective integration of OFSP in planning and programming in Niassa*
 - 1.1 Results from endline surveys and in-depth assessment of benefits accrued due to OFSP and constraints faced by OFSP value chain were presented and discussed by stakeholders.
 - 1.2 OFSP varietal demonstrations and trials implemented in a few selected locations of strategic importance for province-wide scaling.
 - 1.3 Integration of evidence and lessons into government plans and non-governmental organisation (NGO) programmes facilitated.
2. *Objective 2: New locations with high demand for OFSP in Inhambane assessed and prepared for scaling out OFSP activities in 2018–2021*
 - 2.1 High potential locations identified, OFSP varietal demonstrations and participatory evaluations implemented, and results disseminated to stakeholders.
 - 2.2 In these locations, an initial group of 2,000 farmers and 20 decentralised vine multipliers (DVMs) will be trained.
 - 2.3 In these locations, government and NGO staff were trained in OFSP and nutrition extension methodologies in preparation for subsequent large-scale implementation.
3. *Objective 3: Integrated 4-year programme co-designed by government, CIP, and other stakeholders for increased investment in OFSP in Niassa and Inhambane*

- 3.1 Provincial strategies and intervention plans for scaling out OFSP in Niassa and Inhambane, co-designed by the government and other stakeholders with technical facilitation by CIP.
- 3.2 Funding proposal for a 4-year programme prepared to support the implementation of provincial OFSP strategies and intervention plans.

2.2 TARGET AREA/GROUP

The principal target groups were poor, rural women and their young children (aged 6–59 months) in eight districts in Niassa (Chimbunila, Lago, Muembe, Sanga, Mandimba, Cuamba, Mecanhelas, and Lichinga) and three districts in Inhambane (Massinga, Mabote, and Govuro) (Fig. 1). Attention was also given to other members of the HH who were considered influencers of adoption and behaviour change. These included men (influential community leaders, husbands) and mothers-in-law, who often have a considerable say in child-caring practices. This approach helped to ensure that all HH members understood the importance of investing in nutrient-rich crops and providing good child-caring practices. The project selected villages with at least 200 HH in 2017, to ensure a strong impact at scale and for the community-level intervention and contribute to SETSAN's objective of reducing malnutrition from 44% in 2013 to 30% in 2019

The target groups were involved in (1) the participatory selection of varieties from the planning stage to the tasting of cooked leaves and storage roots at three districts of Inhambane, (2) planting of OFSP varieties, (3) capacity building, and (4) cooking demonstrations for nutrition education and HH participation during the awareness campaign.

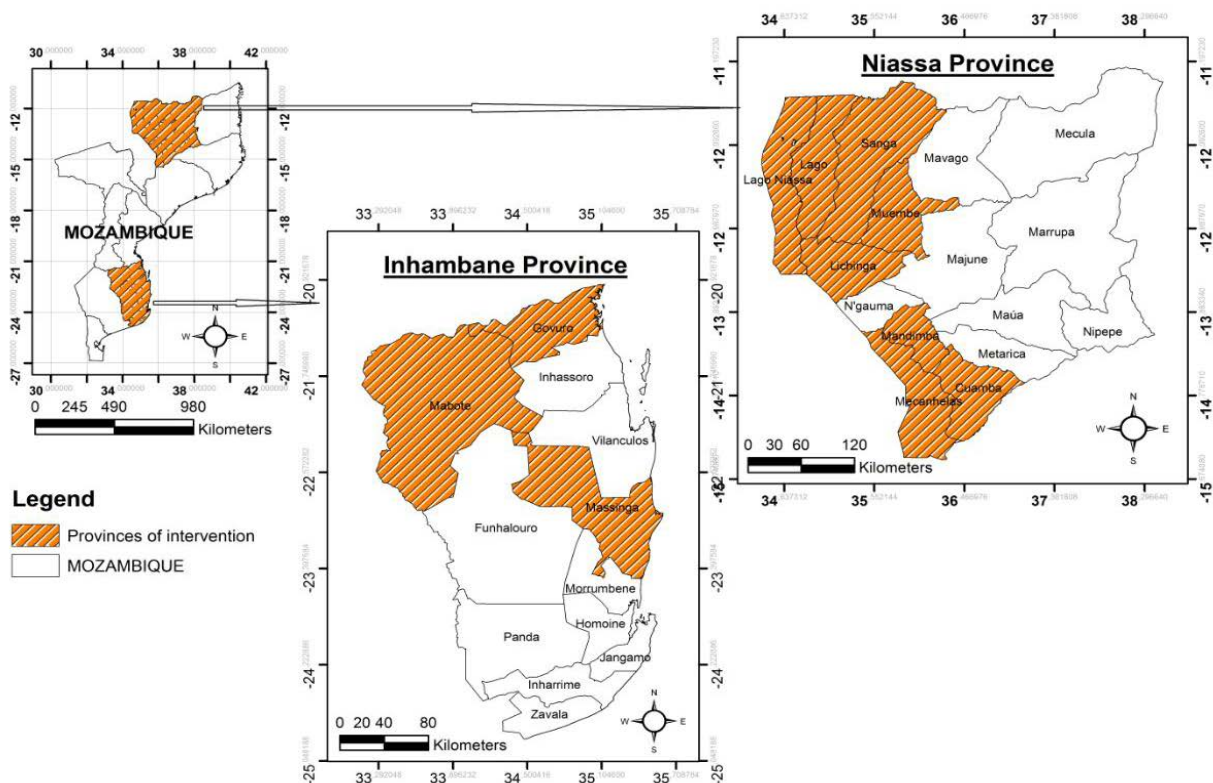


Figure 1. Intervention zones in Niassa and Inhambane provinces.

2.3 MAIN ACTIVITIES AND ACHIEVEMENTS MADE

The activities for the project were submitted to and approved by Irish Aid. Summary of the main activities and project achievements are shown in Table 1.

Table 1. Main activities planned and the achievements made during project implementation: Nutritious OFSP for Niassa and Inhambane provinces

Narrative	Outputs 2017	Performance indicators/actions/observations
<i>Vision of success for the project: To increase the contributions of OFSP to nutrition, food security, and rural incomes in Niassa and Inhambane provinces, Mozambique</i>		
<i>Objective 1: Evidence base and capacities of government and partners consolidated for effective integration of OFSP in planning and programming in Niassa</i>		
Outcome 1.1 Government of Mozambique (GoM) and other stakeholders in Niassa have improved knowledge of OFSP benefits and challenges	GoM and stakeholder contributions to the technical dialogue	
Activity 1.1.1 Conduct surveys and in-depth assessments of OFSP production and utilisation in the 8 current Niassa districts	1 survey report and 1 qualitative research report published	<ul style="list-style-type: none"> • 320 questionnaires for in-depth assessment distributed to 45 technicians and 8 supervisors • 231 filled questionnaires received from 36 technicians (6 females) • 59 communities involved in the assessment • Change in the following points was observed: <ul style="list-style-type: none"> ○ Area of OFSP plantation ○ HH behaviour change (selection criteria, investment in agriculture equipment and school fees) ○ Market opportunity and incomes ○ Improvements in household dietary diversity score and individual dietary diversity score
Activity 1.1.2 Hold review meeting with GoM and NGO partners to analyse evidence generated over the past 4 years and identify key lessons for uptake	At least 1 review meeting held	<ul style="list-style-type: none"> • Review meeting held on April 11–12, 2017 • Participatory planning in Lichinga and at 8 districts realised • 74 communities are involved in the process of key lessons implementation for uptake • 8 activities identified for the extension agents (see Annex 6) • 5 activities detailed for SETSAN focal point (see Annex 7)
Outcome 1.2 GoM planning and NGO programming reflect OFSP lessons	Niassa provincial plans and at least 1 NGO programme includes OFSP	<ul style="list-style-type: none"> • SNV, APOIAR, Diocese, Associação Progresso, UCA, FOFEN, and DSAE outside of the intervention zones included OFSP in their programmes
Activity 1.2.1 In partnership with SETSAN, provide technical support for integration of OFSP promotion in agriculture and health sector planning at provincial and district levels	Two technical planning support meetings held in Niassa	<ul style="list-style-type: none"> • 8 SETSAN focal points at district level trained on 6 topics on nutrition • 53 SDAE technicians trained in participatory planning, data collection, and monitoring. • 166 plots measured in 8 districts (93 plots measured using crop cut module and 73 using the small plot module); 6 OFSP varieties and 1 OFSP

Narrative	Outputs 2017	Performance indicators/actions/observations
<i>Vision of success for the project: To increase the contributions of OFSP to nutrition, food security, and rural incomes in Niassa and Inhambane provinces, Mozambique</i>		
		<ul style="list-style-type: none"> clone identified • Training material integrating agriculture and nutrition developed for awareness campaign • Work plan for SETSAN focal points and SDAE technician developed in a participatory way in Lago, Sanga, Muembe, Chimbunila, Lichinga, Mandimba, Cuamba, and Mecanhelas districts
Activity 1.2.2 Hold technical meetings with NGOs to advise on best practice programming for OFSP	At least 1 technical meeting with NGOs held	The meeting was held together with Activity 1.1.2
<i>Objective 2: New locations with high demand for OFSP in Inhambane assessed and prepared for scaling out OFSP activities during 2018–2021</i>		
Outcome 2.1 High OFSP production potential locations identified, OFSP varietal demonstrations and at least 20 participatory evaluations implemented, and results disseminated to stakeholders	Assessment results from high OFSP production potential communities in 3 districts disseminated	
Activity 2.1.1 Rapid assessment of sweetpotato potential in communities in Massinga, Govuro, and Mabote districts	Communities with at least 2,000 HH identified	<ul style="list-style-type: none"> • Overall, 13% of HH produced OFSP. Specifically, 2%, 12%, and 57% grew OFSP in Mabote, Govuro, and Massinga, respectively • 93% of HH linked to farmer groups • 28% of HH conserve vines; specifically, 77% in Massinga and 8% in Govuro; no HH in Mabote conserved vines • 91% of HH have access to nutrient-rich starchy staple foods; 56% of HH have access to dark green vegetables; 26% of HH have access to fruits or vegetables; and less than 18% of HH have access to any other food groups • 16 communities with at least 2,150 HH identified in 3 districts
Activity 2.1.2 OFSP varietal demonstrations and participatory evaluations carried out	At least 20 Mother–Baby trials (MBT) implemented and at least 3 varieties identified for future promotion	<ul style="list-style-type: none"> • 20 OFSP varieties introduced in Inhambane Province through on-farm trials (OFTs) • 36 OFTs established in 3 districts, 6 administrative posts, and 36 locations • 32 OFTs evaluated leaf tastes in 3 districts, 6 administrative posts; participants in 32 locations indicated higher preference for 20 varieties • 17 OFTs evaluated yield performances in 3 districts, 5 administrative posts; participants in these 17 locations indicated higher preference for 19 varieties • 17 OFTs evaluated OFSP root taste evaluation in 3 districts, 5 administrative posts; participants from 17 locations indicated a higher preference for 19 varieties

Narrative	Outputs 2017	Performance indicators/actions/observations
<i>Vision of success for the project: To increase the contributions of OFSP to nutrition, food security, and rural incomes in Niassa and Inhambane provinces, Mozambique</i>		
Activity 2.1.3 Data from MBTs analysed and disseminated	Technical report of MBT results	<ul style="list-style-type: none"> • 12 varieties preferred in the 3 districts for leaf taste • 8 varieties preferred for root taste • 11 varieties adaptable for root production in the 3 districts • OFTs results presented to the stakeholder meetings in Vilankulo and Maputo • Results disseminated to local government authorities of each district
Activity 2.1.4 Field days and planting material fairs held	At least 5 field days and fairs held	<ul style="list-style-type: none"> • 9 field days and planting material fairs held for invited farmers to evaluate varieties (2 in Govuro, 3 in Mabote, and 4 in Massinga)
Outcome 2.2 In these locations, an initial group of 2,000 farmers and 20 planting material multipliers trained and provided with access to clean planting material	At least 2,000 farmers and 20 multipliers established	
Activity 2.2.1 DVMs trained and equipped	DVMs registered (at least 6 females)	<ul style="list-style-type: none"> • 26 DVMs in the 3 districts—10 in Massinga (3 females), 9 in Mabote (1 female), and 7 in Govuro (1 female)—were established. These DVMs have received clean OFSP planting material and training in methods of rapid and conventional multiplication.
Activity 2.2.2 OFSP planting material distributed to 2,000 HH	2,000 bundles delivered to eligible HH	<ul style="list-style-type: none"> • 220 HH (132 female-headed) received 480 bundles (2 kg) of OFSP planting material
Activity 2.2.3 Nutrition education delivered to 2,000 HH	Nutrition education delivered in communities	<ul style="list-style-type: none"> • 2,150 HH registered and received nutrition education
Outcome 2.3 In these locations, at least 50 GoM and NGO staff trained in OFSP and nutrition extension methodologies in preparation for subsequent large-scale implementation	At least 50 staff trained	
Activity 2.3.1 50 GoM and NGO staff trained	At least 50 staff trained	<ul style="list-style-type: none"> • 20 agriculture extension workers (6 females) trained on OFTs methodologies, vine multiplication, and good OFSP agronomic practices • 65 SDAEs, authorities, nutritionists, and NGO staff (16 females) trained in participatory planning and extension methodologies
<i>Objective 3: Integrated 4-year programme co-designed by government, CIP, and other stakeholders for increased investment in OFSP in Niassa and Inhambane</i>		
Outcome 3.1 Provincial strategies and intervention plans for scaling out OFSP in Niassa and Inhambane co-designed by government and other stakeholders with technical facilitation by CIP	Programme and strategy produced	
Activity 3.1.1 Capture pertinent information base and	1 technical report on OFSP	<ul style="list-style-type: none"> • Lessons learnt documented

Narrative	Outputs 2017	Performance indicators/actions/observations
<i>Vision of success for the project: To increase the contributions of OFSP to nutrition, food security, and rural incomes in Niassa and Inhambane provinces, Mozambique</i>		
expert views on OFSP potential and development pathways for Niassa and Inhambane	potential and pathways produced	<ul style="list-style-type: none"> • 1 report on OFSP production potential and preference for Inhambane and 1 in-depth assessment report for Niassa produced
Activity 3.1.2 Consultative meetings held to capture perspectives from agricultural, health, and marketing stakeholders	3 meetings held (1 in Niassa, 1 in Inhambane, and 1 in Maputo)	<ul style="list-style-type: none"> • Two consultative meetings held in Inhambane and Maputo • The consultation process held with the participation of stakeholders from DPASA/SDAE, SETSAN, and NGOs • Participants from Niassa presented the lessons from 2013–2016 • Participants from Inhambane presented the results and lessons in 2017 • CIP presented the lessons from Mitigation in Inhambane and the proposed structure of the project • The working group captured perspectives from agricultural, health, and marketing stakeholders
Activity 3.1.3 Strategy and implementation documents drafted by small team with facilitation from CIP	Strategy and implement documents produced (1 in Niassa, 1 in Inhambane)	<ul style="list-style-type: none"> • The document provided by the moderator highlighted the strategy and implementation document.
Outcome 3.2 Funding proposal for a 4-year programme prepared to support the implementation of provincial OFSP strategies and intervention plans	1 proposal produced and submitted	
Activity 3.2.1 Funding proposal to Irish Aid drafted by CIP, focused on agreed segment of multi-institutional programme and strategy	1 draft proposal circulated	<ul style="list-style-type: none"> • Proposal to be produced and circulated to stakeholders next year
Activity 3.2.2 Proposal revisions as needed	1 revised proposal submitted	<ul style="list-style-type: none"> • To be submitted next year

NOTE: APOIAR = Associação Portuguesa de Apoio a África; DPASA = Director Provincial da Agricultura e Segurança Alimentar; FOFEN = Forum das Organizações Femininas do Niassa; SDAE = Serviço Distrital de Actividade Economicas; SNV = Smart Development Works; UCA = União dos Componeses e Associações de Lichinga.

3. PROJECT MANAGEMENT AND PARTNERSHIPS

3.1 STAFF STRUCTURE

CIP manages the project from Lichinga, Niassa, and established a small field office in Massinga District in Inhambane Province.

The project manager in Lichinga is supported by a coordinator for Inhambane Province as well as scientists and specialists in programme design based in Maputo and the sub-Saharan Africa region. The project has full-time staff, including one administrator/finance assistant; one monitoring, learning, and evaluation (MLE) specialist; one field technician; one junior agronomist, who previously worked for the Scaling-Up Sweetpotato Through Agriculture and Nutrition project (funded by the Department for International Development); and three drivers.

3.2 PARTNERSHIPS

The main partners for this phase are the provincial and district government departments, SETSAN, and Instituto de Investigação Agrária de Mocambique (IIAM); local NGOs are supported in their initiatives:

- **IIAM** is CIP's long-term partner in Mozambique for breeding and other research for development programmes. The director of IIAM's Niassa north-western zone ensures the strategic linkage with the provincial government. IIAM is hosting all trials and basic seed multiplication of planting material in the screenhouse, where one field worker is responsible for screenhouse management. IIAM is testing OFSP varieties at Majune and Ngauma districts.
- **DPASA** (Provincial Directorate of Agriculture and Food Security) through **SETSAN** and **SDAE**:
 - **SETSAN** in Niassa is a well-established and multi-sectoral body that monitors the food security and nutrition situation. It has a focal point in all districts in charge of the nutrition side for the project where the extension agent of SDAE operated. CIP has contributed to SETSAN's efforts in all the project intervention districts, supplied OFSP planting materials to other districts, and continued to integrate into the international NGO platform in Niassa since March 2014.
 - **SDAEs in eight districts in Niassa and three districts in Inhambane** are involved in the project. Seventy-five SDAE staff (17 females) participate directly in the implementation of project activities. SDAE technicians ensured the coordination and participatory selection of adapted varieties, vine multiplication, and dissemination of OFSP varieties at district level under CIP staff supervision. Some 53 extension agents and supervisors (7 females) took part in the participatory training on planning and data collection at district level of Niassa. Nine extension agents (2 females) were involved directly in OFTs monitoring, yield evaluation, varietal preference taste, vine multiplication, and beneficiary identification and registration under CIP's supervision in Inhambane. The district directors in Inhambane and Niassa were responsible for the supervision of the extension workers as well as pushing the OFSP agenda in the local government planning meetings.
- **Provincial Directorate of Health:** Nutrition specialists were involved in the project in the dissemination of nutrition messages to communities in Inhambane and Niassa provinces, but the same task was done by SETSAN focal points.
- **The University of Cuamba** works with the project through the student experiment on OFSP fertilizer trials.
- All the old partners working with the project continue to work on OFSP. These are Associação Progresso, Diocese de Niassa (Anglican diocese), WeEffect through União dos Componeses e Associações de Lichinga and FOFEN, the Ajuda de Desenvolvimento do Povo para Povo, Manda Wilderness Agricultural Project, Padaria Sanjala, and Padaria Nadimba.

- SNV, APOIAR, and Mundukide take the initiative to buy OFSP vines for their beneficiaries.
- **Irish Aid** is the project donor and its representative in Niassa and Maputo participated in consultation and planning meetings.

3.3 MONITORING AND EVALUATION (M&E)

The M&E data were collected and processed for sharing with stakeholders and for report writing. All the relevant project data are well organised and under the custody of the project M&E management. The M&E specialist participated in the community of practice MLE in Maputo in January 2017, and in the baseline survey training in Nampula in June 2017.

3.4 EVENTS

The project participated in seven national and four regional events to promote the project's objectives and disseminate results and findings from the previous project phase (see Annexes 1 and 2, for examples). Participation in these events was essential for learning and to demonstrate the impact of the project to other stakeholders. At the national events, the project showcased its impact and disseminated sweetpotato agronomic innovations and nutrition messages to some farmers who are not necessarily in the intervention areas.

3.5 COORDINATION

The revised proposal was submitted on February 21st, 2017 (Annex 3 presents the 2017 work plan). The project began in January 2017 by assessing SDAE technician staff. CIP staff held eight internal meetings for coordination and eight planning meetings in eight districts. The project also participated in Direcção Provincial de Saúde organisational meeting for the nutrition roadshow as well as in the DPASA organisational meeting for the president's visit and agricultural campaign kick-off. In Inhambane, the project participated in the provincial coordination meeting organised by SETSAN. In this meeting, the partners designed a strategy to contribute to the reduction of chronic malnutrition in the province where OFSP was identified as a top priority crop.

4. PROJECT PROGRESS: IMPLEMENTED ACTIVITIES AND OUTPUTS ACHIEVED AGAINST WORK PLAN

From January to December 2017, 12 activities programmed under three specific objectives were carried out. The project is working closely with provincial leaders in both provinces. Also, 59 communities were selected for field activities in the previous intervention districts in Niassa to fill specific knowledge gaps. About 231 HH were interviewed during the depth assessment in seven districts of Niassa. Thirty-six OFTs activities were carried out in 36 communities in Massinga, Govuro, and Mabote districts in Inhambane, in preparation for large-scale implementation in Inhambane in subsequent years. The consultation process was meant to develop a 4-year project proposal.

4.1 OBJECTIVE 1: EVIDENCE BASE AND CAPACITIES OF GOVERNMENT AND PARTNERS CONSOLIDATED FOR EFFECTIVE INTEGRATION OF OFSP IN PLANNING AND PROGRAMMING IN NIASSA

Four activities were undertaken to achieve this specific objective.

4.1.1 *Conduct surveys and in-depth assessments of OFSP production and utilisation in the eight current Niassa districts*

The survey started by evaluating the capacity of the field technicians using an approach in which some technicians covered up to seven villages with three to four contact producers per village and with a distance of up to 20 km on foot. After the evaluation, the project continued to train the technicians and supervisors in planning methodologies, yield measurement, and data collection (Figs. 2 and 3):

- A total of 53 SDAE technicians and supervisors were trained in planning, yield measurement, and data collection.
- Some 320 questionnaires for in-depth assessment were distributed to 45 technicians as enumerators and eight supervisors. The field enumerators correctly completed 231 questionnaires which were filled correctly by 36 technicians in seven districts. Since the primary objective was to build the capacity of SDAE technicians in survey methodology and implementation and not monetary, the team at Chimbunila District was unwilling to participate.
- About 166 yield assessment data sheet records (Annex 4) were filled by 45 field technicians in eight districts where 93 plots measured using crop cut module and 73 using the small plot module. Data were recorded for six OFSP varieties and one OFSP clone in eight districts. Small plot module gave a higher yield than the crop cut module. Average yield ranges from 4.2 t/ha for 'Delvia' variety in Ngongo Lago to 36 t/ha for 'Irene' variety in Bandeze Lago. The results showed higher average yield in Mandimba district with 15.4 t/ha (Fig. 2).

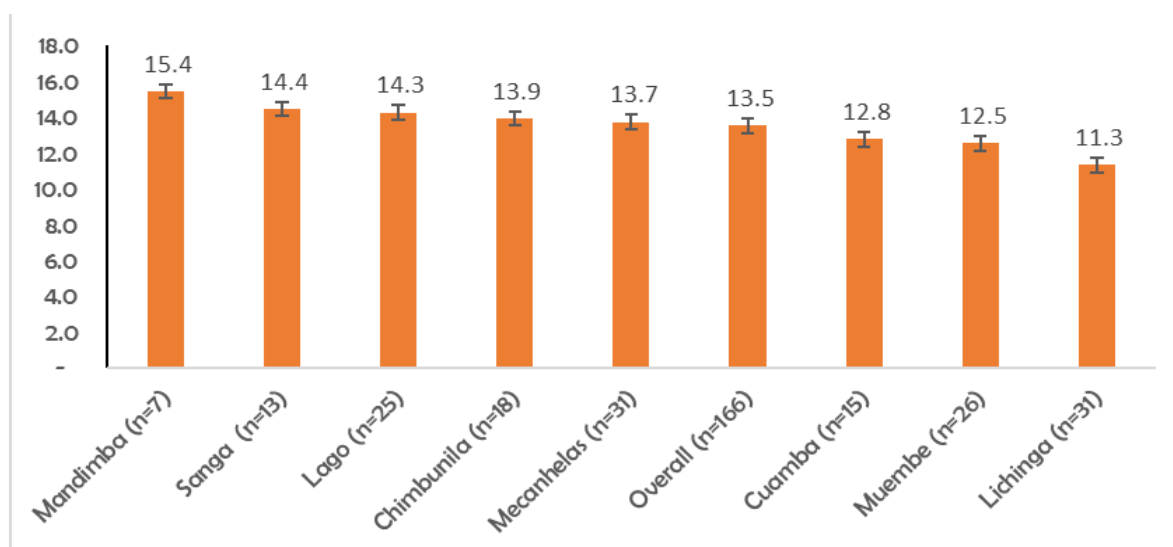


Figure 2. Average yield (t/ha) in eight districts with the two models.

In terms of variety performance, 'Jane', 'Bela', 'Clone', and 'Irene' varieties have a higher yield than the average. 'Delvia', 'Irene', and 'Gloria' varieties are available in 74, 41, and 35 farmers' fields, respectively (Fig. 3).

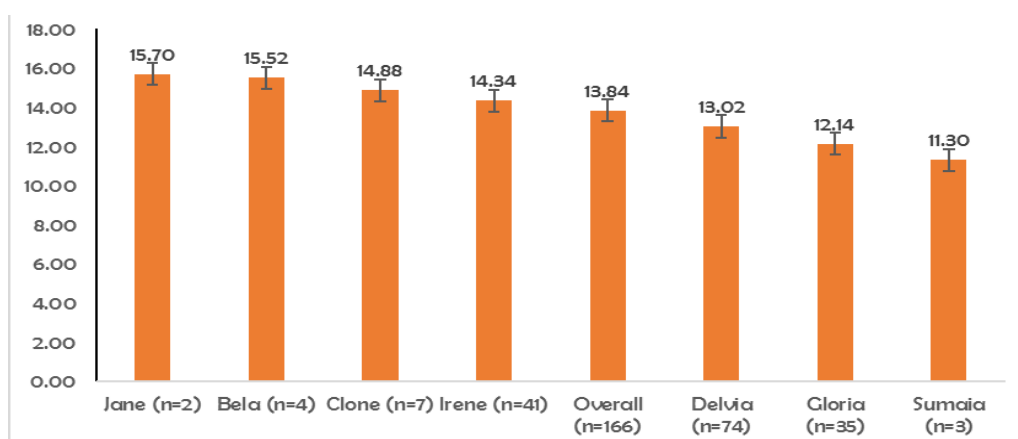


Figure 3. Average yield (t/ha) per variety.

Fifty-nine communities were involved in the depth assessment. Changes were observed between 2016 and 2017 as shown in Figures 4 and 5:

- Percentage of HH producing OFSP increased and OFSP stood at the first position of crop production statistics in these communities.
- Presence of vitamin A in OFSP becomes the primary reason for OFSP adoption by 84% of HH in 2017 to 67% in 2016.
- HH started to buy OFSP vines and plant more OFSP varieties; OFSP vines from SDAE increased, showing efforts from field technicians.

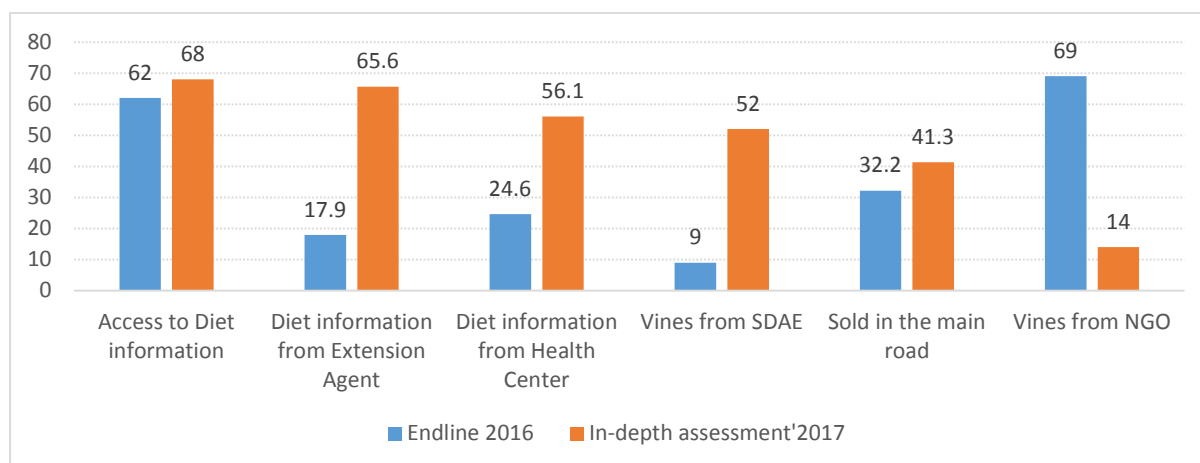


Figure 4. Changes in action results registered during the in-depth assessment.

Changes were also observed in the percentage of HH selling OFSP. More HH sold alongside roads near their house and invested in agriculture equipment and school fees. Involving the field technicians in awareness made a difference in the source of information about vitamin A.

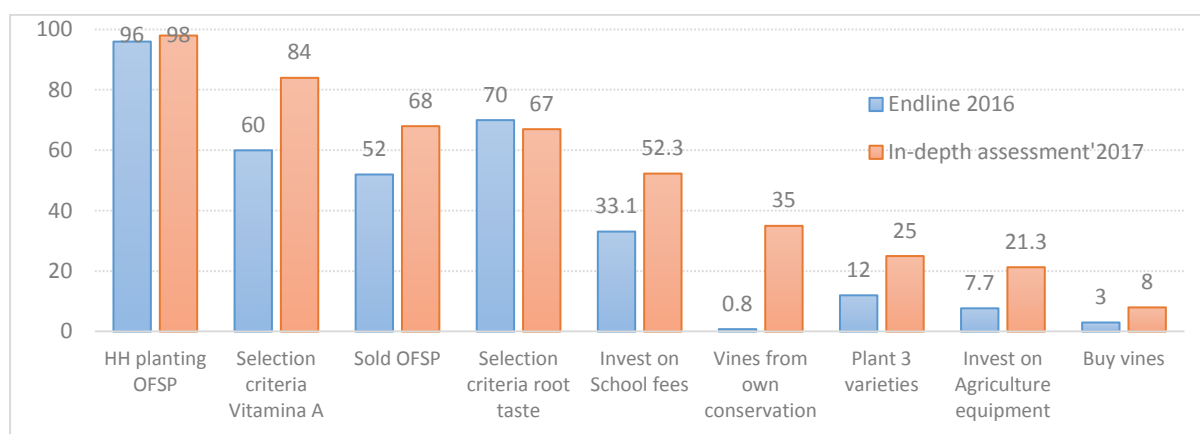


Figure 5. Behaviour changes registered during the in-depth assessment.

4.1.2 Review meeting with government and NGO partners to analyse evidence generated over the past 4 years and identified key lessons for uptake

The annual review meeting was held on April 11–12, 2017, in Lichinga; 69 participants (57 males, 12 females) attended. They represented diverse institutions such as DPASA; SDAE; SETSAN; donors; foreign affairs provincial representative; education; health department; NGO representatives involved in agriculture, nutrition, education, and markets; university; bakers; advanced producers; IIAM; and CIP (Annex 5). As an outcome of the review meeting, the project:

- Initiated participatory planning in Lichinga in more than eight districts.
- Involved 74 communities in identifying key lessons.

- Identified nine activities for the extension agents until October 2017 (Annex 6).
- Identified five activities for SETSAN focal point until October 2017 (Annex 7).

4.1.3 In partnership with SETSAN, provide technical support for integration of OFSP promotion in agriculture and health sector planning at provincial and district levels

During January–June 2017, the project produced training materials that integrate agriculture and nutrition; trained the SETSAN focal point and field technicians; and elaborated the work plan in a participatory process. Results for this activity include:

- Eight SETSAN focal points in eight districts were trained on participatory planning, yield measurement, and data collection. These focal points were trained for 2 days on nutrition education.
- Fifty sets of training materials integrating agriculture and nutrition were developed for campaign and training (Annex 8).
- Work plan for focal point was developed in a participatory way (Annex 7).

4.1.4 Technical meetings with NGOs to advise on best practice programming for OFSP

This activity was combined with the annual review meeting. Some NGOs and associations like SNV, APOIAR, and FOFEN bought OFSP vines for their programme and asked for technical assistance for OFSP vine multiplication and conservation training.

4.2 NEW LOCATIONS WITH HIGH DEMAND FOR OFSP IN INHAMBANE ASSESSED AND PREPARED FOR SCALING OUT OFSP ACTIVITIES DURING 2018-2021

Six related activities on training and multiplication of planting material to facilitate the access of quality planting material and dissemination of OFSP varieties were undertaken.

4.2.1 Rapid assessment of OFSP potential in communities in Massinga, Govuro, and Mabote districts

During the 2016–2017 cropping season, a baseline survey was conducted in southern Mozambique. For the present report, the discussion is focused on Inhambane Province, where some of the critical activities of the project have been implemented.

Results from the baseline study in each of the 3 intervention districts in Inhambane Province indicated that there is at least one farmer organisation present. This is crucial for the implementation of nutrition-sensitive agriculture in each of the project areas. Some farmers in Mabote (1.9%), Govuro (7.9%), and Massinga (10%) are linked to some collective action network or organisation in the district. These associations would facilitate production and commercialisation of OFSP roots within and outside the 10 districts of intervention. This has been demonstrated by the current DVMs established. Two DVMs in Massinga opted to multiply OFSP planting material in an association field, and the other members of the association were also trained and would participate in the whole OFSP seed system. With this associative network, dissemination of nutrition messages and capacity building can be made easier in communities where such associations exist. The baseline study also indicated that a higher proportion of the farmers (71.8%) in the target districts do not conserve adaptive sweetpotato planting material during off-season. This explains why many farmers end up failing to produce vitamin A-rich OFSP varieties due to a shortage of planting material at the onset of rainy season. It is important therefore that vine conservation techniques during the long dry season be regarded as one of the key activities in the next phase of the project in the target districts.

Although Inhambane Province is among the most drought-affected areas in southern Mozambique, the farmers have developed some drought-adaptive strategies which, if enhanced, may contribute to increased food production in general and OFSP production. In Mabote, the farmers tend to

grow crops around natural lakes that conserve water for 4–5 months after the rains. They also use existing few low-lying areas for crop production. These low-lying areas can be used for the conservation of OFSP planting material. In Massinga crop production is usually done in the low-lying areas rich in moisture for the greater part of the year. They use these low-lying areas to produce horticultural crops including sweetpotato. In Govuro, crop production is typically done along the Save River bank to take advantage of the moisture in the low-lying areas. However, farmers in Govuro are at risk of floods and destruction of the crop by a hippopotamus. With correct timing and good meteorological information, farmers can successfully produce all types of crops along the margins of Save River with a good harvest that ensures food security and surplus for sale.

4.2.2 OFSP varietal demonstrations and participatory evaluations carried out

Three districts and six administrative posts in Inhambane Province were identified, and 36 OFTs were established to determine the most adaptable and preferred varieties. The trials were set up in selected farmers' fields and managed by the participating farmers with technical advice and supervision from trained government extension workers and CIP agronomists. The OFTs were meant to identify the most adaptive and preferred OFSP varieties to be scaled out during the next 4 years. These trials also served as demonstration plots where the rest of the surrounding communities would come and observe the growth of the new OFSP varieties. In these new locations, 20 rural extension workers were trained on OFSP production, including multiplication of sweetpotato planting material, disease identification and control, and conservation of planting material. Sustainability of sweetpotato planting material conservation will depend on dissemination of nutrition education in the community which will in turn stimulate demand for the sweetpotato roots for consumption. Also, nutrition messages were disseminated through the Ministry of Health personnel so that the communities are enlightened on the nutrition benefits of OFSP. This knowledge disseminated is a valuable tool in stimulating production and consumption of vitamin A-rich OFSP as well as improving dietary behaviour that will help to reduce chronic malnutrition.

Twenty OFSP varieties bred and released in Mozambique (Annex 9) were introduced to be tested in Govuro, Mabote, and Massinga districts before multiplication and dissemination. The 36 OFTs were installed following the protocol (Annex 10) in these three districts, six administrative posts, and 36 localities on May 5–12, 2017. A total of 32 participatory leaf taste tests were conducted in the districts on August 7–26, 2017. A total of 662 farmers (411 females) participated: 174 (88 females) in Govuro, 265 (186 females) in Mabote, and 223 (137 females) in Massinga. Nine OFSP varietal demonstrations were carried out in three districts of Inhambane Province. This was jointly done with participatory root evaluation in which communities assessed the root yield of each of the varieties. A total of 361 farmers (229 females) participated in the yield assessment and root evaluation in Inhambane Province: 66 (34 females) in Govuro, 69 (42 females) in Mabote, and 226 (156 females) in Massinga.

During the leaf taste evaluations, the following varieties were most preferred by the participants: 'Lourdes', 'Irene', 'Ininda', 'Sumaia', 'Gloria', and 'Alisha' in Govuro; 'Alisha', 'Melinda', 'Delvia', 'Ivone', 'Lourdes', and 'Ininda' in Mabote; and 'Ivone', 'Jane', 'Tio Joe', 'Irene', and 'Gloria' in Massinga.

The farmers participated in yield assessments of all varieties that were tested in their fields in the three districts. In Govuro District, OFSP varieties that had higher storage root yield than the local variety were 'Alisha', 'Delvia', 'Ivone', 'Jane', 'Lourdes', and 'Sumaia' (Fig. 6). These varieties yielded at least 4 t/ha, which is reasonably well under smallholder farming system in semi-arid conditions.

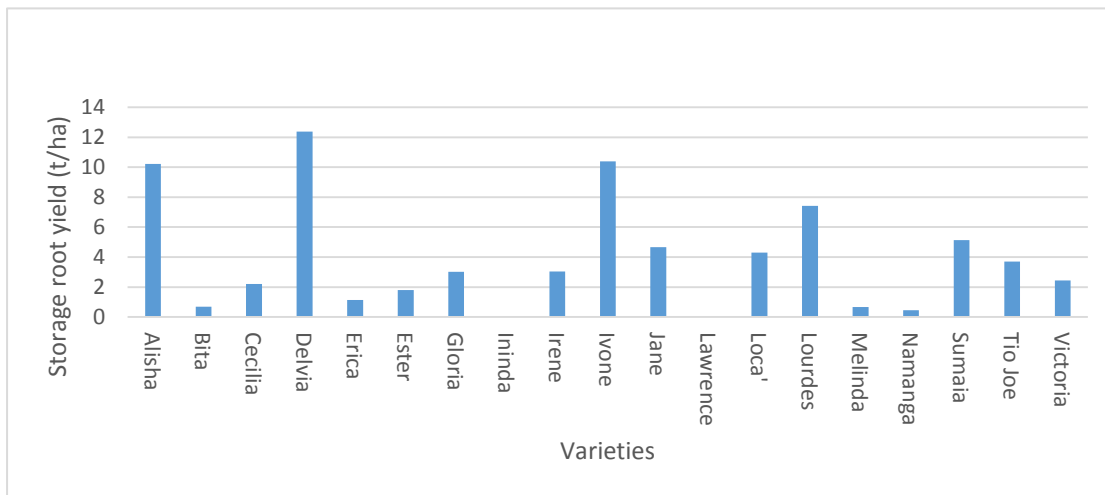


Figure 6. Storage root yield of improved sweetpotato varieties grown under OFTs in Govuro.

Elevated temperatures and poor soil conditions, as well as drought, probably could not support the adaptation of some of the varieties that yielded less than the local variety.

In Massinga OFSP varieties 'Alisha', 'Cecilia', 'Delvia', 'Irene', 'Lourdes', 'Melinda', and 'Sumaia' had storage yield equal or higher than the local variety. The yield of these OFSP varieties was more than 10 t/ha. This yield is very acceptable under smallholder conditions in Mozambique. Good fertile soils and humid, low-lying areas promoted growth and adaptability of the OFSP varieties, resulting in mostly higher yields than the local variety (Fig. 7).

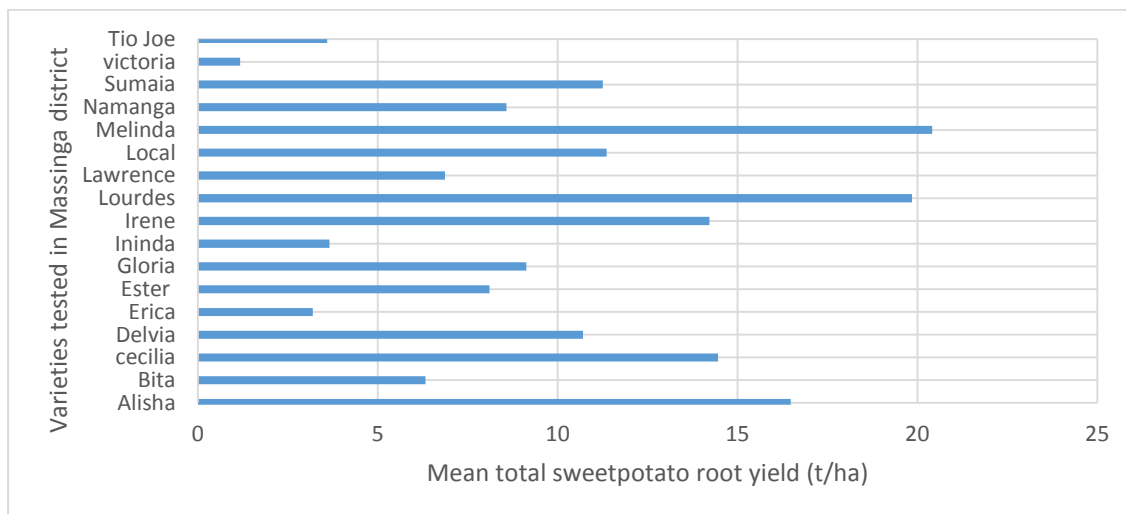


Figure 7. Total sweetpotato storage root yield (t/ha) results of OFTs in Massinga District.

In Mabote District, the most adaptable varieties with storage root yield higher than 4 t/ha were 'Alisha', 'Delvia', 'Gloria', 'Ininda', 'Lawrence', and 'Namanga' (Fig. 8). These varieties are tolerant to semi-arid conditions of Mabote District.

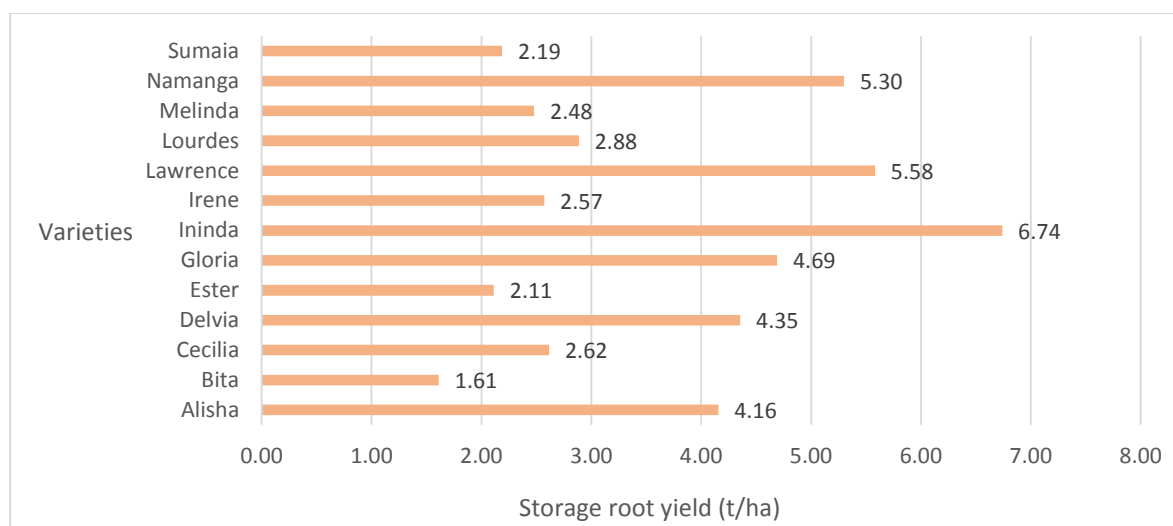


Figure 8. Storage root yield (t/ha) of improved sweetpotato varieties grown under OFTs experiments in Mabote District.

From the OFTs and variety demonstrations, the communities were given the opportunity to evaluate the taste of each variety, and selected varieties that they preferred through secret voting. Table 2 shows varieties that were selected for storage root yield, leaf taste, and root taste preference in each of the three districts.

Table 2. Sweetpotato varieties recommended for storage root production, root, and leaf taste preference in Govuro, Mabote, and Massinga districts in Inhambane Province

	Govuro	Mabote	Massinga
Varieties recommended for storage root yield	Alisha, Delvia, Ivone, Lourdes, and Sumaia	Namanga, Lawrence, Ininda, Gloria, Delvia, and Alisha	Melinda, Lourdes, Cecilia, Alisha, Sumaia, and Delvia
Varieties selected for leaf taste	Lourde, Irene, Ininda, Sumaia, Gloria, and Alisha	Alisha, Melinda, Delvia, Ivone, Lourdes, and Ininda	Ivone, Jane, Tio Joe, Irene, and Gloria
Varieties selected for root taste	Alisha, Gloria, Delvia, Cecilia, Bitá, and Victoria	Ininda, Lawrence, Gloria, and Irene	Delvia, Alisha, Irene, Gloria, and Lawrence

4.2.3 DVMs trained

Twenty-six DVMs (5 females) were trained on how to multiply OFSP clean planting material in Inhambane. The trained DVMs are from the districts of Govuro (7), Mabote (9), and Massinga (10). The training was mainly on rapid and conventional seed multiplication, crop management, and soil fertility management for sweetpotato production, including the use of organic material for sustainable crop production. The trained DVMs multiplied preferred varieties through both rapid and conventional multiplication in each of the three districts to enable communities to have easy access to OFSP planting material at the onset of the raining season. Because of the training, DVMs used organic matter and cattle manure to improve soil fertility both for sweetpotato and other crops in their fields. This practice is an important approach to improving water-holding capacity in drought-prone areas of Mabote and Govuro districts. The government rural extension workers, with backstopping from CIP, have been supervising the DVMs and give them technical advice especially on pests control and disease identification and control. Involvement of extension workers in monitoring vine multiplication was meant to ensure project ownership by the extension workers for sustainability in the government agricultural extension system. Vine distribution forms have been delivered to the DVM so that they register all the beneficiaries who collect vines with them. The OFSP planting material is now ready for distribution in all the three districts; but unfortunately, rains have not fallen and so the material has not been distributed to HH.

4.2.4 OFSP planting material distributed to 2,000 HH

A total of 220 HH (132 female-headed) received OFSP planting material in the three districts. Each HH received two OFSP varieties of 2 kg per variety. The rains have not started in greater parts of the intervention districts, hence the distribution of planting material is off to a slow start, although the established DVMs already have planting material. The few HH (220) that have received vines are those with humid, low-lying areas to plant before rains come. It is hoped that as soon as the rains start in the intervention districts, all the registered beneficiaries will receive OFSP planting material for production.

4.2.5 Nutrition education delivered to 2,000 HH

A total of 2,150 HH have received nutrition education in the intervention districts. The nutrition manual developed by CIP and used in Niassa was also used for nutrition education in Inhambane Province through nutritionists from the Ministry of Health. Nutrition education was disseminated during variety demonstration and at health centers, and the nutrition education received triggered a demand for OFSP planting material. However, a greater proportion of these HH have not received planting material because the rains have not started (although the DVMs are ready with planting material). Inhambane Province is generally dry and drought-prone, and it may not be advisable to distribute planting materials prior to the beginning of the rainy season.

4.2.6 Training of 50 government and NGO staff carried out

Two types of training were conducted in Inhambane Province. The training covered establishment of OFTs, OFSP production techniques, and participatory planning. Because of this training, the extension workers improved their capacity to assist the farmers in the target districts. For the trainings held:

- Twenty SDAEs field technicians and supervisors (6 females) were trained on OSFP seed systems, crop production management, establishment of OFTs, and how to measure sweetpotato crop yields. This is essential as it will enable them to determine sweetpotato production and productivity.
- Sixty-five local government authorities were trained in participatory activity planning. The participants of this training included SDAEs nutritionists and staff from local NGOs. The participants could develop work plans during participatory planning at district level (Annex 11). The trained government staff have strengthened their capacity to implement OFSP programmes and planning for OFSP activities in the intervention districts.

4.3 SPECIFIC OBJECTIVE 3: INTEGRATED 4-YEAR PROGRAMME CO-DESIGNED BY GOVERNMENT, CIP, AND OTHER STAKEHOLDERS FOR INCREASED INVESTMENT IN OFSP IN NIASSA AND INHAMBANE

Two stakeholder meetings were held to present results and lessons learnt and to consult the government with the view of co-designing a new proposal. A stakeholder report has been produced.

4.3.1 Capture pertinent information base and expert views on sweetpotato potential and development pathways for Niassa and Inhambane

Lessons learnt were documented (Annex 12). The most relevant points were:

- Sweetpotato planting material multiplied in one net tunnel yields 45 kg of vines in 2 months, on average. One net tunnel produced 100–120 kg of quality planting material per year.
- Small quantities (1 kg) of sweetpotato planting material given to some HH beneficiaries can yield up to 10 t of planting material after 1 year in areas with good agro-climatic conditions.
- Success of vine multiplication business depends on the interest of individual multipliers.

- Success in vine multiplication also depends on the market demand and/or value chain development.
- Planting during the off season (from April to September) in lowlands and homesteads under irrigation provides opportunities to farmers to harvest and sell during the season of food scarcity and high market prices.
- Use of compost needs to be developed from operational research and demonstration with selected farmers to improve soil fertility.
- A better, easy-to-execute, and cheap approach is to cover almost every HH in a determined/target community.
- Technical capacity building and community mobilisation are important tools for success.
- The commitment of SDAE team, mainly the technicians, is evidence of community success.
- Knowledge of nutritional values of OFSP by communities increases farmers' income as the price of OFSP is higher than white-fleshed sweetpotato (WFSP) on the market.
- Awareness campaigns at each community, followed by small OFSP vines distribution with strong OFSP agronomy messages, nutrition, and processing, could cover most of the HH and will reduce malnutrition significantly within brief time at the village of intervention
- OFSP becomes more expensive than WFSP over the different markets in Lichinga. This explains the increased interest in OFSP roots by urban consumers.
- On the value chain, linking producers to puree producer with contract motivates DVMs to prioritise their OFSP vines and roots production over the year.
- Small bakers and small HH selling their products in the streets should be involved in capacity building on processing to add value to their products.
- Use of 30–40% OFSP puree as an ingredient in the production of power bread, donuts and biscuits, composite of wheat flour and OFSP puree at selected localities. Use of 50% of OFSP puree will reduce the production cost and increase net return. The value addition and processing training at district levels were well received by the small bakeries which create demand at various levels.

4.3.2 Consultative meetings held to capture perspectives from agricultural, health, and marketing stakeholders

A new, integrated 4-year programme was co-designed by the government, CIP, and other stakeholders. In this process two stakeholder meetings were held, one in Inhambane with senior provincial government staff from Niassa and Inhambane, and the other national meeting in Maputo. From the government side, stakeholders were led by provincial directors of the two respective provinces as well as provincial health directors. District directors of agriculture and local government administrators also took part. The CIP team in the meeting was led by its sweetpotato leader and the Mozambique country representative plus their technical staff. The objectives of the meeting was to determine provincial needs jointly, identify strengths and gaps in project planning and accountability, OFSP production challenges and opportunities, nutrition gaps that the new project could fill in, as well as jointly explore opportunities and strategies to strengthen capacities of local government to implement nutrition-sensitive agriculture programs. These meetings culminated in the co-design of the new programme for Niassa and Inhambane. The key areas that were raised and are a priority for this new programme are systems strengthening through capacity building of local authorities in areas of planning and accountability, OFSP production, nutrition, and marketing and value chain development.

For each of these areas, a problem tree was used to determine the major problems in OFSP programming and the causes and impacts of the problems identified by stakeholders. From these

problems and impacts, the stakeholders could develop the objectives, activities, and the expected outcomes and impact of the new 4-year project phase. Stakeholders felt that if local government capacity is fully developed in the next 4 years, nutrition-sensitive agriculture projects can easily be integrated into local government plans and programmes, thereby contributing to food security and a reduction in both malnutrition in general and in vitamin A deficiency in particular.

4.3.3 Strategy and implementation documents drafted by small team with CIP's facilitation

From these meetings and stakeholders' consultations, a report was produced by CIP, highlighting the strategy for implementation. From the ideas raised in the stakeholders' meetings, a 4-year proposal will be developed.

5. KEY ISSUES

- SDAE approach was supported to cover the maximum HH at each community to reduce the malnutrition rate from 44% to 30% in Niassa Province and from 31.7% to 20% by 2020 in Inhambane Province. Some technicians succeeded and some failed due to misunderstanding and commitment.
 - More support should be given to the technicians in the future in order to better understand the importance of community selection and creating interest. Participatory planning sessions and M&E should be systematically undertaken. Agreement of responsibilities should be clarified earlier to all the SDAE technicians in intervention zones.
- Roots storage support is for a small quantity of OFSP.
 - Root storage research would be enhanced for the future to be able to store a significant quantity of roots. Contact through DPASA in Cago Delgado and other partners such as SNV should be done to explore a market outside of Niassa.
DVMs need to be supported for a sustainable root market for puree production and for other markets outside Niassa Province.
- Agronomic management remains a challenge for some HH. Low-fertility sites are still used, resulting in very low yields. Farmers do not apply top dressing well in order to rectify the low fertility; as a result the crop grows poorly.
 - Improving agronomic practices—mainly the use of compost and other cropping systems such as rotation and intercropping—should be a component of the project's next phase.
- Encouraging HH to grow OFSP from April to September is still an issue, as most HH have no lowlands, have lowlands but no source of water, or their lowlands dried quickly. Suggestions for the next phase should explore the introduction of newly developed drought-tolerant varieties.
 - Participatory planning with the community will significantly resolve these issues. The project should invest in efforts to support OFSP planting from the end of March to September so that the crop is harvested during a period of food scarcity and at a good market price. This partially resolves the hunger problems during food scarcity period.
- Some SDAE technicians struggled to mobilise the communities to harvest the trials.
 - Capacity building and commitment agreement between CIP and extension workers should be enhanced at the beginning of the project to ensure extension staff's full commitment.
- Medium- and small-scale bakers trained the previous year stated that they could benefit from the use of OFSP puree; but most would like to get the puree free of charge from the project.
 - Enhance the capacity of small bakers taking the initiative by providing more business-oriented silks and training to encourage them to continue using OFSP.
 - Encourage bakers to make the puree available year-round at their own cost to ensure that they produce power bread throughout the year.

6. SIGNIFICANT DEVELOPMENTS IN THE SECTOR

OFSP becomes more expensive than WFSP over the different markets in Lichinga, but consumers opt to buy OFSP. This explains the increased interest in OFSP roots by urban consumers. Presence of vitamin A in OFSP becomes the primary reason why HH adopt OFSP in 2017.

Most HH conserve their planting material for the next rainy season. The possible use of lowlands for vine multiplication was established in Niassa Province and area increased every year. The most committed farmers should be supported with irrigation system during the next phase of the project.

Community participatory process was a successful activity at the community level. The community accepted participatory planning, implementation, and self-evaluation to learn and internalise the process for the development cycle.

7. CASE STUDIES

Success stories were recorded for DVMs at Chimbunila, Lichinga, Cuamba, and Mecanhelas districts—for example:

- Fernando Alabe from Cholue, Chimbunila District, continues to increase his commitment. He sold 60 t of OFSP in Chimbunila and Lichinga last year. This year, the area under OFSP is estimated around 7 ha, from which he sold around 27 t worth \$2,200.
- Ussene Ajaba from Cachule, Chimbunila District, continues to produce OFSP vines and roots. He bought a maize-grinding machine with proceeds from his OFSP business.
- Afonso Giboia from Lurio, Cuamba District, started and continues to produce power bread from his OFSP harvests after being trained in Lichinga in November 2016. He has been selling OFSP roots from December 2016 until now, and has had good returns from OFSP vines, roots, and power bread.
- Rachid Medala from Lussanhando, Lichinga District, provides OFSP roots for puree production and has started to buy and sell power bread from Padaria Sanjala. He is selling about 600 loaves of power bread per week.
- The Naveia community in Chissaua, Insaca, Mecanhelas District, began growing OFSP in group associations with 10 people. On the basis of the awareness campaigns conducted as the primary activity of the project upon entry into a new community, all the HH in the community became interested in producing OFSP. They now have an area for conservation and multiplication in lowlands as well as in their home gardens.

8. FINANCIAL REPORT

The financial report will be submitted separately from CIP–Lima.

9. CONCLUSION AND LESSONS LEARNT

The project had the following conclusion and lessons learnt by the end of 2017:

- **Objective 1.** At a meeting in April 2017, the project reviewed the work plan at the district level, and each technician was assigned the management of two communities. Training of technicians improved their intervention delivery in the field; some satisfactory results were collected. Community interest becomes more and more important as well amongst both rural and urban consumers. OFSP is being planted in all districts of Niassa through the provincial initiative. Despite OFSP being now more expensive than WFSP, it sells more quickly in the market, meaning that consumers understand the importance of OFSP in diet.

The in-depth assessment was documented; with visible changes in HH behaviour noted. In the in-depth assessment, results showed that 98% of HH produce OFSP, pushing the crop to the first position of all crops produced in intervention villages. Additional results from the assessment also showed that the vitamin A attribute of OFSP was the first selection criteria for OFSP, adoption, production, and consumption. Farmers have now started buying OFSP vines to plant more and increase their area of production. Changes were also observed in the percentage of HH selling OFSP: more are currently selling OFSP along the roadside near their homes compared with results from the baseline and endline surveys. Also, more HH invested in agriculture equipment and school fees for their children based on proceeds earned from OFSP. This was a positive impact of OFSP production on farmers' livelihoods. Involving field technicians in awareness improved the diversity of sources of information about vitamin A.

- **Objective 2.** Despite the delay in the implementation of the project in Inhambane, the results of OFTs harvested in the three districts showed success. OFSP varieties were selected and vines have already been multiplied by 26 DVMs. Farmers' behaviour of taking some vines of their preferred varieties to their homes after participating in root yield and taste evaluation for further multiplication is an indicator of interest. Dissemination in Inhambane will be successful once the effort is supported by an awareness campaign.
- **Objective 3.** The lessons learnt during the previous project and 2017 implementation recorded visible changes that can be applied to the next phase. The consultation process was successful with the active participation of the stakeholders. CIP submitted the stakeholders' meetings report to Irish Aid.



The International Potato Center (known by its Spanish acronym CIP) is a research-for-development organization with a focus on potato, sweetpotato, and Andean roots and tubers. CIP is dedicated to delivering sustainable science-based solutions to the pressing world issues of hunger, poverty, gender equity, climate change, and the preservation of our Earth's fragile biodiversity and natural resources.

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