

# Sustained Diet Quality Improvement by Fortification with Climate-smart, Nutrition-smart Orange-fleshed Sweetpotato in Southern Nations, Nationalities and Peoples' Region (SNNPR), Ethiopia

2018 Annual Report

February 2019

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# **Sustained Diet Quality Improvement by Fortification with Climate-smart, Nutrition-smart Orange-fleshed Sweetpotato in Southern Nations, Nationalities and Peoples' Region (SNNPR), Ethiopia**

## **2018 Annual Report**

**February 2019**

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**Beneficiaries and affiliated entities:** International Potato Center, People in Need, and Emory University

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## ACRONYMS

ATVET	Agricultural Technical and Vocational Education and Training Institute
BANRD	Bureau of Agriculture and Natural Resource Development
CFs	Community facilitators
CIP	International Potato Center
DA	Development agent
DM	Dry matter
EU	European Union
FTC	Farmer training centre
HARC	Hawassa Agricultural Research Centre
HDA	Health Development Army
HEWs	Health extension workers
HLCs	Healthy living clubs
HH	Households
OFSP	Orange-fleshed sweetpotato
PIN	People in Need
QDBH	Quality Diets for Better Health
SARI	Southern Agricultural Research Institute
SASHA	Sweetpotato Action for Food Security and Health in Africa
SBCC	Social behaviour change communication
SNNPR	Southern Nations, Nationalities and Peoples' Region
ToT	Training of trainers
VAD	Vitamin A deficiency
WFSP	White-fleshed sweetpotato



## EXECUTIVE SUMMARY

The Sustained Diet Quality Improvement by Fortification with Climate-smart, Nutrition-smart Orange-fleshed Sweetpotato in Southern Nations, Nationalities and Peoples' Region (SNNPR), Ethiopia is a 4.5-year project (hereafter referred to as the Activity) funded by the European Union. The Activity is being implemented by the International Potato Center (CIP) and partners People in Need and Emory University in three woredas in SNNPR in Southern Ethiopia, which are subdivided into 66 kebeles. Of these, 41 have been selected as having the right conditions for sweetpotato production. The Activity is structured around one intermediary outcome and four outputs.

During Year 2 (Y2) of 2018, the Activity has added 11 new kebeles to the 13 kebeles already covered in 2017. It was impossible to initiate actions in 4 kebeles in one woreda because of popular unrest and safety concerns. These and another 13 kebeles will benefit from the intervention in 2019–2020 if the security situation improves.

An additional training of trainers (ToT) was organised in collaboration with another CIP project. As a result, staff of eight woredas in SNNPR were trained in the farming and use of biofortified sweetpotato varieties.

In Y2 the Activity operated in three action areas:

- Research into nutrition habits and knowledge of vitamin A and sweetpotato among urban consumers, seed system with emphasis on so-called traditional vine multipliers, and irrigation and market parties for the development of the sweetpotato value chain to ensure properly designed interventions
- Variety assessment and multiplication through demo plots at 24 farmer training centres and with 24 private farmers and 3,270 Baby trials
- Capacity building through ToT, step-down trainings to agricultural and health extension workers and Health Development Army volunteers, and establishing 109 healthy living clubs (HLCs)
- Piloting of fresh root and leaves supply to vendors and a restaurant in Hawassa City
- Refinement of on-going monitoring and evaluation, including the continuation of the study covering HLC member households of the first batch of HLCs and the establishment of a quality monitoring system for HLC training sessions

The Activity is aligned with the original logframe (see Annex A). It has reached out to more woredas and trained more agricultural and health extension officers than planned. However, civil unrest in the intervention areas prevented the Activity from fully meeting all targets with respect to the number of direct beneficiaries. The cumulative number of direct beneficiaries is now 210 (5%) short of what was planned. There are delays in the sharing of planting material and reaching urban consumers because the orange-fleshed sweetpotato (OFSP) varieties have not yet been officially released. Despite these delays, the intervention logic of combining climate-smart, drought-resistant, nutritious sweetpotato with dietary education and market development remains valid.

The main modification to the logframe is that minimum dietary diversity has replaced minimum acceptable diet as the key outcome indicator, as it is more directly impacted by the Activity. Other important modifications are the addition of the woreda Kochere in Gedeo to replace four kebeles in Dilla Zuria which proved to be unsuitable for sweetpotato farming due to their local climatic

conditions, and the initiations of actions in another woreda, Hawassa Zuria, to promote the production of OFSP for the Hawassa City market.

In addition to Annex A the report contains the following annexes:

- Annex B: An Updated Action Plan for Future Project Activities
- Annex C: Beneficiaries/Affiliated Entities and Other Cooperation
- Annex D: Visibility



Indicators		Y1		Y2		Y3	Y4	Total	Remark
		Planned	Achieved	Planned	Achieved	Planned	Planned	Planned	
No. of woredas	Cumulative	3	3	3	4	3	3	3	
No. of kebeles		13	13	29	24	41	41	41	
No. of FTCs established as vine multiplication sites		10	13	20	24	32	32	32	
No. of decentralised vine multipliers established as vine multiplication sites		3	13	9	24	9	9	9	
No. of HLC/multipliers (FTC or decentralised vine multipliers)	Annual	2	2	4	4.5	5	4		Clubs operate for 9 months
No. of HLCs established and trained		26*	26	116	109	205	164	511	Over target to allow for contingency
No. of HH targeted (30/HLC)		780	778	3,480	3270	6,150	4,920	15,330	
No. of cuttings to be provided for each HH		600	150	600	600	600	600		To cover 100 m <sup>2</sup>
Total no. of cuttings		468,000	165,600*	2,088,000	1,962,000	3,690,000	2,952,000	9,198,000	
No. of cuttings/multiplier required		36,000		72,000		90,000	72,000		

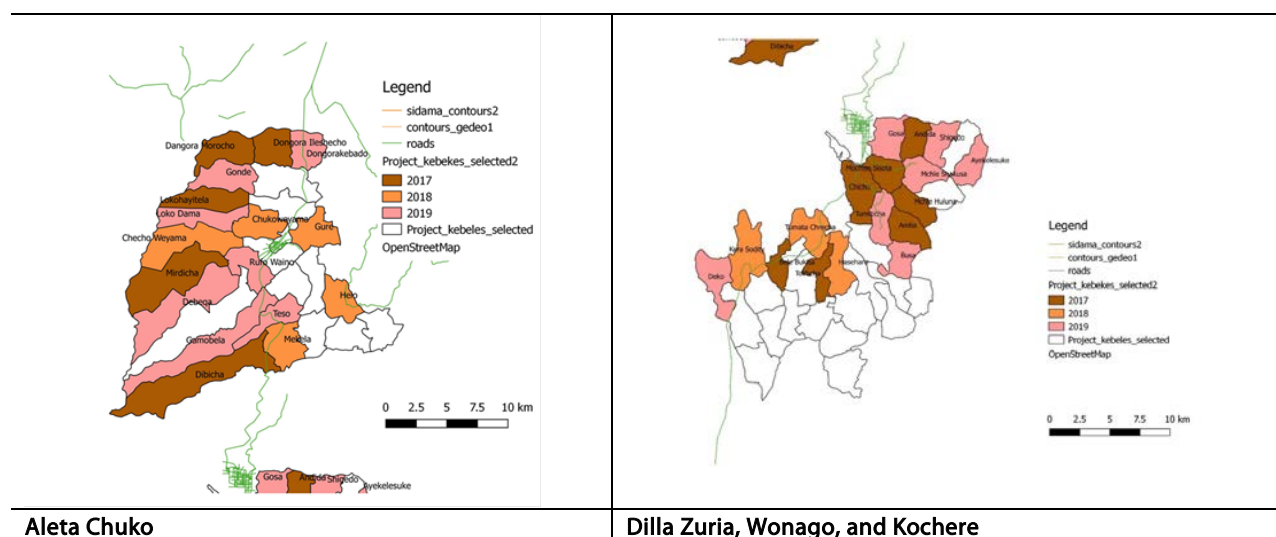
\*1,104 HH received vines

# 1. RESULTS AND ACTIVITIES

## 1.1 INTRODUCTION AND MODIFICATIONS TO THE ORIGINAL PLAN OF INTERVENTION

The Sustained Diet Quality Improvement by Fortification with Climate-smart, Nutrition-smart Orange-fleshed Sweetpotato in Southern Nations, Nationalities and Peoples' Region (SNNPR), Ethiopia is a 4.5-year project (hereafter the Activity or QDBH) funded by the European Union (EU). The Activity is being implemented by the International Potato Center (CIP) and partners People in Need (PIN) and Emory University (Emory) in three woredas in SNNPR in Southern Ethiopia, which are subdivided into 66 kebeles. Of these, 41 have been selected as having the right conditions for sweetpotato production. The Activity is structured around one intermediary outcome and four outputs (discussed below).

During the preparation of the kebeles that were programmed for the 2018 intervention, it appeared that some were not suitable for sweetpotato farming and that in others overlapping actions were taking place. After consulting with the local government and the donor a new selection was made. As a result, in Aleta Chuko and Dilla some kebeles were dropped and a new woreda, Kochere, was added. In this way it was possible to maintain the total numbers of kebeles in both zones (Figure 1).



**Figure 1. Map with the selected kebeles in the Activity's intervention woredas by year of intervention.**

The year 2018 was characterised by political instability and unrest which directly affected the Activity. The woredas in Gedeo had to face an influx of more than 820,000 Internally Displaced Persons, of whom about 225,000 were in project woredas and Dilla Town. As a result, activities had to be suspended for about a month and no actions could be undertaken in Kochere. In response to government requests, QDBH donated about 590 kg of roots to refugees hosted at the Chichu farmer training centre (FTC).

Since August 2018 the situation has improved in Dilla and Wonago and all activities could be resumed. Kochere was among the most affected areas with more than 103,000 refugees and has continued to be unstable. The situation in Kochere is expected to improve during the first trimester of 2019.

The data collected during the baseline study showed that in Gedeo local agriculture is characterised by multi-storey coffee-based agroforestry. Sweetpotato is relatively unimportant, with only 10% of the households (HH) in Dilla Zuria and 30% of the HH in Wonago farming the crop. Even though the Activity can be expected to achieve the transition from the current white-fleshed sweetpotato (WFSP)

to the new orange-fleshed sweetpotato (OFSP) cultivars, one may not assume that farmers in Gedeo will become major suppliers of OFSP to urban markets within the Activity's lifespan. As a result, the Activity's original design would not ensure urban consumers as targets would be reached.

To guarantee that the Activity will achieve its objectives related to the urban populations, and after consulting with the EU, we decided to develop actions in Hawassa Zuria. CIP has been working in this woreda for several years through a research project, Sweetpotato Action for Security and Health in Africa (SASHA) (funded by the Bill and Melinda Gates Foundation), focused on irrigation and the conservation of planting material. Local agriculture is maize dominated and farmers are already supplying the urban market. Drought-tolerant sweetpotato fits easily in this farming system and can especially strengthen local food and income security of the poorer HH without access to irrigation. To support the expansion of OFSP farming in Hawassa Zuria, QDBH has invested in rainwater harvesting in one FTC and one model farmer. These investments will ensure the production of planting material to support the expansion of OFSP in this woreda and of OFSP for the Hawassa market.

Until 2017 the only OFSP cultivar available in Ethiopia was 'Kulfo'. This variety has substantial beta-carotene (8.3 mg/100 g) and is early maturing. However, compared with the existing WFSP cultivar it is sensitive to drought, does not keep well in the ground after maturing, and has a low dry matter (DM) percentage (22.9%). In contrast, the dominant WFSP cultivar 'Awassa-83' has a DM percentage of 31.0%.<sup>1</sup> As a result, farmers and consumers who are used to WFSP cultivars have been reluctant to adopt 'Kulfo'.

Over the last few years CIP has supported the breeding of new cultivars at the Southern Agricultural Research Institute (SARI). These new cultivars are more drought tolerant and resistant to viruses and have a higher DM content (Table 1). As a result, they can be expected to be more agreeable to farmers and consumers. The official release of these new cultivars, originally expected in 2017, has been delayed to 2019. Therefore the establishment of demo plots at FTCs and private farmers and the dissemination of planting material under QDBH have happened as part of the assessment of seven candidate cultivars under the model of on-farm, farmer-managed Baby trials. The results of the 2017 demo plots and Baby trials helped us narrow down the number of candidate cultivars from six to four in 2018. The data from the 2018 trials are being incorporated into the evaluation of these remaining candidate clones and will ensure the adaptability to smallholder conditions of the cultivars that will be released.

**Table 1. Key characteristics of the four candidate cultivars in comparison with the existing OFSP variety 'Kulfo'**

Cultivar	Characteristics				
	Root yield (t/ha)	DM Content (%)	Beta-carotene content (mg/100 g)	Flesh Colour	Reaction to Virus Disease
Alamura (Ukr/Eju-10)	28.7	31.9	12.4	Deep orange	Moderately resistant
Dilla (Ukr/ Eju-13)	26.8	31.4	9.5	Deep orange	Moderately resistant
Vita (SPK004/6)	16.8	29.6	9.6	Intermediate orange	Resistant

1. [https://www.researchgate.net/publication/318224856\\_Pre-harvest\\_Curing\\_Effects\\_on\\_Skin\\_Adhesion\\_Chemical\\_Composition\\_and\\_Shelf-life\\_of\\_Sweetpotato\\_Roots\\_under\\_Tropical\\_Conditions](https://www.researchgate.net/publication/318224856_Pre-harvest_Curing_Effects_on_Skin_Adhesion_Chemical_Composition_and_Shelf-life_of_Sweetpotato_Roots_under_Tropical_Conditions)

Cultivar	Characteristics				
	Root yield (t/ha)	DM Content (%)	Beta-carotene content (mg/100 g)	Flesh Colour	Reaction to Virus Disease
Kabode (SPK004/6/6)	20.2	30.3	8.5	Intermediate orange	Resistant
Kulfo	17.0	22.9	8.3	Pale orange	Susceptible

Source: Fekadu Gurma, SARI, pers. Comm.

## 1.2 RESULTS

The discussion in Section 1.1 follows the logframe and presents the Action's achievements from its inception to 31 December 2018.

### *Intermediary Outcome 1*

*Increased intake of vitamin A and improved food security among 15,000 children and 15,000 women of reproductive age and at least 61,000 urban consumers in three urban centres, achieved through an improved delivery of nutrition-sensitive agricultural and health extension services*

In Y2 the activities that were initiated in Y1 were scaled out. In Y1 26 healthy living clubs (HLCs) were established with 780 members in 13 kebeles. In Y2, 109 HLCs with 3270 members were established in 24 kebeles. This is slightly less than the target originally planned. The shortfall is due to security issues and political instability, which made it impossible to work in 4 of the kebeles.

Value chain development has started by connecting farmers in Hawassa Zuria with supermarkets and traders in Hawassa City. Moreover, staff in one restaurant was trained in preparing culturally adapted recipes using OFSP roots and leaves. The restaurant has served these dishes on fasting days (Wednesdays and Fridays) depending on supply. During the second trimester of 2018 a study was carried out among urban consumers to assess their intake of vitamin A-rich food and their knowledge, attitude, and practices regarding OFSP. A second study examined the cost of production currently faced by local processors for their products that can be expected to incorporate OFSP. In 2019 the results of these studies will be translated into concrete actions to stimulate urban OFSP demand and consumption.

### *Output 1.1 (Op 1.1)*

*A total of 53 decentralised OFSP vine multiplication sites, operated by trained development agents (DAs) of farmer training centres (FTCs) and selected private farmers, provide 15,000 local HH with the inputs and knowhow required for homestead production of OFSP*

Forty-eight demo plots were set up on FTCs and private farms in 24 out of 41 kebeles in the three woredas. The FTCs were evaluated to identify appropriate irrigation technologies to ensure that planting material in the future will be available at the end of the dry season. The equipment has been installed. FTC staff and surrounding farmers participated in planting, maintenance of the fields, harvest, and variety assessments.

Out of these 48 sites, 22 FTCs and 18 private multipliers were encouraged to produce planting material for 2019; they are managing about 2.1 ha to supply 3m cuttings.

### ***Output 1.2 (Op 1.2)***

*At least 15,000 women and 10,000 men are aware of climate-smart OFSP's benefits, recipes for their everyday use, and essential child nutrition practices, gained through participating in 500 HLCs managed by trained community health workers*

Between August and December 2017, 26 HLCs were established (2 per kebele), preferentially composed of HH with children aged under 4 months; total enrolment in these HLCs is 778. The first session was held in December and focused on the conservation of planting material obtained from harvests at the FTCs through the Triple S method (storage in sand for sprouting). In 2018 training sessions continued and covered nutrition aspects, and there were also cooking demos. In August 2018 these members received an attendance certificate at graduation ceremonies in each of the 13 kebeles.

During the first round of HLC trainings, monitoring of HLCs only covered attendance. After a field visit in February/March by the Emory team leader, we decided to implement a process evaluation to identify gaps and issues in the programme and its implementation by the partners. The focus of this evaluation was on the HLC training. This evaluation showed that the nutrition topics covered in the HLC curriculum are relevant and brought new information. Participants found sessions on exclusive breastfeeding, the importance of vitamin A and OFSP, and responsive feeding to be most useful. Participants appreciated learning about different ways to prepare OFSP roots and leaves using culturally adapted recipes.

The report highlighted that some of the tools were ready only late in the HLC training cycle. It also showed the need to improve the contents of the session about agriculture.

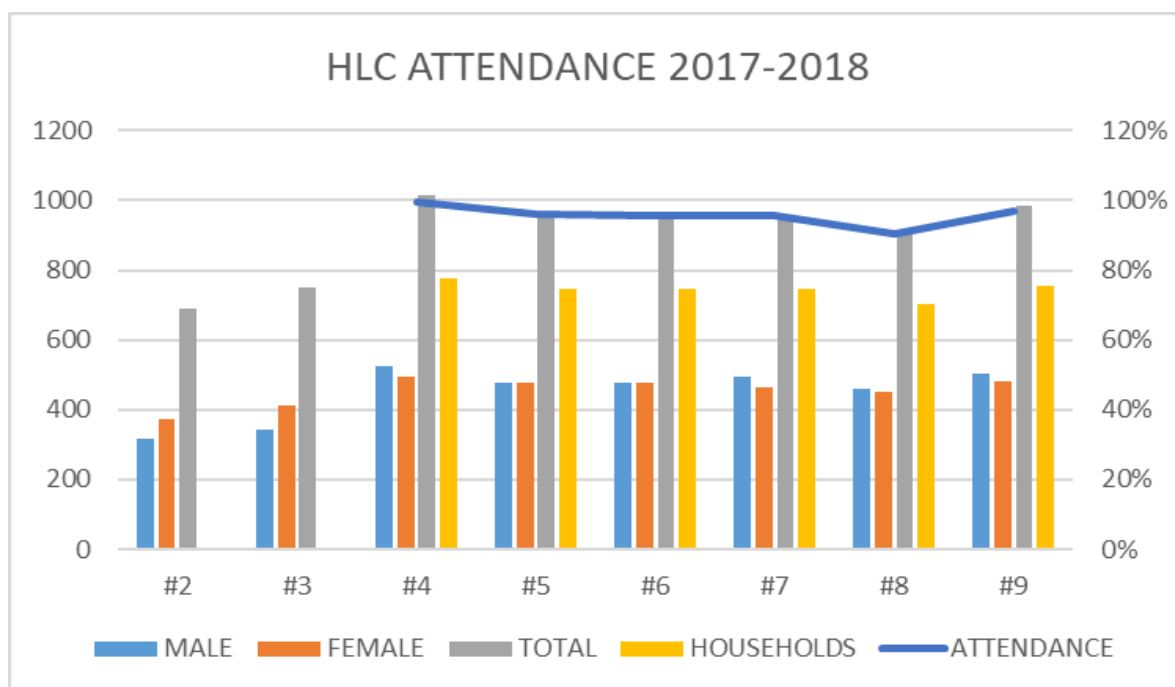
The report came up with several practical recommendations which are being implemented for the HLCs that started their trainings in August 2018. Moreover, a system was designed to improve the capacity to monitor the quality of the HLC trainings and its direct impact on participating HH.

For the HLCs that started in 2018, a new agricultural training tool was developed on the basis of the material already used in the training of trainers (ToT) *Everything you ever wanted to know about sweetpotato*. These materials pay more attention to improved farming techniques. In addition, CIP developed new training materials for Triple S. The Triple S training was removed from the HLC curriculum and instead transformed into three separate sessions that match with the Triple S conservation and planting cycle. These sessions are not given by Health Development Armies (HDAs) but by DAs. The latter received a specific training.

Figure 2 shows the evolution of attendance of the first batch of HLCs. On average 95% of the member HH attended the sessions (measured from session 4 onwards). On average 353 mothers and 449 fathers participated in each session.

Between June and September 2018, 109 new HLCs with 3,270 members in 24 kebeles were established. To support quality of the training sessions, a new monitoring tool was created. The tool combines the registration and assessment of activities during the training sessions themselves with monitoring visits to 10% of the members between the sessions.

The data for the HLC sessions that have been organised with the new batch of HLCs are still incomplete. Preliminary data show that about 4,000 people have attended the sessions, of whom 43% were men (fathers).



**Figure 2. Evolution of attendance of the first 26 HLCs over 2017–2018.**

### **Output 1.3 (Op 1.3)**

*Improved supply of and demand for OFSP products in the urban areas with the increased consumption of at least 61,000 beneficiaries*

Market monitoring started in September 2017 in Dilla, Chuko, and Hawassa and covers sweetpotato, major staple foods, and specific vitamin-rich foods. Data provide basic information about availability and price and will allow for a comparison of the costs of calories and vitamin A from different sources. The study revealed that sweetpotato roots at Hawassa market are mainly supplied from Wolayta during May–September and from Sidama during October–February. Prices vary between 4 Birr/kg in December and 13 Birr/kg in March; OFSP varieties are not available. Other activities contributing to Op1.3 will start in 2019.

In the second half of 2018 two studies were carried out to establish a better understanding of market opportunities in Hawassa City. As part of the consumer study 646 interviews across all kebeles of Hawassa City were carried out, representing a sample intensity of 0.7%. The key outcomes of the study are:

- The majority (55%) of the population of Hawassa knows about vitamin A and is aware of vitamin A deficiency (VAD). Many can mention vitamin A-rich food items, and most ate at least one vitamin A-rich food item during the last 24 hours.
- Many (43%) know at least one problem that the lack of vitamin A may cause in the body.
- Sweetpotato is widely known but less frequently eaten. About half of the population eats sweetpotato less than once a month. OFSP is known by about one-fifth of the population, mostly by hear-say. Channels such as health facilities and mass media are less important as a source of information. It is eaten by less than 10% of the HH and mostly by chance.

- People are in general unaware of the nutrition benefits of sweetpotato and think that it is less nutritious than cereals and Irish potato. The data do not confirm that there are negative social and cultural attributes associated with sweetpotato. Most interviewees (75%) do not agree that sweetpotato is eaten by people who are poor, and 55% do not think that sweetpotato delays speech in young children—a belief that had been mentioned during the formative research in the three rural woredas targeted by the Activity.
- Only 3% know that OFSP is a source of vitamin A.
- Sweetpotato roots are typically eaten boiled; about one-tenth of respondents also eat them fried. Other uses such as in bread or as a sauce are hardly practiced. Sweetpotato leaves are not commonly eaten: only 11 out of 646 respondents said that they ate leaves. Most people believe that leaves are not suitable for human consumption.

These results suggest that the effort to commercialise OFSP roots and leaves must be accompanied by a campaign that highlights the nutritional value of OFSP relative to WFSP, cereals, and Irish potato and shows that it can be eaten in different ways other than boiled.

#### ***Output 1.4 (Op 1.4)***

*After evaluating the effectiveness of the intervention during the first 3 years, recommended value-for-money models for large-scale OFSP dissemination (based on R1 & R2 experience) begin to be integrated into the SNNP region's agricultural extension and health promotion systems, with a potential to reach at least 3m women and children at risk of VAD*

Op 1.4 can only be achieved at the end of the Activity when evidence has been gathered to support the scaling-out of the intervention model into other *woredas*. The Action has already engaged in a partnership with Wolayta Sodo Agricultural and Technical Vocational Education and Training (ATVET) Institute to establish an institutional framework for reaching out to other *woredas*.

The additional *Everything you ever wanted to know about sweetpotato* ToT at the Wolayta ATVET added eight woredas in SNNPR to the ones initially covered by the Activity.

## **1.2 ACTIVITIES**

### ***A.1.0.1 Inception: Recruitment, staff training, office set-up in Hawassa, and Activity launching workshop***

The only activity under this heading is the recruitment, by PIN, of two additional field officers. Since 1 July 2018 they are assigned respectively to Wonago and Kochere. In addition, 11 community facilitators were recruited for the new kebeles of Wonago (Tumata Chericha, Hase Haro, Mekonisa, and Kara Soditi); Aleta Chuko (Mekela, Chuko Woyama, Chichu Woyama, Gure, Hallo, and Lela Honcho); and Dilla Zuria (Otilicho).

***A.1.0.2 Hold monthly project progress review and planning meetings with consortium staff***  
CIP, Emory, and PIN managers have biweekly meetings to ensure communication and coordination. Frequency is modified depending on availability and urgency.

***A.1.0.3 Hold annual stakeholder meeting, present, project progress, and receive feedback***  
In March 2018 stakeholder meetings were organised in Chuko and in Dilla Town (Figure 3). The meetings were attended by officers of the zonal and woreda bureaus of agriculture and by representatives of the 24 kebeles with interventions in 2018. This set-up encouraged an exchange



between the 13 kebeles that had already benefited from the Activity in 2017 and the 11 kebeles that were going to benefit in 2018. A total of 117 people (15 women) from kebeles, woreda, and zonal governments participated. No formal evaluation was done, but feedback at the end of each day indicated that all present were very satisfied by the Activity and by the meeting itself. There appeared to be a strong interest in the entire package—that is, irrigation/rainwater harvesting, sweetpotato, the Healthy Baby Toolkit, and Triple S.



**Figure 3. Stakeholder meetings in Chuko and Dilla.**

On 1 June 2018, the regional stakeholder workshop was organised. Participating were 33 representatives (4 women of the regional bureaus of agriculture, health and finance and economic development), SARI, Hawassa University, and those from the Sidama Zone. During the regional stakeholder meeting it became clear that the government does not accept that the Activity disseminates fewer than the agreed 600 cuttings/HH. As the new varieties have not yet been released in 2019, HLC members received 500 cuttings of ‘Kulfo’ and 100 of two new varieties. The stakeholders agreed to maintain the Baby trial model for vine dissemination.

#### ***A.1.1.1 Design and implement qualitative research on women’s and men’s roles along the OFSP value chain***

The report on the study on the role of women and men along the OFSP value chain was finalised in 2018 and submitted as a separate document due to its size. It is expected to be produced as a CIP working paper in 2019.

Key results are that women and men participate in all steps of the value chain, from vine production to root production, from wholesaling to retailing. Land preparation, planting, and harvesting are mainly done by men, whereas women are more responsible for applying manure and collecting of vines for livestock. Sweetpotato retail is dominated by women, although men normally control larger volumes and cover longer distances. Men are also perceived to be more knowledgeable farmers. The alleged difference in knowledge is perpetuated by the FTCs, who typically invite men to trainings and not women.

#### ***A.1.1.2 Establish demo trials of OFSP in major sites and assess acceptability***

In 24 kebeles demo plots were set up at 24 FTCs and with 24 private farmers. The FTC fields were planted between 6 May and 6 June; 13 were continuations from 2017 and 11 were new (see Table 2). Owing to the security situation, none of the demo plots planned for the four kebeles in Kochere could be established.

**Table 2. FTCs by zones, woredas, planting dates (all in 2018), and location data**

Zone	Woreda	FTC	Year Start	Plant Date	Latitude	Longitude	Altitude (masl)
Gedeo	Dilla Zuria	Chichu	2017	28/04	N06.21.65,1	E038.18.49,6	1,517
Gedeo	Dilla Zuria	Andida	2017	26/04	N06.24.21,6	E038.20.67,6	1,870
Gedeo	Dilla Zuria	Holona	2017	19/05	N06.21.46,4	E038.21.01,5	2,137
Gedeo	Dilla Zuria	Sisota	2017	12/05	N06.23.09,2	E038.19.36,6	1,673
Gedeo	Dilla Zuria	Amba	2017	18/05	N06.20.31,1	E038.20.21,4	1,970
Gedeo	Wonago	Tokicha	2017	06/06	N06.24'10.1	E038.23'17.3	1,722
Gedeo	Wonago	Bele	2018	15/05	N06.17.92,4	E038.17.04,8	1,747
Sidama	A. Chuko	Rufo Wayno	2017	16/05	N06.18.68,7	E038.15.25,1	1,810
Sidama	A. Chuko	Miridicho	2017	22/05	N06.16'42.2	038013'34.6'	1,660
Sidama	A. Chuko	Dibicha	2017	22/05	N06.18'15.1	038017'14.9'	1,633
Sidama	A. Chuko	Dongoro Elilcho	2017	09/05	N06.20'12.7	038016'34.6'	1,794
Sidama	A. Chuko	Dongoro Morocho	2017	11/05	V06.18'03.8'	038013'32.0	1,713
Sidama	A. Chuko	Loko Haytala	2017	08/05	N06.33.91,5	E038.19.65,9	1,698
Sidama	A. Chuko	Chuko Woyama	2018	07/06	N06.34.67,2	E038.16.60,1	1,857
Sidama	A. Chuko	Mekela	2018	26/05	N06.30.09,8	E038.18.75,5	1,783
Sidama	A. Chuko	Lela Honcho	2018	25/04	N06.39.31,0	E038.20.35,4	1,833
Sidama	A. Chuko	Hallo	2018	01/05	N06.39.37,3	E038.18.11,1	1,932
Sidama	A. Chuko	Gure	2018	05/05	N06.37.06,7	E038.17.29,0	1,876
Sidama	A. Chuko	Chichu Woyama	2017	30/05	N06°35.227'	E038°18.276'	1,681
Gedeo	Wonago	Hase haro	2018	02/05	N06°30.529'	E038°22.445'	1,645
Gedeo	Wonago	Tumata Cherecha	2018	27/04	N06°35.839'	E038°21.804'	1,579
Gedeo	Wonago	Kara Soditi	2018	23/05	N06°35.331'	E038°16.570'	1,860
Gedeo	Wonago	Mekonissa	2018	27/04	N06°33.122'	E038°23.086'	1,899
Gedeo	Dilla Zuria	Hotilcho	2018	04/05	N06°31.098'	E038°20.302'	2,083

Figure 4 shows two examples of demo annex multiplication sites established under this Activity. One of the concerns is to provide labels to identify varieties. This will help farmers to understand that varieties differ regarding their agronomic behaviour and taste. It will also assist the monitoring process through improved varietal knowledge of interviewees.



**Demo plot, FTC D. Elilcho.**



**Vine multiplication plot, farmer D. Morocho.**

**Figure 4. Demo annex multiplication plots in Aleta Chuko.**

In December 2017 at 13 FTCs, cooking demos were organised to respond to two important results from the formative research (“sweetpotato is boring because can only be eaten boiled” and “sweetpotato leaves are not appropriate for people but should be given to animals”). The demos also served to prepare the people attending for their participation in the sensory evaluation of roots and leaves of the nine varieties (seven candidates and two controls). The results were incorporated into the varietal analysis by SARI.

In October and November 2018, this exercise was repeated at all 24 FTCs. The focus was now, however, exclusively on familiarising people with OFSP and making them aware of the diverse possibilities of using OFSP roots and leaves in their diets. As in 2017 these demos were supported by a specialist from Hawassa Agricultural Research Centre (HARC) and by a local non-governmental organisation Ene La Enga. Table 3 shows the number of participants by gender by woreda and kebele.

**Table 3. Participants by gender at cooking demos per kebele (2018)**

Kebele	Participants			Kebele	Participants		
	Men	Women	Total		Men	Women	Total
<i>Aleta Chuko Woreda</i>				<i>Dilla Zuria Woreda</i>			
Chichu wayama	21	62	83	Amba	74	63	137
Chuko wayama	33	22	55	Andida	43	18	61
D. Elelcho	32	57	89	Chichu	75	81	156
D. Morocho	21	22	43	Holena	18	41	59
Dibicha	9	11	20	Otilicho	41	45	86
Gure	22	25	47	Sisota	58	24	82
Halo	25	18	43	<i>Subtotal</i>	309	272	581
Lela Honcho	20	25	45	<i>Wonago Woreda</i>			
Loko Hytala	48	42	90	Bele Bukisa	30	21	51
Mekela	38	35	73	Hase Haro	78	37	115
Miridicha	20	26	46	Kara Sodity	40	29	69
Rufo Wa'eno	15	10	25	Mokonisa	39	74	113
<i>Subtotal</i>	304	355	659	Tokicha	82	105	190
<i>Kochere Woreda</i>				<i>Tumata Chirecha</i>	47	36	83
Kochere	0	0	0	<i>Subtotal</i>	316	302	585
<i>Subtotal</i>	0	0	0	<b>Total</b>	<b>929</b>	<b>929</b>	<b>1,858</b>

In 2017, 1,009 persons (448 women) participated in the cooking demos. In 2018, 1,858 (929 women) participated, for a cumulative total number of people reached by cooking demos of 2,967.

#### ***A.1.1.3 Prepare and conduct ToT course for extension personnel concerning OFSP***

The ToT training on *Everything you ever wanted to know about sweetpotato* uses a curriculum developed for trainings in several African countries over the past 5 years. It has an extensive manual which covers 14 different topics ranging from sweetpotato farming to marketing, from processing to gender and adult education. The manual exists already in English, Kiswahili, French, and Portuguese. It was translated into Amharic for the training. The draft Amharic version is now undergoing a final review.

In 2017, 13 DAs from 13 kebeles participated in the *Everything you ever wanted to know about sweetpotato* ToTs in Hawassa and Sodo. The training also involved staff of the zonal Bureaus of Agricultural and Natural Resource Development (BANRD). Thirty people (7 women) participated.

In May and June 2018, QDBH organised a second ToT in two, 5-day sessions. All classes were given at Sodo ATVET college and its experimental fields except. Some field practicals were done at a nearby FTC and at a private sweetpotato vine multiplier in Bilate.

The 2018 training was not foreseen in the original Activity plan and budget, but it could be organised through combining funds from EU and Irish Aid. Thanks to this combination, 11 DAs and 16 crop experts from Gedeo, Sidama, and Wolayita were trained together with instructors from the Tigray and Wolayita ATVET colleges (Table 4). The synergy between both projects has hence increased their combined impact and opportunities for scaling out.

**Table 4. Numbers of DAs, crop experts, and instructors who participated in the 2018 ToT**

Category	Number
DA	11
Crop expert	16
Instructor	5
Other	5
<b>Total</b>	<b>37</b>

NB: Three participants from Borricha were substituted.

The ToT had 34 participants (4 women) from the BANRD departments and offices from Tigray and SNNPR and from three zones with SNNPR (Gedeo, Sidama, and Wolayita). Other participants were CIP junior staff working under the EU project and instructors from the Sodo and Tigray ATVET colleges (Table 4). Trainers and facilitators were staff from Hawassa University, Sodo ATVET College, HARC, SARI, and CIP (Table 5).

**Table 5. Participants of 2018 ToT by region and woreda**

Region/Zone	Woreda	Agricultural Growth Pole	Funding	Number
Ethiopia	CIP	NA	EU/Irish Aid	3
Gedeo	Kochere	No	EU	1
Gedeo	Yirgachefe	No	EU	1
Gedeo	Gedeb	Yes	EU	1
Sidama	Loko Abaya	No	Irish Aid	3
Sidama	Zone	NA	Irish Aid	1
Sidama	Bursa	Yes	EU	1
Sidama	Wondo Genet	Yes	EU	1
Sidama	Borricha	No	Irish Aid	4*
Sidama	Bona	No	EU	1
SNNPR	Region	NA	Irish Aid	1
Tigray	Region	NA	Irish Aid	1
Tigray	ATVET	NA	Irish Aid	2
Tigray	TARI	NA	Irish Aid	1
Wolayita	Damot Gale	No	Irish Aid	3
Wolayita	Humbo	No	Irish Aid	3

Region/Zone	Woreda	Agricultural Growth Pole	Funding	Number
Wolayita	Zone	NA	Irish Aid	1
Wolayita	Sodo Zuria	No	Irish Aid	3
Wolayita	ATVET	NA	EU/Irish Aid	2
<b>Total</b>				<b>34</b>

\*Three participants were replaced between the first and the second parts of the training.

The last session in June had to be cut short to allow participants to evacuate when security in Sodo town deteriorated. CIP staff who had stayed behind barely escaped when a mob assaulted the ATVET college. Apparently at least one student was killed and a CIP vehicle was severely damaged.

The main gains from organising this additional ToT are a stronger incentive towards the incorporation of the programme and/or its elements into regular ATVET college teaching, the opportunity to scale out to other woredas in SNNPR prioritising the Agricultural Growth Pole woredas, and laying the foundations of a strengthening of OFSP biofortification activities outside SNNPR, in Tigray,

#### ***A.1.1.4 Training and material support to the target FTCs and farmers-entrepreneurs producing and multiplying OFSP vines***

In each of the 24 kebeles targeted for Y1 and Y2, an FTC was identified. These FTCs were assessed with regard to their water sources and needs, as previous experience has shown that sustained vine supply requires a reliable source of water. On the basis of that assessment, an investment plan was drafted which covered the topic of rainwater harvesting installations. Table 6 shows which types of water sources and suggested technologies for water-lifting and irrigation have been selected. Figure 5 contains images of a rope-and-washer pump and a rainwater harvesting installation in FTCs in Dilla and Chuko. Table 7 provides an overview of the current status of the 24 FTCs with their respective water source and proposed technologies for water-lifting and irrigation.

**Table 6. Water resources potential and selected irrigation technologies for the FTCs in the selected kebeles of intervention districts**

Types of Water Sources	No. of FTCs	Suggested Water-Lifting and Irrigation Technologies
River or spring	10	Solar water pumps integrated with either drip irrigation or manual irrigation using a bucket or a hose (bunch irrigation)
Shallow wells	2	Rope-and-washer pump for water-lifting from the wells integrated with bunch irrigation
Water-harvesting from roof tops and ground catchments with irrigation equipment	12	Geomembrane-lined trapezoidal underground tanks (average storage capacity 50 m <sup>3</sup> ) and fiberglass surface tanks for rainwater storage and hand pumps or treadle pumps for water-lifting. All the FTCs will use bunch or furrow irrigation techniques.

In 2017 procurement was slow and the rainwater harvesting installations were only completed after the rains had stopped. In 2018 procurement was still slow, but it was possible to complete the building and equipment during the rainy season. As a result, they could be used for irrigation during the dry months at the start of 2019.





**Figure 5. Examples of investments in irrigation and rainwater harvesting equipment.**

**Table 7. FTCs with their water sources, water-lifting and irrigation technologies, and status**

FTC/Kebele	Intervention Year	Water Source	Water-Lifting Technology	Proposed Irrigation Method	Status (as of 31 Dec. 2018)
Chichu	2017	Groundwater (shallow well)	Rope & washer pump (2 in number)	Furrow	The first rope pump installed and maintained once. Second pump purchased and will be installed soon; the first pump is functioning.
Andida	2017	River/stream	Solar pump	Furrow	Purchased/functioning
Holena	2017	Groundwater (shallow well)	Rope & washer pump	Bunch <sup>1</sup>	Purchased and installed; maintained once.
Sisota	2017	Rainwater harvesting (roof-water harvesting using fibreglass tank)	Plastic pipes/ delivery hose	Bunch	Fibreglass tank purchased, installed, and fenced. Gutter installed and the tank is filled with water
Amba	2017	Spring and roof-water harvesting	Hand pump	Bunch	Underground geomembrane-lined tank completed; roof gutters constructed.
Tokicha	2017	Roof-water harvesting	Plastic pipes/ delivery hose	Bunch	Fibreglass tank purchased, installed, and fenced. Gutter installed and the tank maintained once.
Bele Bukisa	2017	River/stream	Solar pump	Furrow	Solar pump purchased and submitted; The FTC has a very steeply sloped and small land. Hence, irrigating the upper side of the FTC is difficult.
Rufo Wayno	2017	River/stream	Solar pump	Furrow	Solar pump purchased and functioning; resetting/ maintenance undertaken once.

FTC/Kebele	Intervention Year	Water Source	Water-Lifting Technology	Proposed Irrigation Method	Status (as of 31 Dec. 2018)
Miridicha	2017	Rainwater harvesting (geo-membrane-lined underground trapezoidal tank from ground catchments)	hand pump	Furrow	Water harvest pond completed and filled with water from a ground catchment nearby. The roof catchment could not be used as the corrugated iron roof was demolished by wind.
Dibicha	2017	Rainwater harvesting integrated with watershed management	Treadle pump	Bunch	Treadle pump purchased but not functioning as they allocated a degraded land as new FTC. Hence, PIN and CIP are supporting the reclamation of the new FTC using integrated watershed management strategy.
Dongoro Elilcho	2017	Rainwater (both roof-water harvesting using fibreglass tank and geo-membrane-lined underground tanks from ground catchments)	Hip pump	Furrow	Geomembrane-lined underground water harvesting tank installed and filled with water. Fibreglass tank installed and attached to a gutter from the roof which was maintained once. It has started functioning.
D. Morocho	2017	Rainwater (both roof-water harvesting using fibreglass tank and geo-membrane-lined underground tanks from ground catchments)	Hip pump	Furrow	Geomembrane-lined underground water harvesting tank installed and filled with water. Fibreglass tank installed and attached to a gutter from the roof which was maintained once. It has started functioning.
Loko Haytala	2017	Rainwater (both roof-water harvesting using fibreglass tank and geo-membrane-lined underground tanks from ground catchments)	Hip pump	Furrow	Geomembrane-lined underground water harvesting tank installed and filled with water. Fibreglass tank installed and attached to a gutter from the roof which was maintained once. It has started functioning.
Hallo	2018	River/stream	Solar pump	Furrow	Solar pump purchased
Ella Honcho	2018	River/stream	Solar pump	Furrow	Solar pump purchased



FTC/Kebele	Intervention Year	Water Source	Water-Lifting Technology	Proposed Irrigation Method	Status (as of 31 Dec. 2018)
Chuko woyama	2018	Rainwater harvesting (underground hemispherical tank lined with cement)	Treadle pump	Furrow	Cement-lined underground water harvesting tank installed and tank fenced. It is filled with water already.
Chichu Woyama	2018	Rainwater (geomembrane-lined underground tanks from ground catchments)	Hand pump	Furrow	Geomembrane-lined underground water harvesting tank installed and tank fenced. The geomembrane tank is filled with water already.
Mekella	2018	Rainwater harvesting (roof-water harvesting using fibreglass tank)	Plastic pipe/ delivery hose	Bunch	Fiberglass tank purchased, installed, and fenced.
Gure	2018	Rainwater (geomembrane-lined underground tanks from roof catchments)	Treadle pump	Furrow	Geomembrane-lined underground water harvesting tank installed, gutter installed, and tank fenced. The geomembrane tank maintained once.
Kara soditi	2018	River/stream	Solar pump	Furrow	Solar pump purchased and demonstrated.
Tumata Cherecha	2018	River/stream	Solar pump	Furrow	Solar pump purchased and demonstrated.
Hase Haro	2018	River/stream	Solar pump	Furrow	Solar pump purchased and demonstrated.
Mekonisa	2018	River/stream	Solar pump	Furrow	Solar pump purchased and demonstrated.
Hotilcho	2018	River/stream	Solar pump	Furrow	Solar pump purchased and demonstrated.

<sup>1</sup>Bucket and/or hose.

One of the main concerns is the impact and sustainability of the investments in irrigation equipment. The original proposal did not foresee any specific intervention to bolster these. Project management has come up with two capacity-building strategies to enhance impact and lifespan. First, under QDBH at each FTC a rain gauge was installed. FTC managers were trained in reading and recording rainfall, and CIP's research assistants collected these data. Subsequently, it was explained to them how they can adapt their irrigation to rainfall so that they would not under or over irrigate. Thirty-six persons (3 women) were trained as organised on 17–19 December 2018, facilitated by CIP and PIN (Table 8).

**Table 8. Participants trained on irrigation, by woreda, organisation, and gender**

Represented Woreda	Position/Organisation				Gender		
	DA (kebele)	Woreda Agriculture	Zonal Agriculture	Private Technician	M	F	Total
Aleta Chuko	22	2	0	1	22	3	25
Dilla Zuria	4	1	1	0	6	0	6
Kochere	0	2	0	0	2	0	2
Wonago	2	1	0	0	3	0	3
<b>Total</b>	<b>28</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>33</b>	<b>3</b>	<b>36</b>

Second, FTC managers, crop and irrigation experts, and mechanics from selected workshops were trained in operation and repair of irrigation equipment on 18–31 August. These trainings also involved the equipment providers who are thus connected with local workshops so that the former can supply the latter with spare parts. As a result, there will be an adequate repair capacity installed in Chuko and Dilla Town. One training focused on rope-and-washer pumps, as there had been problems with two of these pumps (Table 9). The training was organised by PIN and facilitated by an irrigation expert from SMITH (Adane Kefele) and a chief mechanic (Tefera W/Yohanes) from W/Sodo TVET and the project manager (Dawit Sahlu). The second training (29–30 October) focused on the solar pumps, which are technologically the most advanced but also the most expensive pumping technology (

Table 10). This training was organised by CIP, PIN, and Solar Development Technology from Addis Ababa.

**Table 9. Participants trained on rope-and-washer pump installation and maintenance, by woreda, organisation, and gender**

Represented Woreda	Organisation Origin				Gender		
	DAs	Zonal Water Office	Woreda Water Office	Private Technician/Plumber	M	F	Total
Aleta Chuko	0	0	1	0	1	0	1
Dilla Zuria	2	2	1	3	8	0	8
Kochere	0	0	0	0	0	0	0
Wonago	0	0	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>9</b>	<b>0</b>	<b>9</b>

**Table 10. Zonal, woreda, and kebele expert participants trained on solar irrigation pump installation for by woreda, organisation, and gender**

Woreda	Organisation					Gender		
	DAs	Woreda Agriculture	Zonal Agriculture	Woreda Water Office	Private Mechanic	M	F	Total
Aleta Chuko	6	4	0	2	2	12	2	14
Dilla Zuria	5	2	2	1	2	9	3	12
Kochere	0	0	0	0	0	0	0	0
Wonago	10	3	0	1	1	9	6	15
<b>Total</b>	<b>21</b>	<b>9</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>30</b>	<b>11</b>	<b>41</b>

None of these irrigation-related trainings were foreseen in the original activity plan.

The Activity also provided agronomic and irrigation technical coaching to 18 private vine multipliers. One motor pump was borrowed for three potential vine multipliers who cover the operational costs and will return the pump. Their exposure to this technology will help them to decide whether they will purchase their own pumps and adopt irrigation.

The activity plan foresees the creation of an FTC-managed revolving fund. Interaction with the FTCs during Y1 showed that the level of skills in asset management, budgeting, and accounting among FTC managers is rather low. Hence we decided to improve their skills by a targeted training of 67 (14 women) people from three woredas; 48 were DAs and 22 were kebele managers on 24–25 October (Table 11). These are the ones who will be directly involved in implementing the rotating fund. The training was organised and facilitated by Biruk Melese (CIP) and assisted by Dawit Sahlu (PIN).

**Table 11. Participants trained on the revolving fund (financial management), by woreda, position, and gender**

Woreda	Organisation/Position				Gender		
	DAs	Kebele Management	Woreda Agriculture	Woreda Finance	M	F	Total
Aleta Chuko	24	12	3	3	38	4	42
Dilla Zuria	12	6	2	1	17	4	21
Kochere	0	0	0	0	0	0	0
Wonago	12	4	1	1	12	6	18
<b>Total</b>	<b>48</b>	<b>22</b>	<b>6</b>	<b>5</b>	<b>67</b>	<b>14</b>	<b>81</b>

The technical training in financial management and accounting was followed by a more strategic seminar on the objectives and operation of revolving funds, organised by PIN and the woreda stakeholders on 23 and 28–29 November (Table 12). A total of 129 (55 DAs and 56 kebele managers) people participated. The officials from Woreda Agriculture and Finance facilitated the meeting and discussed with the revolving fund team in the kebele how the revolving fund will be implemented.

**Table 12. Participants attending the revolving fund (financial management) implementation meeting**

Woreda	Organisation/Position				Gender		
	DAs	Kebele Management	Woreda Agriculture	Woreda Finance	M	F	Total
Aleta Chuko	28	23	5	2	54	4	58
Dilla Zuria	14	16	3	2	26	9	35
Kochere	0	0	0	0	0	0	0
Wonago	13	17	4	2	26	10	36
<b>Total</b>	<b>55</b>	<b>56</b>	<b>12</b>	<b>6</b>	<b>106</b>	<b>23</b>	<b>129</b>

None of these trainings was foreseen in the original design of the Activity.

#### ***A.1.1.5 Form groups and train 15,000 female and 10,000 male farmers on OFSP production, storage, and vine conservation by trained agricultural DAs and health extension agents***

The vehicle for training rural women and men in OFSP production, storage, and vine conservation is the HLC. In each kebele, two HLCs were formed. The composition of these HLCs has changed to respond to the needs of the longitudinal study (see A.1.4.3), with an age window for the reference child of up to 6 months. Table 13 provides an overview of the evolution of the number of HLCs per kebele.

The number of HLCs established in 2018 is slightly less than foreseen in the original work plan due to the fact that no actions could be initiated in the four kebeles in Kochere. All 2018 HLCs have 30 member-

HH as envisaged in the original plan. In 2017 HLC training sessions started in December, and in 2018 in August. Cumulatively, the Activity has now reached 4,048 direct beneficiary HH through HLCs.

**Table 13. Number of HLCs per kebele in 2017 and per kebele and per woreda in 2018**

Kebele	2017	2018	Cumulative	Kebele	2017	2018	Cumulative
Dongoro Elalcho	2	5	7	Andida	2	5	7
Miridicha	2	5	7	Holena	2	5	7
Dibicha	2	5	7	Amba	2	5	7
Rufo Waeano	2	5	7	Chichu	2	5	7
Dongoro Morocho	2	5	7	Sisota	2	5	7
Lokaka haytala	2	5	7	Hotelicho	0	4	4
Halo	0	4	4	<b>Total Dilla Zuria</b>	<b>10</b>	<b>29</b>	<b>39</b>
Gure	0	4	4	Tokicha	2	5	7
Chuko Woyama	0	4	4	Bele Bekosa	2	5	7
Chichu Woyama	0	4	4	Tumeta Cherecha	0	4	4
Lelancho	0	4	4	Kara Soditi	0	4	4
Mekela	0	4	4	Hase Haro	0	4	4
<b>Total Aleta Chuko</b>	<b>12</b>	<b>54</b>	<b>66</b>	Mokonisa	0	4	4
Kochere	0	0	0	<b>Total Wonago</b>	<b>4</b>	<b>26</b>	<b>30</b>
<b>Total Kochere</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>All</b>	<b>26</b>	<b>109</b>	<b>135</b>

To ensure better quality of HLC training, two refresher trainings were delivered: one on 25–27 April and the other on 9–11 May. The trainings targeted woreda and kebele staff from the bureaus of agriculture and health of the kebeles where intervention had started in 2017 and those who were included in 2018. In the first training 39 (46% female) people participated; in the second 81 (29% female) people participated.

To ensure sectoral integration of agriculture and health, two rounds of refresher training for DAs, health extension workers (HEWs), and community facilitators (CFs) for Aleta Chuko and Gedeo zones, respectively, were held on 25–27 April and 9–11 May 2018. Each of the 3-day short-term training sessions was on OFSP production and nutrition and facilitated by the trained zonal- and woreda-level agricultural experts in Dilla Town. A total of 81 officials (57 men, 24 women) from the 13 Y1 intervention kebeles were trained (Table 14).

**Table 14. OFSP refresher training participants by organisation and gender**

Woreda	Organisation					Gender		
	BANRD Experts	DAs from FTC/Kebele	Health Office	HEWs	PIN staff (CF)	Male	Female	Total
Aleta Chuko	4	12	8	6	6	28	8	36
Dilla Zuria	4	9	4	5	5	16	11	27
Kochere	0	0	0	0	0	0	0	0
Wonago	4	4	4	3	2	13	5	18
<b>Total</b>	<b>12</b>	<b>25</b>	<b>16</b>	<b>14</b>	<b>13</b>	<b>57</b>	<b>24</b>	<b>81</b>

#### ***A.1.1.6 Design and implement strategy for vine dissemination to HH, provide ongoing technical support, and consolidate lessons for region-wide replication***

During 2017 the design and implementation of vine dissemination was determined by three factors: (1) project implementation activities only took off in March; (2) the vines are of varieties that are still being evaluated and not officially released; and (3) the HLCs that had been created in August were adjusted for the longitudinal study. These three factors had four important implications:

- In 2017 planting material became available relatively late (in September). In 2018 it was possible to start vine dissemination in June. The last HLCs received their planting material in September.
- As in 2017, dissemination in 2018 was done as part of the assessment trials under a Mother–Baby trial model. In this model the Mother trials are the demo plots at the FTCs and with private farmers; the Baby trials are the plots managed by the target HH, who received three varieties (two new ones and one control). Crop development is monitored by CIP and PIN staff and included in the overall varietal evaluation process.
- Each HH received 600 cuttings of three cultivars: 500 cuttings of ‘Kulfo’ and 100 of two candidate varieties. This number is consistent with the original project design.
- A total of 3,270 HH received vines (as planned).

Vines were sourced from FTCs and from private farmers in the project woredas and from a commercial vine multiplier in Balate (Wolayita). The latter supplied mainly cuttings of ‘Kulfo’ (Table 15). Local providers were selected based on the quality and quantity they had available among the FTCs and farmers who had received support. Thus, among the 48 managers of demo plots/multiplication sites, 22 FTCs and 18 private farmers appear to be able to produce adequate quality planting material.

**Table 15. Number of cuttings by source and by variety in 2018**

Kebele	Type	Variety						
		All	Alamura	Dilla	Kabode	Kulfo	Naspot-13	Vita
Rufo Waeno	FTC	34,360	10,220	13,100	5,040	0	3,000	3,000
D. Morocho	Farmer	52,339	15,692	8,500	8,900	1,227	7,450	10,570
Miridicha	Farmer	11,825	3,200	8,050	325	0	0	250
Bilate (Wolayita)	Commercial	1,692,050	11,000	16,050	30,450	1,605,000	18,450	11,100
Chichu	FTC	15,900	0	9,900	6,000	0	0	0
Chichu	Farmer	11,280	1,350	3,250	4,040	0	1,200	1,440
Tokicha	Farmer	107,950	51,850	15,600	7,100	1,000	32,400	0
Andida	FTC	94,600	9,900	8,400	8,800	30,000	3,900	33,600
<b>Total</b>		<b>2,020,304</b>	<b>103,212</b>	<b>82,850</b>	<b>70,655</b>	<b>1,637,227</b>	<b>66,400</b>	<b>59,960</b>

The figures in Table 15 show the:

- Absence of HARC as a source of planting material
- Importance of FTCs and farmers for the supply of material of the new candidate varieties
- Role of the commercial farmer in Balate (Wolayita) as the main supplier of the only released OFSP variety, ‘Kulfo’

The acquisition of vines from FTCs and local farmers implies a significant influx of revenue into these communities. Each cutting is bought at the standard price of 0.35 Birr. This means that each farmer

receives a bundle of 600 cuttings for approximately \$7.75. Local famers received almost \$2,400 and FTCs received almost \$1,900 (Table 16). The money received by the FTCs will be the first revenue for their revolving fund.

**Table 16. Amounts received per multiplier type**

Multiplier Type	Amount (\$)	Percent
FTC	1,877	7
Farmer	2,376	9
Commercial	21,934	84
<b>Total</b>	<b>26,187</b>	<b>100</b>

Vines from the candidate varieties are distributed in bundles of 50 cuttings. Each bundle is labelled so that the farmer knows which variety she or he receives. Names of beneficiaries and the varieties they receive are registered during distribution. Distribution is also used to raise the visibility of the Activity (Fig. 6).



**Figure 6. Preparation and dissemination of planting material.**

Table 17 summarises the cuttings per cultivar per kebele receiving vines as part of the Baby trials and the varieties that were allocated. The candidate cultivar most disseminated was 'Alamura', the least disseminated was 'Vita'.

**Table 17. Dissemination of planting material by woreda and cultivar (excluding 'Kulfo') in 2018**

Woredas	Alamura	Dilla	Kabode	Naspot-13	Vita	Total
A. Chuko	34,000	33,900	33,300	33,500	27,050	<b>161,750</b>
D.Zuria	19,650	18,600	15,900	18,100	11,450	<b>83,700</b>
Wonago	16,550	16,750	16,400	16,400	11,900	<b>78,000</b>
<b>Total</b>	<b>70,200</b>	<b>69,250</b>	<b>65,600</b>	<b>68,000</b>	<b>50,400</b>	<b>323,450</b>
Percent	22	21	20	21	16	100

NB: The registration data of 22 households were lost.

Table 18 summarises the gender of the persons who came to collect the vines. Out of the 3,238 beneficiaries whose names were written down during vine dissemination for 2,768 cases, the gender

was registered. It appears that the large majority of recipients (2,539 or 92%) were men. There is no vine dissemination register of 32 HLC members.

**Table 18. Gender of the person who received vines**

Kebele	All	Men	Women	Kebele	All	Men	Women
<i>A. Chuko</i>				<i>D. Zuria</i>			
Chichu Woyama	120	91	29	Amba	150	150	0
Chuko Woyame	120	54	4	Andida	150	133	17
D. Morocho	150	127	23	Chichu	150	149	1
D. Elchcho	150	148	2	Holena	135	119	1
Dibicha	150	117	18	Otilicho	120		
Gure	120	119	3	Sisota	133	102	31
Hano	120	106	14	<i>Subtotal</i>	<i>838</i>	<i>653</i>	<i>50</i>
L. Honcho	120	88	31	<i>Wonago</i>			
Loko Hayitala	150	150	0	Bela Bokisa	150	126	24
Mekela	120			Hase Haro	120	104	1
Miridicha	150	148	0	Karasoditi	120	113	6
Rufo Wayeni	150	149	0	Mekonisa	120	115	5
<i>Subtotal</i>	<i>1,620</i>	<i>1,297</i>	<i>124</i>	Tokicha	150	78	12
<i>Kochere</i>				Tumata C.	120	53	7
Kochero	0	0	0	<i>Subtotal</i>	<i>780</i>	<i>589</i>	<i>55</i>
<i>Subtotal</i>	<i>0</i>	<i>0</i>	<i>0</i>	<b>Total</b>	<b>3,238</b>	<b>2,539</b>	<b>229</b>

NB: In 470 cases gender was not registered.

The number of vines disseminated per HH is exactly as planned. The total number of beneficiary HH is slightly less than planned due to security issues.

To complement dissemination of vines and to disseminate techniques to ensure that people can carry over planting material across the dry season, CIP has been developing the Triple S technique. In 2017, 402 HLC members participated in the training. In 2018 a new training model was established. This model, which was developed under the CIP-led SASHA project, uses specially designed training materials (leaflets, flipcharts, videos). The trainings of farmers are carried out by the local DAs who have received a special ToT for that model. In the first round 3,285 (1,595 or 49% women) people attended. Table 19 provides the attendance figures by kebele. In principle, attendees are HLC members, although some HLC members may not have participated and some of the attendants may not have been HLC members.

Vines from the 2017 Triple S exercises matured during the 2018 planting season. These were bought from those who had taken care of them to be distributed to 2017 beneficiaries who had lost their material during the dry season but still wanted to experiment the new cultivars.



**Table 19. Participants in round 1 of the Triple S training, per kebele and gender**

Kebeles	Males	Females	Total	Kebeles	Males	Females	Total
<i>Aleta Chuko Woreda</i>				<i>Dilla Zuria Woreda</i>			
Chichu Wayama	38	65	103	Amba	142	103	245
Chuko Wayama	63	53	116	Andida	74	34	108
D. Elalcho	109	131	240	Chichu	204	174	378
D. Morocho	96	105	201	Holena	57	53	110
Dibicha	30	62	92	Otilicho	35	70	105
Gure	43	32	75	Sisota	92	79	171
Halo	71	46	117	<i>Subtotal</i>	<i>604</i>	<i>513</i>	<i>1,117</i>
Lela Honcho	50	35	85	<i>Wonago Woreda</i>			
Loko Hytala	69	58	127	Bale Bukisa	89	81	170
Mekela	77	56	133	Hase Haro	66	19	85
Miridicha	60	65	125	Kara Sodity	28	14	42
Rufo Wa'eno	32	72	104	Mokonisa	32	15	47
<i>Subtotal</i>	<i>738</i>	<i>780</i>	<i>1,518</i>	Tokicha	54	96	150
<i>Kochere Woreda</i>				Tumata Chirecha	79	77	156
Kochere	0	0	0	<i>Subtotal</i>	<i>348</i>	<i>302</i>	<i>650</i>
<i>Subtotal</i>	<i>0</i>	<i>0</i>	<i>0</i>	<b>Total</b>	<b>1,690</b>	<b>1,595</b>	<b>3,285</b>

#### ***A.1.1.7 Plan and implement events to promote dissemination to indirect beneficiaries***

The varieties have not yet been officially released and the number of farmers cultivating them is still very small. On the basis of data collected in August 2018 from a sample of 20 HH in Aleta Chuko, it appears that some HH are sharing their planting material. Out of the 20 HH, 6 had shared with 29 HH, suggesting a multiplication factor of 1.45.

A preliminary analysis of the results of the 2018 Baby trials collected in January 2019 shows that none of the farmers who had received vines in 2018 had yet to share planting material with neighbours or relatives. One reason for not sharing may be the season: December is the end of the rainy season and people will not be interested in obtaining vines. In March 2019, when the short rains have started, new data will be collected, and these are likely to provide better insight in horizontal distribution.

Retention of all the remaining pipeline varieties is about 80%. When the candidate varieties have been released, actions will be undertaken to encourage horizontal dissemination to indirect beneficiaries.

#### ***A.1.1.8 Integrate OFSP production into the FTCs' annual production plans and budgets***

To prepare for the incorporation of OFSP into the annual project plans and budgets in 2018, financial trainings were organised (see Table 11 and Table 12).

#### ***A.1.2.1 Conduct formative research on the key barriers and boosters to OFSP production and consumption, and develop behaviour change communication and promotion strategy, including use of health baby toolkit (bowl/spoon)***

The formative research was carried out in 2017. Its results were used to develop a social behaviour change communication (SBCC) strategy and incorporated into the HLC curriculum. The SBCC strategy

identifies mothers and fathers of infants and young children as the primary audience, with grandmothers, HEWs, and HDA members as secondary, or “influencing” audiences.

An exploratory visit by staff from Emory in March 2018 suggested that the implementation of the HLC curriculum was not as expected. In July 2018 a process evaluation was carried out to assess the extent of the problems and identify solutions. The process evaluation led to four important changes:

- The agricultural component of the curriculum was strengthened by the creation of a specific session on farming and the separation of the Triple S training from the general programme. The session was supported by written material extracted from the *Everything you ever wanted to know about sweetpotato* ToT manual.
- The conditions for cooking demos were improved by acquiring cooking utensils for each kebele.
- The monitoring system was improved so that it not only registers attendance, but also to what extent (1) the curriculum is followed, (2) participants are satisfied with the sessions, and (3) the trainings influence HH behaviour.
- The training of HDA volunteers was strengthened so that it not only covers the contents of the HLC curriculum but also strengthens their session-facilitating skills.

#### ***A.1.2.2 Design, plan, and train health extension personnel on nutrition and behaviour change techniques***

In 2017 PIN-CFs and HEWs of 13 kebeles had been trained in the general aspects of the HLC strategy and training programme. This training was followed by a step-down training in which the CFs and HEWs trained the HDA members. From January to August 2018, this initial training was followed by a monthly 1-day training of the HDAs that addressed the HLC session programme for that month.

The training programme was intensified for the second round of HLCs. In 2018 HEW, HDA members, and other key agents received three trainings: one introductory meeting on 28–29 August (Table 20), one general training in the HLC curriculum on 17–19 October (Table 21), and a training in facilitation skills on 5–6 December (Table 22). In the second training woreda officers played a key role as facilitators.

**Table 20. Participants of the introductory meeting for HLC implementation, by organisation and gender**

Woreda	Organisation/Position					Gender		
	HEWs	PIN-CFs/Officers	HDA	Woreda Health	HEW Supervisors	M	F	Total
Aleta Chuko	11	7	54	2	1	9	66	75
Dilla Zuria	6	2	28	1	0	3	34	37
Kochere	0	0	0	0	0	0	0	0
Wonago	6	4	26	1	0	3	34	37
<b>Total</b>	<b>23</b>	<b>13</b>	<b>108</b>	<b>4</b>	<b>1</b>	<b>15</b>	<b>134</b>	<b>149</b>

**Table 21. HLC participants of HAD training, by organisation and gender**

Woreda	Organisation/Position				Gender		
	HDA	PIN-CFs + Field Officers	HEW	Woreda Health Officer	M	F	Total
Aleta Chuko	54	8	0	2	8	56	64
Dilla Zuria	29	2	1	2	3	31	34
Kochere	0	0	0	0	0	0	0
Wonago	26	5	0	2	4	29	33
<b>Total</b>	<b>109</b>	<b>15</b>	<b>1</b>	<b>6</b>	<b>15</b>	<b>116</b>	<b>131</b>

**Table 22. Participants of the facilitation-skills training and experience-sharing for HDAs and HEWs, by organisation and gender**

Woreda	Organisation/position				Gender		
	HEWs	PIN-CFs + Officers	HDA	Woreda Health Office	M	F	Total
Aleta Chuko	12	14	54	2	14	68	82
Dilla Zuria	7	8	29	1	7	38	45
Kochere	0	0	0	0	0	0	0
Wonago	6	7	26	1	5	35	40
<b>Total</b>	<b>25</b>	<b>29</b>	<b>109</b>	<b>4</b>	<b>26</b>	<b>141</b>	<b>167</b>

**A.1.2.3 Plan and implement series of participatory learning events for 15,000 women and 10,000 men participating in HLCs**

The HLC training curriculum was slightly modified to respond to the experiences of Y1 of QDBH implementation (Table 23). Figure 7 shows the key components of the Healthy Baby Toolkit. The bowl and spoon in this figure are in orange to emphasise OFSP.

**Table 23. HLC session programme and material tools**

HLC Sessions Content	Tools Supporting the HLC Sessions	
1. Agriculture and HLC Introduction	Diet diversity wheel	Pictorial tool with six food groups displayed on a wheel
2. Maternal Nutrition for Exclusive Breastfeeding	Goal cards	Small images specific to each session topic from which participants can choose a goal for the upcoming month
3. Complementary Feeding—Texture	Audio stories	Story without an end about a complementary feeding topic to initiate discussion among participants
4. Complementary Feeding—Frequency and Volume	Meal frequency & volume supplement	Pictorial tool showing the frequency and volume (using coffee cups as a guide) to feed children of differing ages
5. Responsive Feeding and Feeding During Illness		
6. Vitamin A and Orange Fleshed Sweetpotatoes for the Family		
7. Orange Fleshed Sweetpotato Recipes for Complementary Feeding & Dietary Diversity	Cooking demos	Practice in culturally adapted recipes for roots and leaves
8. Complementary Feeding as Children Age and Maternal Nutrition		
9. Graduation		Certificate



Feeding bowl and spoon



Counselling card (front)



Counselling card (back)

**Figure 7. Healthy baby toolkit with feeding bowl, slotted spoon, and counselling card.**

HLC members were exposed to sweetpotato planting and maintenance during the set-up of the demo plots (April) and Mother–Baby trials (May–September).

#### ***A.1.3.1 Plan and implement rapid market assessment of sweetpotato value chain***

The study on gender roles along the value chain was followed up by further work focusing on local vine multiplication practices. The study was made possible through a partnership with CIP's SASHA project and the wider CGIAR Research Program on Roots, Tubers and Bananas. The output of this study will help to fine-tune the future vine disseminations strategy in such a way that it supports and incorporates existing, experienced smallholder multipliers.

Monthly monitoring of markets in Chuko, Dilla, Wonago, and Hawassa City started in September 2017 and has been continued without interruption. It allows for the establishment of relationships with traders and for obtaining regular data on traded volumes and prices.

#### ***A.1.3.2 Plan and implement support to improve supply of OFSP to the target urban markets***

As the varieties have not yet been officially released and the number of farmers cultivating them is still very small, there is no significant supply to the market. Aleta Chuko, Dilla Zuria, and Winago are located relatively distant from Hawassa City (SNNPR's capital) and with about 500,000 inhabitants in its main urban agglomeration. For that reason, we decided to start additional activities in Hawassa Zuria, building on contacts and experiences obtained during the SASHA project.

Hawassa Zuria has the following advantages:

- It is close to Hawassa City with many farmers producing crops such as tomato and cabbage for that market.
- As Hawassa Zuria is at a lower elevation than Aleta Chuko and the two woredas in Gedeo, night temperatures do not constrain sweetpotato production.
- Its agriculture is dominated by maize; sweetpotato offers more security to farmers and hence easily accepted.

Roots from Hawassa Zuria were taken to supermarkets, open-market retailers, and a restaurant in Hawassa City. Restaurant staff were trained in culturally adapted OFSP roots and leaves-based recipes by staff from HARC. The total amount of roots supplied to supermarkets and retailers was 820 kg. Assuming an intake of 0.1 kg/person, this means that about 8,000 persons may have benefitted.

The experience has produced some important lessons:

- Supermarkets such as Gets Vegetables and Mercado supply mainly to the expat staff at Hawassa Industrial Park, who accept any OFSP variety independent from the DM content. Their number is dependent of the development of that park and on the general security situation in the city. That number, however, has decreased in the second semester 2018 after the rioting in June.
- The open market caters to nationals who are used to high DM, white-fleshed cultivars. Open-market retailers received negative feedback about 'Kulfo', indicating the urgency of the release of the new, high DM OFSP varieties.
- The restaurant has served OFSP-based dishes on fasting days (Wednesdays and Fridays) depending on supply. The hotel reported a positive feedback from its customers but complained about the irregularity of the supply. In the case of the leaves, the problem is with the recipe provided which just used the top portion of the leaf. This makes the dish economically

unattractive to the restaurant. However, a new recipe will be developed that will use leaves from all parts of the plant; 'Kulfo' leaves are well-liked.

- Moreover, leaves are highly perishable, which means that a well-working supply chain and appropriate storage facilities are required.

These lessons show that there are opportunities for OFSP at the urban market which will be explored further when, in 2019 the new, high DM cultivars have been released.

#### ***A.1.3.3 Design, develop, and test up to three OFSP-processed products in collaboration with the private sector***

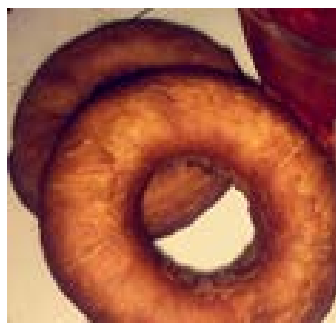
As part of the preparation of this activity, a two-stage study of potential processors was carried out. Initially, 645 processors and traders in fresh roots were interviewed to assess the opportunities for OFSP incorporation by asking about key ingredients and the colour of the product (see Table 24). Most abundant are the makers of injera (174), doughnuts (*bombolino*, 205), *chamosas* (*assambusa*, 187), and flatbread (*ambasha*, 60). Street-corner vendors (188) sell boiled Irish potato, sweetpotato, and the like. Some of the food products that may be adapted using OFSP as an ingredient are shown in Figure 8.

**Table 24: Number of processors interviewed to assess their presence in Hawassa City by product.**

Product	Kocho	Kuchame	Injera	Bread	Other bread	Bombolino	Assambusa	Kokor	Ambasha	Fried roots	Boiled roots	Fresh roots	Leaves
Total	27	24	174	55	34	205	187	83	60	16	188	62	116



**Ambasha**



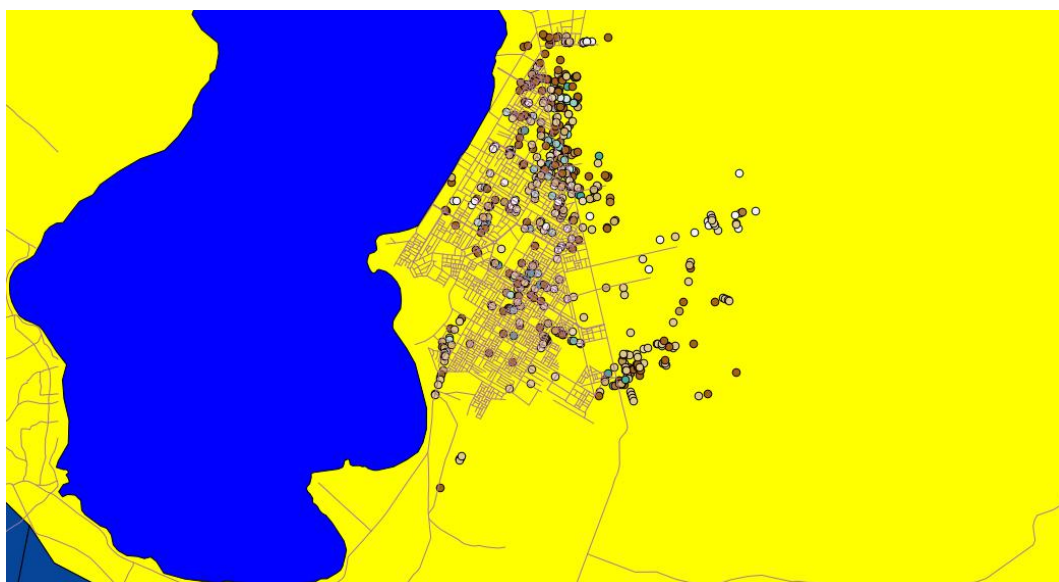
**Bombolino**



**Injera**

**Figure 8. Some food products that can incorporate OFSP.**

Figure 9 indicates the businesses in the city tend to concentrate. Table 25 provides insight in the sizes of these businesses in terms of monthly turnover, profits, and ingredients. It suggests that important impacts on OFSP demand can be achieved by working with injera makers, bakeries, and the other processors mentioned above. We expect that the formal and informal businesses will be trained in March 2019 in partnership with Hawassa University, CIP regional office, and Euro Ingredients under the Bioinnovate project.



**Figure 9. Location of different processor businesses covered by the inventory.**

**Table 25. Key characteristics of flour and root processors in Hawassa City (monthly turnover data)**

Product	Obs.	Product		Main Ingredient		Profit	Ingredients
Name	(N)	kg (mean)	Birr (mean)	kg (mean)	Birr (mean)	Birr (mean)	
<i>Bursame</i>	5	495	250,800	797	18,840	193,715	Kocho, butter, kale, meat, salt, union
Injera	55	872	27,638	696	16,196	411	Teff, rice, maize, fenugreek, wheat (1 case)
<i>Ambasha</i>	7	264	11,507	229	4,243	4,616	Wheat/maize, yeast
European bread	57	6,136	153,135	5,131	92,658	45,873	Wheat, barley, oats, yeast, eggs, "powder",, colourant, salt
<i>Asambusa</i>	24	546	25,750	446	5,360	6,596	Wheat, union salt, oil, yeast, pimento, carrot (1x)
<i>Bombolino</i>	48	387	20,512	626	12,025	139	Wheat, oil, sugar, yeast, colourant, salt, vanilla, "powder"
Fried potato	1	480	18,000	600	3,600	9,848	Potato, oil, salt
Boiled potato	26	720	13,535	747	4,422	4,964	Potato, pimento, boo, oil, legumes, salt, union
Vegetables	5	168	23,400	78	4,140	11,091	Kale/cabbage/spinach, carrot, potato, tomato, salt, oil
Cake (1)	46	510	55,238	1,123	21,864	19,998	Wheat, egg, cream (1x), yeast, butter, colourant
Cake (2)	9	581	52,400	417	8,079	31,640	Wheat/barley, sugar, egg, sesame, vanilla, colourant, "powder"
Cake (3)	7	483	40,971	390	7,547	22,737	Wheat, sugar, egg, cacao, oil, colourant, yeast, butter
<b>Total</b>	<b>304</b>	<b>1,615</b>	<b>56,522</b>	<b>1,584</b>	<b>27,869</b>	<b>11,732</b>	

#### **A.1.3.4 Identify private sector partner and provide technical support for establishing one OFSP-processed product value chain**

The study cited above will help identify a larger business to carry the OFSP-processed product value chain. On average, a bakery producing European-style bread (*dabo*) has a monthly turnover of more than 6 tonnes and consumes more than 5 tonnes of wheat flower (Table 24). Engaging just one of them will make a significant impact on OFSP. Another option is the commercial vine multiplier

mentioned in Table 16. This business has several other activities and may prove a viable option to shorten the link between root production and the retailing of processed OFSP in markets outside of Hawassa. This activity will start in Y3 (2019).

#### ***A.1.3.5 Design and implement an OFSP promotion campaign in targeted urban areas***

Work has been done on designing radio messages. Three service suppliers submitted proposals, but the conclusion of the radio messages was delayed due to the high number of activities taking place in December 2017.

We intended to disseminate promotion material in targeted urban areas in 2018, but as the supply of roots that respond to consumer preferences is still too small, this activity will be undertaken in 2019.

In the first semester of 2019, different promotion tools will be piloted and evaluated in terms of costs and effectiveness as part of a partnership with the School of Food Sciences and Nutrition of Hawassa University and the University of Wisconsin. The results will be used for scaling out in the second semester, when supply from Hawassa Zuria will have expanded.

#### ***A.1.4.1 Design and implement monitoring system for R1 and R2 targets***

The monitoring system was designed. Key monitoring, learning, and evaluation data collected include names and contacts of (1) people receiving vines, (2) HLC members, and (3) facilitators.

#### ***A.1.4.2 Design system for collecting disaggregated cost data developed, drawing on Phase 1 experience and collected data***

Expenditures are coded by budget line and by activity. This allows for an easy assessment of the total cost of activities per direct beneficiaries reached. Staff-time costing will be based on position/responsibility and time allocation.

#### ***A.1.4.3 Plan and implement baseline study on community-level intervention***

The project evaluation follows a quasi-experimental design with three treatments:

- Beneficiaries who receive OFSP planting material, a standard HLC training programme and a so-called Healthy Baby Toolkit (full treatment)
- Beneficiaries who receive OFSP planting material and the standard HLC training programme (partial treatment)
- Those who do not benefit from any intervention (control)

Treatments are organised by kebele, so that there are kebeles with a full treatment, a partial treatment, and no treatment until the execution of the endline data collection.

Baseline data were collected in 2017; data cleaning, analysis, and reporting have happened during 2018. Endline data will be collected at the end of 2019 so that the 13 control kebeles can benefit from the intervention in 2020.

Results of a preliminary analysis of the baseline data were introduced in the logical framework in the report over 2017; in 2018 the analysis was improved. Updated figures can be found in the logical framework (Annex A) in the present report.

The baseline data for longitudinal study were collected in January 2018, and midline data were collected in September. A preliminary analysis of the midline data suggests that HH who participated in the HLCs had adopted significantly better dietary practices than their counterparts in the control kebeles.



During the reporting period, researchers from Emory completed the longitudinal midline survey and data cleaning. A total of 548 HH (from the 605 enrolled at baseline) completed the survey, which included a questionnaire and multiple pass 24-hour recall of the diets of reference infants. The data from the questionnaire were cleaned and analyses have begun. In addition, Emory has begun to prepare for the longitudinal endline survey, including hiring and training of data collectors. Data will be collected in January and February 2019.

Preliminary results based on the base- and midline data show that infants in intervention kebeles had nearly twice the odds of meeting minimum dietary diversity adequacy, defined as consuming four or more food groups in the previous 24 hours (Table 26). This suggests that the HLC training had a positive impact on complementary feeding practices. Final results will be made available after the endline data have been collected and analysed.

**Table 26. Preliminary results of midline data for infant minimum dietary diversity adequacy**

Infant Minimum Dietary Diversity Adequacy (consuming 4+ food groups)					
Treatment	Baseline	Midline % (95% CI)	Odds Ratio	95% CI	P value
Partial	N/A	17.5 (11.3, 23.7)	1.13	(0.61, 2.11)	0.68
Full	N/A	28.8 (22.0, 35.6)	2.90	(1.61, 5.23)	< 0.01
Control	N/A	9.36 (5.6, 13.1)	Reference	Reference	-

#### ***A.1.4.4 Plan and implement a midline assessment***

As agreed in 2017, no midline study will be carried out. Instead, the endline will be brought forward by 1 year to allow for a significant intervention in the control kebeles before the end of the Activity.

#### ***A.1.4.5 Plan and implement endline study on community-level intervention***

The endline study will be carried out in December 2019.

#### ***A.1.4.6 Negotiate agreement with the regional and woreda Bureaus of Agriculture and Health on the integration of OFSP into their official extension systems***

These negotiations will be evidence-based and occur in 2020 (Y4 of the Activity).

#### ***A.1.4.7 Plan and implement training for 30 new woredas on OFSP sweetpotato production and proposal writing, and provide technical materials***

This training will be evidence-based and occur in 2020.

#### ***A.1.4.8 Plan and implement assessment of urban consumer acceptance of OFSP roots and products and frequency of purchase/intake***

This will be initiated in 2018, when OFSP supply to the market will start to take off.

#### ***A.1.4.9 Plan strategy for final write-up and dissemination of findings; implement the strategy***

The strategy discussion will happen over 2019 and be implemented over 2020.

## ANNEX A. UPDATED LOGFRAME MATRIX

	Results Chain	Indicators	Baseline	Current Value	Targets	Targets				Sources and Means of Verification	Assumptions
			December 2018			Y1	Y2	Y3	Y4		
Overall objective: Impact	Contribute to the reduction of VAD and improved food security among children and women living in SNNP Region of Ethiopia	1) Amounts of vit. A and energy consumed by 13–15-months old rural children (disaggregated by sex) in participant compared to non-participant HH 2) Prevalence of reported diarrhoea episodes and other morbidities during past 2 weeks of children aged < 5 years and principal women 3) Food insecurity score at HH level in rural areas	N.A.		1) At least a 50% improvement in vit. A-intake compared with control group and at least a 10% improvement in energy intake (rural only)					1) 24-hr recall consumption study conducted in a representative sub-sample of participant and control children 2) Baseline and endline surveys of principal women and reference children aged <5 years in all HH targeted for nutrition intervention (questions between brackets)	1) No extreme drought severely deteriorating HH's food intake takes place. 2) At least 80% of the mother–child cohorts will not change residence during the intervention period 3) OFSP-processed products developed are culturally acceptable to urban consumers
			17% of reference children suffered of diarrhoea past 2 weeks (M07_13)	-	2) At least a 15% reduction in prevalence of morbidities compared with control group (rural only) <b>Eliminated: This indicator depends on factors outside the Activity's control</b>				14%		
			8.38 HFIAS score (M05_1B M05_9B)	-	3) At least 30% reduction in food insecurity score compared with control group (rural only)				5.87		
Specific objective(s): Outcome(s) (Oc)	Oc 1: Increased intake of vit. A and improved food security among 15,000 children and 15,000 women of reproductive age and at least 61,000 urban	1) Frequency of intake of vit. A-rich foods during past 7 days by urban consumers and rural mothers and children aged <5 years 2) Rural woman's dietary diversity index for past 24 hr, including category for biofortified foods 3) % of rural children <2 minimal acceptable diet	Urban consumers		1) At least a 30% improvement in frequency compared with control group for rural HH; 10% higher index among urban consumers purchasing OFSP roots or products compared with those not purchasing	N.A.				Sources of information and methods used to collect and report (including who and when/how frequently). 1 & 2 & 3) RURAL: Baseline and endline surveys of principal women and reference children	Factors outside project management's control that may impact on the outcome-impact linkage. Drought raises prices of all foods, making affordable OFSP access difficult for urban
			Rural mothers 2.19	-							

	Results Chain	Indicators	Baseline	Current Value	Targets	Targets				Sources and Means of Verification	Assumptions
			December 2018			Y1	Y2	Y3	Y4		
	consumers in 3 urban centres, achieved through an improved delivery of nutrition-sensitive agricultural and health extension services.	4) For urban consumers: Awareness of vit. A and its role in the body & awareness that OFSP is an excellent source of vit. A	MDD-W=2.5 (M06_01)M06_20); 2.94	-	2) At least a 20% improvement in the woman's dietary diversity score compared with control group (rural)				3.5	aged <5 years in all HH targeted for nutrition intervention; 1 & 4) URBAN consumers: Survey at local markets of adult consumers at end of intervention period: OFSP purchasers vs. non-purchasers	consumers Costs of advertising skyrocket or rules restrict promotion campaigns
			Bio-fortified food 2.5%								
			YICF=2.6 (M06_01) (M06_20)2.95	-	3) Increase of at least 30% of intervention compared with control children attaining minimal acceptable diet when using healthy baby tool kit; 15% when not using toolkit				3.8		
			% Bio-fortified food 3.3%						4,3%		
			% of children with minimum dietary diversity (≥4 food groups) 34.2%	-					44.5%		
			MAD breastfed 25.32	-					32.9%		
			MAD not breastfed 9.64	-					12.5		
			% Aware of vit. A	55%	4) At least 30% of urban consumers are				30%		

	Results Chain	Indicators	Baseline	Current Value	Targets	Targets				Sources and Means of Verification	Assumptions
			December 2018			Y1	Y2	Y3	Y4		
			% aware OFSP source	3%	aware of vitamin A and that OFSP is a good source of vitamin A; at least 20% of urban consumers know the role of vit. A in the body				20%		
			% knowing role vit. A	43%					20%		
Outputs	Op1.1 53 decentralised OFSP vine multiplication sites, operated by trained DAs of FTCs and selected private farmers, provide 15,000 local HH with the inputs and knowhow required for a homestead production of OFSP	1) % of supported sites supplying local HH with vines at the end of the Activity 2) Vine multiplication sites provided vines to at least 15,000 HH 3) % of trained HH are able to explain/ demonstrate at least 3 correct OFSP production practices introduced by the extension workers	Planting materials for OFSP available only at national research program	24 FTC & 24 private demo sites plus 1 farmer's outside project area	1) 70% of 53 vine multiplication sites established operating at end of Activity	26	48			1) Multiplication site monitoring forms 2) Dissemination records from monitoring system 3) Baseline and endline surveys among HH with children aged < 5 years	There is no devastating drought that severely affects water table Government continues to support and operate FTCs Biofortification remains a priority in government strategies
			0 HH received vines	4,374 HH received vines	2) 15,000 HH are provided with vines	780	4050	10,410	15,330		
			0 trained HH	4,050 trained HH	3) 75% of trained HH demonstrate adequate knowledge in homestead production of OFSP	0	3,195	7,810	11,500		
	Op1.2 At least 15,000 women and 10,000 men are aware of climate-smart OFSP's benefits, recipes for their everyday use, and essential child nutrition practices, gained	1) % women and % men with improved nutritional knowledge score 2) % women who have shared their knowledge (2 recipes) with other mothers not in clubs (will randomly select their names for verification) 3) % of men and women reporting a change in the nutritious foods they	0 (no recipes taught)	5 recipes in cooking demos; and HLC trainings	1) Average nutritional knowledge score among women at least 40% higher and among men at least 30% higher in intervention areas than in control areas	0	1,420	3,470	5,110	1 & 3) RURAL: Baseline and endline survey data in rural areas 2) Monitoring data concerning sharing recipes and follow up by HDAs	Men will agree to participate in HLCs Well-collected monitoring data permit attribution of knowledge gain to participation in HLCs
			% shared	No info	2) At least 30% of women in HLCs have shared OFSP-based recipes with other non-group members	0	850	2,080	3,066		
			%	No info	3) At least 20% of	0	568	1,249	1,840		

	Results Chain	Indicators	Baseline	Current Value	Targets	Targets				Sources and Means of Verification	Assumptions
			December 2018			Y1	Y2	Y3	Y4		
	through participating in 500 HLCs managed by trained community health workers	grow or purchase	reporting change		women and men report that purchasing patterns have changed and there has been an increase in use of nutritious foods.						
	<b>Op1.3</b> Improved supply of and demand for OFSP products in the urban areas with the increased consumption of at least 61,000 beneficiaries	1) No. of months OFSP appears per year in 3 major urban markets & its price compared to white- & yellow-fleshed sweetpotatoes 3) No. of rural OFSP producers supplying agro-processors 3) % of urban shoppers purchasing a baked or fried product during the past week that purchased an OFSP product	No OFSP available	0	1) OFSP in market at least 6 months a year and sells at a price at least as high as white- & yellow-fleshed sweetpotato	0				1) Presence and prices of OFSP roots in at least 3 major urban markets collected monthly 2) Monitoring data from company receiving roots from farmers 3) Endline survey of urban consumers at 3 major markets	Agro-processor respects MOU requiring company to share sales figure data Market authorities & shopkeepers permit the collection of data Farmers are interested in commercialisation opportunities & OFSP is competitive with alternative crops
			No processed products	0	2) At least 500 farmers (50% women) supply agro-processor(s)	0			500		
			% of urban shoppers	0							
			OFSP seasonally available in limited roadside selling points	0	3) 20% of shoppers in 3 target urban markets	0					

	Results Chain	Indicators	Baseline	Current Value	Targets	Targets				Sources and Means of Verification	Assumptions
			December 2018			Y1	Y2	Y3	Y4		
	Op1.4 After evaluating the effectiveness of the intervention during the first 3 years, recommended value for money models for large-scale OFSP dissemination (based on R1 & R2 experience) begin to be integrated into the SNNP Region's agricultural extension and health promotion systems, with a potential to reach at least 3m women and children at risk of VAD	1) No. of additional DAs/ HEWs or other government personnel trained about sweetpotato by those trained as ToTs	No trained staff	29 DA staff trained at first ToT, 26 DAs in step-down, and 26 HEWs in step-down	1) At least 50 additional trained staff members 2) At least 40% of those approached have included OFSP in their plans 3) At least 3,000 additional HH received OFSP vines not provided by the project	23 DA staff trained at first ToT, 13 DAs in step-down, and 13 HEWs in step-down	23	23	50	1) Monitoring data maintained by extension personnel; phone survey follow-up of ToT course participants 2) Monitoring data capturing visits to government officials to discussed sustained production at FTCs and other locations 3) Monitoring system using dissemination forms developed by project and adopted/ adapted by public sector extension	MoA officials agree that extension personnel can use tools recommended by the project MoA officials permit FTCs to incorporate OFSP into their plans Extension personnel and others have sufficient financial resources to distribute vines in Y4 & Y5
		2) No. of woreda agriculture offices that have been exposed to the results of the intervention that have incorporated OFSP into their own programmes	0	0		0	9	9	20		
		3) No. of HH reached with OFSP vines in Y 4 & Y5 by extension personnel NOT backstopped by project	0	0		0	0	0	3000		
				Y1 (2017)	2018	2019	2020				Assumption
Activities	A.1.0.1. Inception: Recruitment, staff training, office, setup in Hawassa & Project launching workshop			Completed	N.A.						Funding, office space, candidates available
	A.1.0.2. Hold monthly project progress review and planning meetings with consortium staff			2 steering committee meetings	Biweekly meetings at Hawassa level						Frequency adequate for implementation
	A.1.0.3. Hold annual stakeholder meeting, presenting			3 meetings	3 meetings in 2018						Interest in the

	Results Chain	Indicators	Baseline	Current Value	Targets	Targets				Sources and Means of Verification	Assumptions
			December 2018			Y1	Y2	Y3	Y4		
	project progress and receiving feedback										project
	A.1.1.1. Design and implement qualitative research on women and men’s roles along the OFSP value chain		Completed	N.A.							Genders have different role and/ or levels of control
	A.1.1.2. Establish demonstration trials of OFSP in major sites & acceptability assessment		26 demo plots is 13 kebeles	48 demo plots in 24 kebeles							FTCs and private farmers interested, land and water available
	A.1.1.3 Prepare and conduct ToT course for extension personnel concerning OFSP		1 training course, 30 participants	1 training course, 34 participants (not foreseen)							Target group wants to be trained
	A.1.1.4. Training and material support to the target FTCs and farmers-entrepreneurs producing and multiplying OFSP vines		13 DAs trained, FTCs equipped with irrigation equipment	13 DAs trained, cumulative 26 <b>Additional FTCs equipped with rainwater harvesting and irrigation equipment (Table 6, Table 7), irrigation trainings (Table 8, Table 9, Table 10)</b>							Equipment available in Ethiopia
	A.1.1.5. Form groups and train 15,000 female and 10,000 male farmers on OFSP production, storage, and vine conservation by trained agricultural DAs and health extension agents		778 HH in HCLs	3,270 HH added, cumulative 4,048							At least 15,000 HH interested in OFSP farming
	A.1.1.6. Design and implement strategy for vine dissemination to HH. Ongoing technical support. Consolidation of lessons for region-wide replication		1,1,04 HH received vines through Baby trials	3,270 HH added, cumulative 4,374							OFSP varieties officially released
	A.1.1.7. Plan and implement events to promote dissemination to indirect beneficiaries		Not yet	Not yet as new varieties have not been released yet							OFSP varieties released, multiplication on speed
	A.1.1.8. Integrate OFSP production into FTCs annual production plans and budgets		Not yet	Being worked in through financial trainings: 22 kebeles							FTCs have market for OFSP



	Results Chain	Indicators	Baseline	Current Value	Targets	Targets				Sources and Means of Verification	Assumptions
			December 2018			Y1	Y2	Y3	Y4		
					participated (Table 11)						
	A.1.2.1. Conduct formative research on the key barriers and boosters to OFSP production and consumption. Develop SBCC and promotion strategy, including use of health baby toolkit (bowl/spoon).		Completed	N.A.							Knowledge and awareness are barriers for adequate IYCF practices
	A.1.2.2. Design, plan, and train health extension personnel on nutrition and SBCC techniques		24 HEWs trained	25 HEW trained (Table 22)							HEWs require additional training on nutrition
	A.1.2.3. Plan and implement series of participatory learning events for 15,000 women and 10,000 men participating in HLCs		Learning events planned	9 events for initial 26 HLCs, 3 for 109 HLC's added in 2018, with approximately 2633 women and 2169 men.							HH willing to participate
	A.1.3.1. Plan and implement rapid market assessment of sweetpotato value chain		Seed system components completed	Market study completed							Planting stock, vines and roots are marketed
	A.1.3.2. Plan and implement support to improve supply of OFSP to the target urban markets.		Not yet	First 820 kg supplied to market							Planting stock, vines and roots are marketed
	A.1.3.3. Design, develop, and test up to 3 OFSP processed products in collaboration with the private sector		Not yet	Not yet							Products economically attractive for private sector
	A.1.3.4. Identify private sector partner and provide technical support for establishing 1 OFSP-processed product value chain		Not yet	Not yet							Capable entrepreneurs exist
	A.1.3.5. Design and implement an OFSP promotion campaign in targeted urban areas		Not yet	Not yet							OFSP varieties officially released
	A.1.4.1. Design and implement monitoring system for R1 & R2 targets		In place	Improved for HLCs							
	A.1.4.2. Design system for collecting disaggregated cost data developed, drawing on Phase 1 experience and collect data		In place, needs testing	Testing being done							
	A.1.4.3. Plan and implement baseline study on community-level intervention		Data collection	Draft report ready							

	Results Chain	Indicators	Baseline	Current Value	Targets	Targets				Sources and Means of Verification	Assumptions
			December 2018			Y1	Y2	Y3	Y4		
				completed							
		A.1.4.4. Plan and implement midterm assessment		To be skipped	To be skipped						Time span between baseline, midline, and endline is sufficient to allow for measurable changes
		A.1.4.5. Plan and implement endline study on community-level intervention		To be moved to 2019	Moved to 2019						
		A.1.4.6. Negotiate agreement with the regional and woreda Bureaus of Agriculture and Health on the integration of OFSP into their official extension systems		Not yet	Not yet						Evidence confirms that approach is successful and cost-effective
		A.1.4.7. Plan and implement training for 30 new woredas on OFSP: sweetpotato production & proposal writing and provide technical materials		Not yet	11 new woreda staff trained in second TOT						Evidence confirms that approach is successful and cost-effective
		A.1.4.8. Plan and implement assessment of urban consumer acceptance of OFSP roots and products & frequency of purchase/intake		Not yet	Done						
		A.1.4.9. Plan strategy for final write-up and dissemination of findings; implement the strategy		Not yet	Not yet						

NOTE: MAD = Minimum acceptable diet

## ANNEX B. AN UPDATED ACTION PLAN FOR FUTURE PROJECT ACTIVITIES

Year	Half-year 3						Half-year 4						
Activity	1	2	3	4	5	6	7	8	9	10	11	12	Implementing body (comment)
<i>Example</i>													<i>Example</i>
Preparation Activity 1(title)													Beneficiary or affiliated entity 1
Execution Activity 1(title)													Beneficiary of affiliated entity 1
Preparation Activity 2 (title)													Beneficiary or affiliated entity 2
Etc.													
Conclusion A.1.1.1 Design and implement qualitative research on women and men's roles along the OFSP value chain													CIP (editing and publishing report)
Conclusion A.1.1.2 Establish demo trials of OFSP in major sites & acceptability assessment													CIP (yield assessment, Mother-Baby trials)
A.1.1.3 Prepare and conduct ToT course for extension personnel concerning OFSP													CIP (2x5 days training)
A.1.1.4 Train and provide material support to the target FTCs and farmers-entrepreneurs producing and multiplying OFSP vines													CIP and PIN (ongoing, 16 new FTCs added)
A.1.1.5 Form groups and train 15,000 female and 10,000 male farmers on OFSP production, storage, and vine conservation by trained agricultural DAs and HEAs													PIN (26 started n 2017 and 58 58/116 HLC added)
A.1.1.6 Design and implement strategy for vine dissemination to HH. Ongoing technical support. Consolidate lessons for region-wide replication.													CIP (and PIN)
A.1.1.7 Plan and implement events to promote dissemination to indirect beneficiaries													CIP (and PIN)
A.1.1.8 Integrate OFSP production into FTCs' annual production plans and budgets													CIP and PIN
A.1.2.1 Conduct formative research on the key barriers and boosters to OFSP production and consumption. Develop SBCC and promotion strategy, including use of health baby toolkit (bowl/spoon)													Emory (
A.1.2.2 Design, plan, and train health extension personnel on nutrition and SBCC techniques													PIN
A.1.2.3 Plan and implement series of participatory learning events for 15,000 women and 10,000 men participating in HLCs													PIN
A.1.3.1 Plan and implement rapid market assessment of sweetpotato value chain													CIP (reporting on seed system, assessment root market)

Year													
	Half-year 3						Half-year 4						
Activity	1	2	3	4	5	6	7	8	9	10	11	12	Implementing body (comment)
A.1.3.2 Plan and implement support to improve supply of OFSP to the target urban markets													CIP
A.1.3.3 Design, develop, and test up to 3 OFSP-processed products in collaboration with the private sector													CIP (first trials)
A.1.3.4 Identify private sector partner and provide technical support for establishing 1 OFSP-processed product value chain													CIP, Hawassa University
A.1.3.5 Design and implement an OFSP promotion campaign in targeted urban areas													CIP, Hawassa University
A.1.4.1 Design and implement monitoring system for R1 & R2 targets													CIP, PIN, Emory
A.1.4.2 Design system for collecting disaggregated cost data developed, drawing on Phase 1 experience and collect data													CIP, PIN
A.1.4.3 Plan and implement baseline study on community-level intervention													CIP (data cleaning and reporting)
A.1.4.5 Plan and implement longitudinal study on community-level intervention													Emory
A.1.4.5 Plan and implement endline study on community-level intervention													CIP
A.1.4.6 Negotiate agreement with the regional and woreda Bureaus of Agriculture and Health on the integration of OFSP into their official extension systems													CIP
A.1.4.7 Plan and implement training for 30 new woredas on OFSP sweetpotato production & proposal writing and provide technical materials													CIP
A.1.4.9 Plan strategy for final write-up and dissemination of findings; implement the strategy													CIP

NOTE: This plan will cover the financial period between the interim report and the next report.

## ANNEX C. BENEFICIARIES/AFFILIATED ENTITIES AND OTHER COOPERATION

### *1.1 How do you assess the relationship between the beneficiaries/affiliated entities of this grant contract (ie, those having signed the mandate for the coordinator or the affiliated entity statement)? Please provide specific information for each beneficiary/affiliated entity.*

The Activity is implemented by three entities: CIP, PIN, and Emory, with CIP having the coordinator position. The operational relationship with PIN is ensured by two mechanisms: PIN is represented on the steering committee by four elements and there are biweekly meetings between PIN project manager and the CIP project manager to ensure coordination in daily operations. These meetings are supplemented by incidental meetings. There is also a direct collaboration for instance: (1) design and roll-out of irrigation equipment for FTCs, (2) selection of beneficiaries and implementation of vine dissemination, and (3) contacts at kebele level for HH listing and the study of the longitudinal and cross-sectional studies. The aim is to achieve full transparency in the communication.

Emory is also represented on the steering committee, It has one staff member based in the Activity's office in Hawassa ensuring direct communication at the implementation level. Skype calls involving CIP's principal scientist, the project manager and Emory staff have been held to support more strategic decision making about the implementation of the baseline studies.

One key issue involving all three partners has been the setting up of HLCs. There have been tensions as the HLCs in Y1 have two objectives: the general nutrition education and training and dissemination of OFSP planting material to target group households and ensuring the collection of evidence with regard to the effectiveness of the HLCs and the Healthy Baby Toolkit through the longitudinal study (see A.1.4.3). These two objectives are to a certain level contradictory as the evidence collection requires a restriction of the age group of the children covered by these HLCs. These problems have been resolved, but are still mirrored in the discrepancy between the number of households receiving vines (1,104) and the number enrolled in the HLCs (778). As the HLCs that will be established over the coming period will no longer be used for the longitudinal study, there will be no age restriction and this problem will not affect future activities.

### *1.2 How would you assess the relationship between your and State authorities in the organisation Activity countries? How has this relationship affected the Activity?*

Interaction with the government covers four levels: regional, zonal, woreda, and kebele. At the regional level relations with the BANRD are cordial. The deputy director has participated in the stakeholder meeting and in the closure of the ToT. He has publicly supported the project and called on the zonal and woreda BANRD staff attending the training to support project implementation and incorporate OFSP in their routine activities.

The relation with the Ministry of Health is less intensive. A representative of the regional level participated in the stakeholder meeting; zonal and woreda and kebele staff participated in the ToTs in Chuko and Dilla organised by PIN. Staff of the BoH has participated in cooking demos.

The relation will now intensify as HLCs are being rolled out and HEW and HDA-members will be engaged in the training of these groups.

There are signals that at woreda and kebele levels the coordination between CIP, PIN community facilitators, DAs, and kebele leadership needs improvement. This is partially due to the huge amount of activities taking place during the last few months of 2018. Time for communication and coordination between all parties was extremely short and the demands on DAs and kebele leadership to support specific activities very high. Efforts have been made to improve communication. In March 2018 an additional stakeholder meeting will be held for woreda staff to inform them about progress and plans so that they feel more ownership over the project.

*1.3 Where applicable, describe your relationship with any other organisations involved in implementing the Activity.*

- The relation with SARI/HARC is intensive as it supplies trainers for the ToTs, technical assistance for recipe development, and cooking demos. It is the main responsible for variety selection and participated actively in the discussions about vine dissemination and variety assessment and in part of the associated field activities. Finally, SARI/HARC is one of the three providers of planting material,
- The relation with the Nutrition and Food Science Department of Hawassa University is currently structured by the two nutrition studies that have dominated much of the activities in 2017. It is expected that in 2018 they will be involved in product development.
- Wolayta Sodo ATVET has become a key partner for the implementation of the ToT *Everything you ever wanted to know about sweetpotato*. It has agreed to be the host for the additional 2018 edition as a step towards its institutionalisation within the ATVETs teaching activities.

*1.4 Where applicable, outline any links and synergies you have developed with other actions.*

- With CIP's SASHA project, work is done with regard to the understanding of the seed system (traditional planting material production and sales by local multipliers) and the testing and dissemination of Triple S allowing interventions in two additional woredas (Wolayta Sodo and Hawassa Zuria).
- With CIP's capacity-building project financed by Irish Aid, the partnership with Wolayta Sodo ATVET is developed towards the institutionalisation of the ToT *Everything you ever wanted to know about sweetpotato*.
- With the CGIAR's Roots, Tubers and Bananas programme the Activity works to promote and scale out locally adapted Triple S techniques for the conservation of planting material.
- With Hawassa University work is undertaken to develop an appropriate OFSP marketing strategy for the urban market in Hawassa.

*1.5 If your organisation has received previous EU grants in view of strengthening the same target group, in how far has this Action been able to build upon/complement the previous one(s)? (List all previous relevant EU grants).*

Not applicable.

## ANNEX D. VISIBILITY

The Activity's first deliverable was a communication strategy that showed how the Activity would ensure the visibility of the EU contribution. In line with this strategy during Y2 the following actions have been undertaken:

- Banners for the stakeholder meeting and the ToT training *Everything you ever wanted to know about sweetpotato* exposed at the entrance of the venue (three in total).
- Signs erected at the 24 FTCs benefiting from investments through the project.
- Banners erected during vine dissemination and HLC graduation events
- All materials that Emory has produced (curriculum, counselling card, dietary diversity wheel, and goal card) include the EU emblem and credit the EU for funding. Informed consent documents for data collection disclose the EU as the funder of the research. All reports, papers, presentations, and theses produced by Emory and derived from the Activity acknowledge the EU as the funding agency.
- An international conference of nutritionists in Hawassa was sponsored, including a slot at the plenary session to present the project.
- The project had an established presence at regional meetings under the Sweetpotato for Profit and Health Initiative.

Visibility will increase when the formative research reports are published and the OFSP varieties currently under evaluation will be approved and officially released so that marketing can take off.

**The European Commission may wish to publicise the results of Actions. Do you have any objection to this report being published on the EuropeAid website? If so, please state your objections here.**

No objections

Name of the contact person for the Activity:

Roland Brouwer .....

Signature: .....

Location: ...Hawassa, SNNPR, Ethiopia .....

Date report due: .....

Date report sent: .....





The International Potato Center (known by its Spanish acronym CIP) is a research-for-development organisation 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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