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ANNUAL PROJECT REPORT

GENDER-SENSITIVE EMERGENCY RESPONSE WITH POTATO AND SWEETPOTATO AMONG DROUGHT-AFFECTED FARMERS IN SNNP AND AMHARA REGIONS, ETHIOPIA

20 AUGUST 2018–19 AUGUST 2019

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ACRONYMS

AIQC&QA	Agricultural Inputs Quality Control and Quarantine Authority
BoANRD	Bureau of Agriculture and Natural Resources Development
BoH	Bureau of Health
CIP	International Potato Center
DAs	Development agents
DLS	Diffused light store
ETB	Ethiopian Birr
HH	Household
HEs	Health experts
HEWs	Health extension workers
IPM	Integrated pest management
LB	Late blight
OFDA	Office of Foreign Disaster Assistance
OFSP	Orange-fleshed sweetpotato
QDS	Quality declared seed
SNNPR	Southern Nations, Nationalities and Peoples' Region
ToT	Training of trainers
Triple S	Sand, storage, and sprouting
VAD	Vitamin A deficiency
USAID	United States Agency for International Development

HIGHLIGHTS OF ACHIEVEMENTS

The Gender-Sensitive Emergency Response with Potato and Sweetpotato among Drought-Affected Farmers in SNNP and Amhara Regions, Ethiopia" project is funded by the Office of U.S. Foreign Disaster Assistance/United States Agency for International Development (OFDA/USAID) and has been implemented since 20 August 2018. The project's objective is to support drought-affected potato and sweetpotato farmers through the provision of planting materials of the two crops to improve their future food production capacity and training on production and postharvest technologies and create nutrition awareness. The project is led by the International Potato Center (CIP) and is implemented in partnership with the Bureau of Agriculture and Natural Resources Development (BoANRD, or BoA) of Southern Nations, Nationalities and Peoples (SNNP) and Amhara regions. CIP also collaborates with the Bureau of Health (BoH) of the regions through their zonal, woreda, and kebele experts.

The project is being implemented in three zones, 11 woredas (6 potato, 5 sweetpotato), and 90 kebeles (50 potato, 40 sweetpotato) of Amhara region and in six zones, 10 woredas (5 potato, 5 sweetpotato), and 40 kebeles (20 potato, 20 sweetpotato) of SNNPR. Seed potato of the 'Gudene' and 'Belete' varieties and vine cuttings of the white-fleshed sweetpotato ('Awassa-83') and the orange-fleshed sweetpotato (OFSP) ('Kulfo') were planted in the project kebeles in both regions.

During the reporting period, the project made good achievements in food and planting material production with potato and capacity building with potato and sweetpotato. In Amhara and SNNP regions, 10.133m sweetpotato vine cuttings in equal proportions of 'Awassa-83' and 'Kulfo' were distributed (4.133m in Amhara, 6m in SNNPR) to 10,133 households (HH) (a HH represents a farmer: 4,133 in Amhara, 6,000 in SNNPR). Moreover, 185,000 cuttings (35,000 of 'Awasaa-83', 150,000 of 'Kulfo') were distributed to additional farmers in Boricha woreda and to farmer training centers in Mirab Badawacho woreda in SNNPR, surpassing the target.

Food production

The project aimed to improve the food security of 126,000 people by working with 21,000 direct beneficiary HH (9,000 with potato, 12,000 with sweetpotato). Significant achievements have been made in food production with potato. However, since sweetpotato is still in the field, food and planting material production data have not yet been collected. These will be presented in the next report.

Potato

Amhara

- In Amhara, 196 metric tons (mt) of seed potato were distributed to 3,918 beneficiary HH (3145 males, 773 females) with 50 kg/HH. Some 3,926.3 mt of potato was produced, contributing to improved food security of about 23,508 people.
- If the total produce were sold as seed at the average seed potato price of 10,000 ETB/mt, it would have a gross value (without deducting costs) of ETB 39,263,000 ($1,233,987) at an exchange rate of $1 = 31 ETB. If all the produce were sold as ware potato at 5,000 ETB/mt (average price), the gross value would be ETB 19,631,500. If half were sold as seed and half as ware, the gross value would be ETB 29,447250. The generated HH income could be used to diversify diets and meet other needs.
- Average yields of the 'Gudene' and 'Belete' varieties were 35.3 mt/ha and 42.7 mt/ha, respectively.

SNNPR

- In this region 120 mt seed of 'Belete' and 'Gudene' varieties were distributed to 3,000 beneficiary HH with 40 kg/HH, and 2,439.18 mt of potato was produced, contributing to improved food security for about 18,000 people.
- If the total produce were sold as seed potato at 10,000 ETB/mt, it would have a gross value of ETB 24,391,800, or as ware potato at 5,000 ETB/mt, the gross value would be ETB 12,195,900. If half were sold as seed and half as ware, the gross value would be ETB 18,293,850.
- Average yields of the 'Gudene' and 'Belete' varieties were 40.9 mt/ha and 35.3 mt/ha, respectively.

General

- All the recipient farmers preferred the 'Belete' and 'Gudene' varieties to their local varieties because they have a more vigorous vegetative growth and higher resistance to diseases, mature earlier, yield higher, and taste good. Farmers decided to expand the production of the new varieties and grow to a seed potato producer level.
- 'Belete' is preferred to 'Gudene' in Amhara; the opposite is true in SNNPR.
- Yields obtained with 'Belete' and 'Gudene' varieties in both regions are significantly higher than the national mean potato yield of 12.3 mt/ha (CSA 2016).

Restoration of the lost planting material

Restoring planting materials of potato and sweetpotato that farmers lost due to drought with productive and adaptive varieties is one of the reliable ways of producing food for the family going forward and improves disaster relief preparedness. Quality planting material of the above-mentioned potato and sweetpotato varieties produced by certified seed producer cooperatives following the quality declared seed (QDS) regulations was distributed to farmers. Recommended practices were followed to avoid damaging the planting material during harvest, transport, and planting.

Potato

Amhara

- From the 196 mt seed potato of "Gudene' and 'Belete" varieties distributed, 3,926.3 mt of potato was produced. If all the produce were used for seed, it would plant over 1,963 ha.
- Since the average yield for the two varieties in Amhara was 39 mt/ha, it would produce about 76,602 mt, enough to plant over 38,300 ha.

SNNPR

- Similarly, in SNNPR from the 120 mt of seed distributed, farmers produced 2,439.2 mt of potato. If all were used for seed, it would plant 1,219.6 ha.
- Since the average yield for the two varieties in SNNPR was 36.2 mt/ha, it would produce 44,204 mt, enough to plant 22,102ha.

General

- With such high yields in both regions, the beneficiary farmers can be self-sufficient in seed potato production in a short period of time and can supply seed to fellow farmers in their surroundings, enabling them to produce a lot of food and increase their HH incomes.
- To help farmers reduce postharvest losses of seed potato during storage and attain quality seed potato with short, green, and multiple sprouts that result in high yields, 40 communal diffused light

stores (DLS) (30 in Amhara, 10 in SNNPR) are being constructed for 40 kebeles, 1 DLS per kebele. The project and the beneficiary farmers are sharing the costs: Farmers are contributing local construction materials and labor, and the project supplies corrugated iron sheets and nails and covers carpenter fees. The aim is to demonstrate the benefits of DLS to farmers and motivate them to build their own in the future. The rate of construction is slower than planned, especially in Amhara, because farmers are not making timber available on time; however, all have promised to expedite the construction.

Capacity building for sustainable food and planting material production

Capacity building lays a foundation for a successful achievement of project objectives and their sustainability beyond a project's lifespan. In both regions crop experts, development agents (DAs), and farmers were trained on potato and sweetpotato production and postharvest technologies. Health extension workers (HEWs), health experts (HEs), and farmers were trained on OFSP nutrition and product development. A training of trainers (ToT) approach was adopted to train trainers, who would further cascade the knowledge to men and women farmers through awareness creation.

Amhara

- A ToT course was given to 113 participants (89 males, 24 females), comprising 21 crop experts and 92 DAs on potato and sweetpotato agronomy, integrated pest management (IPM), postharvest handling, and QDS standards and procedures.
- A nutrition ToT course was given to 80 participants (16 males, 64 females) composed of zonal- and woreda-level HEs and kebele HEWs.
- The ToT trainees cascaded the training to 8,996 farmers (7,183 males, 1,813 females; 3,870 potato and 5,126 sweetpotato).

SNNPR

- A ToT course was given to 88 participants (70 males, 18 females), comprising 10 crop experts and 78 DAs on potato and sweetpotato agronomy, IPM, postharvest handling, and QDS standards and procedures.
- The ToT trainees cascaded the training to 9,000 farmers (6,877 males, 2,123 females; 3,000 potato and 6,000 sweetpotato).

General

- The number of female trainees was small because of the few female professionals in the field of agriculture.
- Production and postharvest trainings to farmers were given before the planting materials were distributed to enable them to follow recommended agronomic practices, including seed management.

Creating ownership through inception workshop

CIP is implementing this project in partnership with the BoAs of Amhara and SNNP regions by actively involving the woreda focal persons and DAs in kebeles (among others), who are closely monitored and backed by regional and zonal agriculture experts and CIP staff. CIP also collaborates with the BoH in both regions. To ensure that the BoAs and BoHs own the project and provide the necessary support to their woreda and kebele staff—vital for achieving the project's objectives—inception workshops were held in both regions in which agriculture and health officials from regions, zones, and woredas participated. At the inception workshops, participants expressed their full commitment to support and own the

project in their respective areas.

Challenges

Several challenges were faced during the implementation of the project in both regions. The major ones include sporadic civil unrest that led to the destruction of OFSP planting material in Amhara and to changes in implementation plans, shortage of planting materials due to drought and therefore suppliers selling to other buyers at higher prices, and lack of commitment by some farmers in a few woredas to allocate land to sweetpotato.

1. INTRODUCTION AND BACKGROUND

Ethiopia is still suffering from a chronic drought it has been experiencing since 2015, when it was hit by one of the worst droughts in more than five decades, exacerbated by the phenomenon of El Niño, which caused significant crop and livestock losses. The Southern Nations Nationalities and People's (SNNP) and Amhara regions were among the worst affected by the drought, causing them to face deeply entrenched malnutrition. Amhara has 46.3% stunted (the highest in the country), 9.8% wasted, and 28.4% underweight children under 5. The corresponding figures for SNNPR are 38.6%, 6.0%, and 21.1%, respectively (EDHS 2016). In 2018 Ethiopia had about 7.9m people who required food aid (USAID 2018). The figures in Amhara and SNNPR were close to 1.0m and 1.9m, respectively.

The International Potato Center (CIP), together with the Bureau of Agriculture and Natural Resources Development (BoANRD, or BoA) of SNNPR implemented an emergency project with potato and sweetpotato funded by the Office of U.S. Foreign Disaster Assistance/United States Agency for International Development (OFDA/USAID) from June 2016 to June 2018 to help drought-affected households (HH) in SNNPR. The project helped the people to improve their food and nutrition security and restored seed of potato and sweetpotato lost due to drought with great contributions to improving disaster risk reduction. However, the proportion of the population affected by the drought remained high nationally. Consequently, CIP proposed to extend the project intervention into Amhara region for the same purpose and objectives. OFDA/USAID agreed to support this expanded initiative with $1.5m.

The original plan was to start implementing the project in June/July 2018 to coincide with the planting season. However, the agreement was signed on 20 August 2018 after the planting season had passed, and implementation of the project started in September. Thus, some data of sweetpotato are not fully collected. This report presents progress of project implementation, achievements made, and challenges met for the period of 20 August 2018–19 August 2019.

1.1 Goal and Objective

1.1.1 Goal

To improve food and nutrition security of drought-affected farmers in SNNP and Amhara regions by providing immediate access to improved seed potato and sweetpotato planting material of productive and locally adapted varieties.

1.1.2 Objective

To support at least 21,000 drought-affected potato and sweetpotato farmers (12,000 in Amhara, 9,000 in SNNPR) by providing seed potato and sweetpotato planting material to improve their future food production capacity and training farmers on production and postharvest technologies and nutrition awareness creation.

1.2.3 Project components

The project seeks to accomplish its goal and objective through two major components: (1) emergency seed supply of potato and sweetpotato and (2) farmer training and awareness creation.

1.2 Project Intervention Areas

The project is being implemented in two regions: nine zones (three in Amhara, six in SNNPR), 21 woredas (11 in Amhara, 10 in SNNPR; Fig. 1), and 130 kebeles (90 in Amhara, 40 in SNNPR; Table 1). In Amhara during the belg 2019 season, 36 kebeles planted potato and 26 kebeles planted sweetpotato; in meher 2019, 32 kebeles planted sweetpotato. In SNNPR 20 potato kebeles in 5 woredas planted potato in belg 2019 and 20 kebeles in 5 woredas planted sweetpotato in meher 2019.

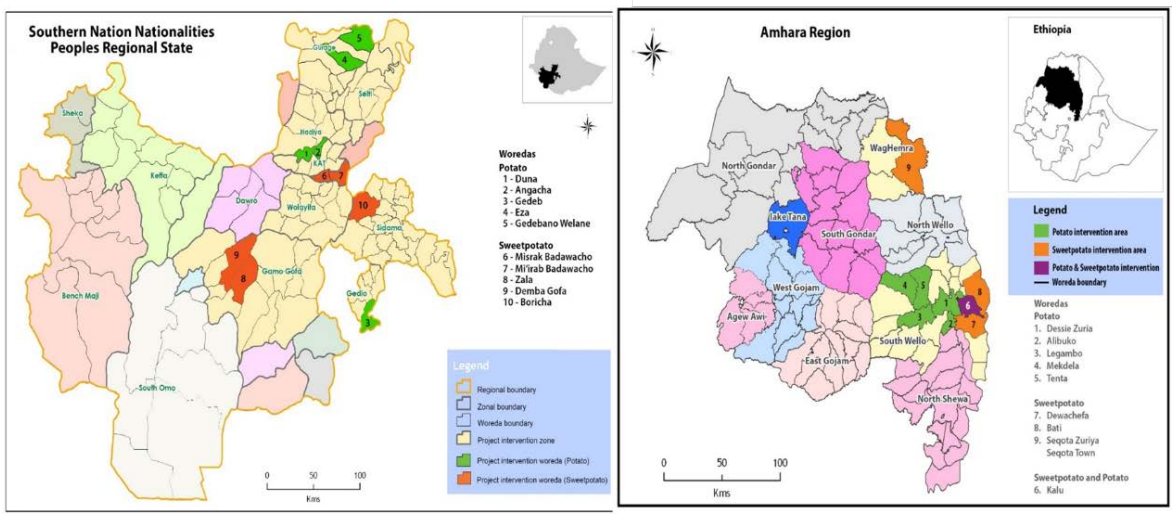

Figure 1. Project intervention woredas in SNNP and Amhara regions.

Table 1. Project intervention areas by region, zone, woreda, and kebele summarized by planting season, 2019

Crop	Zone	Woreda	Kebele	
			Belg 2019	**Meher 2019**
Potato	***Amhara***			
	South Wello	Dessie Zuria	Abasekotu, Atinitmesberia, Keygedel, Kelina, Guguftu, Harawebelo	*Gilbita*, Dajole*, Tebasit*, Gelsha*
		Alibuko	Tosa, Soba, Maibar, Geterfelana	Bele*, Gemanigus*
		Legambo	Chincha, Dereba, Delel, Merkemecho, Dembesh, Tered	Yekosha*, Yechaya*, Buso*, Keymebrat*
		Mekdela	Dedere, Tebi, Yekoso, Adeyguya, Gogos, Kibitya	Deferga*, Genatit*, Besober*, Gonderoch*
		Tenta	Kereygimba, Ababoru, Wertej, Merkena, Kurkura, Sadakurkura, Chihna, Sakunat, Gaya, Yerima	One kebele to be selected
		Kalu	Mukale, Ardebo, Worabaity, Kedida	-
	SNNPR			
	Hadiya	Duna	Huletegna Otoro, Semene Otoro, Ajarana, Kankicho	
	Kenbata Tembaro	Angacha	Bondina, Garba Fandide, Masana, Ambaricho Wasera	
	Gedeo	Gedeb	Geshe, Harmufo, Abel, Dibandibe	
	Gurage	Eza	Sabola, Koter, Gedeb, Shamene	
		Gedebano Gutazer Wolene	Wellega Desse, Kespi maranato, Tilamo, Zere	
Sweetpotato	***Amhara***			
	South Wello	Kalu	Abicho, Arabu, Giraramba, Resa, Wodaje	Addismender, Birkodebele, Miyawa, Tekake, Worabo
	Oromo Bihereseb	Dewachefa	Bedeno, Goda, Gur, Sitir, Teref	Chiret, Gerbi, Harogobensa, Qelo, Serte
		Bati	Bira, Jeldeti, Hato, Urungu	Garero, Gure, Kurkura, Qebele

Crop	Zone	Woreda	Kebele	
			Belg 2019	**Meher 2019**
	Wagihamira	Seqota Zuriya	Abiya, Bara, Eqliwa, Fikreselam, Hamusit, Laysaida, Mygondo, Qeba, Seriel, Weleh	Abiya, Bara, Eqliwa, Fikreselam, Hamusit, Laysaida, Mygondo, Qeba, Seriel, Weleh
		Seqota Town	Andinet, Wukir	
	SNNPR			
	Hadiya	Misirak Badawacho		Walgita, Weira mezoria, Banta wesen, Huletegna chefa
		Mi'irab Badawacho		Jarso mezoria, Wabara, Andegna koto, Sibaya
	Gofa	Zala		Gayila, Indagara, Bayisa, Shecha
		Demba Gofa		Doche dambila, Zenga awande, Lote dodola, Horda
	Sidama	Boricha		Hanja chefa, Konsore chefa, Konsore fulasa, Aldada dela

* Could not plant in meher 2019 due to shortage of seed.

2. ACHIEVEMENTS

The agreement for this project was signed on 20 August 2018 after the main planting season of June/July 2018 had passed. Pre-planting preparations started in September 2018 and planting started in January/ February 2019.

In Amhara and SNNP regions, project intervention kebeles and beneficiary HH were selected together with partners for both potatoes and sweetpotatoes. Seed potato and sweetpotato vines were procured competitively, distributed, and planted in the selected project kebeles. Crop experts, development agents (DAs), and farmers were trained on potato and sweetpotato agronomy and postharvest technologies. Although the sweetpotato crop is still in the field, good achievements were made in food production, with potato and capacity building with both crops at various levels in the two regions.

2.1 Food Production

The project is working to contribute to the improvement of food and nutrition security of about 126,000 people by engaging directly with 21,000 beneficiary farmers (12,000 in Amhara region, 9,000 in SNNPR), where each farmer represents a HH (one HH is assumed to have six members; Gebreselassie et al. 2011). Moreover, the direct beneficiaries are expected to give (mainly by selling) planting materials of these potato and sweetpotato varieties to other farmers through a farmer-to-farmer technology transfer, leading to the production of more nutritious food for people to augment cereal-based diets.

2.1.1 Potato

The project provided quality seed potato of the 'Belete' and 'Gudene' varieties produced by seed producer cooperatives following the quality declared seed (QDS) regulations in both Amhara and SNNP regions. These varieties are highly productive, adaptable, and more tolerant to diseases, especially late blight (LB) (Photo 1). The recipient farmers were very impressed with the uniform and vigorous growth of the two varieties (Photo 2) that positively translated to higher yields than experienced before.

Photo 1. Reaction of the 'Gudene' variety (left) and farmers local variety (right) to LB disease, Duna woreda, Semen Otoro kebele, SNNPR (2019).

Photo 2. Vegetative performance of potato in SNNPR (top) and Amhara (bottom) (2019).

To determine tuber yield (food) and yield per hectare of the two varieties, samples were taken from 25 farmers per kebele across all kebeles. Three plots of 6.25 m^2 per farmer were harvested, weighed, and weight in kilograms converted to yield in metric tons (mt) per hectare.

Amhara. In belg 2019 (January, February, and April), 196 mt of seed potato was distributed to 3,918 beneficiary HH (3,145 males, 773 females) with 50 kg/HH. Eighty people in Mekedela woreda planted together in a consolidated field, showing a big interest they have in potato production. This field and other individual farmers' fields in Tenta woreda were visited by two OFDA-Addis staff on 25 April, who interacted with the farmers (Photo 3). During the discussion, farmers expressed their gratitude to the project. They stated that they want to grow to a seed producer cooperative and asked to be linked with them to market. They asked for support to construct a diffused light store (DLS) to safely keep their seed potatoes. The OFDA and CIP staff advised them to form an association in consultation with the

officials in the woreda and apply to produce QDS of the improved varieties. For market linkage, the staff advised the farmers to work with the leaders in the woreda and start producing quality seed that is disease free and can be certified by the government inspectors. If all this is done, finding a market will not be a problem, since there is high demand for quality seed potato of the improved varieties.

Farmer Zeritu Adem from Tenta woreda, Ababoru kebele, Amhara, said: "I am very happy with the performance of the Belete variety I received. It was not affected by disease at all and matured in four months. I harvested 1.6 mt from the 50 kg I received. I sold 1.2 mt and kept 100 kg as seed for myself. I have three children and this variety will help me feed my children better and buy them scholastic material they need for their schooling. Potato is an important staple for us, so I will increase the production of this variety."

It was agreed that one DLS will be constructed for them for communal use (it was in the original plan) to which they will contribute locally available construction materials and labor. The OFDA staff were impressed by the collaborative spirit of farmers to plant and properly manage such a large field together. OFDA staff also visited individual farmers in Tenta woreda, who were equally grateful for the support and happy with the two new potato varieties. The farmers were generally impressed by the vigor and health of their crops judged by the vegetative growth. They believed the yield would be higher than what would be ordinarily obtained from local varieties.

Photo 3. Two OFDA-Ethiopia staff discussing with farmers (A, B) and a group potato field (C) of 80 farmers in Amhara, 2019.

Another 14 kebeles from five project intervention woredas had planned to plant potato during meher (June/July) 2019; however, a shortage of seed potato in the region caused the planting to be postponed to December 2019. Owing to strict quarantine regulations for movement of seed potato between regions, it was not possible to import from other regions. Replacement kebeles for the belg potato planting were selected together with the zonal and woreda partners, for which seed will be available.

On the basis of the sample data gathered from all the kebeles in the participating woredas, the average tuber yields of 'Gudene' and 'Belete' potato varieties were 35.3 mt/ha and 42.7 mt/ha, respectively (Table 2). The table also shows that the overall yield across the varieties and project intervention woredas was 40.2 mt/ha, which is more than three times the average national potato yield.

Yields varied among the woredas and between potato varieties. 'Belete' had higher yield than 'Gudene'. Yield was also highest in Legambo with 'Belete' and lowest in Albuko woreda with 'Gudene' (Table 2). Potato yields also varied between kebeles within the same woreda (Annex 1). The highest yield of 64.2 mt/ha was obtained in Adeyguya kebele in Mekdela woreda with 'Belete' variety, and the lowest yield of 10.0 mt/ha was obtained in Kereygimba kebele in Tenta woreda with 'Gudene' variety. The differences in yield between woredas and kebeles could be attributed to variations in agronomic practices the farmers applied, quality of seed obtained from different QDS producers, differences in soil fertility, and the potato variety. However, it is important to recognize that the lowest average yield obtained in woredas in these large, farmer-based field demos was significantly higher than the average national yield of 12.3 mt/ha reported by the Central Statistics Agency (CSA 2016). This indicates the yield advantage if farmers were to routinely get quality seed of improved varieties. It also shows that if suitable varieties are grown following recommended agronomic practices, farmers can produce considerable amounts of food in small plots to support their families. Most importantly, the beneficiary farmers appreciated the two new varieties more than the local ones because they mature early, resist disease better, give higher yields, and have a good taste.

A couple (Mr. Jemal Ayalew and Mrs. Fatuma Ebrahim with their two children) from Tenta woreda, Kereygimba kebele, Amhara, said: "We grew the 'Gudene' variety. We observed a very limited late blight attack and removed the diseased parts to contain the disease. We got 35–47 tubers/plant and harvested 1,000 kg from the 50 kg we received and sold 800 kg at BIRR15/kg. This variety tastes much better than 'Belete' and the local variety, our children are happy with it. We will grow more of it and someday, we shall become a seed producer."

Table 2. Total yield and yield per hectare of potato produced in South Wello zone, Amhara region, summarized by woreda, 2019

Variety	Woreda	Area Planted (ha)	Total Yield (mt)	Average Yield (mt/ha)
Gudene	Dessie Zuria	29.9	1,252.20	41.9
	Kalu	10.0	379.2	37.9
	Albuko	10.0	262.1	26.2
	Subtotal	49.9	1,893.5	
	Gudene mean yield			35.3
Belete	Mekdela	14.4	620.2	43.1
	Tenta	18.7	706.1	37.9
	Legambo	15	706.5	47.1
	Subtotal	48.1	2032.8	
	Belete mean yield	16.0	677.6	42.7
	Grand total	97.7	3,926.3	
	Gudene and Belete mean yield			40.2

From the 196 mt of seed planted in the six woredas, 3,926.3 mt of fresh potato were produced, contributing to improved food security of about 23,508 people. If the total produce were sold as seed at 10,000 ETB per mt (average seed price), it would have a gross value of ETB 39,263,000 ($1,308,766.67)

at an exchange rate of $1 = 31 ETB. If all the produce were sold as ware potato at 5,000 ETB per mt (average ware price), the gross value would be ETB 19,631,500. If half were sold as seed and half as ware potato, the gross value would be ETB 29,447250. The generated income could be used to diversify diets and meet other HH needs.

SNNPR. In this region 120 mt of seed potato of the 'Gudene' and 'Belete' varieties were distributed to 3,000 farmers with 40 kg/ farmer and 2,439.2 mt of potato were produced (Table 3). This contributed to improving food security for about 18,000 people. If the total produce were sold as seed potato at 10,000 ETB/mt, it would have a gross value of ETB 24,391,800 or as ware potato at 5,000 ETB/mt, the gross value would be ETB 12,195,900. If half were sold as seed and half as ware potato, the gross value would be ETB 18,293,850, providing an opportunity for the HH to diversify diets and meet other family needs.

The average yields for 'Gudene' and 'Belete' varieties were 41.0 mt/ha and 31.6 mt/ha, respectively (Table 3). These yields were 3 and 2.5 times higher than the national average of 12.3 mt/ha reported by the Central Statistics Authority (CSA 2016). Noteworthy, yields varied among kebeles within a woreda and among woredas. The highest yield of 64.9 mt/ha was obtained in Gedebano Gutazer Wolene woreda, Kespi Maranato kebele, with "Gudene', followed by Wellega Desse kebele in the same woreda, where 'Gudene' yielded 61.7 mt/ha (Annex 2). Potato yield was lowest in Gedeb woreda, where 'Gudene' yielded 29.6 mt/ha (Table 4). In this woreda the lowest yield of 25.5 mt/ha was obtained in Dibandibe kebele (Annex 2). This was probably due to low seed rate as the farmers used wider spacing at planting than what is recommended.

Mr. Bedewe Mohammed and Mrs. Mekia Bedewe, a couple in Gedebano Gutazer Wolene woreda, Kispimaranato kebele, SNNPR said: "The 'Gudene' variety we received is superior to our local variety. It is more disease tolerant, early maturing, and more productive". They applied a fungicide once to control late blight, but the local variety still got attacked but not 'Gudene'. They got 26–36 tubers/plant from 'Gudene' and no more than 18 tubers/plant from the local variety. They said, "Thanks to the government and the project, we have found the right variety to grow and feed our family. We will use our entire harvest to produce seed for us and sell to other farmers to earn money and help other farmers get this productive variety."

Farmer Tsegaye Nimani, with his daughter, from Eja woreda, Shamene kebele, SNNPR, said: "This variety ('Gudene') is superior to our variety in disease resistance, yield, taste, and rotting of tubers that occurs due to much rain. I have never harvested this much potato from such small plot. I got 900 kg from the 40 kg I received. I will multiply this variety for seed. If any seed remains, I will give some to my neighbors to plant, so that they also benefit from this variety".

Table 3. Total and average yield of potato produced by woreda in SNNPR in 2019

Zone	Woreda	Variety	Area Planted (ha)	Total Yield (mt)	Average Yield (mt/ha)
Kembata Tambaro	Angacha	Gudene	6	206.5	34.4
		Belete	6	189.3	31.6
Gedeo	Gedeb	Gudene	12	354.6	29.6
Hadiya	Duna	Gudene	12	478.4	39.9
Gurage	Eza	Gudene	12	510.7	42.6
	Gedebano Gutazer Wolene	Gudene	12	699.6	58.3
Gudene average yield					41.0
Total			**60**	**2,439.2**	

2.1.2 Sweetpotato

Amhara. Distribution and planting of the sweetpotato vine cuttings was conducted in mid-May and July 2019. The sweetpotato varieties distributed were the white-fleshed ('Awassa-83') and the orange-fleshed sweetpotato (OFSP) ('Kulfo'). It was planned to plant 6m vines (3m of 'Awassa-83', 3m of 'Kulfo') with 1,000 cuttings (500/variety) per HH. However, only 4.133m vines were planted, accounting for 68.9% of the target by 4,133 farmers, with 1,292 in May 2019 (belg) and 2,841 farmers in July 2019 (meher).

Several reasons accounted for the deviation from the target, three factors particularly. (1) Lack of QDS vines in the belg planting season (main sweetpotato planting season). A commercial farmer producing OFSP was identified within Amhara region to be the source of planting material, but his farm was destroyed due to civil unrest, and an agreement was then reached to import sweetpotato vine cuttings from SNNPR. A supplier was chosen through a transparent competitive bidding, but his crop was severely damaged by drought, delaying the time for delivery. (2) Some farmers planted their fields to other crops because of delayed planting material delivery, especially in Dewachefa and Seqota Zuria woredas. (3) Farmers, particularly in Seqota Zuria woreda, were not familiar with sweetpotato and were thus not very interested in planting it. However, this woreda is one of the most food insecure and hardest hit by drought. Moreover, it is where the Seqota Declaration to end undernutrition by 2030 was made. For this reason this woreda was chosen for sweetpotato and, specifically, for introduction of OFSP. In this woreda, about 736,000 sweetpotato vine cuttings to be given to 736 farmers got spoiled because of the above-mentioned reasons.

SNNPR. Six million quality declared sweetpotato vine cuttings were distributed to the beneficiary farmers in the project kebeles. Each farmer received 1,000 cuttings (500 cuttings from each of the varieties 'Awassa-83' and 'Kulfo'). Planting was done from mid-July to mid-August 2019. Additionally, 185,000 cuttings (35,000 of 'Awassa-83', 150,000 of 'Kulfo') were distributed to additional farmers in Boricha woreda and farmer training centers in Mirab Badawacho woreda (this was above the target). This was to increase the planting material there, a woreda that is very much challenged by drought.

A more detailed description on performance of sweetpotato in both regions will be submitted in the next report, as most of the crop is still in the field.

2.2 Restoration of the Lost Seed/Planting Material

Restoring planting materials of potato and sweetpotato that farmers lost due to drought with productive and adaptive varieties is one of the reliable ways of producing food for the family to improve food security preparedness and disaster risk reduction.

2.2.1 Potato

Amhara. During the reporting period, from the 196 mt seed potato of 'Gudene' and 'Belete' varieties distributed to 3,918 farmers, 3,926.3 mt of potato was produced as reported before in section 2.1.1. If all the produce were used for seed, it would plant more than 1,963 ha. Since the average yield of the two potato varieties was 39.0 t/ha, it would yield about 76,602 mt—enough to plant more than 38,300 ha in the subsequent season. The remaining 2,082 beneficiary farmers out of the 6,000 targeted will plant in December 2019, which will add to the total seed potato produced. Moreover, to improve the quality of their seed stock, selected seed potato producer cooperatives will receive high-quality basic seed (Generation 3). This will significantly improve the quality of QDS sold to smallholder farmers, leading to increased productivity of potato in the future.

SNNPR. Similarly, in SNNPR from the 120 mt of seed distributed, the farmers produced 2,439.2 mt of potato as elaborated in section 2.1.1. If all were used for seed, it would plant 1219.6 ha of land and potentially yield 44,204 mt at an average yield of the 36.2 mt/ha obtained for the two varieties in the region.

With such high yields in both regions, the beneficiary farmers can be self-sufficient in seed potato quickly and be able to supply seed to fellow farmers in their surroundings. This would enable the latter to produce a lot of food and increase their HH incomes besides being food secure. However, this will require constant monitoring and backstopping to the recipient farmers.

DLS construction. The project planned to construct 40 DLS for 40 selected kebeles (30 in Amhara, 10 in SNNPR) to reduce postharvest losses and attain quality seed with short, green, and multiple sprouts leading to the production of high yield. The kebeles for the construction of the DLS were selected by the respective woredas based on their importance in seed potato production. One DLS is being built for one kebele for communal use and demo purposes. The aim is that after farmers see the advantage of storing seed potato in DLS, they will construct their own DLS either in groups or individually. The project provides materials such as corrugated iron sheets and nails and pays carpenter fees. Beneficiary farmers provide locally available construction materials and labor.

Although in both regions construction of DLS is in progress with some completed and already in use (Photo 4), it is slower than planned because farmers reportedly have difficulties in acquiring timber for the construction. However, they have promised to build the DLS assigned to them within the project's lifespan.

Photo 4. Project supported communal DLS built in Legambo woreda, Amhara (A) and in Eja woreda, SNNPR (B and C).

2.3 Capacity Building for Sustainable Food and Planting Material Production

The traditional farming system that farmers are practicing is, among other factors, contributing highly to low productivity of potato and sweetpotato in Ethiopia. To reverse this course and achieve the project objectives, capacity building at different levels is vital. To improve human capacity, several trainings were provided for crop experts, DAs, and farmers. To reach large numbers of male and female farmers with training on improved practices in a short period, a training of trainers (ToT) approach was adopted. Woreda-level crop experts and DAs were trained by CIP agronomists. These trainees in turn cascaded the training to the beneficiary farmers in their respective woredas and kebeles.

2.3.1 Increased capacity of crop and nutrition experts

Training of crop experts and DAs. ToT courses were given on potato and sweetpotato agronomy, integrated pest management (IPM), postharvest handling, Triple S (sand, storage, and sprouting), and QDS standards and procedures in both Amhara and SNNP regions. Triple S is an innovative technology developed by CIP that ensures a more sustainable supply of planting material in drought-prone areas using roots as the 'seed' source. Undamaged sweetpotato roots are layered with dry, cool sand in a container that is kept in the house until 6–8 weeks prior to the expected onset of rains. The roots are subsequently planted out in a protected garden and watered twice a week. On average, 40 cuttings (three to four nodes per cutting) are produced by each root in the garden. When the soil has sufficient moisture, cuttings are then planted out in the field.

Amhara. Two rounds of ToT training were conducted; one each for belg and meher planting woredas and kebeles. In the first round, 73 participants comprising 11 crop experts (6 from potato-, 5 from sweetpotato-growing woredas) and 62 DAs (36 from potato-, 26 from sweetpotato-growing kebeles) were trained for the belg planting. In the second round, 40 participants comprising 10 crop experts (5 each from potato- and sweetpotato-growing woredas) and 30 DAs (15 each from potato- and sweetpotato-growing kebeles) were trained for the meher planting (Table 4). Moreover, a QDS expert from Dessie Agricultural Inputs Quality Control and Quarantine Authority (AIQC&QA) trained on QDS standards and procedures to be followed for both potato and sweetpotato. The trainings covered both theory and practice. During practical sessions, the trainees got hands-on agronomic practices such as field layout, planting method, depth of planting, planting orientation, and fertilizer application with emphasis on rate and method of application (Photo 5). Among the 113 trained, 89 (78.8%) were males and 24 (21.2%) were females. The number of female trainees was small because there are few female professionals in the field of agriculture at both woreda and kebele levels.

Table 4. Trainees of potato and sweetpotato ToT by zone and woreda disaggregated by sex, Amhara, December 2018 and May 2019

Crop	Zone	Woreda	Dec. 2018/19				May 2019				Total
			Trainees		Sex		Trainees		Sex		
			Woreda Crop Expert	Kebele DA	Male	Female	Woreda Crop Expert	Kebele DA	Male	Female	
Potato	South Wello	Mekdela	1	6	6	1	1	4	2	3	12
		Tenta	1	10	9	2	1	1	2	0	13
		Albuko	1	4	4	1	1	2	2	1	8
		Kalu	1	4	4	1	0	0	0	0	5
		Legambo	1	6	4	3	1	4	5	0	12

Crop	Zone	Woreda	Dec. 2018/19				May 2019				Total
			Trainees		Sex		Trainees		Sex		
			Woreda Crop Expert	Kebele DA	Male	Female	Woreda Crop Expert	Kebele DA	Male	Female	
		Desse Zuria	1	6	6	1	1	4	5	0	12
		Subtotal	6	36	33	9	5	15	16	4	62
Sweetpotato	South Wello	Kalu	1	5	6	0	2	5	5	2	13
	Oromo Behereseb	Bati	1	4	5	0	1	4	3	2	10
		Dewachefa	1	5	3	3	1	5	6	0	12
	Waghimra	Seqota Zuria	1	10	9	2	0	0	0	0	11
		Seqota Town	1	2	2	1	1	1	1	1	5
		Subtotal	5	26	25	6	5	15	15	5	51
Total			**11**	**62**	**58**	**15**	**10**	**30**	**31**	**9**	**113**

Photo 5. ToTs in classroom session (A), group work on developing work plan (B), practical session: training in field (C), potato planting (D), sweetpotato planting (E), and Triple S demo (F), Amhara, 2019.

SNNPR. Eighty-eight participants (43 on potato, 45 on sweetpotato) composed of 10 crop experts and 78 DAs were trained by CIP staff on potato and sweetpotato agronomy, IPM, postharvest handling, and QDS standards and procedures at a ToT level (Table 5). The trainees were 70 (79.6%) males and 18 (20.4%) females. The number of female trainees was low in this region too for the same reason as in Amhara. The training consisted of theory and hands-on practical sessions on the same topics as in Amhara (Photo 6). The knowledge gained at ToT was cascaded to farmers to bring about a sustainable increase in production and productivity of the two crops.

Table 5. Participants of potato and sweetpotato ToT by zone, woreda, and expertise; disaggregated by sex in SNNPR

Crop	Zone	Woreda	February 2019				June 2019				Total
			Trainees		Sex		Trainees		Sex		
			Woreda Crop Experts	Das	Male	Female	Woreda Crop Experts	Das	Male	Female	
Potato	Gurage	Eza	1	8	5	4					9
		Gedebano Gutazer Wolene	1	8	7	2					9
	Kenbata Tembaro	Angacha	1	8	9						9
	Hadiya	Duna	1	8	9						9
	Gedeo	Gedeb	1	6	3	4					7
	Subtotal		5	38	33	10	0	0	0	0	43
Sweetpotato	Sidama	Boricha					1	8	5	4	9
	Gofa	Dembagofa					1	8	8	1	9
		Zala					1	8	8	1	9
	Hadiya	Misrak Badewacho					1	8	8	1	9
		Mirab Badawacho					1	8	8	1	9
	Subtotal		0	0	0	0	5	40	37	8	45
	Total		**5**	**38**	**33**	**10**	**5**	**40**	**37**	**8**	**88**

Note: February 2019 (belg) for potato and June (meher) 2019 for sweetpotato.

Photo 6. ToT in classroom session (A), practical training in the field for potato (B), and sweetpotato (C), SNNPR, February 2019.

Nutrition experts. Communities in Amhara and SNNP regions are among those heavily affected by vitamin A deficiency (VAD), which leads to retarded growth and death, particularly among young children globally. OFSP is rich in vitamin A and can reduce the prevalence of VAD, which largely affects preschool children, pregnant and breast-feeding mothers, and rural poor families. The kebeles that were not previously exposed to OFSP were targeted by this project. It is therefore important that people know how to prepare food with OFSP to combat VAD. Since planting materials were distributed recently in SNNPR, training of ToTs in nutrition was given only in Amhara during the reporting period.

In this region, ToTs in OFSP nutrition was given to 80 participants (16 males, 64 females) composed of zonal- and woreda-level health experts (HEs) and kebele health extension workers (HEWs) in May 2019 (Table 6). A practical session was also organized to enable the trainees to apply the knowledge they gained to prepare their traditional foods, combined with either sweetpotato leaves or roots to improve the nutritional status of their diet (Photo 7).

Table 6. ToT in nutrition by zone and woreda to HEs and HEWs disaggregated by sex, Amhara, Meher 2019

Zone	Woreda	Trainees			Sex		Total
		Zonal	HEs	HEWs	M	F	
South Wello	Kalu (sweetpotato)	4	2	16	6	16	**22**
Oromo Behereseb	Bati	1	1	15	5	11	**16**
	Dewachefa	0	1	18	2	18	**20**
Waghimra	Seqota Zuria	1	1	15	1	15	**16**
	Seqota Town	0	1	4	2	4	**6**
Total		**6**	**6**	**68**	**16**	**64**	**80**

Photo 7. ToT in nutrition: A theory session in classroom (A), food preparation (B and C), and food ready for tasting (D and E).

2.3.2 Increased capacity of farmers

This project works with a given group of beneficiary farmers in kebeles for one season and moves to others. It is therefore indispensable that farmers are properly trained to sustainably use project achievements. During the reporting period, training to farmers was given by the ToT trainees in both regions.

Amhara. The trainees cascaded knowledge in agronomy, IPM, seed management, and postharvest technologies to 3,870 potato farmers (3,040 males, 830 females) and to 1,957 sweetpotato farmers (1,576 males, 381 females) who planted in belg (January–March) 2019 season. In meher season of 2019, additional 3,169 sweetpotato farmers (2,567 males, 602 females) were trained, bringing the total number of trained sweetpotato farmers to 5,126 (Table 7), which is 85.4% of the project target. The remaining farmers in both crops will be trained within the project duration to achieve the project's target of training 6,000 farmers per crop.

Table 7. Farmers trained on potato and sweetpotato production and postharvest technologies by zone and woreda in Amhara region; disaggregated by sex

	Zone	Woreda	No. of Farmers Trained						Grand Total
			Belg 2018/2019			Meher 2019			
			Sex			Sex			
			Male	Female	Total	Male	Female	Total	
Potato	South Wello	Mekdela	417	183	**600**	0	0	**0**	**600**
		Tenta	820	180	**1,000**	0	0	**0**	**1,000**
		Albuko	286	114	**400**	0	0	**0**	**400**
		Kalu	363	37	**400**	0	0	**0**	**400**
		Legambo	482	149	**631**	0	0	**0**	**631**
		Desse Zuria	672	167	**839**	0	0	**0**	**839**
	Subtotal		3,040	830	**3,870**	0	0	**0**	**3,870**
Sweetpotato	South Wello	Kalu	220	24	**244**	375	104	**479**	**723**
	Oromo Behereseb	Bati	344	56	**400**	346	50	**396**	**796**
		Dewachefa	207	35	**242**	1,029	257	**1,286**	**1,528**
	Waghimra	Seqota Zuria	699	221	**920**	817	191	**1,008**	**1,928**
		Seqota Town	106	45	**151**	0	0	**0**	**151**
	Subtotal		1,576	381	**1,957**	2,567	602	**3,169**	**5,126**
	Total		**4,616**	**1,211**	**5,827**	**2,567**	**602**	**3,169**	**8,996**

SNNPR. The trained trainees cascaded the training on potato and sweetpotato production and postharvest technologies, including seed management, IPM, and postharvest handling to 3,000 potato farmers (met target) consisting of 2,161 males (72%) and 839 females (28%) and 6,000 sweetpotato farmers (met target) consisting of 4,716 (78.6 %) males and 1,284 (21.4 %) females (Table 8). Farmers in all the 10 potato and sweetpotato project woredas were trained before the planting materials were distributed to enable the farmers to have enough technical knowledge about planting, seed management, and management of their fields to get higher yields. Potato was planted in belg (Feb.–Mar.) and sweetpotatoes in meher (June–July) 2019.

Table 8. Farmers trained in potato and sweetpotato production and postharvest technologies by zone and woreda in SNNPR, disaggregated by sex in February–March 2019 for potato and June–July 2019 for sweetpotato planting

Crop	Zone	Woreda	February–March 2019		June–July 2019		Total
			Sex				
			Male	Female	Male	Female	
Potato	Hadiya	Duna	350	250			**600**
	Kembata tembaro	Angacha	405	195			**600**
	Gedeo	Gedeb	539	61			**600**
	Gurage	Eza	454	146			**600**
		Gedebano Gutazer Welane	413	187			**600**
		Subtotal	2,161	839			**3,000**
Sweetpotato	Hadiya	Mirab Badewacho			1083	117	**1,200**
		Misrak Badewacho			1006	194	**1,200**
	Sidama	Boricha			807	393	1,200
	Gofa	Dembagofa			1,051	149	1,200
		Zala			769	431	1,200
Subtotal					4,716	1,284	6,000
Total					**6,877**	**2,123**	**9,000**

3. IMPLEMENTATION APPROACH

3.1 Project Implementation Approach and Role of Partners

The project was designed to reach 21,000 direct beneficiary HH in the two regions: 12,000 in Amhara (6,000 each for potato and sweetpotato) and 9,000 in SNNPR (3,000 for potato, 6,000 for sweetpotato). To reach this target, the project partnered with the two regions, with their woreda and kebele staff actively involved in project implementation, from seed distribution to postharvest handling and data collection. These staff were supported by focal persons from regional BoAs and zonal departments of agriculture and CIP staff. The project also partnered with the woreda health staff of both SNNPR and Amhara regions to disseminate nutrition education, with South Agricultural Research Institute, Amhara Regional Agricultural Research Institute, seed producer cooperatives, and with private seed producers in acquiring quality planting material. Since the training aspect was quite involved, a ToT approach was adopted as mentioned earlier. Here, CIP agronomists and BoA experts trained woreda crop experts and DAs, who in turn trained the beneficiary farmers in all intervention kebeles.

3.2 Creating Ownership through Inception Workshops

The project is being implemented with active involvement of the woreda focal persons and DAs in kebeles, who are closely monitored and backed by regional and zonal agriculture officers as well as CIP staff. Therefore, to ensure that the project achieves its objectives, increasing ownership and commitment of regional, zonal, and woreda agriculture and health officers is essential so that they provide constant support and guidance to the farmers throughout the project period. To realize this, inception workshops were conducted for both crops in Amhara region on 14 December 2018 and in SNNPR on 30 January 2019 for potato woredas and on 14 June 2019 for sweetpotato woredas.

Amhara. Thirty-two agriculture officers (8 from three zones, 20 from the 10 intervention woredas, 1 from AIQC&QA, 2 from the Dessie tissue culture lab, and 1 from the NGO Concern International) participated in the inception workshop (Photo 8). Ato Tekeda Tebabal, deputy head of BoA–Amhara and a signatory to the subgrant agreement with CIP, was to officially open and chair the workshop. Delegated by him, Ato Tadesse Girma, head of South Wello Zone Department of Agriculture, officially opened the meeting. He delivered a motivating speech and encouraged all participants to own the project and make the necessary follow-ups to make the project a success to help the poor communities in intervention woredas benefit from it.

CIP staff made presentations on (1) overview of CIP–Ethiopia, (2) introduction of the Gender-Sensitive Emergency project, and (3) draft project work plan. The presentations were very well received by the participants and were followed by lively discussions. Using the CIP-proposed work plan as an input, the participants developed work plans for their woredas during breakout group discussions. Work plans were presented at a plenary for feedback, and final work plans were developed to be reviewed by the woreda crop experts and DAs during the ToT workshop that was planned for the next day to finalize the implementation plans. Representatives strongly agreed to closely follow up on activities in their respective woredas and deliver reports on time.

Photo 8. Participants of the project inception workshop, Amhara region, December 2018.

SNNPR. Twenty-eight officials (4 from BoA-SNNPR, 10 from zonal agricultural departments, 11 from woreda agricultural offices, 1 from South Agricultural Research Institute, 1 from Hawassa Agricultural Research Center, and 1 from Sidama Zone Health office) participated in the potato inception workshop (Photo 9). Another inception workshop was also conducted for sweetpotato woredas, in which 31 officials (28 males, 3 females) composed of woreda agriculture offices and health offices participated (Photo 9). Ato Daniel Damtew, deputy head of SNNPR BoA and a signatory to this project for BoA–SNNPR, officially opened both workshops. In a motivating and encouraging speech, he underscored that the efforts made by CIP to support farmers to recover their lost seed due to drought and improve their food and nutrition security were very significant. He also stressed that the officials from zone and woreda must take full responsibility to ensure that the project is successful and makes a significant impact on the beneficiary farmers in the intervention areas.

In SNNPR similar presentations were made and discussed. Work plans were developed using a similar approach as in Amhara region.

Photo 9. Participants of the project inception workshop at Shashemene in SNNP region, January 2019.

4. CHALLENGES FACED, AND MEASURES TAKEN

Amhara

- This project pays per diems to agriculture staff when they work for the project, without topping up salaries. The proposal did not consider the involvement of the horticulture staff, but woreda crop experts and kebele DAs. The zones where the project is being implemented suggested that the horticulture staff should also be part of the implementing staff, which will mean more costs in the form of per diems. The project has revised this and included these staff, without altering the budget amount allocated to BoA by reducing the time each staff will work for the project. Should there be some shortfall at the end, appropriate allocation will be made with the donor's approval.
- One of the seed producer cooperatives who won the bid supplied 31.5 mt less than the agreed amount. To fill the gap, another QDS producer was identified; however, this increased the cost of the seed. To avoid a similar situation in the future, agreements will be signed between CIP and suppliers in the presence of agriculture officials.
- It was not possible to find sweetpotato cuttings. The commercial farmer who was targeted during proposal development lost his crop due to a sporadic public unrest that ended up destroying his QDS production. Through interregional arrangements, sweetpotato cuttings were to be imported from SNNPR. The supplier in SNNPR also lost his crop due to drought, which caused irrigation water to be insufficient for the commercial farm and the surrounding farmers. This forced us to postpone the planting to the next season.
- Owing to the above arrangement, planting material was transported to the Amhara region for belg 2019 planting. In Seqota Zuria woreda, however, some vine cuttings rotted before planting. This was caused by delayed delivery of vine cuttings due to drought, as mentioned above. When the vines were delivered after a month, some farmers planted their land to other crops, although the arrival time was communicated to them.
- In Seqota Zuria woreda, farmers' acceptance of sweetpotato is very low despite the fact that the woreda is one of the most food and nutrition insecure and hard-hit by drought (and which is why the Seqota Declaration to end undernutrition by 2030 was made). To overcome the bias against sweetpotato and, more importantly, against OFSP, a nutrition training will be given to farmers followed by more awareness creation. When something new is introduced, there are always challenges. We are happy that a good number of farmers and farmer training centers planted OFSP that will serve as a source of planting material going forward.

SNNPR

- During the reporting period, the region got a new BoA-SNNPR deputy head, who recommended that zonal focal persons and more woreda staff must participate in ToT and overall project implementation. This will increase implementation costs as these were not included in the partner budget that was prepared with his predecessor. After a detailed discussion with him, we agreed to accommodate as many staff as possible without increasing the amount of partner budget by reducing the number of days each staff will work for the project and involve more staff. This will not affect the amount and quality of work the partner staff will contribute to the project. It was not possible to reject his recommendation, as this would significantly damage the BoA-SNNPR's partnership with us and hence project's achievements.

- The distribution of sweetpotato vine cuttings was interrupted because of the public unrest that occurred in Sidama zone of SNNPR, where the farm of one of the vine suppliers is located. To avoid wastage of vine cuttings, responsibility of harvesting, bundling, loading, and transporting of vine cuttings was given to the seed supplier and transporters whenever staff were not able to travel because of security and safety reasons. In some cases, we received complaints that the bundles had a smaller number of cuttings than the standard 500/bundle.

General

- The unforeseen sporadic public unrest has continued, resulting in postponing activities due to blocked roads and sometimes for security and safety of the staff and vehicles. This might influence meeting the project objectives in a timely manner and increase implementation costs. We will monitor the situation and report on developments that may directly or indirectly affect the project on a regular basis.
- The construction of DLS has not been progressing as fast as it was planned in several kebeles in both regions. Farmers are finding it difficult to produce locally available construction materials such as timber. To speed up DLS construction, we are in touch with farmers and zonal as well as woreda agriculture officials. Recently, farmers agreed to fulfill their commitments to complete construction of DLS within the duration of the project. We feel that communal responsibilities are not well respected; this needs more awareness creation and continued discussions with officials in the project intervention areas.

5. NEXT STEPS

This project was meant to be implemented over three planting seasons as mentioned earlier. However, since the project agreement was signed late, the first season was missed. More needs to be done during the remaining project period to compensate for the lost season. The major immediate activities will include the following.

Amhara and SNNPR

- Continue backstopping the woreda experts and DAs throughout the project period.
- Monitor potato and sweetpotato fields and take the necessary measures to rectify the shortcomings, if any.
- Give Triple S demos and trainings to farmers at kebele level.
- Cascade the OFSP nutrition training to the farmers with about 80% women.
- Finalize construction of the DLS in selected project kebeles for communal use.
- Train model farmers.
- Distribute promotional, educational, and training materials as well as flyers of various kinds to crop experts, DAs, and farmers in the project intervention woredas and kebeles to improve the capacity and skills of farmers.
- Conduct data gathering, analysis, and reporting.

Amhara

- Supply basic seed potato (Generation 3) to selected seed producer cooperatives to improve the quality of their stock so that smallholder farmers have access to quality seed potato going forward,
- Cascade potato agronomy training to selected belg/irrigation kebeles,
- Distribute quality seed to the beneficiary farmers who have access to irrigation for belg production.

SNNPR

- Give ToT on OFSP nutrition to rural women extension workers, HEs, and HEWs.

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ANNEXES

Annex 1. Average potato yields for the two varieties in project intervention zone, woreda and kebele, Amhara

Woreda	Kebele	Variety	Belg Yield (mt/a)
Tenta	Chihna	Belete	57.7
	Gaya	Belete	46.9
	Sadakurkura	Belete	21.8
	Ababoru	Belete	*
	Merkena	Belete	21.0
	Kurkur	Belete	53.0
	Yerima	Gudene	30.1
	Zakunat	Belete	53.2
	Werteg	Belete	47.2
	Kereygimba	Gudene	10.0
Mekdela	Yekoso	Belete	57.7
	Adeyguya	Belete	46.9
	Tebi	Belete	21.8
	Kibitya	Belete	*
	Gogos	Belete	21.0
	Dedere	Belete	53.0
Albuko	Tosa	Gudene	30.1
	Geterfelana	Gudene	26.4
	Maibar	Gudene	20.3
	Soba	Gudene	28.0
Kalu	Ardebo	Gudene	35.4
	Mukale	Gudene	34.0
	Worabaiti	Gudene	44.4
	Kedida	Gudene	*
Dessiezuria	Harawebelo	Gudene	40.3
	Abasekotu	Gudene	35.5
	Kelina	Gudene	49.8
	Keygedel		**
	Atinitmesberia		**
	Gugugtu		**
Legambo	Dereba	Belete	34.5
	Merkemecha	Belete	56.8
	Tered	Belete	50.0
	Dembesh	Belete	**
	Chincha	Belete	*
	Delel	Belete	*

* Data not filled because of deviation from reality, usually exaggerated. **Data not yet obtained from the DAs.

Annex 2. Average potato yield for the two varieties in project intervention zone, woreda, and kebele, SNNPR

Zone	Woreda	Kebele	Variety	Yield (mt/ha)
Kembata Tembaro	Angacha	Ambaricho Wasera	Belete	32.2
		Gerbafandide	Gudene	34.3
		Mesena	Gudene	35.2
		Bondena	Belete	30.9
			Gudene	33.8
Hadiya	Duna	Ajarana	Gudene	35.4
		Semen otoro	Gudene	40.8
		Kenkicho	Gudene	47.9
		Huletegna Otoro	Gudene	35.4
Gurage	Eza	Gedeb	Gudene	40.7
		Sabola	Gudene	46.8
		Koter	Gudene	37.4
		Shamene	Gudene	45.4
	Gedebano Gutazer Wolene	Zere	Gudene	54.8
		Tilamo	Gudene	51.7
		Kespi Maranato	Gudene	64.9
		Wellega Desse	Gudene	61.7
Gedeo	Gedeb	Harmufo	Gudene	31.3
		Dibandibe	Gudene	25.5
		Abel	Gudene	28.2
		Geshe	Gudene	33.1

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