

**BIOINNOVATE AFRICA PROGRAMME PHASE II
THIRD BI-ANNUAL TECHNICAL PROGRESS REPORT FORM****Reporting Period:** 01/01–30/06/2020**Project Title:** Orange-Fleshed Sweetpotato (OFSP) Puree for Bakery Applications in East Africa for Nutrition, Postharvest Loss Management, and Youth and Women Economic Empowerment**Project Code** (as given by the PMO): BA/C1/2018-16**Project Start Date:** 01/10/2018**Expected Project End Date:** 01/09/2021**Project Leader:**

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1. SUMMARY

This report covers the activities the Orange-Fleshed Sweetpotato (OFSP) Puree for Bakery Applications in East Africa for Nutrition, Postharvest Loss Management, and Youth and Women Economic Empowerment project undertook in the first semi-annual reporting period (January–June 2020).

To increase the utilization of OFSP puree, a refresher training on baking with OFSP puree was held on 5–6 February 2020 at Naivas supermarket, Kitengela branch, in Kajiado county, Kenya. Food safety and hygiene certificates were awarded to participants who had previously attended food safety training in December 2019. EIL also hosted a “Shamba Shape Up” (SSU) filming exercise on 11 May 2020 at its premises in Nairobi. The project has already purchased a complete set of puree-processing equipment to be leased to project partners for processing in Uganda, Ethiopia, and Rwanda. Installation and sustainable operation of the equipment will be reported alongside other activities in the next reporting period. In Uganda a meeting was held with the private sector organization (Biofresh Uganda Ltd) to discuss the draft contract between their company and Makerere University (MU). A pilot study on “consumer and market survey of bakery ingredients, products and fried foods in Kampala” was also completed and the report developed by MU in Uganda. A virtual meeting with the project partners was held on 27 May 2020 to review project progress. The July–December 2020 work plan (narrative) and budgets, the COVID-19 risk monitoring matrix, the gender integration assessment form, and the environmental screening form were all updated.

During this period, some scheduled activities were affected by the global COVID-19 (coronavirus) pandemic as the governments in our implementation countries restricted movement and imposed containment measures.

2. OVERVIEW

The project is promoting the processing of OFSP puree as a healthy ingredient (rich in pro-vitamin A beta-carotene) that can be substituted for up to 40% wheat flour, thereby reducing the amount of sugar and fat used in the baking industry. This is being done through product development and promotion to attract both small and medium enterprises (SMEs) as private processors. The OFSP puree concept has been proven and tested, and bakers and hotels are integrating it into several products (e.g., bread, chapati, buns, *injera*, *ambasha*, and *bombolino*). In Kenya Tuskys and Naivas supermarkets are the main puree off-takers in their bakery section. Rwanda has various private enterprises using OFSP puree in a range of products. Private processors have been recruited to introduce OFSP puree processing and utilization in Uganda and Ethiopia. Through increased utilization of OFSP puree, farmers will benefit by having a ready market for their roots, thus reducing postharvest losses while creating access to healthier products. The project is creating opportunities for youth and women along the OFSP value chain by creating a ready market for roots and employment opportunities at puree processors.

3. DEVELOPMENT OBJECTIVE

The development objectives remain the same as stated in the project proposal. The following objectives guided the implementation of activities during this reporting period, namely to:

- Promote the commercialization of OFSP puree through demand creation, value addition, and processing in baked and fried bakery products
- Improve nutrition and incomes in Ethiopia, Uganda, Rwanda, and Kenya (consortium countries) through a profitable and vibrant OFSP-based food value chain

4. EXPECTED OUTCOMES

The expected outcomes of the project are:

- Bakeries and street vendors in Ethiopia, Rwanda, Uganda, and Tanzania using OFSP puree as a key ingredient in baked and fried products
- Cost of production for baked and fried products reduced, hence increased savings for bakeries and informal sector
- Increased awareness of OFSP puree-based products and their nutritional benefits

None of the project outcomes as stated in the proposal were changed during this reporting period. The following adjustments are suggested by the project leader (PL) to *icip*e for its consideration in the next reporting period. They comprise alternative remedies, activities, and deliverables from the project to add value to the ongoing efforts of our implementing partners and project stakeholders to support the COVID-19 response at country and regionals level and mitigate its impact (Annex 8):

- Equip OFSP puree processors and bakers to become investment ready, including conducting an investment readiness gap analysis.
- Conduct a markets assessment for baked and fried products in Uganda, Kenya, and Rwanda.
- Develop online training materials.
- Develop OFSP shelf-stable products for dissemination to institutions such as schools.

5. ACCOMPLISHED OUTPUTS

Project activities for this reporting phase were rolled out and guided by the outputs developed by project partners during the inception meeting in April 2019. No changes have so far been made to these outputs:

1.1 Recruitment of private sector partner for OFSP puree processing

In Uganda a meeting was held with the private sector organization (Biofresh Uganda Ltd) to discuss the draft contract between their company and MU (Annex 4). In Ethiopia, Hawassa University (HU) issued a letter of notification to Dwame Bakery on selection as a project partner after finalizing the recruiting process. The next step involves developing a memorandum of understanding (MoU) between the two parties.

1.2 Financing and equipment buy-out agreements signed

In Uganda a meeting was held with Biofresh Uganda Ltd.'s company director and one of her staff members to discuss the draft contract between their company and the project (Annex 4).

1.3 Procurement of equipment for OFSP puree processing and storage for private company

The project has already purchased a complete set of OFSP puree-processing equipment to be leased to project partners for processing in Uganda, Ethiopia, and Rwanda. Unfortunately, the coronavirus pandemic has delayed the installation. The equipment was delivered to the respective partner institutions in Ethiopia and Uganda. In Rwanda the equipment awaits customs clearance by authorities. The PL has provided virtual technical support to the private companies in Uganda and Ethiopia. With travel restrictions now lifted, he will be traveling to install the equipment and train others on how to sustainably operate it, as well as other activities. In Ethiopia HU has spoken with the regional Health Bureau of Southern Nations Nationalities Peoples Region to provide direction to the CIP–EU PL on self-quarantine as a special issue for food security and community service case. This will allow the PL to travel (fly) in order to install the OFSP puree-processing equipment.

1.4 Consumer acceptance and willingness to pay studies report for OFSP puree products

This was not done during this reporting period due to the travel restrictions and interaction prohibitions imposed by the government as a response to COVID-19. Upon the resumption of field activities as allowed by CIP and the lifting of the given restrictions, the project will conduct these studies.

1.5 Markets assessment for OFSP-based baked and fried products

A pilot study on “Consumer and market survey of bakery ingredients, products and fried foods in Kampala” was also completed and the report was developed by MU in Uganda (Annex 5).

1.6 Demand creation and messaging for OFSP and farmer mobilization

CIP, through the Roots, Tubers and Banana (RTB) Scaling Fund project, has partnered with the Mediae Company to air 10 episodes on OFSP and puree utilization on Kenya’s most-watched television channel under the “SSU” series, which has 3.5 m viewers. EIL also hosted an SSU filming exercise on 11 May 2020 at its premises in Nairobi. This exercise was planned in collaboration with the Mediae Company, the producer of SSU and CIP under the RTB Puree Scaling Fund and BioInnovate projects. The main objective of the filming exercise was to develop content to broadcast for a wider coverage through Citizen TV for promotion.

1.7 Capacity building and OFSP puree product market penetration OFSP puree

To increase the utilization of OFSP puree, a refresher training on baking with OFSP puree was held on 5–6 February 2020 at Naivas supermarket, Kitengela branch in Kajiado county, Kenya. This was in collaboration with CIP’s RTB Scaling Fund and BioInnovate projects, EIL, Naivas supermarket, and Organi Ltd (Annex 1). The main objective of the exercise was to retrain Naivas bakers on how to utilize puree in baked products (report is included as Annex 1). The training exercise was done concurrently with the food safety training exercise to equip staff with knowledge, information, and skills on food safety and hygiene practices in OFSP puree baked products. Samples from the training were taken to the Food and Nutritional Evaluation Laboratory (FANEL) lab for analysis; results will be shared in the next reporting period. The project intended to carry out more demos during this period, but was prevented from doing so because of the COVID-19 pandemic. The project will organize more technology demo workshops in Kenya, Ethiopia, and Uganda in the next reporting quarter.

The successful baking training and brand activation of Naivas stores by the project and EIL in February has seen bread quality greatly improved. Generally, bread and bun sales have tripled since the exercise was launched, consequently leading to an increase in puree demand in February and March 2020 which we hope shall be sustained. But Naivas needs to consistently apply its OFSP puree formulation.

The process of selecting a consultant firm to offer tailor-made business model and development services to SMEs has been initiated and the terms of reference drafted. Once finalized and all SMEs are identified, the CIP procurement team will conduct a competitive selection of the consulting firm, and the CIP legal team will issue a service agreement to the selected partner.

1.8 Food production and food safety training

Participants who had previously attended food safety training in December 2019 received food safety and hygiene certificates. The certificates were handed out during a Friday morning coffee at the International Livestock Research Institute in Nairobi, witnessed by more than 200 attendees. Twenty-five participants from various sectors, including national and county governments, academia, private sector (food processors), and non-profits, were honored for having passed the

Royal Society for Public Health Level 2 Award in Food Safety and Hygiene exam, administered by the Natural Resources Institute in the United Kingdom (Annex 2).

The project collaborated with FANEL to address food safety challenges. It is paramount to have the food safety training to help equip various sectors with knowledge in addressing the challenges faced in the OFSP value chain.

6. UNACCOMPLISHED OUTPUTS

During this period, scheduled activities were affected by the COVID-19 pandemic as the governments in our implementation countries restricted movement and imposed containment measures. Despite the challenges, however, the project has ensured continuity by carrying out some activities by following the government guidelines on combating and prevention of COVID-19. To ensure that activities continued, the implementing team laid down mitigation measures (e.g., social distancing, frequent handwashing, reduction of contact between persons, and hosting meetings virtually). The partners have continually updated the COVID-19 matrix to document any impact on the progress of activities:

- Puree-processing equipment installed and tested with the partner
- Protocols and guidelines developed for puree use by formal sector and informal sector puree-processing toolkits
- Youth and gender strategy developed for the puree value chains—gender and youth integration in OFSP puree value chain studies
- Training materials for farmers, transporters, factory workers, and chapati makers developed on biosafety issues. This has been changed to focus on consumer experiences along the supply chain of materials needed to make OFSP puree.

7. PLANNED OUTPUTS

7.1 Uganda: MU, EIL, CIP, and private partner

- Hold a site meeting between the project team and the director of Biofresh (U) Ltd to discuss the mini-study on “Consumer and market survey of bakery ingredients, products and fried foods in Kampala” for running the OFSP puree-making business.
- Conduct a full consumer and market survey to inform product development. A participatory approach will be used and will involve the private sector, bakeries, fried-food entrepreneurs, Uganda National Bureau of Standards, and consumers of baked products and fried snacks. The focus will be on OFSP puree and its products.
- Develop communication materials for engaging various OFSP puree customers, bakeries, fried-product makers, and consumers of baked and fried products. The materials will be developed with the private sector partner.

7.2 Ethiopia: HU, EIL, CIP, and private partner

- Sign the MoU between HU and selected private partner.
- Install OFSP puree-processing equipment at the identified private sector partners, Hawassa.
- Train bakers and informal sector on OFSP puree processing and hold technology demos.
- Demonstrate OFSP puree utilization technology to youth and women’s groups. Conduct gender studies for inclusive value chains.

7.3 Rwanda: The Women’s Bakery, EIL, CIP, and private partner

- Install OFSP puree-processing equipment at the identified private sector partners, WDB Rwanda.
- Train bakers and informal sector on OFSP puree processing and hold technology demos.
- Demonstrate OFSP puree utilization technology to youth and women’s groups. Conduct gender studies for inclusive value chains.

7.4 Kenya: Chapati Delight Ltd, EIL, CIP, and private partner

- Install hot-fill equipment, filler, and packaging equipment at Chapatti Delight Ltd.
- Demonstrate OFSP puree utilization technology to youth and women’s groups.
- Train bakers and informal sector on OFSP puree processing and hold technology demos.
- Launch hot-fill OFSP puree product.

8. NEW KNOWLEDGE

Moving to an all-virtual work environment for the project with both office-based and field activities was difficult; however, some project activities were done through online engagement. The project has therefore replanned and rescoped either to address COVID-19 needs or respond to constraints and changes to the project.

9. STAKEHOLDER ENGAGEMENTS

In promoting OFSP puree, the project worked closely with existing CIP projects. In collaboration with CIP’s RTB Scaling Fund project, we were able to interact with a range of stakeholders who were keen to support the scaling-up of OFSP puree for Kenya and Uganda. On the supply side, existing root farmers are already linked to the project. In addition, the team has some linkages with the other project partners working on clean sweetpotato planting materials for potential root supply. More formal engagements may be firmed up after processing equipment has been installed in each of the countries.

MU engaged EIL for guidance during this COVID-19 lockdown, and agreed on the strategy on how to get our project running once things ease up. MU also engaged with the director of Biofresh (U) Ltd to discuss the contract between MU and her company. The discussions of that meeting were shared with the PLs, who were able to find solutions to the issues raised.

HU conducted collaborative planning with the CIP–EU project, which is focused on bringing the OFSP puree-processing equipment from Addis Ababa to Hawassa. The equipment will then be transferred to a private processing company, which will ensure the profitability of OFSP puree through a variety of higher dry matter products.

10. POLICY ISSUES

There have been no significant policy-related challenges during this period.

11. ADDITIONAL INFORMATION

There is no additional information that relates to this reporting period.

12. INSTITUTIONAL CHANGES OR CHANGES TO THE PROJECT TEAM COMPOSITION














CIP made some changes as follows: Ms. Keziah Githae was appointed by Dr. Tawanda Muzhingi to assist in the overall coordination of activities. She will be supported by Dr. Mukani Moyo in ensuring complementarity of activities with the RTB Scaling Fund project.

13. SUMMARIZE UTILIZED FUNDS FOR ALL YOUR PROJECT PARTNERS IN THE REPORTING PERIOD

	Institution/Organization	Funds Received (\$)	Funds Spent (\$)	Balance (\$)
1	Hawassa University, Ethiopia	15,671.00	31,562.44	32,766.56
2	Makerere University	19,868.00	8,109.00	11,759.00
3	Women's Bakery			
4	CIP	94,392.00	21,991.00	72,401.00
5	EIL			

14. RESULTS MONITORING

See Annexes 1–8.

Annex 1	 Naivas refresher training report.docx				
Annex 2	 ILRI FMC hosted by CIP.docx				
Annex 3	 Filming OFSP cooking by Mediae Photos/Video link: https://shambashapeup.com/series/season-10/ep14-orange-fleshed-sweet-potato-electric-pressure-cooker/				
Annex 4	 Meeting with BIOFRESH team  2020 Draft Contract Jar rfm comments.doc				
Annex 5	 Final Quick Survey of Bread and Fried F				
Annex 6	 Virtual meeting notes with Project 1				
Annex 7	 OFSP BioInnovate 2st Project Workplai  BA Environmental Screening Form.doc  BA Covid - 19 Risk Monitoring Update  EIL WORK PLAN-Installation, Tr  BA Gender Integration Assessm				
Annex 8	 L-065-20 1389-ICIP C-19 Preparedness I				