



## Building Nutritious Food Baskets

---

### **Interim Progress Report Year 3, Quarter 3 Consolidated Report November 2017 – July 2018**

**(Including Updated Financial Actuals & Projections)**

*Submitted September 2018*

## Progress Narrative

### General Information

<b>Investment Title:</b>	Building Nutritious Food Baskets: Scaling up Biofortified Crops for Nutrition Security in Nigeria and Tanzania (Reaching Agents of Change Phase 2)		
<b>Grantee/Vendor:</b>	International Potato Center		
<b>Primary Contact:</b>	Simon Heck	<b>Investment Start Date:</b>	November 6, 2015
<b>Feedback Contact<sup>1</sup>:</b>	Hilda Munyua	<b>Investment End Date:</b>	October 31, 2018
<b>Feedback Email<sup>1</sup>:</b>	<a href="mailto:h.munyua@cgiar.org">h.munyua@cgiar.org</a>	<b>Reporting Period Start Date:</b>	November 6, 2017
<b>Program Officer:</b>	Kristen MacNaughtan	<b>Reporting Period End Date:</b>	July 31, 2018
<b>Program Coordinator:</b>	Jeanne Bridgman	<b>Reporting Due Date:</b>	August 31, 2018
<b>Investment Total:</b>	\$5,000,000.00	<b>Opportunity/Contract ID:</b>	OPP1137764
<b>Scheduled Payment Amount: (If applicable)</b>	xxx		

<sup>1</sup> Feedback Contact/Email: The full name and email of the contact whom foundation staff queries for various surveys.

### Submission Information

*By submitting this report, I declare that I am authorized to certify, on behalf of the grantee or vendor identified on page 1, that I have examined the following statements and related attachments, and that to the best of my knowledge, they are true, correct and complete. I hereby also confirm that the grantee or vendor identified on page 1 has complied with all of the terms and conditions of the Grant Agreement or Contract for Services, as applicable, including but not limited to the clauses contained therein regarding Use of Funds, Anti-Terrorism, Sub grants and Subcontracts, and Regulated Activities.*

<b>Date Submitted:</b>	X September 2018	<b>Submitted by Contact Name:</b>	Maria Teresa Bellido
		<b>Submitted by Contact Title:</b>	Grants and Contracts Manager
		<b>Submitted by Contact Email:</b>	<a href="mailto:m.bellido@cgiar.org">m.bellido@cgiar.org</a>
		<b>Submitted by Contact Phone:</b>	+51 998342422

## TABLE OF CONTENTS

<b>Acronyms and Abbreviations</b> .....	<b>3</b>
<b>1. Progress and Results</b> .....	<b>5</b>
EXECUTIVE SUMMARY .....	5
SUMMARY OF KEY ACHIEVEMENTS FOR THE 9 MONTHS .....	5
<b>2. Project Progress and Results</b> .....	<b>22</b>
OBJECTIVE 1: STRENGTHEN THE ENABLING ENVIRONMENT FOR INVESTMENTS IN BIOFORTIFIED CROPS .....	22
OBJECTIVE 2: STRENGTHEN INSTITUTIONAL AND COMMUNITY CAPABILITIES TO PRODUCE AND CONSUME BIOFORTIFIED CROPS .....	40
<b>3. Milestone Deviations and Course Correction</b> .....	<b>61</b>
<b>4. Financial Update</b> .....	<b>65</b>
<b>Appendices</b> .....	<b>72</b>
APPENDIX 1. RESOURCES MOBILIZED (OCT. 2015–JULY 2018) .....	72
APPENDIX 2. RESOURCES IN THE PIPELINE .....	74
APPENDIX 3. COUNTRY ADVOCATES–NIGERIA .....	75
APPENDIX 4. COUNTRY ADVOCATES–TANZANIA .....	76
APPENDIX 5. REGIONAL CHAMPIONS .....	77
APPENDIX 6. INSTITUTIONS WITH CAPACITY TO SCALE-UP BIOFORTIFICATION NIGERIA .....	78
APPENDIX 7. INSTITUTIONS WITH CAPACITY TO SCALE-UP BIOFORTIFICATION TANZANIA .....	78
<b>Annexes</b> .....	<b>79</b>

## ACRONYMS AND ABBREVIATIONS

AfDB	African Development Bank
ADP	Agricultural Development Programme
ARCN	Agricultural Research Council of Nigeria
ARI	Agricultural Research Institute
ASDP II	Agricultural Sector Development Programme Phase II (Tanzania)
AUC	African Union Commission
BecA	Biosciences eastern and central Africa
BMGF	Bill & Melinda Gates Foundation
BNFB	Building Nutritious Food Baskets project
CAADP	Comprehensive Africa Agriculture Development Programme
CIAT	International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Center
CIP	International Potato Center
CMAM	Community Management for Acute Malnutrition
CORAF	Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles
CRS	Catholic Relief Services
CSO	Civil society organization
DFID	Department for International Development
DUS	Distinctiveness, uniformity, and stability
DVMs	Decentralized vine multipliers
FAO	Food and Agriculture Organization of the United Nations
FARA	Forum for Agricultural Research in Africa
FCT	Federal Capital Territory
FMARD	Federal Ministry of Agriculture and Rural Development (Nigeria)
GAIN	Global Alliance for Improved Nutrition
HH	Household(s)
HIB	High-iron and –zinc beans
HLSCN	High-Level Steering Committee for Nutrition
IITA	International Institute of Tropical Agriculture
INGO	International nongovernmental organization
IR	Intermediate result

MoA	Ministry of Agriculture (Tanzania)
MoBNP	Ministry of Budget and National Planning
MEL	Monitoring, evaluation, and learning
MoHCDGEC	Ministry of Health Community Development, Gender Elderly and Children (Tanzania)
MT	Metric tons
NARS	National agricultural research systems
NEPAD	New Partnership for Africa's Development
NGO	Nongovernmental organization
NMNAP	National Multi-Sectoral Nutrition Action Plan (Tanzania)
NPTs	National Performance Trials
OFSP	Orange-fleshed sweetpotato
PABRA	Pan-Africa Bean Research Alliance
PANITA	Partnership for Nutrition in Tanzania
PAP	Pan African Parliament
PMO	Prime Minister's Office (Tanzania)
PVA	Pro-vitamin A
PVS	Participatory varietal selection
RAC	Reaching Agents of Change
RCCG	Redeemed Christian Church of God
RECODA	Research, Community and Organizational Development Associates
SARI	Selian Agricultural Research Institute
SGAs	Sub-grant agreements
SITAN	Situation analysis
SRI	Sugarcane Research Institute-Kibaha
SUGECO	Sokoine University Graduate Entrepreneurs Cooperative
TAAT	Technologies for African Agricultural Transformation
TFNC	Tanzania Food and Nutrition Centre
TOSCI	Tanzania Official Seed Certification Institute
ToT	Training of trainers
VCs	Value chains
WAtiP	Promoting West Africa Trade Integration
WINNN	Women in Nutrition in Northern Nigeria

## 1. PROGRESS AND RESULTS

### Progress Details

#### EXECUTIVE SUMMARY

The Building Nutritious Food Baskets (BNFB) project, led by the International Potato Center (CIP), made substantial progress in the last 9 months (November 2017–July 2018). This report highlights progress made and financial actuals and projections. The report is organized as follows: summary of progress on key project milestones (Section 1, Table 1); narrative of the project progress and results in more detail (Section 2); milestone deviation and course correction (Section 3); and the financial narrative projects with projections for the remaining period (Section 4).

#### SUMMARY OF KEY ACHIEVEMENTS FOR THE 9 MONTHS

*Number of policy documents, strategies, and plans that include/prioritize biofortification within the agricultural and nutrition sectors.*

- National level (Nigeria and Tanzania)
  - The project has achieved seven policy documents, which is 100% of the expected target on this indicator at country level. No additional strategy and policy documents have been influenced in the last 9 months. The project focused on implementation of policies already influenced and that include statements on biofortification. In Nigeria these include (1) the Nigerian Food and Nutrition Policy (2016–2020), (2) the draft Nigerian Food and Nutrition Strategic Plan of Action, (3) the Agricultural Sector Food Security and Nutrition Strategy (2016–2025) of the Federal Ministry of Agriculture and Rural Development (FMARD), and (4) a draft national advocacy policy brief prepared by the Federal Ministry of Budget and National Planning (MoBNP). Some state governments (e.g., Oyo, Rivers and Kano) have also included biofortification in their strategies.
  - In Tanzania the documents include (1) the Ministry of Agriculture, Livestock and Fisheries' Food Security draft strategic plan, (2) the Tanzania Food and Nutrition Centre (TFNC) 5-year strategic plan, and (3) the National Multi-Sectoral Nutrition Action Plan (NMNAP). In addition, BNFB supported the implementation of statements on biofortification in the Agricultural Sector Development Programme Phase II (ADSP II) influenced by the Reaching Agents of Change (RAC) project.
- Regional level
  - At regional level, through the influence of the Forum for Agricultural Research in Africa (FARA), regional champions, and CIP, the project influenced the inclusion of biofortification in two additional policy documents during this reporting period, bringing the total number of policies influenced to four. The project attained 110% against the target of three policy documents on this indicator at regional level. The documents include (1) African Development Bank (AfDB) Multisectoral Nutrition Action Plan (2017–2021); (2) the Conseil Ouest et Centre Africain pour la Recherche et le Développement Agricoles (CORAF) Nutrition Strategy for implementation in Promoting West Africa Trade Integration (WAtIP); (3) the African Union Business Plan to guide Implementation of the Comprehensive Africa Agriculture Development Programme (CAADP)-Malabo Declaration 2017–2021; and (4) the Communique of the Pan African Parliament and New Partnership for Africa's Development (NEPAD) nutrition document and the Resolution of

the Pan African Parliament (PAP)-NEPAD high-level event on nutrition and food systems. Biofortification has also been entrenched in several programs and calls for proposals, including the implementation of the FARA Science Agenda for Agriculture in Africa with a number of strategic plans and country guidelines that have been completed and executed; NEPAD's Flagship Programs for Nutrition and Food Security; the Technology for African Agricultural Transformation (TAAT) program; and the African Union Commission's (AUC) 2018 Call for Research Proposals.

- Resources mobilized in support of biofortification:
  - During this reporting period, \$5,751,301 new investments were recorded in Nigeria and Tanzania, which is 93.6% of the total investment raised to date. In Nigeria \$4,506,801 new investment was realized. This includes \$983,486 by Premier Seed Company Ltd., \$500,000 from the Department for International Development (DFID), \$15,000 by the Catholic Relief Services (CRS), \$878,315 by Mondelēz Foundation, and \$130,000 by the AfDB through the TAAT program. In addition, since 2017 HarvestPlus has continued to work closely with federal and state governments of Nigeria and with international development partners (using their own funds) to leverage \$2m in additional funding (direct and indirect) for biofortification.
  - In Tanzania \$1,244,500 has been mobilized. This includes \$600,000 through the TAAT and Pan-Africa Bean Research Alliance (PABRA) to support high-iron and -zinc beans (HIB) programs in Tanzania; \$130,000 to support orange-fleshed sweetpotato (OFSP); \$0.09m by the Government of Tanzania to purchase the atomic absorption spectrophotometer for TFNC; \$61,000 by Mero Agro Ltd. to multiply pro-vitamin A (PVA) maize seed; \$318,000 by the Sokoine University Graduate Entrepreneurs Cooperative (SUGECO) to support the OFSP value chain; \$18,200 by Perfect Farm Group to produce and process biofortified crops; and \$27,300 by AFCO Co. Ltd. invested in the processing, storage facilities, awareness creation, and marketing activities. Although the Government of Tanzania has invested in biofortification, it has been challenging to establish the exact amount earmarked for biofortification because the investment in biofortification is integrated into the large umbrella of investment for nutrition.
  - Against a target of \$10m, \$6,145,332 (61.5%) has been raised to support initiatives on biofortification in Nigeria and Tanzania—mainly by external governments and development agencies. The funds have been invested by external governments/international development agencies (\$2,553,315, equivalent to 41.5%); nongovernmental organizations (NGOs)/foundations (\$1,527,336, 24.9%); the private sector (\$1,407,986, 22.9%); local/state governments (\$531,695, 8.7%); and national/federal governments (\$125,000, 2%)—see Intermediate Results (IR) 1.3 and Appendix 1. The governments of Nigeria and Tanzania have also invested in biofortification and have supported staff salaries, research activities, land, and other fixed costs for implementation of programs on nutrition such as the FMARD, the MoBNP, the Ministry of Agriculture (MoA), the Ministry of Health, and the Prime Minister's Office (PMO) in Tanzania. However, it has been challenging to isolate the specific amounts for biofortification from the larger national figures. Several seed companies and agro-processors have also invested in biofortification, but are reluctant to disclose how much they have invested because they consider these investments as confidential business information. An additional \$12,946,180 is in the pipeline in Tanzania and Nigeria (see details in Appendix 2).

- Number of agencies/institutions with capacity to design and implement programs in support of biofortification:
  - During this reporting period, BNFB has continued to collaborate with and strengthen the capacity of 15 national and community institutions that are currently implementing/supporting programs and projects on biofortification. This brings the total number of institutions whose capacity has been built to 40, against a target of 20 (200%) (see full list of institutions in Appendices 6 and 7).
  - In Tanzania BNFB strengthened the capacity of SUGECO to offer training of trainers (ToT) courses on agro-processing to youth agripreneurs, and the Partnership for Nutrition in Tanzania (PANITA) to train its members—NGOs, international NGOs (INGOs), civil society organizations (CSOs), and religious organizations—on advocacy and biofortification. BNFB further strengthened the capacity of Arumeru, Moshi, Hai, Mbulu, and Monduli district councils that had expressed interest in integrating HIB in their school-feeding program. The BNFB team supported TFNC in developing guidelines on micronutrients, school-feeding, and in-service training curriculum for community health workers and supported training for policymakers and the technical team to ensure that biofortification is well mainstreamed in the guidelines. BNFB also strengthened the capacity of staff from the Tanzania Agricultural Modernization Association on production and utilization of OFSP to enable them to incorporate OFSP into their projects.
  - In Nigeria the BNFB team held a 3-day learning event to strengthen the skills and capacity of national advocates who represented various government, private sector, and civil society institutions on advocacy, mainstreaming, and raising new investment for biofortification. In collaboration with FMARD, BNFB conducted a project planning, implementation, monitoring and evaluation course focusing on biofortified crops. Since the training, five proposals on biofortification have been developed.
- BNFB has completed the development of three ToT modules: (1) Biofortification: A Sustainable Solution to Hidden Hunger; (2) High-Iron Beans: A Biofortified Solution for Iron Deficiency; and (3) Pro-vitamin A Maize: A Biofortified Solution for Vitamin A Deficiency. The project has continued to use and test these learning resources with partners and end-users. In addition, the project has collaborated with Sugarcane Research Institute (SRI)—Kibaha to develop two simplified training manuals in Swahili for use in Tanzania on (1) Production and Agronomy of OFSP and (2) Value Addition and Utilization of OFSP. During this reporting period, the project has completed the revised drafts of four topics of the ToT manual on Everything You Ever Wanted to Know About Sweetpotato. The full revised toolkit of the ToT manual is being formatted to align with the format of the other learning modules and will be published in September 2018.
- Number of change agents with capacity to scale up biofortified crops:
  - During the reporting period 3,408 (1,749 females) change agents were trained on critical areas<sup>1</sup> along the value chains (VCs) of OFSP, HIB, and PVA maize. These include 473 in Nigeria (182 females), 2,915 in Tanzania (1,556 females), and 20 regional champions (11 females). The total number of change agents trained since project inception now stands at 6,405 (3,190 females) or 64.1% against a target of 10,000. This figure includes 101 national and regional advocates and

---

1. The critical areas/topics are described in detail under IR 2.1. These include different recipes and different ways of preparation of biofortified crops; seed systems; quality control and quality assurance; nutrition education; agripreneurship; concept note / proposal writing; advocacy for policy change and raising new investments; and promotion and sensitization.



champions (27 regional, 42 in Tanzania, and 32 in Nigeria) whose advocacy skills have been strengthened.

- In addition, about 26 schools in Tanzania have been trained on the production of HIB and have started to grow at least a quarter of an acre for seed production.
- Number of national crop varieties in development that include traits on biofortification:
  - During this reporting period, BNFB supported the release of 3 biofortified crops, bringing the total number of varieties of biofortified crops to 7 against a target of 12. The project has achieved 58.4% against this indicator with more varieties expected to be released in 2019.
  - In Tanzania the International Center for Tropical Agriculture (CIAT), in partnership with the Agricultural Research Institute (ARI)–Selian and ARI–Maruku, who have been evaluating two high-iron and -zinc bean varieties (RWV1129 and MAC44) since project inception, officially released Selian 14 (MAC44) and Selian 15 (RWV 1129) in January 2018 (see Annex 1 for details).
  - In Nigeria the National Roots Crops Research Institute in partnership with CIP catalyzed the release of one OFSP variety, UMUSPO4 ‘Solo Gold’ on 26 July 2018. The variety is high in beta-carotene and dry matter, is high yielding, resistant to sweetpotato weevil and virus disease, and is adaptable in multiple locations across the country.
  - Substantial progress has been made on the evaluation of additional 15 promising genotypes of biofortified crops. These include 8 high-iron and -zinc bush bean genotypes in Tanzania; 3 PVA maize hybrids for entry into National Performance Trials (NPTs), distinctiveness, uniformity, and stability (DUS), and farmer assessment in Tanzania; and 4 potential OFSP candidates which underwent the second season for the multilocal trials.
  - In addition, the International Institute for Tropical Agriculture (IITA) evaluated 100 elite PVA maize varieties/genotypes across lowland tropics and mid-altitude areas in Nigeria. These include single cross hybrids, 3-way cross hybrids, top cross hybrids, and open pollinated varieties. These varieties are of superior quality with respect to PVA content and other agronomic traits.
- Number of households (HH) growing biofortified crops:
  - At least 980,865 HH have been recorded as growing biofortified crops in Tanzania and Nigeria. These include 56,695 (24,542 in Tanzania, 32,153 in Nigeria) reached with OFSP (2016–2017), 3,500 reached with small packets of HIB disseminated to farmers in Tanzania, and 14,763 farmers who will benefit from the 150 metric tons (MT) of certified PVA maize produced by seed companies in Nigeria. The figure includes 905,907 HH that HarvestPlus has reached with yellow cassava (using their own funds) in Nigeria (2017 and 2018 data).
  - During the period under review, IITA worked with four seed companies (Premier Seed Co, Maslaha Seed Co, Gold Agric, and Savanah) through contract farmers to produce 150 MT of certified seed from 2.4 t of breeder seed of the two released PVA maize varieties (Sammaz 49’ and Sammaz 52’). The certified seed is ready for the market and will reach at least 14,763 HH.
  - IITA provided the four seed companies with an additional 6 t of PVA maize breeder seed for planting in June 2018. This seed is estimated to cover over 300 ha with a potential of produce up to 600 MT of certified PVA seed in 2019.
  - In Tanzania, 227 kg of various classes of parent seed of Meru VAH517 and Meru VAH519 were dispatched to Meru Agro to assist in basic and certified seed multiplication, and to Tanseed to assist in testing and evaluating PVA maize hybrids. Meru Agro produced 180 kg of single cross

parent of Meru VAH517 at Same in Tanzania for production of certified seed. A further 0.1 ha each of single parents of Meru VAH517 and Meru VAH519 was planted at Harare as back-up for production in Tanzania. Moreover, Meru Agro planted 6.4 ha of certified seed. The crop was planted at Kahe and is at booting and 3-4 leaf stage. The seed will reach approximately 2,600 farming HH. A further 11 ha of PVA maize grain was planted at Mbozi farm, southern Tanzania, and approximately 33 t of grain was harvested in June 2018. The International Maize and Wheat Improvement Center (CIMMYT) produced an extra 800 kg of the Meru VAH517 grain to act as a backup for the processing and marketing initiative.

- During the period under review, SRI-Kibaha reached 8,211 farmers directly with clean OFSP vines; about 469,500 cuttings were disseminated. Additionally, 1,200 primary school children were given vines to take to their parents.
- In Nigeria, in partnership with the Agriculture Development Programme (ADP) officers of Enugu, Kogi, Taraba, and Ogun states, BNFB provided 2,362 farmers directly with OFSP vines and 843 indirectly in Kogi and Enugu states.
- Number of commercial food processors utilizing biofortified crops as a major ingredient:
  - BNFB has continued to strengthen private sector to process and market biofortified food products. Against a target of four processors the project has attained 100% against this indicator. In Tanzania these include (1) AFCO Investment Co. Ltd continued to process and market PVA maize flour in target areas; (2) Mama Organic agroprocessor, which started processing and selling OFSP flour after attending a training course for youth agripreneurs organized by BNFB and SUGECO; and (3) JAGEF Group, processing and commercializing bean flour. The fourth processor (in Nigeria) is Mahauty Health Solutions Company, which processes OFSP infant-weaning products. A few small-scale processors are making OFSP bread, snacks-chin chin, crisps, juice, local beverage (Kunu), and cookies in Abuja, Rivers, and Osun states.
- Surveys Conducted. Two surveys were conducted during the current reporting period, one was an assessment of the BNFB partnership and the other on the utilization of the OFSP investment toolkit:
  - The partnership survey assessed how well the BNFB partnership has worked in terms of the partnership engagement process, implementation process, leadership and management of the partnership, and added value by BNFB. Interim results from 16 respondents out of the 39 invited to participate showed that the BNFB partnership has worked well. The survey highlighted areas for improvement, suggestions on how the partnership can be better enhanced in future, recommendations on how the process of implementation can be improved in the future, and key lessons learned.
  - The survey on the use of the OFSP investment guide toolkit showed that the BNFB advocates and champions have been using the three volumes in their advocacy work and recommended the need to update the investment guide to include content on the other nutritious food baskets crops. Results provided by 28 (with varying numbers of 'n' for different questions') out of the 30 invited respondents recommended that the investment guides be updated (15 strongly agreed, 4 agreed, and 4 neither agreed nor disagreed), and provided guidance on the type of content to be added. Work on updating the toolkit is ongoing.
  - Table A summarizes progress against the set targets for each indicator by reporting period.

**Table A. Summary of progress of the BNFB project across Y1, Y2, and Quarter 3 of Y3 against targets**

Progress Indicator	Target	Period 1 (6/11/15– 30/11/16)	Period 2 (1/12/16– 30/11/17)	Current Reporting Period (6/11/17– 31/07/18)	Total to Date
Number of policies/strategic plans that prioritize biofortification	<b>10</b>	1	8	2	<b>11</b>
Number of new programs on biofortification initiated by change agents in Nigeria and Tanzania	<b>5</b>	0	1	4	<b>5</b>
Amount of resources mobilized in support of biofortification	<b>\$10m</b>	\$335,000	\$59031.1	\$5.6m	<b>\$6.15m</b>
Key elements of the scaling up model document/published	<b>5</b>	0	0	1	<b>1</b>
Number of change agents with capacity to design and implement gender sensitive projects/programs on biofortification	<b>10,000</b>				<b>6,405</b>
Number of agencies/institutions with capacity to design and implement gender sensitive projects/programs on biofortification	<b>20</b>	3	18	19	<b>40</b>
Number of pipeline varieties released	<b>12</b>	3	1	3	<b>7</b>
Households growing/producing biofortified crops	<b>1.175m</b>	0	30,383	950,482	<b>980,865</b>

Table 1 presents the progress on key project milestones.

**Table 1: Key Milestones**

Obj. No.	Milestone/Output	Organization Responsible	Due Date		Current Status	Revised Date		Comments on Progress
			Month	Year		Month	Year	
Objective 1: Strengthen the enabling environment for investments in biofortified crops								
1.1.1.a	Situation analysis (SITAN) and needs assessment conducted in Tanzania, Nigeria, and at regional level	CIP, FARA	July	2017	Completed			The regional- and country-level SITAN studies were completed in July 2017. The reports were shared with partners and key stakeholders and are available online on the BNFB web page: <a href="https://cipotato.org/bnfb/products/">https://cipotato.org/bnfb/products/</a> , the Sweetpotato Knowledge Portal <a href="https://www.sweetpotatoknowledge.org/project/building-nutritious-food-baskets-bnfb/">https://www.sweetpotatoknowledge.org/project/building-nutritious-food-baskets-bnfb/</a> MELSpace and the CGIAR Monitoring and Learning Platform <a href="https://mel.cgiar.org/user/login">https://mel.cgiar.org/user/login</a> the CGSpace repository ( <a href="https://CGSPACE.CGIAR.ORG">HTTPS://CGSPACE.CGIAR.ORG</a> ) and FARA’s web page <a href="http://faraafrica.org/wp-content/uploads/2018/03/Vol-2-No-12_2018_SE.pdf">http://faraafrica.org/wp-content/uploads/2018/03/Vol-2-No-12_2018_SE.pdf</a>
1.1.1.b	Gender-aware, pro-poor, youth- friendly, and environmentally sensitive country advocacy and resource mobilization strategy/plan developed for Tanzania, Nigeria, and at regional level	CIP, FARA	Sept.	2017	Completed	April	2018	The regional-level and the Tanzania Country advocacy strategies were finalized in September 2017. The strategy for Nigeria was revised and completed in April 2018. The strategies are being used to guide advocacy efforts and are available and cross-posted and cross-linked on the partner websites for wider reach. The materials are also available online on MELSpace, the CGIAR MEL platform <a href="https://mel.cgiar.org/user/login">https://mel.cgiar.org/user/login</a> and the CGSpace repository <a href="http://faraafrica.org/wp-content/uploads/2018/03/BNFB-FARA-Regional-Advocacy-Strategy-Final-Jan18.pdf">http://faraafrica.org/wp-content/uploads/2018/03/BNFB-FARA-Regional-Advocacy-Strategy-Final-Jan18.pdf</a> ( <a href="https://cgspace.cgiar.org">https://cgspace.cgiar.org</a> ) and the BNFB webpage ( <a href="https://cipotato.org/bnfb/products/">https://cipotato.org/bnfb/products/</a> ) and the Sweetpotato Knowledge Portal <a href="https://www.sweetpotatoknowledge.org/project/building-nutritious-food-baskets-bnfb/">https://www.sweetpotatoknowledge.org/project/building-nutritious-food-baskets-bnfb/</a> The strategy implementation is progressing well (see sections IR 1.1–IR 1.4 for details on implementation).
1.1.1.c	Capacities of Tanzanian and Nigerian governments to initiate and establish multisectoral policy platforms built	CIP	March	2017	Ongoing			BNFB prioritized supporting and strengthening the capacity of the MoBNP in Nigeria and the PMO in Tanzania to bring together key multisectoral ministries and other relevant institutions together to influence policy change, implement policies and raise new investment. This essentially entailed policy engagement and supporting the translation of policies, strategies, and plans into funded programs. This was done through capacity strengthening and mentorship of national multi-sectoral policy platforms, for sustained scaling up of biofortified crops. BNFB held discussions with Mr. Obey Assery Nkya, Director, Department of Coordination of Government

								<p>Business, at the PMO's on 6 February 2018 in Dodoma, Tanzania. They discussed opportunities and priorities for high-level advocacy and raising new investment for biofortification in Tanzania. As a follow up, BNFB organized a 2-day orientation meeting to improve awareness and understanding of biofortification by officials from the PMO. This helped guide their decision of factoring in biofortification during coordination of policy reviews, resource mobilization for investment and implementation of NMNAP and other policy documents. The meeting was held on 14–15 July 2018 in Morogoro (see Annex 8).</p> <p>Officials from the PMO's office met to draft a policy brief on biofortification. In addition, BNFB hosted a 2-day meeting (11–12 April 2018) with senior government officials drawn from six institutions that are key to implementing the NMNAP. The officials were from the PMO's, MoA, Ministry of Health Community Development, Gender Elderly and Children (MoHCDGEC), and TFNC. The objectives of the meeting were to influence the officials to commit to influence implementation of statements on biofortification in the policies, strategies and plans into programs and budgets and to advocate for resource mobilization by government, private sector, and development partners. The priorities agreed upon are ongoing. They include among others support in the implementation of the NMNAP and facilitate preparation of a shorter version of the plan that will be used to educate policymakers that influence (see Annex 9).</p> <p>In Nigeria BNFB supported the Ministry of Budget and National Planning, which hosts the multisectoral policy platform to host one of its quarterly meetings in Gombe State in October 2017. The team discussed issues of nutrition and gave their various contributions toward the declared state of emergence for malnutrition in Nigeria. BNFB presented a session focused on mainstreaming biofortification into ministries, departments, and agencies in Nigeria. The presentation further highlighted the potentials of biofortified crops in contributing to the fight against malnutrition in Nigeria. With support from BNFB, the MoBNP brought together stakeholders from different line ministries to a multisectoral meeting on food and nutrition in the Northwest of Nigeria. An advocacy visit was made to the honorable commissioner of budget and national planning, and the team advocated for increased allocation of resources to support food and nutrition programs and timely release of the funds. The commissioner showed special interest in the nutritious food basket approach and promised to support and prioritize activities on biofortification. She further showed the team the state's and UNICEF's allocation to</p>
--	--	--	--	--	--	--	--	--

								various food and nutrition programs in Kano State.
1.2.1	Strengthened capacity of country advocates and regional champions to influence key stakeholders and decisionmakers to raise the profile of biofortification in relevant fora and debates	CIP, FARA	Nov.	2016	Completed			<p>During the current reporting period, the BNFB supported initiatives to recruit additional country and regional champions and advocates and strengthen their capacity to advocate for biofortification. BNFB leveraged various opportunities to support and build capacity of the country and regional advocates. At the regional level, FARA and CIP organized and facilitated a learning event aligned with Sub-theme 1: <i>Strengthening the implementation capacity through improved effectiveness and efficiency of the country systems</i> of the 14<sup>th</sup> CAADP-PP meeting in Libreville, Gabon, on 24 April 2018. The aim of this workshop was to strengthen the implementation capacity of regional advocates, champions, youth, and women to advocate for increased investment for biofortified programs. The total number of regional advocates and champions now stands at 27.</p> <p>In Tanzania BNFB supported PANITA to conduct a 2-day workshop (12–13 February 2018) in Mwanza, Tanzania, targeting CSO members who will then become agents of change and advocates of biofortification within the PANITA network of over 300-member organizations. The total number of national advocates and champions in Tanzania now stands at 42.</p> <p>In Nigeria the BNFB team held a 3-day learning event (4–6 April 2018). The workshop strengthened the capacity of 24 national advocates from various government and private sector institutions and equipped them with skills to raise new investment. The content focused on advocacy, mainstreaming, and raising new investment for biofortification in their affiliations for enhanced value chain of the crops. The advocates were provided with advocacy materials (such as banners, factsheets, etc.). Some of them have since engaged with the country coordinator to discuss their work plans and some have led initiatives on sensitization, advocacy at state level, nutrition education, programs and nutrition events within their locations, media awareness and training on production and utilization of biofortified crops. Details about these are provided under section IR 1.2. The total number of national advocates and champions in Nigeria now stands at 32. The updated lists of Country Advocates in found in appendices 3 and 4.</p>
1.3.1	Country advocacy strategy fully implemented in Tanzania and Nigeria	CIP	Annual/continuous	2018	On track			The country advocacy strategies are at advanced levels of implementation in Nigeria and Tanzania and will continue being implemented beyond the project period. During the period under review, the advocacy strategy for Nigeria was revised and disseminated. Focus at country level has been on supporting the

							<p>implementation of selected policies that prioritize biofortification and mobilizing resources. With the support of national advocates and champions, \$5,751,301.1 new investments have been recorded. The total investments that the project has influenced or helped raise to date is \$6,145,332.</p> <p>FMARD carried out sensitization and training on nutrition including biofortification targeting national and state government officials. With support from BNFB and some of the advocates, the Redeemed Christian Church of God (RCCG) carried out a 2-day sensitization event where more than 200 people attended. The church has ongoing programs that include schools, clinics, outreach missions, and an initiative of HIV/AIDS. Participants included policy/decisionmakers, health workers, and youth. They were sensitized on the benefits, production and processing of biofortified crops, and discussed how they can invest in biofortification for human development. They held an exhibition and sensitized members of the church on the benefits of biofortified crop staples for health and wealth.</p> <p>Tables 2 and 3 highlight the key advocacy activities and achievements for policy change and resource mobilization.</p>
1.3.2	Regional advocacy strategy fully implemented, leading to biofortification included in regional agricultural strategies and plans	FARA	Annual/ continuous	2018	On track		<p>The regional advocacy strategy was developed in 2017 under the leadership of FARA. The strategy is being implemented by FARA and other regional organizations with the support of the regional advocacy champions (see Appendix 5 for the updated list of regional advocates). During the period under review, FARA and the champions implemented various activities to create awareness and entrench biofortification in key regional documents and plans. For instance, through the leadership of FARA, BNFB and the champions participated in the PAP and NEPAD nutrition event on 7 March 2018, in South Africa. In the final communique, participants recognized the importance of flagship programs such as Home-Grown School Feeding; food fortification, including biofortification, maternal, and child nutrition; capacity development; and policy and advocacy. The document was endorsed by the other committees during the plenary session of the PAP in May 2018. FARA and CIP organized and facilitated a learning event aligned with Sub-theme 1: <i>Strengthening the implementation capacity though improved effectiveness and efficiency of the country systems</i> of the 14th CAADP-PP meeting in Libreville, Gabon, on 24 April 2018. The aim of this workshop was to strengthen the implementation capacity of regional advocates, champions, youth, and women to advocate for increased investment for biofortified programs. Participants discussed key</p>

							competencies for effective advocacy for policy change and increased investment to support women and youth participation in nutrition-sensitive agricultural VC, especially those involving biofortified crops. About 19 participants attended the event. Youth displayed assorted products of biofortified crops that they were processing in Tanzania, Nigeria, and Ghana and made presentations of their businesses, challenges, and opportunities. Other events that FARA and regional champions attended to promote and advocate for biofortification include the Nutrition and Health (ANH) Academy Week held in Accra on 25–29 June and the High-Level Advocacy for Nutrition in Africa meeting held in Cairo, Egypt, on 11 August 2018.
1.3.3	Advocacy/promotion/behavior change communication materials, supplies and visibility (branding and marketing) and media engagement developed/conducted	CIP, FARA	Sept.	2018	On track		During this reporting period, BNFB disseminated more than 1,000 flyers, brochures, and materials to various partners and stakeholders. (These materials have been uploaded on the Sweetpotato Knowledge Portal and the BNFB webpage for wider access.) In addition to the BNFB webpage, the materials are cross-posted and cross-linked on the partner websites for wider reach. The BNFB materials are also available online on MELSpace, the CGIAR Monitoring Evaluation and Learning platform <a href="https://mel.cgiar.org/user/login">https://mel.cgiar.org/user/login</a> and the CGSpace repository ( <a href="https://cgspace.cgiar.org">https://cgspace.cgiar.org</a> ). BNFB has developed additional advocacy and awareness creation materials. These include a brochure to introduce the newly released HIB in Tanzania (see Annex 1), an infographic on biofortification (Annex 2), a feature story on Dr. Kiddo Mtunda from SRI–Kibaha in commemoration of the International Women’s day on 8 March 2018, and one success story on the impact of the 10-day ToT course on a participant/ advocate who has stepped down the course and advocated for biofortified crops in Nigeria (Annex 3). In addition, BNFB has continued to raise awareness of biofortification through social media. The use of WhatsApp is popular, real-time, and practical. BNFB has had very successful media partnership for advocacy and promotion of biofortified crops. For example, in April 2018, BNFB launched the <i>Biofortification Excellence in Journalism Media Award</i> contest that celebrated and recognized journalists who have been reporting and creating awareness on the benefits of biofortification in Tanzania. The winners were honored at a colorful ceremony during the Eastern Africa Grain Council Agribusiness Expo event at the Selian Agricultural Research Institute (SARI) in Arusha on 20 July 2018. The award ceremony was graced by the MoA Dr. Charles Tizeba, who was the guest of honor. Moreover, BNFB mounted a “nutritious food baskets” booth during the Eastern Africa Grain Council Agribusiness Expo event at SARI in Arusha on 20



								July 2018, which coincided with the media awards event mentioned above. The booth attracted over 300 guests, including the MoA and other policymakers. Details about these are provided under section IR 1.5.
1.4	At least \$10m committed by donors, philanthropists, private sector, or government for biofortification	CIP	Annual/ continuous	2018	Delayed			The project registered good progress in resource mobilization, with a total of \$5,751,301 in new investment recorded compared with \$394,031.1 recorded in the previous period. To date, the project has facilitated the raising of new investment to the tune of \$6,145,332
1.5	Monitoring, evaluation, and learning (MEL) system to support learning and adaptive management by all project partners designed and processes, successes, and lessons learned white papers documented	CIP	June Nov. June	2016 2017 2018	On track			BNFB continued to implement the MEL plan that was finalized in Y1 with revised in Y2. The project continued to support partners in Tanzania and Nigeria to refine and implement effective monitoring and evaluation tools and systems. For instance, during this period, the MEL specialist supported TFNC and PANITA with the development of a monitoring tool (see Annex 4) to collect data on investments by INGO in nutrition (including biofortification). The aim is to improve nutrition governance and information system in Tanzania and enhance availability, analysis, and utilization of information on physical and financial implementation of nutrition activities.
<b>Objective 2: Strengthen institutional and community capabilities to produce and consume biofortified crops</b>								
2.1.1	Targeted and gender-mainstreamed ToT learning modules on priority areas for biofortified crops	CIAT, CIMMYT, IITA, CIP, SRI-Kibaha	June Oct.	2017 2017	On track		2018	The ToT modules were completed, and the project has continued to use and test them. The modules are (1) Introduction to Biofortification; (2) Production and Seed Systems of High-Iron (Biofortified) Beans; and (3) Production and Seed Systems, Agro-processing and Utilization of Pro-vitamin (PVA) maize. The project also finalized the ToT manual on <i>Everything you ever wanted to know about sweetpotato</i> .
2.1.3	A critical mass of service providers trained through the step-down cascading model	CIAT, CIMMYT, IITA, CIP, SRI-Kibaha, FARA	Annually	2018	On track			The momentum for training change agents in critical areas of the biofortified crops VCs picked up during this reporting period. During the reporting period, 3,408 (1,659 males, 1,749 females) change agents were trained on critical areas along the VCs of HIB, PVA maize, and OFSP. These include 473 in Nigeria (291 males, 182 females); 2,915 in Tanzania (1,359 males, 1556 females); and 20 regional champions (9 males, 11 females).  The total number of change agents trained since project inception now stands at 6,405 (3,215 males, 3,190 females). In addition, about 26 schools in Tanzania have started to grow at least a quarter of an acre of HIB for seed production. Details of the trainings held are found under IR2.1 below.
2.2.1	Establish crop-specific strategies/road maps to	CIAT, CIMMYT,	Sept.	2016	On track			To complement the crop-specific VC gaps identified during the SITAN studies in Tanzania and Nigeria, the project conducted two studies on

	accelerate the uptake of biofortified crops	IITA, CIP, SRI-Kibaha						(1) willingness to pay for HIB in 2017 and (2) maize seed demand, PVA maize value chain, and maize grain processing in Tanzania in 2018. The study on beans has been completed, and the findings indicated that about 95% of bean consumers in both rural and urban areas are willing to pay for iron-biofortified bean as a hidden trait. These consumers are willing to pay a higher price than the prevailing bean market price by 25%. The preliminary findings of the study on PVA maize seed demand were presented to BNFB and other national stakeholders on 18 July 2018 in Arusha. The consultants were provided feedback on the results and will be submitting the final report by end of August 2018.
2.2.2	Establish crop-specific champion platforms	CIAT, CIMMYT, IITA, CIP, SRI-Kibaha	Annual/continuous	2018	On track			Six crop-specific platforms meetings were held during the current reporting period to catalyze efforts to scale up the biofortified crops. In Tanzania the project hosted two PVA Maize platform meetings on 20 February 2018 and 19 July 2018, at IITA–Dar es Salaam and Arusha, respectively; 17 participants (5 females, 12 males) and 26 (11 females, 15 males) attended the February and the July meetings, respectively. The second OFSP Support Platform meeting was held on 17 July 2018 in Arusha, Tanzania. Similarly, in Nigeria three platform meetings were held: IITA hosted the second and third PVA Maize platform meeting in December 2017 and July, respectively. The platform comprised representatives of key stakeholders of maize in Nigeria ranging from seed companies, farmers’ associations, marketers, processors, research institutes, and the BNFB maize breeder. The OFSP support platform meeting was held on 6 July 2018. Twenty (10 females, 10 males) key actors along sweetpotato value chain participated. Discussions held during the meeting emphasized sustainability of the platforms beyond BNFB project. CIAT and ARI-Selian organized a 2-day meeting for HIB platform members representing the various bean stakeholders who are engaging in the utilization of the HIB. Forty-six (17females, 29 males) partners participated. The meeting took place in Dodoma on 19–20 July 2018. It was an opportunity to plan the August–December 2018 seed road map and enhance other HIB value chain activities. More details about the deliberation during these platform meetings are found under IR1.4.
2.2.3	National seed agencies, the private sector, and farmer/women/youth groups involved in large-scale production of seeds of the biofortified crops	CIAT, CIMMYT, IITA, CIP, SRI-Kibaha	July Sept. March	2018 2017 2017	On track			BNFB supported various agencies and organizations to evaluate new varieties and in production of seeds of the biofortified crops: <ul style="list-style-type: none"> <li>– Multiplication of breeder seed for HIB varieties (Selian 14 and 15) is underway. In total 10.5 acres was under seed multiplication to meet needs for the period of February and August/September 2018. ARI–Maruku planted 3.5 acres in</li> </ul>

								<p>February/March, SARI planted 3 acres for March/April, and Uyole planted 2 acres for April/May. In addition, 2 acres was under contractual arrangement in April. This was possible through the additional 800 kg of breeder seed imported from Burundi and Uganda to fast track seed production in Tanzania.</p> <ul style="list-style-type: none"> <li>– Working with CIMMYT, Meru Agro Seed Company planted 11 ha of PVA maize grain at Mbozi farm, southern Tanzania, and 33t of grain harvested in June 2018. CIMMYT produced 800kg of the Meru VAH517 grain to act as a backup for the processing and marketing initiative. The seed company further planted 6.4ha of certified seed production at Kahe and the crop is at booting and at 3-4 leaf stage. Certified seed of the other hybrid Meru VAH519 will be planted later in November. Moreover, CIMMYT and Meru Agro worked together to avail 1 ton of seed for demonstrations and small packs for promotional purposes. 5,300 small packs of Meru VAH517 of various sizes (50 g, 100 g, and 200 g) were made and distributed to Member of Parliament (200 g x 200 pcs), farmers via agro-dealers (100 g x 2100) and a further 50 g x 3000 will be distributed in the shows at Mbeya, Morogoro, Arusha, and Mwanza in early August 2018.</li> <li>– In relation to processing biofortified products, AFCO Ltd continued to market and sell PVA maize flour in target areas and opened seven new outlets. The total number of outlets selling PVA flour now stands at 21. A potential to partner with 3 more supermarkets in Dar es Salaam is being explored. During this reporting period, AFCO managed to sell 794 kg of PVA maize flour in Dar es Salaam.</li> </ul> <p>Moreover, CIMMYT allocated testing kit consisting of 18 new hybrids to Aminata for evaluation, 4 test varieties under parent testing and registration to IFFA seeds, 3 varieties under DUS testing, NPTs, and on-farm testing to MAMS, 7 varieties under seasons 1 and 2 testing to Tanseed, and 2 varieties under certified seed production to Meru Agro Tours. CIMMYT further developed sub-grant agreements (SGAs) with seed companies to expedite variety release and promotion of released varieties. Eighteen new hybrids were provided to Aminata for further testing (18 three-way cross hybrids with three sets). Tanseed continued with further testing of the material before the DUS/NPT stage. For MAMS Seed Co, the grant supports three of their materials to enter DUS/NPT and farmer evaluation phase.</p> <ul style="list-style-type: none"> <li>– In relation to processing biofortified products, AFCO Ltd continued to sell PVA maize flour in target areas and opened</li> </ul>
--	--	--	--	--	--	--	--	---

								<p>seven new outlets for selling it. The total number of outlets selling PVA flour now stands at 21. During this reporting period, AFCD managed to sell 794 kg of PVA maize flour in Dar es Salaam.</p> <ul style="list-style-type: none"> <li>– BNFB supported the release of two PVA varieties in Nigeria, Sammaz 49 and Sammaz 52. In 2016/17 IITA distributed 8 MT of breeder/foundation seeds of PVA maize varieties to the seed companies (Premier Seed, Seed Co., Value Seed, and Maslaha Seed), youth groups, and other growers. During this period, the seed companies through their contract farmers produced 150 MT of certified seed) from the breeder/foundation seed. The certified seed is ready for the market. Additionally, during this period, IITA provided four seed companies (Premier Seed Co, Maslaha Seed Co, Gold Agric, and Savanah with 6 t of breeder seed for planting in June and is estimated to cover over 300 ha with a potential of giving close to 600 MT of certified PVA seed in 2019. Now that certified seed is available, a new vibrant network of producers and processors has been formed. The platform formed is also actively engaged on this work of involving the small and medium food processing enterprises. Through this exchange and networking, 60 t of certified seeds have been provided to aggregators/processors for planting, which will then be available to the processors for processing. The estimated amount of grain to be harvested from the 60 t of certified seed provided is estimated at 6,000 t.</li> <li>– BNFB introduced OFSP in four states in Nigeria (Enugu, Ogun, Taraba, and Kogi). The project has continued to support the states to ensure the crop is scaled-up in a sustainable manner. BNFB is therefore partnering with the ADP officers in the four target states to multiply and disseminate OFSP planting materials. Discussions are ongoing with the state governments to allocate funds to support vine multiplication to reach more HH. In this regard, Enugu State empowered three decentralized vine multipliers (DVMs) with low-capacity water pump so that they can increase production of quality vines. Like Tanzania, BNFB plans to conduct a systematic survey in June to document the number of indirect HH growing OFSP in the four states.</li> <li>– SRI-Kibaha continued to support OFSP production and disseminations efforts in Tanzania. During the current reporting period, the organization collaborated with the National Youth Service—Ruvu Station to establish and maintain 1 acre of OFSP multiplication nurseries and distributed OFSP vines to 8,211 HH in Ilindi ward, Bahi District. Moreover, SRI-Kibaha reached 1,200</li> </ul>
--	--	--	--	--	--	--	--	---

								HH in Iramba District with OFSP vines via school children.
2.3.1	Pipeline varieties of biofortified crops officially released	CIAT, CIMMYT, IITA, SRI, CIP	Sept.	2018	On track			<p>The project made noteworthy progress toward expediting and catalyzing the release of at least 12 varieties:</p> <ul style="list-style-type: none"> <li>– Under the leadership of CIAT, 2 high-iron and -zinc bean candidates—MAC 44 (Selian 14) and RWV 1129 (Selian15)—were officially released in January 2018. The release of these varieties has provided opportunities to farmers, policymakers (government and NGOs), and other value chain actors to leverage their efforts in combating micronutrient malnutrition in Tanzania. Additionally, in partnership with ARIs Selian, Maruku, and Uyole, CIAT continued to test eight promising HIB bush genotypes (RWR 2154, KAB 06F2-8-36, KAB06F2-8-35, CODMLB 001, CODMLB 033, NGWANKUNGWANKU, SMC 18, and SMC17). During the reporting period, participatory variety selection (PVS) for the eight bush bean lines took place at ARI-Selian and ARI- Maruku for the second year to generate sufficient data for submission to Tanzania Official Seed Certification Institute (TOSCI) that will conduct NPT/DUS by December 2018.</li> <li>– In this reporting period 100 elite PVA maize varieties/genotypes were evaluated in Nigeria under the leadership of IITA. The varieties include single cross hybrids, 3-way cross hybrids, top cross hybrids, and open pollinated varieties. They were evaluated across lowland tropics and mid-altitude area in Nigeria, the pro-vitamin A rich varieties were evaluated in Jos, Ikenne, Saminaka, Zaria, Bagawda, and Kadawa—locations that represent different agro-ecologies in the major maize-growing areas of Nigeria. The varieties will be proposed for registration and released when the required data have been gathered by 2020. The release will be done by private seed companies. These elite varieties are of better quality in terms of PVA content (i.e., most of the experimental varieties have close to 14 µg/g of carotenoid as compared with the earlier released ones with 10 µg/g).</li> <li>– CIMMYT supported the private sector to provide certified seed of PVA maize for grain production. This included provision of 227 kg early generation seed for hybrid maize production and hybrids to support demonstrations and testing for registration of varieties. The seed was produced at CIMMYT Harare and shipped to partners in Tanzania. During the reporting period, CIMMYT allocated testing kit consisting of 18 new hybrids to Aminata for evaluation, 4 test varieties under parent testing and</li> </ul>

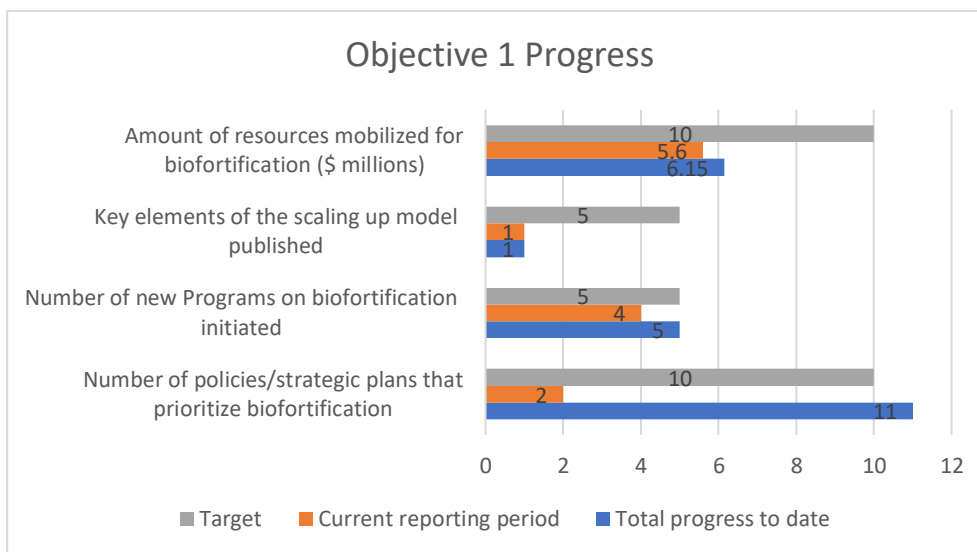
								<p>registration to IFFA seeds, 3 varieties under DUS testing, NPTs, and on-farm testing to MAMS, 7 varieties under seasons 1 and 2 testing to Tanseed, and 2 varieties under certified seed production to Meru Agro Tours. CIMMYT further developed SGAs with seed companies to expedite variety release and promotion of released varieties. Eighteen new hybrids were provided to Aminata for further testing (18 three-way cross hybrids with three sets). Tanseed continued with further testing of the material before the DUS/NPT stage. For MAMS Seed Co, the grant supports three of their materials to enter DUS/NPT and farmer evaluation phase.</p> <ul style="list-style-type: none"> <li>– SRI–Kibaha team supported the evaluation of 11 OFSP varieties: Kiegea, Ex–Luambano, Mataya, Ejumula, Jewel, SPKBH 06/676, Kabode, Naspot 13, Alveria, and Kakamega. Four Mother trials and 26 Baby trials were planted. This is the second season for the multilocal trials. Trial results will contribute to application for the release of three potential candidate of OFSP varieties.</li> <li>– In Nigeria during the period under review, farmer participatory on-farm trials for OFSP conducted in 4 states were harvested and evaluated. BNFB supported the on-farm trials and provided technical support in the compilation and writing of the dossier that was submitted to the National Variety Release Committee for the release of the two candidate varieties. one variety, Solo Gold was accepted for release by the Variety Release Committee on 26 July 2018. The Variety Release Committee recommended that although very promising, the Namanga variety should undergo further one year of multilocation trials before it is due for resubmission.</li> </ul>
--	--	--	--	--	--	--	--	--

## 2. PROJECT PROGRESS AND RESULTS

### OBJECTIVE 1: STRENGTHEN THE ENABLING ENVIRONMENT FOR INVESTMENTS IN BIOFORTIFIED CROPS

Figure 1 shows good progress during the current reporting period compared to previous periods for several indicators aligned to objective 1 on strengthening the enabling environment for investment in biofortified crops against the set targets.

**Figure 1. Current and overall progress on strengthening the enabling environment for investments biofortified crops**



#### ***IR 1.1: Policies, strategies, and plans developed/formulated and implemented that prioritize support to biofortification to accelerate the scaling of biofortified crops within wider agricultural and nutrition/health sectors***

This IR area has been achieved 110%, with statements on biofortification being included in more than 11 key policy documents: four in Nigeria, three in Tanzania, and three at regional level (see Fig. 1). During the period under review, under CIP's leadership the focus at country level was on supporting the implementation of the policies, strategies, and plans that were influenced through advocacy and that capture statements on biofortification. The policy documents influenced in Nigeria include (1) the Nigerian Food and Nutrition Policy (2016–2020), (2) the draft Nigerian Food and Nutrition Strategic Plan of Action, (3) the Agricultural Sector Food Security and Nutrition Strategy (2016–2025) of FMARD, and (4) a draft national advocacy brief prepared by the Federal MoBNP. Some state governments (e.g., Oyo, Rivers, and Kano) have also included biofortification in their strategies.

In Tanzania the documents include (1) the Ministry of Agriculture, Livestock and Fisheries' Food Security draft strategic plan, (2) TFNC's 5-year strategic plan, and (3) the NMNAP. In addition, BNFB supported the implementation of statements on biofortification in the ADSP II, launched on 4 June 2018 in Tanzania. The inclusion of biofortification was influenced by the RAC project. ADSP II aims to bring reforms in small-scale farming, increase productivity, increase revenue for farmers, and increase food security among others.

At regional level, through the influence of FARA, regional champions, and CIP, biofortification has been included in three key policy documents - the (1) AfDB Multisectoral Nutrition Action Plan (2017–2021); (2) the CORAF Nutrition Strategy for implementation of WAtiP; (3) the African Union Business Plan to

guide implementation of the CAADP-Malabo Declaration 2017–2021); and (4) the Communique of the PAP and NEPAD nutrition document and the Resolution of the PAP–NEPAD high level event on nutrition and food systems. The meeting took place on 7 March 2018 in South Africa and was endorsed by the other committees during the plenary session of the PAP in May 2018. Following the success of the BNFB-FARA side event held during the 14th CAADP PP held in Libreville, Gabon, on 24 April 2018, FARA wrote and submitted to the AUC the communique to be appended to the main CAAD-PP report. The declaration on biofortification scaling-up is expected to be submitted for endorsement during the June 2019 summit. Biofortification has also been entrenched in the 2nd African Union Specialized Technical Committee Meeting Agenda and Report; the AUC 2018 Call for Research Proposals; NEPAD’s Flagship Programs for Nutrition and Food Security; the TAAT program and the African Union’s Department of Rural Economy and Agriculture’s Sub-Programme Area 3.4 . Additional advocacy opportunities include influencing the inclusion of biofortification in the African Union Commission strategic plan which expires in 2018. FARA and some regional champions attended the Agriculture, Nutrition and Health Academy Week event in Accra on 25–29 June 2018, and contributed to two sessions: (1) Country Prioritization for Biofortification Crop Interventions; and (2) Learning from Integrating Orange-fleshed Sweetpotato (OFSP) with Nutrition and Health Interventions. They mounted an exhibition and disseminated advocacy materials. There was a lot of interest in the regional situation analysis report and the advocacy strategy. The project will disseminate the documents to more partners and encourage them to continue implementing the advocacy strategy through advocating for policy change and raising new investment for biofortification in their spheres of work.

Table 2 highlights key advocacy activities executed to implement policies at country level and to influence the inclusion of biofortification in policies/strategic documents at regional level.

**Table 2. Key advocacy activities**

Area of Focus	Activity	Rationale/Results/Outcomes
Tanzania	BNFB hosted a Nutrition Education and Training, Policy and Planning and Food Science event on 19–20 April 2018, at SRI–Kibaha. The 2-day advocacy orientation session drew participants from key departments of the TFNC. The objective of the workshop was to increase awareness and understanding amongst TFNC policymakers and professional staff for mainstreaming biofortification in their programs as a complementary cost-effective and sustainable approach in addressing micronutrient malnutrition in the wider community in Tanzania. The team visited the OFSP basic seed multiplication site at SRI–Kibaha. At the end of the session, the TFNC team developed an action plan which earmarked areas for intensification of the nutrition agenda.	The BNFB advocacy strategy outlines that the project will leverage ongoing efforts of TFNC and the Ministry of Education to mainstream biofortification in the nutrition, education, training, and guidelines. This event therefore lays the groundwork for the attainment of this important milestone. The action plan developed during the meeting prioritized (1) mainstreaming of biofortification in training packages and guidelines such as the school-feeding, planning, and budgeting, anemia, and micronutrient guidelines, and (2) increased investments in research to assess the impact of biofortified crops in Tanzania.
	BNFB hosted a 2-day meeting (11–12 April 2018) with senior officials drawn from six government institutions that are key in the implementation of the NMNAP. The officials were from the PMO, MoA, MoHCDGEC, and TFNC. One of the objectives of the meeting was to influence the officials to commit to supporting and transforming of policies, strategies, and plans with statements on biofortification into programs with budgets. The second objective was to advocate for resource mobilization (see Table 3 for details).	The officials committed to support programs on biofortification. The MoHCDGEC promised to include biofortification in the ongoing project write-up being developed for the World Bank support. The PMO’s representatives acknowledged that they would increase support to advance the biofortification agenda in their coordination role of government business. The MoA indicated that they have started allocating resources in support of biofortification.
	BNFB supported a preparatory meeting of the High-Level Steering Committee for Nutrition (HLSCN) of the NMNAP on 3 July 2018. The meeting was chaired by the permanent Secretary	Because of support from BNFB and national advocates, slides on biofortification were included in the presentation made at the high-level policy



Area of Focus	Activity	Rationale/Results/Outcomes
	in the PMO, Dr. Faustine Kamuzora. Presentations focused on (1) ToRs of the HLSCN (Mr. Obey Assery Nkya - PMO); (2) nutrition situation in Tanzania (Dr. Vincent Assey - TFNC); (3) National Food and Nutrition policy (Dr. Vincent Assey); (4) budget planned vs released (Mr. Mwita Waibe – Office of the President); and (5) human resources for nutrition (Mr. Mwita Waibe). The senior country coordinator sensitized participants on the importance of biofortified crops in addressing micronutrient deficiencies and pointed sections that mention biofortification in the NMNAP and the key result areas.	platform. The meeting developed resolutions to the government that recommended the allocation and release of resources for the implementation of NMNAP. There was agreement on the need to scale up food-based approaches including biofortified crops in order to reach the rural poor in Tanzania.
	BNFB organized and facilitated a fruitful orientation seminar for senior officials from the PMO's Department of Coordination of Government Business on 14–15 July 2018 in Morogoro. The seminar enhanced their understanding of biofortification, which is critical to informing decisions when coordinating reviews of government policies, strategies, programs, plans and circulars (see Annex 8).	The knowledge and information imparted on the Government officials has better positioned the officials from the PMO to include biofortification in upcoming relevant policy documents and resource allocation.
Nigeria	With support from BNFB in collaboration with the Civil Society Scaling-Up Nutrition in Nigeria (CS-SUNN), the Ministry of Budget and National Planning brought together stakeholders from 17-line ministries, agencies, and departments (MDAs) to discuss issues on food and nutrition in Nigeria. BNFB used the platform to advocate to all the MDAs that participated and encouraged them to mainstream and invest in biofortification. Knowledge on biofortification was enhanced among the participants and participants were exposed to the magnitude of micronutrient deficiency levels in Kano, the potential of biofortification in addressing the problem and how they could integrate the food-based approach in their programs/projects and mobilize resources to drive biofortification. to the 2nd quarterly National Committee on Food and Nutrition meeting in Kano, North West of Nigeria. An advocacy visit was made to the honorable commissioner of budget and national planning and the team advocated for increased allocation of resources to support food and nutrition programs and timely release of the funds. the commissioner showed special interest in the nutritious food basket approach and promised to support and prioritize activities on biofortification. She further showed the team the state's and UNICEF's allocation to various food and nutrition programs in Kano State.	Support for biofortification and the promise made by the honorable Commissioner of Budget and National Planning has embraced the nutritious food-based approach and this is likely to lead to increased investment to support programs on food-based approaches and biofortification.  Organizations such as UNICEF and others that were earlier on investing in industrial fortification have now embraced biofortification and are allocating resources to support programs and projects on biofortification.
	BNFB participated in the USAID-2nd Quarter Stakeholders' Global Food Security Strategy (GFSS) Workshop. The meeting provided an opportunity for stakeholders (development partners, NGOs, USAID grantees) to network and exchange ideas on opportunities and potential collaborations.	This activity is crosscutting and supports the implementation of (1) Nigerian Food and Nutrition Policy (2016–2020), (2) draft Nigerian Food and Nutrition Strategic Plan of Action, and (3) Agricultural Sector Food Security and Nutrition Strategy (2016–2025). These documents prioritize multisectoral action in the fight against hidden hunger. Resulting from the participation, BNFB was included as a stakeholder in the GFSS where the stakeholders meet quarterly with the USAID mission in Nigeria. The meetings are an opportunity to receive updates on all USAID ongoing projects from various departments/units, funding opportunities with conditions and eligibility, reports on USAID-funded studies, and updates on GFSS country plan.

Area of Focus	Activity	Rationale/Results/Outcomes
	BNFB participated at the Nigeria Country Consultation on Alignment to Government Goals in Agriculture workshop (10–12 April 2018) convened by IITA and the Agricultural Research Council of Nigeria (ARCN) but organized under the auspices of the FMARD. The main objective of the workshop was to deliberate on aligning research to government strategic goals in agriculture. A total of 80 participants representing the stakeholder categories participated in the consultation including government (FMARD)–Planning, PCU), Ogun State Ministry of Agriculture; ARCN, NARIs, universities) institutions; CGIAR centers (IFPRI, ICRISAT, ICARDA, CIP, AfricaRice, IITA); development partners (donors and technical partners); and farmer associations and private sector.	This was a highly participatory and consultative workshop; the level of engagement across partner categories was very high. There were presentations by selected organizations and projects. The country coordinator made a presentation on the BNFB project, as an example of alignment of a multi-partner, multi-crop nutritious food basket initiative. The presentation attracted attention of many development partners to the BNFB unique “food basket approach” and enhanced the project’s visibility. The country coordinator seized the moment to explore opportunities with potential donors, partners, and other investors in biofortification. These included World Food Program, TAAT, World Bank, West Africa Agricultural Productivity Programme, private sector, etc.
	<p>FMARD carried out sensitization and training on nutrition including biofortification targeting national and state Government officials.</p> <p>With support from BNFB and some of the advocates, RCCG carried out a 2-day sensitization event where more than 200 people attended. The church has on-going programs which include schools, clinics, outreach missions and an initiative of HIV/AIDS. Participants included policy/decisionmakers, health workers, and youth. They were sensitized on the benefits, production and processing of biofortified crops and discussed how they can invest in biofortification for human development. They held an exhibition and sensitized members of the church on the benefits of biofortified crop staples for health and wealth.</p>	<p>More government officials at national and state level have been sensitized and trained on biofortification and these will further cascade what they have learned to colleagues and their communities.</p> <p>Leaders at various level, policy makers and members of RCCG have been sensitized on biofortification and it is expected that they will in turn sensitize other people in their respective institutions and families and lead to increased production and consumption of biofortified crops.</p>
	The BNFB team and national advocates advocated to the government of Ogun State through the special adviser to the governor of the state and the program manager of Ogun State ADP. A total of 114 were sensitized on production and processing of OFSP.	Advocacy efforts led to 114 change agents sensitized who will then cascade the knowledge to members of their community and farmers. This will in turn stimulate demand leading to increased production, consumption and processing of biofortified crops.
	BNFB advocated to the king of Kano, Sarikin Kano who is a nutritionist and is supportive of initiatives on nutrition in Kano. Discussion’s with the king’s Personal Assistant highlighted various support programs aligned to the reduction of food and nutrition security. The king gave a piece of land to produce OFSP, which was named after the Sarikin.	The piece of land given by the king of Kano will be used to produce OFSP as well as serve as a demonstration farm for biofortified crops. The adoption of OFSP by the king will influence adoption and acceptance by the citizens of Kano state.
Region	FARA backstpped two regional champions—Kefilwe Moalosi (NEPAD) and Mawuli Sablah (FAO)—to develop and make presentations at the Pan African Parliament and NEPAD nutrition event that took place on 7 March 2018, in South Africa. In the final communique, participants recognized the importance of including biofortification in flagship programs such as Home-Grown School Feeding, Food Fortification, Maternal and Child Nutrition, Capacity Development, and Policy and Advocacy. The documents were endorsed by other Committees during the Plenary Session of the Pan African Parliament in May 2018.	Biofortification was included in flagship programs such as Home-Grown School Feeding, Food Fortification, Maternal and Child Nutrition, Capacity Development, and Policy and Advocacy. The documents are expected to be endorsed during the Plenary Session of the Pan African Parliament in May 2018.
	FARA and CIP organized a side event during the 14th CAADP Partnership Platform meeting held in Gabon on 25–27 April 2018. The side event was titled: <i>Increasing youth and women</i>	In the final communique of the 14th CAADP, African governments were called upon to prioritize nutrition-

Area of Focus	Activity	Rationale/Results/Outcomes
	<i>participation in biofortified crop value chains.</i> BNFB sponsored nine youths (5 females, 4 males), including a journalist to participate in the side event and highlight their work in promoting biofortified foods through agribusiness. The youth were part of the advocacy capacity enhancement training organized on 24 April in Gabon, where regional champions shared experiences and lessons from their advocacy work. BNFB further contributed to the formulation of the final communique that called upon governments to prioritize nutrition-sensitive VCs and create agribusiness opportunities for women and youth.	sensitive VCs and create agribusiness opportunities for women and youth.
	As a follow-up to the resolution of PAP and NEPAD nutrition event that took place on March 7th, 2018 in Midrand, a high-level event on nutrition and food systems was organized in Cairo, Egypt on 11th August 2018. About 40 parliamentarians who are members of Agricultural and Nutrition Committees from various African countries as well as FARA, selected BNFB regional advocates and champions, NEPAD and PAP attended.	The PAP Nutrition and Food Systems Resolutions were presented and global linkages and opportunities for improved nutrition and food systems were enhanced. Awareness of biofortification and its role in combating hidden hunger was raised among the PAP, policymakers, and other stakeholders who were encouraged to mainstream food-based approaches including biofortification in regional agricultural and nutrition policies, strategies and investment plans.
	FARA met with Rehana Valley, the consultant developing the nutrition strategy for CORAF in Accra and briefed her about the BNFB project and what FARA and regional champions are doing in nutrition. They discussed key issues that could be considered in the draft CORAF nutrition strategy. FARA shared the BNFB regional advocacy strategy document with her and other documents showing evidence of biofortification on improving nutritional status.	Biofortification was entrenched in the CORAF Nutrition Strategy for implementation in WATIP
	Since 2016, FARA has been working with regional partners and CGIAR centers to develop the TAAT program, which among other components, gives priority to biofortified foods. In addition, FARA has been working closely with NEPAD with the aim to entrench biofortification in the flagship programs for Nutrition and Food Security. Similar efforts spearheaded by the BNFB regional champion at the African Union were put in place to facilitate the inclusion of biofortification in the AUC 2018 Call for Research Proposals.	Biofortification was entrenched in the NEPAD's flagship programs for Nutrition and Food Security; the TAAT program and the AUC 2018 Call for Research Proposals. The later will ensure more focused attention if given to biofortification by researchers.

### ***IR 1.2: Capacity for advocates and champions built for continued advocacy for biofortification***

Good progress was recorded during the period under review. The advocacy strategies of an additional 50 national and regional advocates and champions were strengthened to ensure better advocacy outcomes when influencing policy change, policy implementation, and resource mobilization. To date the capacity of 101 national and regional advocates has been strengthened. This figure includes 27 regional champions and 74 national advocates (42 in Tanzania, 32 in Nigeria).

In Tanzania BNFB supported PANITA to conduct a 2-day workshop (12–13 Feb. 2018) in Mwanza, Tanzania, targeting CSO members who will then become agents of change and advocates of biofortification within the PANITA network of over 300-member organizations. Participants were selected among CSO members and PANITA secretariat based on geographical representation, nature of CSOs' intervention, and experience on biofortification crops. Twenty-two participants were trained (15 males, 7 females). The individuals trained are spearheading the promotion of increased production and consumption of biofortified crops. The participants were equipped with advocacy skills, tools, and

strategies for promoting biofortified crops in their respective localities. Following the advocacy sessions by the senior country coordinator, several participants were looking for seeds of biofortified crops to make them available to farmers in their localities.

In Nigeria the BNFB team held a 3-day learning event (4–6 April 2018) and trained 24 participants (15 females, 9 males) to strengthen their advocacy skills and capacity of the national advocates to raise new investment for biofortified crops. Participants included representatives from various government and private sector institutions. The training focused on advocacy, mainstreaming, and raising new investment for biofortification in their affiliations for enhanced value chain of the crops. Some of the advocates trained have started applying the knowledge and skills acquired. For example, one of the participants, the State Nutrition Officer for Federal Capital Territory (FCT), Abuja, advocated for support for biofortification at the Community Management for Acute Malnutrition (CMAM) event in Kwali area council in FCT. Her advocacy efforts at the CMAM center attracted over 100 participants (including dignitaries) from public and private sectors (see IR 2.3 for details).

At regional level, FARA and CIP organized and facilitated a learning event aligned with Sub-theme 1: *Strengthening the implementation capacity through improved effectiveness and efficiency of the country systems* of the 14th CAADP-PP meeting in Libreville, Gabon on 24 April 2018. The aim of this workshop was to strengthen the implementation capacity of regional advocates, champions, youth, and women to advocate for increased investment for biofortified programs. Participants attended the learning event and discussed key competencies for effective advocacy for policy change and increased investment to support women and youth participation in nutrition-sensitive agricultural VCs, especially those involving biofortified crops. The youth displayed assorted products of biofortified crops that they were processing in Tanzania, Nigeria, and Ghana, and made presentations of their businesses, challenges, and opportunities. Consequently, the youth have since established a dynamic WhatsApp group where they share information, ideas and opportunities and they continue to advocate for biofortification at regional and national events that they attend.

I have just arrived safely home from the High-Level Nutrition event in Cairo, tired but fulfilled. For what it's worth, from what I have experienced, this is not the time for the [BNFB] project to come to an end. I see its potential to pull in the rest of the nutrition body by leveraging the ongoing reforms and restructuring at the AU.... IFAD and AfDP have mainstreamed biofortification in their lending policies...

— Julia Tagwireyi, BNFB Regional Champion, 13<sup>th</sup> August 2018

FARA supported a BNFB champion, Ms. Kefilwe Moalosi of AU-NEPAD, in developing a PowerPoint presentation, pull-up banner, and flyers for presentation and exhibition at the ECOWAS nutrition meeting held on 24–27 October 2017, in Guinea Bissau. Awareness on biofortification was raised among nutritionists and health professionals at the meeting.

### ***IR 1.3: Increased investments by the public, private, and NGOs sectors in support of biofortification***

During this reporting period, \$5,751,301 in new investments was recorded in Nigeria and Tanzania, which is 93.6% of the total investment raised to date (see Fig. 1 above). In Nigeria \$4,506,801 new investment was realized. These include \$500,000 from DFID, \$15,000 by CRS, \$878,315 by Mondelez Foundation, \$983,486.1 by Premier Seed Company Ltd, and \$130,000 by the AfDB through the TAAT program. In addition, HarvestPlus has continued to work closely with federal and state governments of Nigeria and with international development partners (using their own funds) to leverage \$2m in additional funding (direct and indirect) for biofortification.

In Tanzania \$1,244,500 has been mobilized. This includes \$600,000 through TAAT and PABRA to support HIB programs in Tanzania, \$130,000 to support OFSP, \$0.09m by the Government of Tanzania to purchase an atomic absorption spectrophotometer for TFNC, \$27,300 by AFCCO Ltd, and \$61,000 by Mero Agro Ltd to multiply PVA maize seed.

Table B shows that to date, \$6,145,332 has been raised, which is 61.5% of the target \$10,000,000 for this indicator to support initiatives on biofortification in Nigeria and Tanzania (see Fig. 1 above). Most of these funds were from external governments and development agencies, NGOs, and foundations. When disaggregated by type of investor, these funds have been invested by external governments/international development agencies (\$2,553,315, equivalent to 41.5%); NGOs/foundations (\$1,527,336, 24.9%); the private sector (\$1,407,986, 22.9%); local/ state governments (\$531,695, 8.7%); and national/federal governments (\$125,000, 2%) (Appendix 1). An additional \$12,946,180 is in the pipeline in Tanzania and Nigeria (Appendix 2).

**Table B. Breakdown of investment for biofortified programs and projects by type of invest**

Type of Donor	Total (\$)	Total (%)
National governments	125,000.00	2.0
Local governments	531,695.00	8.7
External governments/international development agencies	2,553,315.00	41.5
NGO/foundations	1,527,336.10	24.9
Private sector	1,407,986.00	22.9
<b>Grand total</b>	<b>6,145,332.10</b>	<b>100</b>

However, it is noteworthy that although the governments of Tanzania and Nigeria have invested in biofortification, it has been challenging to establish the exact amount earmarked for biofortification because this investment is integrated into the large umbrella of investment for nutrition. The governments of the two countries have invested in biofortification and have supported staff salaries, research activities, land, and other fixed costs to support implementation of programs on nutrition such as the FMARD and the MoBNP in Nigeria and the MoA, Ministry of Health, and the PMO in Tanzania. However, it has been challenging to isolate the specific amounts for biofortification from the larger national figures. Several seed companies and agro-processors have also invested in biofortification but are reluctant to disclose how much they have invested because they consider these investments as confidential business information. For example, the ASDP II has committed resources to the tune of \$96m for a 5-year period within sub-components 2.3 and 2.5, which include biofortification. Subcomponent 2.3: Agricultural Research for Development is allocated \$67m, and Subcomponent 2.5: Food and nutrition security planned investment is allocated \$29m.

Table 3 shows the key advocacy activities implemented and results in Tanzania and Nigeria on raising new investments in support of biofortification.

**Table 3. Activities carried out under raising new investments**

Country	Activity	Rationale/Results/Outcomes
Tanzania	As already indicated in Table 2, BNFB hosted a 2-day meeting (11–12 April 2018) involving senior officials drawn from the PMO, MoA, MoHCDGEC, and TFNC. One of the objectives of this meeting was to sensitize participants on the need to leverage opportunities within their dockets to allocate resources to support biofortification programs. The following key points were discussed and agreed:	The Ministry of Health Community Development Gender Elderly and Children promised to include biofortification in the ongoing project write-up under the World Bank support. The prime minister's representatives acknowledged increased support on biofortification agenda in their



Country	Activity	Rationale/Results/Outcomes
	<ul style="list-style-type: none"> <li>There are several interventions on nutrition that include promotion of biofortification and biofortified crops whose resources have not been captured.</li> <li>There is need to strengthen efforts to capture resources that have been invested in biofortification from public and private sector in the country.</li> <li>Documentation of the anticipated resources from ongoing project write-ups and continued advocacy to allocate part of the resources allocated for nutrition to advance biofortification.</li> <li>Work closely with the president's office—regional administration and local government to capture and document resources which were committed to biofortification in 2017/2018 financial year and for the next budget of 2018/2019.</li> </ul>	<p>coordinating role of government business. The MoA has started allocating resources in support of biofortification, allocating Tanzania Shillings 100m (\$45,000) to support biofortification in 2018/2019. Documentation will be available in June after the approval of government budget takes effect. Confirmation is awaited on resources mobilized through the Eastern and Central Africa Agriculture Transformation program.</p>
	<p>The BNFB team facilitated and supported various activities in Tanzania to raise new investments for biofortification as outlined below:</p> <ul style="list-style-type: none"> <li>The team supported AFCCO Ltd to write a proposal on Accelerating Women Entrepreneurs in response to a call from USAID. AFCCO stands a high chance of success due to the efforts of the company to avail biofortified value-added products on the Tanzanian retail market.</li> <li>The team contributed to the finalization of the work plan, budget, and scoping of local partners to implement the OFSP component of TAAT project. The component/intervention, which will be implemented by CIP and local private sector will among others, facilitate and build capacity for communities to self-organize for large-scale production of OFSP. It is anticipated that these interventions will help the project reach at least 15,000 producers through 7 farmers' cooperatives, who will be linked to the agro-processors or fresh root markets</li> </ul>	<p>From these activities, the following results were realized:</p> <ul style="list-style-type: none"> <li>AFCCO Ltd submitted a \$50,000 application in response to the USAID call on Accelerating Women Entrepreneurs.</li> <li>The TAAT OFSP project was funded (\$130,000) for the first year of implementation. Subsequent funding is contingent upon the performance during the first year of implementation.</li> </ul>
	<p>The BNFB team met with the Director of Government Coordination in the PMO in Dar-es-Salaam on 19th May 2018. They provided feedback on the advocacy meeting with Parliamentarians and discussed various issues pertaining to raising and capturing new investment in support of biofortification from Government and other investors</p>	<p>Following this meeting, the BNFB Senior Country Coordinator was invited to two meeting (1) National Multisectoral Nutrition Technical Working Group (MNTWG) meeting organized by the PMO; and (2) Urban Nutrition Consultative meetings organized by the Global Alliance for Improved Nutrition (GAIN) - held on the morning and afternoon of 24th May 2018. Furthermore, Mr. Obey, facilitated the BNFB team to meet with Mr. Enock Musinguzi, Country Director of GAIN – Tanzania on 24th May 2018. The team discussed the possibility of developing a joint proposal between the Government, GAIN, and BNFB. The team agreed that a meeting of key stakeholders be held to discuss the project idea. The GAIN Country Director offered to convene the meeting. The partnership with GAIN and other stakeholders is likely to raise new investment and help expand the BNFB partnership, which will strengthen the on-going efforts on addressing micronutrient malnutrition through a holistic approach and open opportunities for commercializing biofortified crops.</p>
Nigeria	<p>BNFB revised the proposal developed in partnership with the Save the Children entitled “Nutrition Sensitive Kitchen Garden Interventions with OFSP and Other Vegetables—A Sustainability Strategy of the Women in Nutrition in Northern Nigeria (WINNN) Program.”</p>	<p>After much negotiations, DFID funded the WINNN project; however, the budget for CIP was reduced to \$500,000. Implementation of the project has commenced. Demonstration sites have been</p>

Country	Activity	Rationale/Results/Outcomes
		established and promotion and nutrition education are on-going.
	The country coordinator through CIP joined other country offices to respond to the earlier call for TAAT, also referred to as Feed Africa Strategy, which is funded by the AfDB. The TAAT sub-project in Tanzania aims to scale up proven technologies (OFSP) across the country, aiming to boost productivity and promote self-reliance.	The TAAT OFSP project was funded (\$130,000) for the first year of implementation. Subsequent funding for 2 more years is contingent upon the performance during the first year of implementation.
	The BNFB Nigeria team contacted CRS to discuss the advance investment in biofortification under CRS's Sustainable Mechanisms for Improving Livelihoods and Household Empowerment (SMILE) program. Hitherto, this program has been disseminating OFSP and yellow cassava planting materials in four states (Benue, Kogi, FCT/ Nasarawa, and Edo) for 2 consecutive years.	CRS-SMILE invested \$15, 000 to develop a community training manual on processing of OFSP and yellow cassava products. These materials will be useful for posterity.
	Following up on the presentation made by the senior country coordinator during the 15th anniversary of Global Alliance for Improved Nutrition (GAIN) in Nigeria, the BNFB team, in partnership with GAIN and FMARD, prepared and presented an unsolicited concept note on "Market Place for Biofortification in Nigeria," to the EU delegations in Abuja. The project focuses on scaling up production and commercialization of PVA maize and OFSP in North-East Nigeria for 5 years, with a proposed budget of € 10m.	The EU expressed interest in the concept. The head of the team expressed the importance of community participation in project delivery. The EU team was quite receptive and will continue to engage the EU delegation. The latter has promised to get after internal consultation, and to share a related call that will be sent out soon.
	In collaboration with BNFB, Redeemed Aids Programme (RAPAC) held a 2-day event on biofortification where the Senior Country Coordinator met with policy/decision makers to discuss how they can invest in biofortification for human development. They held an exhibition and sensitized members of the church on the benefits of biofortified crop staples for health and wealth. More than 200 participants representing different institutions, health workers and youth attended the event and were sensitized on the benefits, production and processing of biofortified crops.	The Redeemed Christian Church of God (RCCG) – one of the most notable religious organizations in Nigeria has mainstreamed biofortification into its programs. The church is a strong voice and influence on communities and will help demystify myths around biofortification and thereby promote cultural acceptance and consumption of biofortified foods. The Redeemed Aids Programme (RCCG/RAPAC) is one of the on-going programs which include schools, clinics, outreach missions and an initiative of HIV/AIDS. The program is actively involved in care, support and improving livelihoods of people living with HIV/AIDS.
	Following the support and participation at the second multi sectoral meeting of the Ministry of Budget and National Planning on food and nutrition in the North West of Nigeria, an advocacy visit was made to the honorable Commissioner of Budget and National Planning to advocate for increased allocation of funds to food and nutrition programs and timely release of the funds.	The Commissioner showed special interest in the nutritious food basket approach and promised to support and prioritize activities on biofortification.
	The Senior Country Coordinator visited the king of Kano, Sarikin Kano who is a nutritionist and is supportive of initiatives on nutrition in Kano. Discussion's with the king's Personal Assistant highlighted various support programs aligned to the reduction of food and nutrition security.	The king has provided a piece of land to produce OFSP, which was named after the Sarikin. This will enhance adoption and acceptance of OFSP in Kano state Kings in Nigeria are key gatekeepers and command a strong voice and influence on communities. The king's acceptance and adoption of biofortified crops will result in increased investment for biofortified crops in Kano state and cultural acceptance, production and consumption of biofortified foods.
	The Nigerian team visited the University College Hospital (UCH) in Ibadan, Oyo-state to advocate for inclusion of biofortified foods in hospital menu.	Inclusion of biofortified food was successfully introduced in the menu of the largest hospital in Nigeria; University College Hospital (UCH) in Ibadan, Oyo-state through BNFB advocacy. The hospital started feeding geriatric patients on OFSP meals on

Country	Activity	Rationale/Results/Outcomes
		a pilot basis with plans of reaching other units and introducing more biofortified crops later.
	In collaboration with Civil Society Scaling-Up Nutrition in Nigeria (CS-SUNN), BNFB supported the 2nd quarterly NCFN (National Committee on Food & Nutrition) meeting in Kano, North West of Nigeria. The meeting attracted the attention of representatives from 17 relevant ministries, agencies and departments (MDAs) to discuss issues and way forward on food and nutrition in Nigeria. BNFB also used the medium to extend its advocacy to all the MDAs that participated, employing them to mainstream and invest in biofortification.	Knowledge on biofortification was enhanced among the participants and exposure to what they have at stake in biofortification with skills on how to mainstream biofortification in their programs/projects and mobilize resources to drive biofortification in their affiliations.

#### ***IR 1.4: Technical and policy platforms actively promoting evidence-based support for biofortification***

As highlighted in Table 1 Milestone 2.2.2, six crop-specific platform meetings were held during the current reporting period. The project continued to strengthen and provide support to the national multisectoral policy platforms in Tanzania and Nigeria as detailed under IR 1.3 above. Below we describe the events that took place.

##### ***1. PVA maize platform meetings held in Tanzania and Nigeria***

The purpose of PVA maize platforms is to foster collaborative efforts and learning and to improve implementation of the PVA maize activities to deliver biofortified crops at scale in Tanzania and Nigeria. The platforms aim to bring together key PVA maize value chain actors, including national partners and relevant experts, to provide support as needed. During the current reporting period, the project hosted two PVA maize platform meetings in Tanzania, one on 20 February 2018 and the other on 19 July 2018, at IITA–Dar es Salaam and Arusha, respectively. Seventeen participants (5 females, 12 males) and 26 (11 females, 15 males) attended the February and July 2018 meetings. The PVA platform meetings discussed achievements and challenges over the last 2.5 years and priority activities for the remaining implementation period. The team further agreed on the way forward in availing the PVA maize seeds to farmers in Tanzania and sustainability strategies. The presentations made during these two meetings highlighted impressive progress in terms of investments made and awareness creation and promotion along the PVA maize value chain. Seed companies have made very good progress on multiplication of PVA maize seed and branding of seed packages and on the release of new varieties. Agro-processors such as AFCO Co. Ltd, SUGECO, and Perfect Foods reported increased demand and acceptability of PVA maize products. Processors such as AFCO Co. Ltd. are processing OFSP, PVA maize, and HIB. The managing director of this firm indicated that consumers buy when they are aware of the nutritive value of the products and pointed out the importance of nutrition education in promotion and changing consumer perceptions and preferences. The School Feeding Program in Tanzania is prompting nutritious crops such as PVA maize and HIB in selected districts. In 2017, BNFB supported Charoe Pokpand Produce to analysis beta-carotene of the CP 201 variety in the Biosciences eastern and central Africa (BecA) laboratory in Nairobi. The laboratory report indicated that the maize variety does not meet the biofortification criteria. Through the PVA maize platform, Charoe Pokpand Produce has been engaged and is not fully aware that the variety should not be promoted as PVA maize and should be limited for animal consumption, in tandem with the release criteria. Without this support, the maize variety would have continued to be promoted as biofortified and for human consumption. Furthermore, the PVA maize platform provided a forum for the issue to be discussed openly and was concluded amicably.

Suggestions on sustainability of the platform beyond BNFB were also discussed. The suggestions include introducing membership fee, self-sponsorship, integration of the platform in new initiatives, and



registration of the platform as a legal body. Participants acknowledged the role of the platform actors and the value of working together. The role of the private sector in developing the PVA maize value chain was recognized. The government representative in attendance pledged its support in facilitating registration of products and addressing challenges pertaining to regulatory framework, standards, and food safety.

During the first PVA platform meeting, held on 28 September 2017, it was agreed that members raise more awareness using different media. Members further advocated for the need to acquire laboratory equipment for testing micronutrients in Tanzania. Consequently, a journalist (who is a member of the platform) published a headline story about this piece of equipment in *The Guardian* newspaper of 4 October 2017. This publicity, along with advocacy with high-level policymakers at various levels (including the PMO and TFNC), led to the acquisition of an atomic absorption spectrophotometer worth Tanzania Shillings 200m (\$90,000), through support from the International Atomic Energy Agency. Efforts are ongoing to mobilize resources to acquire a high-performance liquid chromatograph.

During the current reporting period, two PVA maize platform meetings were held in Abuja, Nigeria, as part of the project's mandate on scaling up PVA maize. The first was held in December 2017 and the second in July 2018. Participants included representatives of key stakeholders of maize in Nigeria, ranging from seed companies, farmers' associations, marketers, processors, research institutes, and BNFB's maize breeder. The objectives of the meeting of the platform among others were to bring the stakeholders together to plan, synergize, and attend to issues around scaling up PVA maize in Nigeria, especially adoption by farmers and acceptance by consumers/users. Some 18 participants attended the December meeting and elected executive members to run the platform and network regularly. During the PVA maize platform meeting held on 5 July 2018, participants shared highlights on progress made on PVA maize availability, promotion, markets, production, and processing. The meeting facilitated sharing of ideas, experiences, challenges, and opportunities, and strengthened linkages among key PVA value chain actors. Participants included actors along the PVA maize value chain, senior government officials, and consultants of the PVA maize study. They deliberated on sustainability strategies and the way forward for the PVA maize platform. A brief overview was provided on how to use the PVA maize learning toolkit. Participants received a flash disc containing the toolkit along with presentations made at the meeting.

## 2. OFSP platforms for Tanzania and Nigeria

Two OFSP platforms were launched last year (2017): in Dar es Salaam, Tanzania, on 28 September, and in Lagos, Nigeria, on 20 July 2017.

During the current reporting period, the second OFSP Support Platform meeting was held on 6 July 2018 in Abuja, Nigeria. About 20 (10 females) stakeholders along the sweetpotato value chain comprising producers, vine multipliers and disseminators, researchers, processors, and marketers attended. Sahel Capital (OFSP processor) was contacted and included as a key member of the platform. Presentations highlighted progress made; challenges and opportunities of the OFSP value chain, especially seed systems and vine dissemination; policy, advocacy, and awareness creation efforts; and processing, product development, and marketing of OFSP roots and products. There was a



series of interactions among members on the WhatsApp group culminating in sharing of information and linking various actors to activities in various states. Some examples are as follows: OFSP roots was displayed at World Diabetics' Day in Lagos State by Celia Penny, an advocate of OFSP; OFSP vine producers were linked to root producers through adverts on the platform; and information about the availability of roots for cooking demos at University of Ibadan and through root markets such as Shoprite. Participants discussed sustainability strategies for the OFSP platform and indicated that the platform needed more time and support before it could run on its own.

The second OFSP Support Platform meeting in Tanzania was held on 17 July 2018 in Arusha. The OFSP platform was organized and facilitated by platform officials who are national partners, with minimum backstopping from the BNFB team. Participants included actors along the OFSP value chain and senior government officials. During the meeting in Arusha, platform members deliberated on the sustainability strategies which among others included: registration, fund raising, and cost sharing. Several success stories were shared among members. The BNFB team has embarked on an exercise to expand on the success stories shared and document them for wider dissemination.

### **3. *Strengthening the national multisectoral policy platforms***

Technical and policy platforms have continued to advance the biofortification agenda in Tanzania and Nigeria and have helped to coordinate the efforts of the different ministries that have key roles to play in ending hidden hunger among children, women, and the population in general. The PMO continued to coordinate the activities of the national multisectoral policy platform in Tanzania. In collaboration with the Directorate of the Government Coordination in the PMO, the BNFB team held a successful advocacy session with parliamentarians at Parliament buildings in Dodoma on 17 May 2018. About 58 parliamentarians attended. The executive director of PANITA, the ag. executive director of TFNC, and the BNFB senior country coordinator made presentations which highlighted the hidden hunger status in Tanzania and its economic impact, demystified biofortification, and highlighted its potential in complementing other approaches to end micronutrient malnutrition. The presentations were very well received and led to a lot of discussion during the question-and-answer session. The Minister for Education Science and Technology, Professor Joyce Ndalichako, acknowledged the knowledge on biofortification that she gained and remarked that she is now more enlightened on the essence of good nutrition and its linkage to efforts in the education sector.

The Parliamentarians vowed to support the efforts on scaling up biofortification in Tanzania and called for more resources from the government (national and local levels) to support programs on biofortification. They heeded our call to action, and requested a longer seminar on the topic of biofortification in relation to nutrition and strategies that the country could adopt to ensure seeds of biofortified crops are accessible to farmers in all parts of the country. They suggested that the larger audience include other relevant parliamentary committees—namely Budget; Agriculture, Livestock and Water; and Social Development and Services—to strengthen the efforts of the Nutrition committee in pressing for increased budgetary allocation (see Annex 10). This meeting has been planned for September 2018.

In Tanzania the National Food Fortification Alliance held its 31st National Food Fortification Alliance Meeting on 30 November 2017, at the Tanzania Food and Drugs Authority's Conference Hall in Dar es Salaam. The senior country coordinator presented a brief report on progress of biofortified crop and products. He highlighted the importance of developing biofortification guidelines, protocols, and

standards for biofortified crops and products. The meeting tasked Tanzania Bureau of Standards, the Tanzania Food and Drugs Authority, and TFNC to work on the standards. Work on developing the guidelines has started: The Nutrition Health and Development Centre has been commissioned by Nutrition International to carry out the consultancy. The quality of the guidelines will be supervised by HarvestPlus.

BNFB supported a multisectoral platform meeting coordinated by the MoBNP in Gombe State in Nigeria (see Table 2). Participants discussed issues of nutrition and gave their contributions toward the declared state of emergency for malnutrition in Nigeria. BNFB facilitated a session on mainstreaming biofortification into ministries, departments, and agencies in Nigeria. The presentation highlighted the potentials of biofortified crops in contributing to the fight against malnutrition in Nigeria. The meeting included an advocacy visit to the offices of the honorable commissioners of agriculture, and budget and planning. BNFB continued to support the multisectoral advocacy platform on a food and nutrition event in Kano and, in collaboration with the CS-SUNN, they supported the 2<sup>nd</sup> Quarterly National Committee on Food & Nutrition meeting in Kano, Northwest Nigeria. The meeting brought together representatives from 17 MDAs to discuss issues on food and nutrition in Nigeria. BNFB used the platform to advocate to all the MDAs that participated and encouraged them to mainstream and invest in biofortification. Knowledge on biofortification was enhanced among the participants and participants were exposed to the magnitude of micronutrient deficiency levels in Kano; the potential of biofortification to address the problem; and how they could integrate the food-based approach into their programs/projects and mobilize resources to drive biofortification.

#### ***IR 1.5: Improved global understanding of scaling-up approaches***

To complement the crop-specific VC gaps identified during the SITAN studies in Tanzania and Nigeria, in 2017 the project conducted two studies, one on willingness to pay for HIB and one on maize. The HIB study has been completed, and that final report for the maize study is expected to be completed by the end of August 2018. Findings from the HIB study on willingness to pay indicated that about 95% of bean consumers in both rural and urban areas are willing to pay for iron-biofortified bean as a hidden trait. These consumers are willing to pay a 25% higher price than the prevailing bean market price.

CIAT/SARI, in collaboration with Sokoine University of Agriculture, identified an MSc student to conduct nutritional analysis of HIB products as part of her research thesis. The student has developed a concept note with two objectives: (1) to determine the nutritive value of high-iron and -zinc/maize and consumable products (e.g., bean-based porridge) and (2) to recommend adequate quantity per serving in order to meet daily recommended allowance for school children aged 6–15 years (based on results of objective 1).

CIMMYT commissioned a study on maize seed demand, PVA maize VC, and maize grain processing in Tanzania. The objective of the study is to document the maize seed demand and supply dynamics in Tanzania and to understand both the PVA maize VC and the maize-processing VC in Tanzania. Specifically, the study provides information on the quantity of maize seed produced in Tanzania. These include the quantities of certified seed and quality declared seed produced in the entire country. This information has been aggregated from district sources and from Tanzania Seed Trade Association. The study also highlights the level of use of farmer-saved maize seed and recycled seed by region and district. It provides an up-to-date list of companies producing and marketing seed of individual varieties and their respective market size. During the reporting period, BNFB hired a team of consultants, the

data have been collected, and the draft report was validated on 20 June 2018. Feedback has been sent to the consultants and the report is expected to be finalized in September. Results indicate that although the potential area for maize cultivation is 16,195,384 ha, the current area under maize cultivation in 2017/18 season is only 4,839,842 ha, indicating that there is a lot of land (70.1 %) suitable for maize cultivation that it is not being fully utilized. Approximately 42,000 t of seed were produced in the last 3 years, and very low quality declared seed is produced. It was estimated that the seed demand is 105,000 MT, of which a substantial amount is from recycled seed. In Tanzania 37 companies market seed, with 3 seed companies importing and producing seed at the same time. The study further indicates that the production of maize increased from 5.1m t in 2012 to 8m t in 2016. Productivity has also improved from 0.5 t/ha in 2003 to 2.5 t/ha in 2016. Southern highlands have the highest productivity at 3 t/ha. Grain exported was approximately 62,000 MT in 2015 and dropped to 45,000 MT in 2017. The report will be edited and published to guide investment decisions in the PVA maize VC. A journal article will also be prepared and published.

During this reporting period, the project finalized the ex post evaluation study on the RAC project (2011–2014). The main purpose of the evaluation was to assess the relevance, effectiveness, efficiency, impact, and sustainability of RAC and how these have enabled more HH to access and consume OFSP. The evaluation also aimed at improving our understanding of the communities' level of knowledge gained through various capacity-building interventions and highlighting generic lessons to guide the promotion and upscaling of OFSP and other biofortified crops in future. Key findings of the study are as follows:

- OFSP and biofortification was integrated into policy, strategy, and plan documents that position; seven of which were in Mozambique, four in Nigeria, and three in Tanzania.
- The new investment raised through the influence of RAC surpassed the target of \$18m by 20%. The bulk of the funding came from international donors and was highest for Mozambique, which had the longest involvement with OFSP.
- National governments continue to allocate resources for biofortification work in their annual budgets of key line ministries, national research institutions, and provincial and district councils. For example, the Federal Government of Nigeria provided \$819,289.34 (then equivalent to N134, 500,000) in funding for the Rainbow project, which helped reach well over 40,000 HH. The Tanzania government has committed \$115m for the implementation of the NMNAP.
- RAC aimed to reach 600,000 direct HH with OFSP in 5 years after the project came to an end. By the time of the evaluation, RAC and its follow-up projects had distributed more than 24,434,952 vine cuttings to 390,966 farmers directly in the three countries, 20.3% of whom are women. At this commendable rate, by 2020 RAC is likely to achieve or even surpass its target.
- Through the step-down training approach, more than 71,602 extension workers, teachers, pupils, nutrition workers at village level, and farmers were trained. This figure is based on only 38 graduates of the RAC ToT courses that were interviewed for this study in the three primary countries (Tanzania, Nigeria, and Mozambique).
- Traditionally perceived as a poor person's and a major disaster-response crop, OFSP has gained popularity as a regular food across the RAC project countries.
- RAC put in place an elaborate three-tier seed multiplication plan to ensure consistent and sustainable supply of OFSP seed for multiplication and production. This system is well established

and working. New CIP projects have added value and continued to strengthen seed multiplication activities in all the three countries.

- More than 41,216 children from 174 elementary schools in Nigeria are consuming OFSP weekly as part of the school-feeding program. In Mozambique, 32% of the sweetpotato produced is OFSP; people eat it two–three times a week.
- In terms of lessons, the evaluator observed that there is need to strengthen the linkages between agriculture and nutrition and health by supporting farmers and enhancing partnerships and coordination with other CGIAR centers such as HarvestPlus and the Program on Agriculture for Nutrition and Health to maximize the health and nutritional benefits of agricultural development.
- The evaluator concluded by stating that RAC succeeded in building the capacity of individuals and institutions to promote and scale up OFSP in the target countries through policy engagement for policies and investment in support of biofortification, raising of new investment, and strengthening institutional and individuals to design and implement gender-sensitive courses and ensuring availability of clean planting materials.
- The RAC ex post evaluation study report has been published and is available at: <http://www.sweetpotatoknowledge.org/files/reaching-agents-change-project-successes-lessons-recommendations-ex-post-evaluation-report/>. A journal article based on the findings has been drafted and will be submitted for publication in an open-access peer-reviewed journal.
- During the reporting period, the BNFB team conducted two surveys (SurveyMonkey) on (1) the BNFB partnership assessment and (2) utilization of the OFSP investment guidelines toolkits.
  - The objectives of the partnership survey study were to assess how well the BNFB partnership has worked with special reference to the partnership engagement process, implementation process, leadership and management of the partnership, and added value by BNFB. A total of 39 partners were invited to participate in an online SurveyMonkey with two follow-up reminders. Out of the 39 participants, 16 responded (41% response rate). The sample was considered too small, so to strengthen the survey, partners who did not participate have since been contacted to complete the questionnaire and submit via email. Interim results on the different thematic areas showed that (see more detailed results in Annex 11):
    - *The BNFB partnership engagement process* is generally smooth. CIP was inclusive and provided timely support and sufficient information throughout the process. Out of the 11 respondents, 6 indicated that they strongly agreed, 4 agreed, and 1 neither agreed nor disagreed.
    - *The BNFB partnership met its objectives/expectations.* Eleven partners felt that their objectives and expectations were met, with 5 indicating that they strongly agreed, 5 agreed, and 1 neither agreed nor disagreed.
    - *There was a clear understanding of what the project objectives were, what the project expected to achieve through the partner organization.* Six strongly agreed, 4 agreed, and 1 neither agreed nor disagreed.
    - *Each partner's roles and responsibilities were clearly defined.* Five respondents indicated that they strongly agreed, 5 agreed, and 1 neither agreed nor disagreed.
    - *The project inception phase was well executed with CIP providing sufficient guidance, materials, and explanation on the scaling up model.* Five respondents indicated that they strongly agreed, 4 agreed, and 2 neither agreed nor disagreed.

- *During implementation, the project management team was proactive in providing sufficient guidance to facilitate implementation.* Five respondents strongly agreed and 6 agreed.
- *Level of trust between the partner organizations.* Five of the respondents indicated that the level of trust between organizations was excellent, 3 very good, and 2 good.
- *Levels of cooperation.* Out of the 10 respondents, 3 cited excellent, 6 very good, and 1 good.
- *On whether information and guidance on the tasks to be carried out and objectives was provided,* 4 respondents strongly agreed while 6 agreed.
- *Assessment of whether finances were availed to partners in good time,* 3 respondents strongly agreed, 4 agreed, and 3 indicated they neither agreed nor disagreed.
- *Partners were asked whether they felt respected in the BNFB partnership* and 6 stated that they strongly agreed while 4 agreed.
- *When asked whether the BNFB partnership benefited the beneficiaries in Nigeria, Tanzania, and the regional level:* All the respondents answered, yes.
- *Partners highlighted the following as drawbacks in participating or risks to either organization in the BNFB partnership.* Delay in getting improved varieties; in any partnership, any organization must risk part of its freedom, they must learn to work together. Sometimes it is frustrating, time consuming, and may need greater efforts and commitment; finance; natural calamities; the quality of the final products from the farmers and especially OFSP roots has been a big challenge. Farmers have been well trained to multiply the seed but there are few efforts and investment needed to ensure that they are producing quality products which can meet the market demand; there is a shortage of raw materials for the private sector, and it's risky to invest in the business when there is no assurance of the business sustainability.
- *On the perceived value of this partnership (in relation to the people and organization, the country and the role of different organizations in the BNFB partnership),* respondents stated that the partnership: built a strong institution that is sustainable; has prepared them better for future collaborations; there is strong team work and each partner benefited. Some national partners indicated that while their role was to ensure that biofortification was included in various policies, plans, strategies, guidelines for government ownership; they expect to strengthen this working relationship in a collaboration to implement OFSP Project/s; others indicated that the partnership has created a learning group; teaching them that with determination everything is possible - patience and trust are the key in any partnership; providing services like seeds; good; increased business opportunities and better nutrition for the population.
- *When asked to provide suggestions on how the partnership can be better enhanced in future,* respondents indicated that there is need for more engagement and involvement; mutual respect and the recognition of each partner's role as important; to get frequent meetings to discuss progress; to have formative evaluation between the project; to work as a team with one goal; to trust each other; improve on institutional bureaucracy which at some points delays the speed of which the planned activities could be implemented ; more discussions on the project; increase knowledge available for variety under focus; more crops diversity not only maize; business people are a good vehicle to carry the objectives of the project. It's wise to involve them and work together closely.
- *Partners provided the following recommendations on how the process of implementation can be improved in the future:* connecting support with business thinking; to have specific intervals of supervision in a field and include professional personnel who can give advice in

- the field; because the work was on crops and getting improved seeds took longer, more time was needed though BNFB project was a catalyst; provide financial support so as to facilitate effective post-harvest handling and storage facilities; the planned and budget processes and signing of contracts can be improved. There should be no delays in project execution of activities because in a project of 3 years, a delay of 1 or 2 months is a menace; more site visits; increase number of meetings, may be make every two months; involvement of the all value chain players should be considered from the beginning of the project.
- *The key lessons learned from the BNFB partnership* include the following: capacity building creates strong links and growth of organizations; such partnerships require good but firm leadership and partners who are committed to achieving the project objectives; I learned that when there is enough involvement and cooperation, positive effects can be seen/observed in a community and there will be good understanding to students in class; for the success of partnership, team work is important; CIP has committed staff; OFSP value chain is coming very strong to reduce poverty among smallholder farmers; teamwork spirit, transparency, trust and respect for each other are key in any partnership; partnerships complement efforts, and resources which makes it achieve the impossible!; working in cooperation is more efficient than working alone; there is more we can achieve together; and there are various income opportunities for the poor community.
- During the current reporting period, BNFB conducted a survey on the utilization of the OFSP investment guidelines toolkit comprising three products: an investment guide (targeting investors/development partners), an implementation guide (targeting project implementation partners), and a summary (targeting policymakers). Each product comes with a PowerPoint presentation for the online version to provide practical tools to assist advocates and champions to respond to questions relating to what it takes to invest in OFSP projects and programs, what to invest in, and how much to invest. One of BNFB's deliverables is updating the OFSP investment toolkit to now include the multiple biofortified crops in the nutritious food basket. The BNFB team considered it prudent to first assess how the OFSP investments guides have been utilized and seek suggestions on how to improve the summary guide (which the available budget can support). Out of the 30 individuals invited to participate, 28 provided feedback (with varying figures for 'n' for the different questions). Results on the different questions showed that (see more detailed results in Annex 12):
- *Whether the OFSP investment guides have been useful in the work of regional and national champion/advocate*, 8 stated that they strongly agreed, 10 agreed, and 3 neither agreed nor disagreed.
  - *Whether they frequently referred to the investment guides during their advocacy work*, 8 respondents stated that they strongly agreed, 8 that they agreed, 3 that they neither agreed nor disagreed, and 1 strongly disagreed.
  - *The investment guides are simple and easy to use*. Seven respondents stated that they strongly agreed, 9 that they agreed, and 4 that they neither agreed nor disagreed. They explained that: I did not use any investment guide; the English language used is very simple for majority to understand; they are well articulated and very easy to understand.
  - *Which of the three toolkits did you use more frequently?* Six cited the investment guide, 9 the implementation guide, and 5 the summary guide.
  - *I will continue using the investment guides in the future*. Seven respondents stated that they strongly agreed, 8 that they agreed, 4 that they neither agreed nor disagreed, and 1 strongly disagreed.

- *I recommend that BNFB updates the summary investment guide to incorporate other biofortified crops.* Fifteen respondents stated that they strongly agreed, 4 that they agreed, and 4 that they neither agreed nor disagreed.
- *Which aspects of the summary guide did you find most useful?* Respondents cited: beneficiaries of OFSP; investment; the section on OFSP value chain investment program was very useful; I do not have the full complement of the document; the photographs are self-explanatory very useful as it is colorful and attractive and inviting. These are the most useful aspect of the summary; planting time and recipe making; not specific; key summary about biofortified crops and how they differ from genetically modified crops.
- *Which aspects of the summary guide did you find less useful?* Respondents indicated that all the sections were useful.
- *What gaps did you identify?* Respondents stated: inclusion of other biofortified crops; inadequate public enlightenment for consumers of OFSP; the document is ok, but some thought that it has not been widely distributed; all other new things that were discovered by those using or taking OFSP needs to be added as testimonials, such as people giving testimony that OFSP cured stroke, hunch back etc.; production as the product is not in the common market; to have clear messages for different audiences (e.g., parliamentarians and finance ministers).
- *Are you aware of similar investment guides for PVA maize, high iron beans and yellow cassava?* Please explain: The majority of those who responded answered no, while one said yes – they are aware of PVA Maize guides and have mobilized rural women for the program and began demo farms.
- *What suggestions do you have to improve the updating of the summary guide for maximum impact?* Respondents suggested that: during the publication, it should be made available to more advocates of biofortified crops; make the summary guide clear and available to everyone; the aspect on processing should specify what kind of investments will be required (e.g., processing equipment, housing for processing etc.), these documents should please be made available to all stakeholders, ensure that the guide is simple to understand and has appropriate illustrations/photos, more should be made available to go around and we need more advocate considering the health benefits, inputs from advocates on yields and enterprises created and managed by BNFB beneficiaries across the country; should be translated to local language and even simplified to be usable local leaders and farmers; and having messages adapted to different audiences particularly those who are in charge of budget allocation.



#### Value addition of the achievements under IR. 1.5

1. The study on nutritional analysis of high-iron and -zinc bean products has two key contributions. The study contributes to BNFB's agenda of developing future leaders in research through graduate fellowship and, secondly, will provide crucial findings and information on micronutrient and nutritional composition of high-iron and -zinc products that will in turn be useful in informing product formulation as well as guiding feeding patterns to improve nutrition status.

2. The study on maize seed demand and PVA maize value chain is extremely useful and timely for Tanzania. The study will help in understanding the PVA maize value chain in the broader maize value chain in Tanzania and help establish PVA maize seed demand in the country. A journal article will be published from this study, providing current data to inform key actors on the demand for maize seed in the country.

3. In addition to documenting the relevance, effectiveness, efficiency, impact, and sustainability of the RAC project, the findings of the RAC ex-post evaluation will be published as journal articles and will contribute to the global understanding of the scaling-up approaches of food-based approaches, based on the RAC case study.

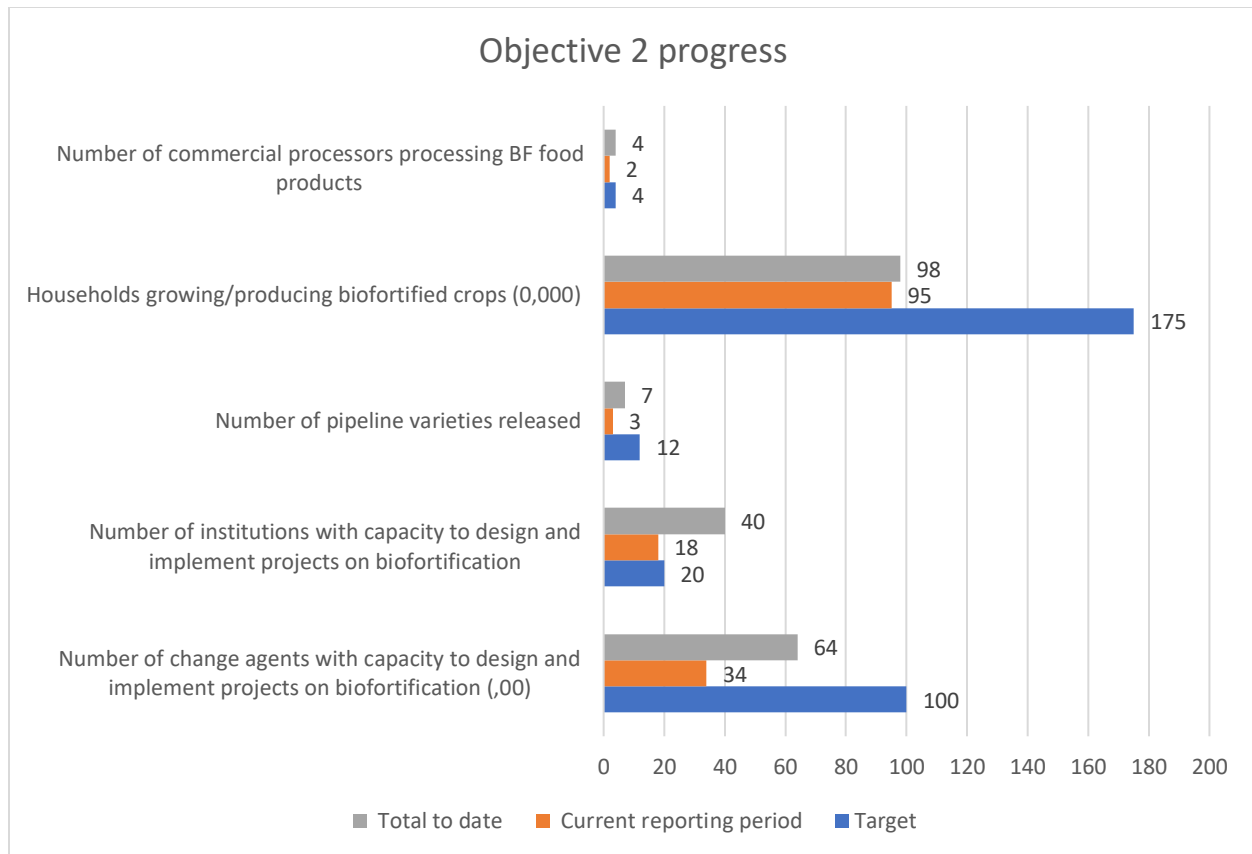
4. Through the various advocacy and communication products developed and disseminated during the reporting period, biofortification has received tremendous attention from policymakers and the communities in Nigeria, Tanzania, and beyond. The increased awareness is critical for the push and pull in marketing of the biofortified crops and is an important element in advocacy for policy change and raising new investments. It is perhaps because of this increased awareness that the project registered achievements in resource mobilization, with a total of \$5,751,300 301 new investments recorded during this reporting period compared with \$394,031 recorded in the previous period.

5. Interim results of the partnership assessment survey assessed how well the BNFB partnership has worked in terms of the partnership engagement process, implementation process, leadership and management of the partnership and value add by BNFB. Interim results from 16 out of the 39 respondents invited to participate showed that the BNFB partnership had worked well. The survey highlighted areas for improvement, suggestions on how the partnership can be better enhanced in future, recommendations on how the process of implementation can be improved in the future, and key lessons learned from the partnership.

6. Results of the utilization of the OFSP investment guide toolkit showed that the BNFB advocates and champions had used the three volumes in their advocacy work and recommended the need to update the investment guide to include content on the other nutritious food baskets crops. Results provided by 28 (with varying numbers of 'n' for different questions' out of the 30 advocates and champions invited to participate recommended that the investment guides be updated (15 strongly agreed, 4 agreed and 4 neither agreed nor disagreed), and provided guidance on the type of content to be added, gaps identified, and suggestions to improve the updating of the summary guide for maximum impact. A consultant has been identified to update the investment guide summary.

#### **OBJECTIVE 2: STRENGTHEN INSTITUTIONAL AND COMMUNITY CAPABILITIES TO PRODUCE AND CONSUME BIOFORTIFIED CROPS**

During the reporting period, the BNFB team made good progress and surpassed the set targets for strengthening the institutional capacity and that of change agents to design and implement projects on biofortification and on the number of processors in (see Fig. 2).



**Figure 2. Current and overall progress on strengthening institutional and community capabilities to produce and consume biofortified crops.**

**IR 2.1: Strengthened capacities and competencies of investors and executing institutions to design and implement technically strong, cost-effective, and gender-sensitive investments that drive uptake of biofortified crops**

BNFB has continued to collaborate with and strengthen various national and community institutions that are currently implementing/supporting various programs and projects on biofortification. A total of 40 national and community supportive agencies, including training institutions, NGOs, seed companies, and agroprocessing companies, have been strengthened since project inception against a target of 20 for this indicator. The main areas of focus during the reporting period include production, seed systems, agroprocessing, agripreneurship, utilization—focusing on different recipes and different ways of preparation of biofortified crops—nutrition education, quality control and quality assurance, biofortification, and advocacy as identified by the change agents. For example, in Tanzania BNFB collaborated with SUGECO to offer a 3-day (31 January–2 February 2018) ToT course in Morogoro to youth agripreneurs (15 females, 15 males) on how to integrate biofortified crops into agribusiness. The training widened their scope in knowledge, skills, attitude, and linkages to biofortified crops production, value addition, marketing, business management, and communication skills. One of the course participants has since started processing and selling OFSP flour marketed under the brand of *Mama Organic*.

BNFB has continued to strengthen private sector to process and market biofortified food products. Against a target of four processors, the project has attained 100% against this indicator. In Tanzania these include (1) AFICO Investment Co. Ltd, which continued to process and market PVA maize flour in

target areas; (2) Mama Organic agroprocessor started processing and selling OFSP flour after attending the training course for youth agripreneurs; (3) JAGEF Group, which is processing and commercializing bean flour; and in Nigeria, the processor, Mahauty Health Solutions Company, is processing OFSP infant-weaning products. A few small-scale processors are making OFSP bread, snacks-chin chin, crisps, juice, local beverage (Kunu), and cookies in Abuja, Rivers, and Osun.

During the current reporting period, BNFB further strengthened the capacity of trainers from five small institutions in Tanzania on how to integrate biofortified crops into agribusiness, especially in OFSP product development. The institutions include SUGECO, SRI-Kibaha, Upendo bakery, Ushirika wa Neema (a religious organization from Moshi), and Kinshaga Foods (a local bakery). Participants were introduced to the puree technology, development of products that are nutritious and competitive in the market, hygiene, health, safety, and equipment issues.

Practical sessions focused on options for using puree for value addition, especially in culinary, baking and the meat industry. Participants learned

how to prepare puree and made various products including bread, buns, ketchup, meat burgers, and juice. The training was hosted by SUGECO in Morogoro on 22–23 May 2018.



The private sector, especially the bakery industry, has taken up these skills and integrated them into their production, thereby saving on production costs for flour and promoting nutritious OFSP bread. For example, informed by increased demand for these skills, SUGECO conducted a similar step-down training on puree technology on 25–28 July 2018 in Morogoro. A total of 34 (25 females, 9 males) self-sponsored participants (representing various institutions including small-scale agro-processors, bakery owners, doctors, nurses, journalists, farmers, and representatives from NGOs like World Vision–Tanzania) attended. Some pictures are available at this SUGECO blog <http://richard-mwaikenda.blogspot.com/2018/07/mafunzo-ya-uogezaji-thamani-viazi-lishe.html>. A further 35 self-

Show us how to fish instead. We are proud of the support and capacity building offered to SUGECO and now we are working hard to make sure that the **enlightened torch keeps on shining, for the benefit of everyone in Tanzania.**

—SUGECO Executive Director

sponsoring participants have enrolled for the next course scheduled for September. This is a good demonstration of the impact of BNFB's capacity development efforts and how the knowledge and skills on agro-processing and integrating biofortified crops into agribusiness (especially OFSP) product development have cascaded down to many other institutions.

BNFB in Tanzania has strengthened the capacity of five district councils that have expressed interest in integrating HIB into their school-feeding programs. The pilot districts include Arumeru, Moshi, Hai, Mbulu, and Monduli. Twenty-six primary schools were identified and engaged in establishing the bean field demos in their schools. The school demos served as a model to the surrounding communities, particularly parents and community/school-based institutions (school committees) who endorsed the approach. In addition to schools/parents, local agro-businesses such as agro-dealers and traders were involved.

BNFB has built the capacity of advocates in the two countries. These include 22 individuals trained in Tanzania (12–13 February 2018) in partnership with PANITA, and 24 others in Nigeria trained on 4–6 April. See section under RI 1.2 for details on these two events.

During the reporting period, 3,408 (1,659 males, 1,749 females) change agents were trained on critical areas<sup>2</sup> along the VCs of HIB, PVA maize, and OFSP. These include 473 in Nigeria (291 males, 182 females), 2,915 in Tanzania (1,359 males, 1,556 females), and 20 regional champions (9 males, 11 females). Against the target of 10,000 for this indicator, the project has trained a total of 6,405 (3,215 males, 3,190 females) change agents since project inception (64%) (Fig. 2). This figure includes 101 national and regional advocates and champions (27 regional, 42 in Tanzania, and 32 in Nigeria) whose advocacy skills have been strengthened. In addition, about 26 schools in Tanzania have been trained and have started to grow at least a quarter of an acre of HIB for seed production. This number is projected to increase exponentially during the last quarter of project inception from a more rigorous data collection and evaluation of ToTs trained so far (Fig. 2).

Some of the priority areas the change agents have focused on include processing of biofortified crops and products; production; utilization—focusing on different recipes and different ways of preparation of biofortified crops; seed systems; quality control and quality assurance; nutrition education; agripreneurship; concept note/proposal writing; advocacy for policy change; raising new investments; and promotion and sensitization. The individuals and national and community institutions whose capacity we have strengthened in Nigeria and Tanzania continue to train other change agents along the VCs of OFSP, HIB, and PVA maize through step-down training based on needs identified in the communities. They have also mainstreamed biofortification in their programs (see Annex 3, a success story to demonstrate the impact of the 10-day ToT course on a participant/advocate who has stepped down the course and advocated for biofortified crops in Nigeria). Annex 7 presents a sample report from one of the Wanawake Waumini Wakristu, a CBO whose capacity was strengthened by BNFB during the current reporting period.

In addition, during the reporting period the BNFB team has focused on critical capacity gaps and the “nutritious food basket” as opposed to focusing on a single commodity. Examples include the youth in agribusiness trainings carried out in Nigeria and Tanzania and the advocacy training for women and youth carried out in Gabon/Gambia during the CAADP–Partnership Platform meeting held early this year. For PVA maize and HIB, most of the institutions whose capacity has been strengthened have so far focused on production. This is because, unlike OFSP, PVA maize seed and HIB are not yet available on the market. Other nonconventional capacity development initiatives such as strengthening the capacity

---

2. The critical areas/topics are described in detail under IR 2.1. These include different recipes and different ways of preparation of biofortified crops; seed systems; quality control and quality assurance; nutrition education; agripreneurship; concept note/proposal writing; advocacy for policy change and raising new investments; and promotion and sensitization.

of crop-specific and advocacy platforms and WhatsApp groups in Nigeria and Tanzania have yielded very good results. The change agents are advising others on a broad range of topics, from regulatory issues to production, processing, markets and marketing, and opportunities for business. The WhatsApp groups are dynamic; change agents are sharing a wealth of critical information and knowledge, diagnosing and solving problems, and ultimately learning together.

BNFB continued to collaborate with all the institutions whose capacity has been strengthened since project inception, to continue to implement various initiatives on biofortification (see Appendices 6 and 7 for a list of these institutions.)

BNFB has continued to use and test the newly developed ToT modules; the *Biofortification: A Sustainable Solution to Hidden Hunger* module has been very well received. The country coordinators and the country advocates have applied the instructional materials during various advocacy events, thus ensuring consistency in the message on biofortification while at the same time enabling them to simply technical language on biofortification. The module is useful for setting the context or as an introduction to biofortification during training on specific biofortified crops (e.g., the ToT module on *Everything You Ever Wanted to Know about Sweetpotato*, the ToT module on *Pro Vitamin A Maize: A Biofortified Solution for Vitamin A Deficiency*, and the ToT module on *High-Iron Beans: A Biofortified Solution for Iron Deficiency*). However, it is also self-contained and can be delivered independently when it is more appropriate for the target audience. All the modules developed include a PowerPoint presentation, an annotated facilitator's guide, and a handout for participants.

To ensure sustainability, BNFB continues to encourage partner institutions, academic institutions, and other users to adapt and reproduce these instructional materials and, where appropriate, integrate the teaching and learning into existing curriculum. For example, in Tanzania and in collaboration with other nutrition stakeholders, TFNC is developing guidelines on micronutrients and in-service training curriculum for community health workers. In addition, the center is working with the Ministry of Education in developing school-feeding guidelines and reviewing the maternal, infant, and adolescent nutrition guidelines. BNFB continues to be a key partner in this agenda to ensure that biofortification is mainstreamed in the guidelines for the sustainability of the biofortification agenda in Tanzania.

BNFB is developing future leaders in research through graduate fellowships. For example, CIAT/SARI, through BNFB and in collaboration with Sokoine University of Agriculture, has identified an MSc student to conduct nutritional analysis of high-iron and -zinc products as part of her research thesis. In the meantime, the fellow has developed a concept note with two objectives. The first is to determine the nutritive value of high-iron and -zinc/PVA maize and consumable products (e.g., bean-based porridge). The second objective is to recommend adequate quantity per serving to meet daily recommended allowance for school children aged 6–15 years (based on results of objective 1). The information will be useful in guiding product formulation as well feeding patterns to improve nutrition status.

BNFB has also collaborated with TFNC to jointly support one member of staff to a 3-month (July–September 2018) research fellowship at the Beca–ILRI Hub in Nairobi. The fellow is focusing on the nutritional and food composition analysis of biofortified crops (OFSP, PVA maize, and HIB) and food products in Tanzania. The fellow is expected to generate valuable results and data that will inform various stakeholders involved in processing and value addition of biofortified foods. Upon his return he will train technicians within and outside TFNC.

Value addition of the achievements under IR. 2.1.

1. BNFB further strengthened the capacity of various institutions in Tanzania on how to integrate biofortified crops in agribusiness. Consequently, the private sector especially the bakery industry has adopted these skills and integrated them into their production. For instance, in partnership with the TAAT project, Hot Oven begun processing and selling OFSP bread in Dar es Salaam. The utilization of OFSP puree saves on the production costs for flour in addition to promoting nutritious OFSP bread. BNFB has therefore added value in promoting private business and thus employment through capacity building.

2. Except the ToT module on *Everything You Ever Wanted to Know about Sweetpotato* which was revised, all the other 3 modules (A. *Biofortification: A Sustainable Solution to Hidden Hunger* B. *Pro Vitamin A Maize: A Biofortified Solution for Vitamin A Deficiency*, and C. *the ToT module on High-Iron Beans: A Biofortified Solution for Iron Deficiency*) have been developed by BNFB. BNFB further developed an OFSP training video and supported Catholic Relief Services-Nigeria to develop an OFSP recipe booklet. These materials are available as 'public goods' and learning resources for partners and public to adapt and use.

3. As earlier mentioned, CIAT/SARI through collaboration with Sokoine University of Agriculture are supporting an MSc student through a fellowship and mentorship. The aim of this is to develop future leaders in research in Tanzania. Additionally, BNFB collaborated with TFNC to jointly support one member of staff to a 3-month research fellowship at the Beca – ILRI Hub in Nairobi. This is in response to findings of the situation analysis study that identified gaps in micro-nutrient testing in the country. The trained staff will be of immense value and resource for biofortification in the country.

## ***IR 2.2: Enhanced awareness of and increased organizational action for biofortification among key stakeholder groups (farmer organizations, marketers, processors, consumer groups)***

### ***2.2.1 Creating nutrition awareness in the community***

The BNFB theory of change presupposes that awareness creation and sensitization are key in creating demand for biofortified crops in the communities, and that they influence key decisionmakers to formulate appropriate policies and allocate resources.

During this reporting period, BNFB disseminated more than **2,000** flyers, brochures, and materials to various partners and stakeholders. (These materials have been uploaded on the [Sweetpotato Knowledge Portal](#) and the [BNFB webpage](#) for wider access.) In addition to the BNFB webpage, the materials are cross-posted and cross-linked on the partner websites for wider reach. The BNFB materials are uploaded on MELSpace—the CGIAR Monitoring Evaluation and Learning platform <https://mel.cgiar.org/user/login> and the CGSpace repository (<https://cgspace.cgiar.org>).

Media engagement for awareness creation and advocacy in Nigeria and Tanzania has continued to be very effective during Y3. To ensure accurate reporting and correct the myths around biofortification, BNFB has engaged various stakeholders (e.g., religious leaders, youth, community leaders, and women) and empowered them with skills on biofortification. For example, in Nigeria BNFB leveraged an event organized by UNICEF to engage northern Nigeria's traditional and religious leaders on nutrition interventions. During this event BNFB made a presentation on the complementarity of biofortification in nutrition interventions and the role of the leaders in advancing this agenda. BNFB has further collaborated with agricultural journalists in the region and in the project countries. In Tanzania BNFB, in collaboration with the TAJF and the TFNC, finalized arrangements and launched the *Biofortification Excellence in Journalism Media Award Contest* on 21 March 2018. Since the launch of this campaign, there has been a number articles, features, and documentaries on biofortification through various radio and TV channels, newspapers, and online platforms inside and outside Tanzania. For example, Radio Mwangaza and Radio Maria in Dodoma Tanzania have continued to air messages on various topics of



OFSP (1) origin and importance of sweetpotato including OFSP; (2) agronomy—cultural practices, pests and diseases, rapid multiplication of vines, and storage of vines and roots; (3) seed systems; and (4) business model for OFSP production.

**Partnering with the media in advocacy.** A media award ceremony was held on 20 July 2018 in Arusha, Tanzania. The Minister of Agriculture, Dr. Charles Tizeba, was the guest of honor. The awards celebrated and recognized journalists who have been reporting and creating awareness on the benefits of biofortification in Tanzania. Various media categories including TV, radio, and print were awarded 1st and 2nd runners up under each category. Twenty-five journalists participated in the competition with 50 entries: 25 under print media, 20 under radio, and 5 under television. The Biofortification Excellence in Journalism competition and media engagement and campaign have contributed to BNFB's advocacy efforts and scaling up of biofortified crops in Tanzania. This has been achieved through awareness creation, educating the public and other stakeholders on the benefits of biofortified crops and foods, promoting and advocating for policy change, as well as social and behavior change communication. The media campaigns have also played a key role in highlighting the problem of hidden hunger and its impact in Tanzania. They have helped to sensitize relevant authorities and policymakers to prioritize biofortification and take appropriate action, including creating an enabling environment and mobilizing resources for biofortification. Various articles on this event were published by different media houses. Examples include:

<https://www.ippmedia.com/en/news/farmers-ought-be-reached-bio-fortified-crops-govt;>

<http://www.sua.ac.tz/news/suamedia-shines-biofortification-excellence-journalism-awards.>

BNFB has held various exhibitions and disseminated many advocacy materials and biofortified crops products, including:

- The team held a very successful advocacy session with about 58 parliamentarians at Parliament buildings in Dodoma on 17 May 2018. The executive director of PANITA, the ag. executive director of TFNC, and the BNFB senior country coordinator made presentations which highlighted the hidden hunger status in Tanzania, its economic impact, demystified biofortification, and its potential in complementing other approaches to end micronutrient malnutrition. They summarized the session by showing the HarvestPlus video on hidden hunger and biofortification. The presentations were very well received and led to a lot of discussion during the question and answer session. The Minister for Education Science and Technology, Professor Joyce Ndalichako, who was present appreciated the knowledge on



biofortification that she gained and further remarked that she is now more enlightened on the essence of good nutrition and its linkage to efforts in the education sector. The parliamentarians vowed to support the efforts on scaling up biofortification in Tanzania and called for more resources from the government (national and local levels) to support programs on biofortification. The parliamentarians heeded the call to action, and requested a longer seminar on the topic of biofortification in relation to nutrition and strategies that the country could adopt to ensure seeds of biofortified crops are accessible to farmers in all parts of the country. They suggested that the larger audience include other relevant parliamentary committees such as Budget; Agriculture, Livestock and Water; and Social Development and Services to strengthen the efforts of the nutrition committee in pressing for increased budgetary allocation. This advocacy event is scheduled for September 2018.

- Demo plots of the “nutritious food basket” were established at ARI–Selian Arusha Tanzania in March 2018. They feature PVA maize, HIB, and OFSP. The plots have attracted a lot of attention from farmers and other stakeholders, especially during the Eastern Africa Grain Growers Agro-Expo event. Attending were more than 2,000 policymakers, researchers, development workers, agripreneurs, farmers, and the media.
- BNFB advocates led an advocacy/sensitization event on complementarity of biofortification to ending hidden hunger at Kwali Area Council, Abuja, Nigeria. The event attracted 100 participants from public and private sectors.
- Exhibition at the 47th Nigerian Institute of Food Science & Technology Conference: Participants included academia, national and international research institutes, MoAs, science and technology, trade and investments, and others.
- The BNFB team participated in the African Regional Symposium of Sustainable Food Systems and Healthy Diets and the Commemoration of 8th African Day for Food and Nutrition Security on 16–18 November 2017, at Radisson Blu Hotel, Abidjan, Ivory Coast. The team made a presentation on comprehensive approach to combating micronutrient deficiencies and highlighted the role of the BNFB project in this regard. The team also mounted an exhibition of BNFB advocacy materials and participated in a panel discussion on ensuring institutional coordination and regulation for improved safe and healthy food supply chain.
- BNFB held a successful exhibition of advocacy materials and biofortified crops products (brought by the women and youth agripreneurs) during the 14th CAADP-PP meeting in Libreville, Gabon. A total of 400 flyers were disseminated during the event.
- FARA and four regional champions made a presentation on biofortification to sensitize participants at the African Leaders for Nutrition meeting that was held in Abidjan on 27–29 March 2018. The meeting endorsed the African Leaders for Nutrition’s Annual Work Plan for 2018.
- Recognizing the crucial role women and youth play in the food and nutrition security discourse in Africa, FARA and BNFB organized a pre-meeting side event entitled “Advocacy for improving women and youth participation in biofortified food value chains in Africa,” aligned with Sub-theme 4 of the 14th CAADP-PP meeting: *Agripreneurship and the role of youth and women*. The side event provided a platform for discussing mechanisms for engaging women and youth, including biofortified crop VCs, investment opportunities, and incentives that will attract, empower, and retain them in nutrition-sensitive agribusiness.

BNFB has developed additional advocacy and awareness creation materials including:



- Infographic on biofortification, which has been very well received and requests for copies have been received from different countries and partners (Ethiopia has translated the flyer into Amharic). Various partners, advocates, and regional champions have requested more copies to use and disseminate during advocacy (see Annex 2).
- A brochure to introduce the newly released HIB in Tanzania (see Annex 1).
- To celebrate International Women's Day on 8 March 2018, BNFB developed a feature story on Dr. Kiddo Mtunda from SRI-Kibaha, that was published via CIP website, tweeter, Facebook, LinkedIn, etc. (Available at <https://cipotato.org/blog/fighting-hidden-hunger-among-tanzanias-women-children-nutritious-sweetpotato/>.)
- One success story on the impact of the 10-day ToT course on a participant/advocate who has stepped down the course and advocated for biofortified crops in Ogun State in Nigeria was completed. The story, *Championing vitamin A-rich orange-fleshed sweetpotato in Nigeria*, is available at: <https://cipotato.org/blog/championing-vitamin-rich-orange-fleshed-sweetpotato-nigeria/> and <http://www.sweetpotatoknowledge.org/championing-vitamin-rich-orange-fleshed-sweetpotato-nigeria/> with links: <http://b4fa.org/championing-vitamin-a-rich-orange-fleshed-sweetpotato-in-nigeria/>

BNFB has continued to raise awareness of biofortification through social media. The use of WhatsApp is very popular, real-time, and practical. Various topical WhatsApp groups have been formed and provided very good platform to exchange information, share ideas, and learn together. For example, the OFSP WhatsApp platform in Nigeria, the regional champions, and the women and youth agripreneurs platforms have been very active during the current reporting period. Discussions and exchange of ideas on the OFSP seed systems on this WhatsApp groups has led to increased demand for quality vines from many states of Nigeria, indicating strong synergy between OFSP-related projects in Nigeria through the OFSP platform. Activity on the regional champions' platform has also been active and members have shared information on new opportunities and updates on biofortification. The women and youth agripreneurs platform was established after the CAADP-PP meeting in Gabon. Members have been active on the group and have posed questions that others have answered and shared updates on innovative ideas and information on biofortification.

The number of interactions of Instagram and twitter have increased. Various key partners are picking up the BNFB tweets and retweeting them. See some examples and analytics below.

## Tweet activity




**BNFB Project** @projectbnfb  
Solo Gold-the new variety of **#OFSP** does not only have a high yielding ability but also the ability to fight off the sweetpotato weevil and virus disease which discourages most farmers from venturing into **#OFSP** farming **#hiddenhunger #malnutrition** @nrcr\_umudike @Cipotato @FARAinfo pic.twitter.com/UbWP0XHCqF



### Reach a bigger audience

Get more engagements by promoting this Tweet!

Get started

Impressions	2,421
Total engagements	67
Media engagements	20
Retweets	17
Likes	17
Profile clicks	7
Replies	3
Detail expands	2
Hashtag clicks	1

## Tweet activity




**BNFB Project** @projectbnfb  
The 14th CAADP Partnership conference reminds us of efforts by the BNFB Project in promotion of **#biofortification** and nutrition-sensitive food value chains **#14thCAADPPP** @AGRAAlliance @joyce\_maru pic.twitter.com/fE5ieHnuJq



### Reach a bigger audience

Get more engagements by promoting this Tweet!

Get started

Impressions	1,960
Total engagements	39
Media engagements	13
Likes	9
Retweets	6
Detail expands	4
Profile clicks	4
Hashtag clicks	2
Follows	1

## Tweet activity




**BNFB Project** @projectbnfb  
An amazing display of products from biofortified crops including **#OFSP**, Pro Vitamin A maize, High-iron beans and Cassava from our BNFB team currently representing us in the 14th CAADP Partnership Platform Meeting in Libreville, Gabon **#biofortified** @FARAinfo pic.twitter.com/XIFKFiMcns



### Reach a bigger audience

Get more engagements by promoting this Tweet!

Get started

Impressions	1,807
Total engagements	30
Media engagements	11
Likes	7
Retweets	6
Profile clicks	5
Detail expands	1

Published	Post	Type	Targeting	Reach 	Engagement
08/15/2018 8:13 am	 Day 1 of @projectbnfb Annual review meeting was a success			615 	232 38  
08/13/2018 3:37 pm	 An insight by @glomayen into the media training conducted on			40 	3 2  
08/10/2018 2:49 pm	 Journalists in #Nigeria are currently benefiting from #BNFB			293 	18 7  
08/07/2018 8:32 am	 Solo Gold-the new variety of #OFSP does not only have a			483 	19 17  
07/26/2018 4:28 pm	 Sologold! a new and improved variety of Orange-fleshed			264 	8 9  
07/23/2018 12:18 pm	 Tanzania Minister of Agriculture Dr. Charles Tizeba was the			270 	17 11  
07/17/2018 12:06 pm	 #OFSP bread being served in #Tanzania during a key			1.5K 	273 96  
07/17/2018 10:04 am	 Nyctalopia commonly known as Night Blindness is a condition			232 	8 3  

Total Page Likes as of Monday 27 August 2018



Community mobilization has been a key strategy in stimulating action, educating communities, and creating awareness about consumption and production of biofortified crops. Some BNFB partners have

played a key role in facilitating this either through demos or farmer field days. For example, in November 2017, SUGECO, through their Nutrition Awareness and Cash Crops Value Chain project (funded by FARM Africa), conducted biofortified foods preparation demos in 13 sites along the project area (i.e., Zombo, Kiegea, Kibedya Dispensary, Magubike Health Centre, Kisanga Village, Msange Health Centre, Ngiloli Village, Ibuti Village, Ulaya Health Centre, Mtumbatu Health Centre, Msolwa, Berega Hosiptal, and Nyameni Village). More than **2,419** community members, **27** village leaders and extension officers, and **321** students learned how to make OFSP porridge; PVA maize porridge; OFSP juice; OFSP maandazis; and OFSP chapati, cake, and bread. Mashed OFSP was used as it is affordable for most farmers and the raw materials used were all locally available from a particular area. This activity was supported by the district health department and community development offices of Gairo and Kilosa districts, with maximum support and participation in the fields.

### **2.2.2 Mainstreaming biofortified crops in the school-feeding programs**

In December 2017, representatives of five districts councils in Tanzania (district executive directors, district education officers, district medical officers, district nutrition officers, district agriculture and irrigation officers, district health officers) from Monduli, Meru, Hai, Mbulu, and Moshi rural participated in a workshop hosted by SARI/CIAT. The main objective of the workshop was to discuss and understand nutritional status and deficiencies, particularly about iron and vitamin A in the respective districts, including primary schools. The workshop also aimed to sensitize the district executive directors and district sectoral leaders on the role the nutritious food basket approach that includes HIB, PVA maize, and OFSP to combat the widely spread micronutrient malnutrition/deficiencies.

Twenty-six primary schools were identified and engaged in establishing HIB field demos in their schools. The demos will serve as a bridge to the surrounding communities, particularly parents and community/school-based institutions (school committees) who endorsed the approach. Each school was provided with 10 kg of seed ('Jesca' beans variety) and planted on 0.25 acre. It is expected that each 10 kg of seed will yield at least 100 kg of beans. Each school will be required to replant 90 kg of harvested beans, with the remaining 10 kg being given to another new school. For the second season, each of 26 schools will plant 90 kg expecting 1,100 kg. Each school will provide 100 kg to 10 other schools as part of





the spill-over process. Through this approach, 286 new schools will be reached by 2020. Relevant school teachers were trained on seed quality production and postharvest management.



The project has influenced the inclusion of biofortification in five national programs against a target of five (100%) new programs on biofortification initiated by change agents in Nigeria and Tanzania. A total of 1,200 HH in Iramba District, Tanzania, received OFSP vines via school children. Distribution was done in five schools on 8–9 March 2018. In four schools, 200 school children received the vines, while in one school, 400 school children were given vines to carry to their parents. Two varieties ('Kabode' and 'Ejumula') were distributed. Each student received two varieties each with 50 cuttings to make a total of 100 cuttings per child. All children took home some vines to their parents. The activity started with parents' meetings to sensitize them about OFSP. Some of the parents who had no children at school also received vines from the DVMs.

In Nigeria BNFB has engaged in advocacy for inclusion of biofortification in the national home-grown school-feeding program at all levels. The effort has started to bear fruit as two states (Abia and Cross Rivers) have commenced serving pupils OFSP-based food. In Abia State OFSP is being served to the pupils weekly in at least 40 schools (5% of all the public elementary schools in the state), with the instruction by the state governor to fan out to all the public schools in the state. Cross River State started its pilot with 10,000 pupils in April 2018, serving the pupils with OFSP cookies. One of the BNFB advocates was engaged in the training of the school-feeding team on production of OFSP cookies using OFSP-wheat flour composite.

### **2.2.3 Supporting the public, private sectors, and communities for production and processing of biofortified crops and products**

In addition to the organizational action supported by BNFB as described under IRs 2.1 and 2.2.1–2.2.3 above, the project supported various stakeholder groups/organizations to scale up the production and processing of biofortified food products as discussed below.

- CIAT
  - Multiplication of breeder seed for HIB varieties (Selian 14 and 15) is ongoing. CIAT supported ARI–Maruku to plant 3.5 acres in February/March 2018, whereas ARI–Selian planted 3 acres during March/April 2018. CIAT supported ARI–Uyole to plant 2 acres during April/May 2018. In addition, 2 acres were to be produced under contractual arrangement with farmers in April

2018. All this was possible through the additional 800 kg of breeder seed imported by BNFB from Burundi and Uganda to fast-track the seed production in Tanzania. In total 10 acres are targeted for seed increase for the period of February/March to August/September 2018.

- JAGEF group continued to process and commercialize bean flour. The group has initiated the process of certification with the TFDA. Furthermore, one bakery in Sumbawanga is expecting to start baking bean-based products.



***JAGEF group is continuing in commercializing bean flour.***

- During the current reporting period, the BNFB-CIAT team fast-tracked work on the release of bush varieties of HIB using seed harmonization policies. The CIAT–Selian team completed work on PVS for eight promising biofortified bean genotypes (RWR 2154, KAB 06F2-8-36, KAB06F2-8-35, CODMLB 001, NGWANKUNGWANKU, CODMLB 033, SMC 18, and SMC17) for the second season at five sites (i.e., ARI–Selian, Machine Tools, Uyole, Tukuyu, and Kagera). This will ensure that the team gets sufficient data to move to the next stage—that is, it will generate sufficient field data (genotype x environment and farmers/consumers’ evaluation) to allow the identification of the best candidates to be submitted to TOSCI for NPT and DUS in December 2018.

- **CIMMYT**

- CIMMYT allocated testing kit consisting of 18 new hybrids to Aminata for evaluation. Four test varieties are under parent testing and registration (IFFA seeds), 3 varieties under DUS/NPT/on-farm testing (MAMS), and 7 varieties under season 1 and 2 testing (Tanseed). Two varieties are under certified seed production (Meru Agro Tours) and 3 varieties under reclassification certified seed production (Charoen Pokphand Produce Co. Ltd).
- In Tanzania AFCO Ltd continued to sell and promote biofortified crops. AFCO reached 403 women with nutrition messages and PVA maize products through seven health reproductive clinics. Moreover, through a grant provided by CIMMYT, AFCO developed 3,500 fliers, 100 posters, two banners, and 20 T-shirts to promote PVA maize. AFCO also used social media to market PVA maize flour. The processor has opened seven new outlets for selling PVA maize flour. Using 21 shops AFCO managed to sell 794 kg of PVA maize flour in Dar es Salaam.
- CIMMYT developed SGAs with seed companies to expedite variety release and promotion of released varieties. Eighteen new hybrids were provided to Aminata for further testing (18 three-way cross hybrids with three sets). Tanseed continued with further testing before entering the material to the DUS/NPT stage. For MAMS Seed Company, the fund is to support three of their materials to enter into DUS/NPT and farmer evaluation phase.

- The BNFB team visited Meru Agro Tours seeds farms on 22–24 April 2018, to monitor ongoing activities on multiplying the much anticipated PVA maize grain from seed of the two released PVA maize varieties. The team also visited Meru Agro Tours seed warehouse and processing plant located in Mbeya town. One of the seed-processing warehouses was equipped with state-of-the-art seed-processing equipment, which does the cleaning, sorting, and dressing application. The Meru Agro Tours maize seeds are branded in a unique way to enable farmers to identify the varieties. The ready-to-sell seeds are packed in special 2-kg bags. The seeds are distributed and sold in various places through a network of distributors and agro-dealers. This extensive marketing network will play a key role in creating an effective distribution network for the PVA maize varieties.
- IITA
  - In 2016/17, IITA distributed 2.4 t of PVA maize breeder seeds to four seed companies (Premier Seed, Seed Co., Value Seed, and Maslaha Seed Co). From this seed, the seed companies through their contract farmers produced 150 MT of certified seed that is ready for the market. It is estimated that the certified seed will reach 14,763 HH.<sup>3</sup>
  - During the period under review, IITA provided four seed companies (Premier Seed Co, Maslaha Seed Co, Gold Agric, and Savanah) with 6 t of breeder seeds for planting in June. This breeder seed is estimated to cover over 300 ha with a potential of giving close to 600 MT of certified PVA seed in 2019.
- CIP–Nigeria
  - In Enugu State the ADP was engaged to carry out dissemination of vines to target HH. A total of 442 HH (251 males, 221 females) received two bundles of OFSP vines each. The ADPs of Enugu, Ogun, and Taraba states assisted in the selection of additional DVMs to expand the multiplication of quality vines. Overall, 21 DVMs—7 each from Enugu, Ogun, and Taraba states—were selected and are expanding the production of quality vines. Enugu State empowered three DVMs with low- capacity water pump for increased production of quality vines. In Enugu and Taraba states, 2.4 ha and 2.6 ha, respectively, of quality vine production are being maintained for dissemination during the 2018 dissemination program.
  - A systematic survey to map out indirect HH that have received vines was conducted between May and June 2018 in Enugu and Kogi states. A total of 843 indirect HH were documented.
- HarvestPlus—Nigeria
  - In 2017 HarvestPlus continued to work closely with federal and state governments of Nigeria as well as international development partners (using their own funds) to leverage additional funding (direct and indirect) for biofortification activities to meet set targets. The relationship attracted significant financial support (from federal and state governments and INGOs) worth more than \$2m to help fund seed multiplication, seed delivery, promotional activities, value addition, training, and information-sharing events. Some of these funds were contributed in kind; data are available from the HarvestPlus database.

---

3. The 150 MT will plant 7,381.5 ha for grain production (20 kg of certified seed per ha). With an average land holding of 0.5 ha in Nigeria, the seed will reach 14,763 farmers.

- From these partnerships and resources, HarvestPlus reached 905,907 HH with yellow cassava in 2017 and 2018.

- Tanzania

In Tanzania SRI–Kibaha continued to support organizational action for scaling-up OFSP as follows:

- Staff from SRI–Kibaha and CIP–Tanzania made a resource mobilization tour of the Singida Region. The district executive director of Iramba committed to funding OFSP and engaging every primary school to start a school garden. The district commissioner recommended that all schools plant OFSP in their school gardens. In response, SRI–Kibaha distributed OFSP to at least 1,200 HH through school children (see Section 2.2.2).
- SRI–Kibaha partnered with the National Youth Service–Ruvu Station to establish and maintain OFSP multiplication nurseries that are producing vines for dissemination. Two varieties, ‘Kabode’ and ‘Ejumula’, were harvested and disseminated to four schools in Iramba.
- SRI–Kibaha distributed OFSP vines to farmers at Ilindi ward in Bahi District. A total of 22,400 cuttings were distributed to 345 HH.
- Systematic monitoring of vine multipliers, vine inventory, and HH growing OFSP was done in Mpwapwa, Dodoma, Manyoni, Ikungi, Iramba, and Mkalama districts. The exercise established that all multipliers were accessing vines; however, some of them can only access small quantities due to drought. The exercise further established that to date, SRI–Kibaha has reached 8,211 HH (including the 1,200 reached through schools) directly and 17,590 indirectly with OFSP. In addition, the exercise established that the Enhancing Nutrition Services to Improve Maternal and Child Health in Africa and Asia project, implemented by World Vision, had reached an additional 2,000 HH with vines in the central zone of Tanzania.



***Bound for Iramba District Schools: vine harvesting, counting and labeling at Ruvu multiplication site.***



Significant/value addition of the achievements under IR. 2.2

1. As earlier indicated, CIAT, in partnership with ARI–Selian, hosted a workshop for district officials from Monduli, Meru, Hai, Mbulu, and Moshi rural districts to discuss nutritional status and deficiencies in their districts and to sensitize them on the role of biofortification in addressing iron, zinc, and vitamin A deficiencies. At the end of the workshop, work plans on how to mainstream the nutritious food baskets in each district council targeting schools were developed. These included engaging with parents/communities who supply food to schools and holding HIB field demos in the schools with support from the schools and district teams.
2. CIAT partnered with ARI–Selian to reach 26 primary schools to establish demo fields for HIB. SRI–Kibaha reached four more schools to distribute OFSP in Central Zone of Tanzania. The latter has recently been piloting with commendable progress the use of rural primary school-going kids to fast-track the distribution of OFSP vines. The use of school children as change agents will therefore serve three purposes: (1) as a long-term behavior change approach for better nutrition for the children who will soon grow into adults; (2) as a strategic approach to reach many HH with the biofortified crops; and (3) the demo fields in schools are serving as a bridge to the surrounding communities and model to the surrounding communities, particularly parents and community/school-based institutions (school committees)
3. The PVA maize materials provided by CIMMYT to seed companies are catalytic in nature and are meant to expedite variety release and promotion of released varieties. From the 18-new genotypes provided to Aminata for further testing, and the support provided to MAMS and Tanseed seed companies, it is anticipated that at least an additional five new PVA maize varieties will be released in Tanzania by 2020. The release of seven PVA maize varieties (including Meru VAH517 and Meru VAH519) by BNFB in under 5 years will be a significant achievement in the country that had no PVA maize varieties at the start of the project. The promotion catalytic funds will help create awareness in the market and influence change of attitudes and behavior of farmers and consumers that are accustomed to white kernel maize. Additionally, the promotion of PVA maize by BNFB is an incentive for the seed companies to participate in research for new varieties. It is anticipated that the seed companies will be motivated and keen to invest resources for this endeavor, with the assurance that the market is prepared and enlightened well in advance.
4. Through the support by BNFB, AFCO Ltd opened seven new outlets for selling PVA maize flour. AFCO has continued to sell PVA maize products in 21 shops, resulting in 794 kg of PVA maize flour in sales during the reporting period. Apart from increased sales through the additional outlets, the improved network has helped to ensure that the products are accessible to many consumers who had to travel long distances to access the products.
5. The partnership between BNFB through SRI–Kibaha with Radio Maria is quite synergistic, and the timing of airing of the programs was synchronized to coincide with the planting season. BNFB anticipates that the education and information provided through the radio will benefit farmers in the region and promote OFSP in the central region for increased production and consumption of OFSP.
6. In Nigeria the strong relationship between IITA and the private seed companies (with their contract farmers) and the existence of the PVA maize platform that brings together key stakeholders are actively involved in creating a good environment for the smooth flow of different classes of seed (breeder seed/certified seed). The seed companies worked with contract growers and provided them with breeder seed disseminated by BNFB. The ToT and the step-down trainings done by BNFB have been very useful in providing the necessary information on the production of PVA maize varieties. The two major seed companies (Maslaha and Premier Seed) involved in 2017 in the production of certified seed production have engaged five of their active contract seed growers/farmers to produce the 150 MT of certified seed as highlighted in this report.
7. BNFB has introduced OFSP in four new states in Nigeria (Enugu, Ogun, Taraba, and Kogi), and has continued to support and to build the capacity of these states to prioritize and scale up the crop. Without BNFB, it is unlikely that the (4) additional States would have adopted the crop. Currently, at least 12 main sweetpotato producing States in Nigeria are growing the crop. The addition of Solo Gold variety is quite superior in agronomic and nutritional traits and is likely to spur even more productivity.
8. In both Nigeria and Tanzania, the project has strengthened the national breeding programs: Seven biofortified varieties have been released and many other promising genotypes are in the breeding pipeline. Moreover, because. Moreover, there is renewed interest of national and local governments to assist farmers to engage the production of biofortified crops. The project has played a catalytic role in achieving these results.

### ***Insights from the field***

#### **Dissemination of vitamin A-rich OFSP taking shape in Tanzania's Dodoma and Singida regions**

Many HH in Dodoma and Singida regions of Tanzania can hardly afford to buy nutritious foods or high-quality seeds needed to grow such crops to sell and support their families. However, this situation is slowly changing as many HH now consume and grow OFSP.

Simon Yohana lives with a disabled left arm. He has only one functional hand, but he is among the direct beneficiaries who received vines from BNFB's vine multiplier in Ilindi village of Bahi District. Mr. Yohana believes that disability is not inability. His family, he says, has benefited through consumption and, financially, through the sale of the OFSP that he has been cultivating since 2016.

"Many families in this village are facing problems because they grow crops which don't help them. I have grown the OFSP since 2016 and I am happy that my family is healthy," says Mr. Yohana.



***Mr. Yohana during the interview.***

A father of three, Mr. Yohana says through the sale of the OFSP he has been able to educate his children. He says he wants to be a role model in his village. "I am expecting a bumper harvest this season. I want people to know that with only one hand, I can also make a difference," he adds.

In the same village, the Mwangaza Women Group is leading the campaigns on the use of OFSP for its nutritional value. 63-year-old Suzana Kawea is the chairperson of the 32-member group that is working toward ensuring that every woman in Ilindi village plants OFSP during this planting season. "We have received a lot of information from our leader who has been trained by the BNFB project. This information is what she gives us and we use it to reach out to other women," says Ms. Kawea.

She says they are aware that if they use OFSP, they will be able to control several diseases and help reduce stunted growth, which is a serious problem in the region.

In Masigati village in Manyoni District, the Juhudi Agricultural group consisting of both men and women are also reaching out to farmers with information on OFSP. Their chairperson, Azizah Saidi, is a BNFB vine multiplier and provides them with information every Wednesday during their meetings. At one point the group organized an OFSP promotional event for the entire village. "The first time we cooked the potatoes, we invited all the villagers to taste and appreciate the sweetness of the crop. They confirmed that the OFSP is sweet, its color is attractive, and our children love them," said Ms. Saidi.

Today, at least 11 districts (five in Singida and six in Dodoma) are growing OFSP. The dissemination efforts in these two regions are being led by SRI-Kibaha, a national partner on the BNFB project. In just under 2 years SRI-Kibaha has reached 3,346 HH (including the 1200 reached through schools) directly and 17,590 indirectly with OFSP. BNFB intends to reach 200,000 HH in these two regions by 2022.

***IR 2.3: Biofortification increasingly mainstreamed in national nutrition programs and national agricultural research systems (NARS) crop programs, and biofortified varieties of staple crops prioritized in development, release, and utilization***

Mainstreaming biofortification in the national nutrition programs and ensuring that the crops are prioritized in development, release, and utilization are key priorities of the BNFB project. Table 4 highlights some of the key efforts the project has put in place during the reporting period to ensure that these priorities are achieved in Tanzania and Nigeria.

**Table 4. Key results related to mainstreaming and release of pipeline varieties**

Crop/Country	Objective	BNFB Value Add during the Reporting Period
High-iron beans/ Tanzania	At least 5,000 HH grow high-iron and zinc-rich bean varieties by December 2018	CIAT worked with at least three NARS (ARIs)—Maruku, Selian, and Uyole—to expedite the evaluation and the official release of two high-iron and -zinc varieties (Selian 14 and Selian 15). BNFB acknowledges that release of good varieties is one thing, while availing them to farmers in a timely manner and in sufficient quantities is another. CIAT and partners have reached 3,500 HH with small promotional packs of high-iron and -zinc beans. Through the conventional seed system cycle, it takes around 3 years for released bean varieties to reach farmers. Cognizant of this, BNFB is working with partners to ensure that at least 10 acres of HIB seeds are multiplied to ensure that at least 5,000 HH obtain seed and grow the crop by December 2018, just 10 months after the varieties were released. To achieve this ambitious target, CIAT has provided technical support and a grant to ARIs Maruku, Selian, and Uyole to plant and manage the crop. Additionally, CIAT leveraged the East Africa Seed protocol to import an additional 800 kg of breeder seed of the two varieties from Burundi and Uganda to fast-track seed production in Tanzania.
	At least two high-iron and -zinc bean bush varieties released in Tanzania by March 2019	CIAT has been providing technical support, through PABRA, with BNFB funding to support NARS in Tanzania (SARI, ARI–Uyole, and ARI–Maruku) to evaluate (adaptation tests; PVS; sensory evaluation; and engaging farmers, consumers, and traders in on-farm evaluation and advanced yield trials) eight high-iron and -zinc bush bean varieties. During the reporting period, through this partnership CIAT and NARS completed work on PVS for the eight genotypes for the second season. The data generated are sufficient for analysis to identify the best candidates to be submitted to TOSCI for NPT and DUS in December 2018. The varieties are expected to be ready for release in 2019. BNFB funding has enabled the evaluation to be expedited and to be conducted at nine sites instead of five. The additional sites are significant as they will provide additional data that will determine the agro-ecological adaption of the genotypes, which will further increase the degree of confidence of the findings. The increased sites imply that more farmers and stakeholders are participating in the evaluation process and thus enhancing awareness of HIB in the country.
PVA maize/ Nigeria	At least 50,000 HH grow PVA maize in Nigeria by March 2019	BNFB supported the release of two PVA varieties in Nigeria: Sammaz 49 and Sammaz 52. During the reporting period, the project provided four seed companies with breeder seed to multiply over 150 MT of certified PVA maize seeds. Owing to the availability of seed, formation of networking between the producers and processors has actively started. It is anticipated that sufficient seed will be available to reach 50,000 HH by the long rains season of 2019. Through the PVA maize platform, stakeholders are actively engaged in food processing, particularly through small and medium-size enterprises. It is anticipated that with increased processing, more HH, particularly in the urban areas, will access and consume PVA maize products.
	More PVA maize varieties expedited for release (post-project)	During this reporting period, 100 elite PVA maize varieties/genotypes were evaluated. The varieties include single cross hybrids, 3-way cross hybrids, top cross hybrids, and open pollinated varieties. They were evaluated across lowland tropics and mid-altitude areas in Nigeria. The vitamin A-rich varieties were evaluated in Jos, Ikenne, Saminaka, Zaria, Bagawda, and Kadawa. The locations represent different agro-ecologies in the major maize-growing areas of Nigeria. The varieties will be proposed

Crop/Country	Objective	BNFB Value Add during the Reporting Period
		for registration and released when the required data are gathered by 2020, and the release will be done by private seed companies. These elite varieties are of better quality in terms of PVA content (i.e., most of the experimental varieties have close to 14 µg/g of carotenoid as compared with the earlier released ones with 10 µg/g). Thus, the quality of the pipeline varieties is much better than the already released ones.
PVA maize/ Tanzania	At least 25,000 HH grow PVA maize in Tanzania by December 2018	Through a small grant, technical support, and sensitization, CIMMYT supported Meru Agro Tours to release two PVA maize varieties (HPH 1317 and HPH 1322) in 2016. During the period in review, BNFB supported the seed company to multiply 6 ha of certified seed. Moreover, Meru Agro Tours produced 180 kg of single cross parent of Meru VAH517 at Same in Tanzania for production of certified seed. For back-up, CIMMYT planted a further 0.1 ha each of single parents of Meru VAH517 and Meru VAH519 in Harare. It is anticipated that sufficient seed will be available for farmers during the October–December 2018 rainy season. To expedite the availability of grain for consumption and processing, Meru Agro Tours was supported with another small grant to grow at least 11 ha of grain in the Southern Highlands.
	At least one more PVA maize variety is released in Tanzania by end of the project	The process of evaluation and release of promising varieties is continuous. However, in countries where biofortified crops are new, more deliberate effort is needed to maintain and sustain the varietal evaluation processes. As highlighted under IR 2.2, through a small grants scheme, CIMMYT supported three seed companies to expedite the evaluation of promising genotypes. Eighteen new hybrids were provided to Aminata for further testing. Tanseed continued with further testing of the materials provided during the previous contract before entering them to the DUS/NPT stage. MAMS seed will be moving their materials to the next-stage (i.e., DUS/NPT and farmer evaluation phase). BNFB aims to release at least one additional PVA maize variety in Tanzania by the end of the project. Through the PVA maize platform, the project is building sustainable capacity of the seed companies and national researchers to continue with the evaluation processes after the project ends.
OFSP/Tanzania	At least one more OFSP variety is released in Tanzania by end of the project	BNFB forged synergy with CIP's VISTA project, in funding SRI–Kibaha to conduct field evaluations of 11 promising OFSP varieties: Kiegea, Ex-Luambano, Mataya, Ejumula, Jewel, SPKBH 06/676, Kabode, Naspot 13, Alveria, and Kakamega. (VISTA initiated the partnership, but the project ended in 2017.) BNFB then stepped in to support the continuation of the evaluations. The SRI–Kibaha team has continued to work with farmer groups and 11 district councils (Mpwapwa, Dodoma, Itigi, Manyoni, Singida, Mkalama, Kiomboi, Ikungi, Bahi, Chamwino, and Kondoa) to establish and manage at least Mother–Baby trial sites in Dodoma and Singida. Moreover, the BNFB fund facilitated the agro-ecological testing of the 11 varieties in Dodoma and Singida, with four Mother trials and 26 Baby trials established. The data from these trials will complete the second set, paving the way for application for the release of at least four potential candidates of OFSP varieties (i.e., Naspot 13, SPKBH03, SPKBH03/676, and Ex-Luambano). These candidate varieties are expected to be submitted to TOSCI (for NPT) by the end of 2018. Without this funding, it is unlikely that the evaluations would have continued, nor would the two regions have been considered for testing for varieties that are adaptable to dry areas.
	At least 100,000 HH grow OFSP by the end of the project	SRI–Kibaha has put in place innovative mechanisms to ensure that at least 100,000 HH obtain OFSP, including the use of primary school children to reach more people. Through this approach, at least 1,200 HH have obtained vines. SRI–Kibaha is also working closely with the 11 district councils to allocate funds to multiply and disseminate OFSP. This is an important approach in ensuring sustainability. Last year, at least \$15,695 was allocated by four district councils (Iramba, Bahi, Mkalama, and Manyoni) to support various OFSP activities. Previously, some DVMs were hardly reached and data on indirect HH were not recorded. BNFB implemented an improved documentation exercise to collect data on HH that have obtained OFSP and found that 17,590 indirect HH had obtained vines.
OFSP/Nigeria	At least two more	Farmer participatory on-farm trials conducted in four states were harvested and

Crop/Country	Objective	BNFB Value Add during the Reporting Period
	OFSP varieties are released in Nigeria by the end of the project	evaluated. ADPs, farmers, and the National Variety Release Committee members participated in the evaluation. BNFB supported the on-farm trials and provided technical support in the compilation and writing of the dossier that was submitted to the National Variety Release committee. Two promising genotypes, 'Solo Gold' and 'Namanga', were nominated for release. 'Solo Gold' (UMUSPO4) was released on 26 July 2018. The variety is high in beta-carotene and dry matter, is high yielding, resistant to sweetpotato weevil and virus disease, and is adaptable in multiple locations across the country. 'Namanga' variety will undergo additional season of multilocation trials and is likely to be released in 2019.
	At least 100,000 HH grow OFSP by the end of the project	BNFB is partnering with the ADPs of the four target states (Enugu, Ogun, Taraba, and Kogi) to multiply and disseminate OFSP planting materials. Discussions are ongoing with the state governments to allocate funds to support vine multiplication so as to reach more HH. Enugu State empowered three DVMs with low-capacity water pumps so that they can increase production of quality vines. As in Tanzania, BNFB conducted a systematic survey in May–June to document the indirect HH that are growing OFSP in Enugu and Kogi. A total of 843 indirect HH were documented. Data collection for the two remaining states is planned for September.

In addition to supporting dissemination efforts for the released biofortified crops and catalyzing the release of pipeline varieties, BNFB continued to participate in and support various other events to help entrench biofortification in national programs. Some of these are highlighted below:

- In Tanzania a joint monitoring and advocacy exercise by SRI–Kibaha, CIP, and Hombolo Research Institute was conducted in Dodoma and Singida regions on 2–5 December 2017. The institute is supporting SRI–Kibaha to implement OFSP activities in these two regions. The team visited Iramba, Bahi, Mkalama, Manyoni, and Ikungi district councils to meet with the local council executives and to document resources allocated to biofortification by the districts. Iramba district council has allocated TSH 4m toward OFSP, Mkalama has allocated TSH 10m (OFSP and cassava), Bahi allocated TSH 16m (all biofortified crops), and Manyoni allocated TSH 5m (OFSP). The teams further discussed strategies to scale up biofortified crops and how these crops can be further entrenched in the district programs. In Iramba District, agreement with the district leaders was reached to include OFSP in the school-feeding program with a pilot run planned for 2019, after sufficient roots have been produced by farmers and schools in the area.
- BNFB has continued to support the implementation of NMNAP in Tanzania. For instance, BNFB is supporting TFNC to measure progress toward output-, outcome-, and impact-level indicators as well as toward actual spending (through its common results, resources, and accountability framework) against the funds initially planned to implement NMNAP. To this end, the MLE specialist supported TFNC and PANITA to develop a tool (see Annex 4) to collect data on investments by INGOs in nutrition, biofortification included. The aim is to improve nutrition governance and information system in Tanzania and to improve availability, analysis, and utilization of information on physical and financial implementation of nutrition activities. Moreover, the senior country coordinator held an advocacy meeting for policymakers and technical staff of the TFNC on 19–20 April 2018, to facilitate the mainstreaming of biofortification in their nutrition education and training programs and guidelines.



- Following the capacity development activity for advocates held in April 2018 to drive, mainstream, and raise new investments for scaling up biofortification in Nigeria, BNFB national advocates led advocacy/ sensitization events on the complementarity of biofortification and other approaches to help end hidden hunger at Kwali Area Council, Abuja. One of the participants, the state nutrition officer for FCT, Abuja, advocated for support for biofortification at the CMAM event in Kwali area council in FCT. Her advocacy efforts at the CMAM center attracted over 100 participants (including dignitaries) from public and private sectors. The exhibition of biofortified crop planting materials and products helped to further sensitize participants on the health and wealth benefits of biofortified crops and products. The area council established a demo plot for OFSP, which was planted the same day to illustrate the council's support for biofortification.



**CMAM event, FCT, Abuja.**

## 2. Project Adjustments

### 3. MILESTONE DEVIATIONS AND COURSE CORRECTION

Table 5 presents outcomes and outputs that are behind schedule, the reasons, and proposed steps to fast-track their implementation or plans for corrective action.

**Table 5. Key milestone deviation and course correction**

Milestone	Corrective Action
At least \$10m committed by donor, philanthropists, private sector, or government for biofortification	<p>The project team has intensified efforts toward raising resources to implement biofortification programs in Nigeria and Tanzania. As noted under IR1. 5,751,301 of new investments were recorded during the current reporting period.</p> <p>To date, \$6,145,332 has been raised to support initiatives on biofortification in Nigeria and Tanzania (Appendix 1). An additional \$12,946,180 is in the pipeline in Tanzania and Nigeria (Appendix 2). The project is optimistic that a significant proportion of the funds in the pipeline will be released to narrow the gap of the \$4m remaining on the project target of \$10m. Moreover, plans to conduct systematic data collection on investments by the seed companies in Nigeria and those by the government of Tanzania are scheduled for September–October. We anticipate that the \$10m target will be achieved by the end of the project period.</p>
At least 5 technical programs supporting or utilizing biofortification designed and implemented by 2018	<p>The official release of HIB in Tanzania has enabled the promotion of the biofortified crops as a complete food basket. Moreover, fundraising for national programs on biofortification in both Nigeria and Tanzania is becoming a practical reality. Even when national programs may not have been implemented or attracted any funding yet, programs at the state/ local council level have started taking shape. In Tanzania the ASDP II document contains biofortification and has more than 15 VCs. The inclusion of biofortification was influenced by the RAC project. The ASDP II will be implemented up to 2023 and will be financed by the Government of Tanzania (41%), and development partners (59%). Its launch brings many more opportunities and is likely to herald new attention on nationwide program(s) on biofortification. At the local council level, Iramba, Arumeru, Moshi, Hai, Mbulu, and Monduli district councils in Tanzania have indicated that they will introduce biofortified crops in their school-feeding programs. BNFB has supported the translation of statements on biofortification in the ADSP II. The program was launched by His Excellency the President of Tanzania, Dr. John Pombe Magufuli, on 4 June 2018, in Dar es Salaam. The ADSP II aims to reform small-scale farming; increase productivity and increase revenue for farmers; and increase food security among others. The inclusion</p>

Milestone	Corrective Action
	of biofortification was influenced the RAC project, which preceded the BNFB project. In Nigeria, Cross Rivers and Abia states have included OFSP in their school-feeding menu and will soon be going to scale. At regional level, the TAAT program included biofortified crops in the compact of the VCs it will work on. Already, in the first year, \$390,000 was allocated by the program to OFSP and HIB.
Establish crop-specific strategies to accelerate the uptake of biofortified crops	Through the crop-specific platforms established by BNFB in Tanzania and Nigeria, various stakeholders along the VCs of OFSP, PVA maize, and HIB are involved in identifying challenges and opportunities that facilitate scaling up of biofortified crops. The platforms have held various meetings to raise issues and jointly arrive at solutions. The BNFB design has been to keep reducing the budgetary allocation and allow national partners to support the platform meetings. Officials have been selected from the two countries and sustainability strategies have been discussed. BNFB has assessed the preparedness of the platforms to continue running without BNFB. Members of the platforms see value and would like to continue with the activities of the platform beyond BNFB. They discussed various sustainability options including registering the platforms as legal entities, paying a subscription fee and getting support from new projects / organizations specializing on the specific crops. Platforms of commercial crops such as maize are likely to be more sustainable because of the private sector role.
At least 2.175m HH reached with biofortified crops by 2020	The project has targeted to reach at least 1.175m HH by December 2018. Currently, 980,865HH in Tanzania and Nigeria have been recorded as growing the biofortified crops. The pace of reaching more HH is likely to accelerate when the HIB and PVA maize seeds in Tanzania and PVA maize in Nigeria become available on the market. The project is yet to calculate the number of HH reached with the PVA maize seed sold by seed companies in Nigeria. During the current reporting period, the project has focused on expediting the bulking of the seeds for these crops (see Table 4). To achieve the target of 1.175m HH by December 2018, the MLE specialist is conducting systematic surveys in both countries to capture data on indirect HH that have received OFSP and not documented and working with seed specialists of the BNFB biofortified crops to estimate the number of HH reached with PVA maize and HIB. In addition the BNFB team will work closely with national partners (policymakers, seed companies, DVMs, farmer organizations, extension services, NGOs) to stimulate demand, disseminate seed, and document the number of HH that will receive PVA maize seed, HIB seed, OFSP vines, and yellow cassava (cassava figures from HarvestPlus) during the next cropping season.

### 3. Geographic Areas to Be Served

Provide the most updated list of countries and sub-regions/states that have benefitted or will benefit from this work and associated dollar amounts. If areas to be served include the United States, indicate city and state. Reflect both spent and unspent funds. Add more rows as needed. More information about Geographic Areas to Be Served can be found [here](#).

Location	Foundation Funding (\$)	Year 1 Expenses (\$)	Year 2 Expenses (\$)	Year 3 Expenses (\$)	Total Balance (\$)
Nigeria	2,500,000	380,663	1,074,529	650,794	394,014
Tanzania	2,500,000	385,456	998,840	592,924	522,780

Although the balance reflected amounts to \$916,794 as per CIP's accounts up to July 2018, there are pending expenses and reconciliations which refer to this period but will only be captured in CIP's accounts in August 2018. After considering those adjustments, the remaining adjusted balance for the period ending in July 2018 is \$ 763,897

### 4. Geographic Location of Work

Provide the most updated list of countries and sub-regions/states where this work has been or will be performed and associated dollar amounts. If location of work includes the United States, indicate city and state. Reflect both spent and unspent funds. Add more rows as needed. More information about Geographic Location of Work can be found [here](#).

Location	Foundation Funding (\$)	Year 1 Expenses (\$)	Year 2 Expenses (\$)	Year 3 Expenses (\$)	Total Balance (\$)
Nigeria	1,703,397	214,774	1,008,860	636,306	-56,544
Tanzania	2,909,949	481,958	933,171	578,436	916,383
Kenya	100,000	31,421	22,685	19,412	26,482
Ghana	82,035	15,000	12,584	8,512	45,939
Global	204,620	22,966	96,069	1,052	84,534
<b>Total</b>	<b>5,000,000</b>	<b>766,120</b>	<b>2,073,369</b>	<b>1,243,718</b>	<b>916,794</b>

Although the balance reflected amounts to \$916,794 as per CIP's accounts up to July 2018, there are pending expenses and reconciliations which refer to this period but will only be captured in CIP's accounts in August 2018. After considering those adjustments, the remaining adjusted balance for the period ending in July 2018 is \$ 763,897

## 5. Feedback for the Foundation

Provide one to three ways the foundation has successfully enabled your work so far. Provide one to three ways the foundation can improve.

The BMGF has supported the implementation of BNFB activities in the following ways:

- The program officer has continued to provide guidance on project implementation on a monthly basis. Feedback provided during the consultative meetings has expedited decision-making, pointed out new opportunities and facilitated prompt corrective action.
- BMGF invited BNFB to the PVA maize stakeholders meeting in Abuja. The contributions from the various actors provided insights into key challenges, opportunities, expansion of our network of partners, and linkages to actors along the PVA maize VC. BNFB has worked with some of the partners to advance the project goals.
- BMGF staff attended the review and closeout meeting in Abuja, Nigeria, which helped consolidate progress made over different reporting periods, challenges, opportunities, and lessons learned in implementing the project. This also helped the BMFB staff to better understand the BMGF scaling up model from contributions made by different partners and stakeholders.
- BMGF has commissioned an external evaluation of the impact of work the foundation has sponsored and the outcome of the report will provide more insights into the impact of the BNFB scaling up model, lessons learned and recommendations on the way forward.

## 6. Global Access and Intellectual Property

If your funding agreement is subject to Intellectual Property Reporting, please click the following link to complete an [Intellectual Property \(IP\) Report](#).

If not, please acknowledge by typing "N/A": N/A

To delegate permissions to another member of your project team or for any questions regarding the Intellectual Property Report, please contact [GlobalAccess@gatesfoundation.org](mailto:GlobalAccess@gatesfoundation.org).



## 7. Regulated Activities

Do you represent that all Regulated Activities<sup>1</sup> related to your project are in compliance with all applicable safety, regulatory, ethical and legal requirements? Please mark with an "X":

☒ N/A N/A (no Regulated Activities in project)

☐ Yes

☐ No (if no, please explain below)

Are any new Regulated Activities<sup>1</sup> planned which were not described in any documents previously submitted to the foundation? Please mark with an "X":

☒ No

☐ Yes (if yes, please explain below)

<sup>1</sup> Regulated Activities include but are not limited to: clinical trials; research involving human subjects; provision of diagnostic, prophylactic, medical or health services; experimental medicine; the use of human tissue, animals, radioactive isotopes, pathogenic organisms, genetically modified organisms, recombinant nucleic acids, Select Agents or Toxins ([www.selectagents.gov](http://www.selectagents.gov)), Dual Use technology ([http://export.gov/regulation/eq\\_main\\_018229.asp](http://export.gov/regulation/eq_main_018229.asp)), or any substance, organism, or material that is toxic or hazardous; as well as the approvals, records, data, specimens, and materials related to any of the foregoing.

## 4. FINANCIAL UPDATE

*The purpose of the Financial Update section is to supplement the information provided in the “Financial Summary & Reporting” sheet in the foundation budget template, which reports actual expenditures and projections for the remaining periods of the grant. This section is a tool to help foundation staff fully understand the financial expenditures across the life of the project. Together, the Financial Update section and budget template (“Financial Summary & Reporting” sheet) should provide a complete quantitative and qualitative explanation of variances to approved budget.*

*Note: If you are using an older version of the budget template, this information could be in a different location in your template.*

### 1. Summary

**Briefly describe how total project spending to date compares against the budget and how your assumptions may have changed as the project progressed.**

This financial update provides an overview of the Building Nutritious Food Baskets (BNFB) project’s Y3 Q3 (Interim Progress Report, November 2017–July 2018) and highlights expenditure of investments, updates, and projections. During this reporting period we captured in CIP’s accounts an expenditure of \$1,243,718 against an approved projected budget of \$2,160,512 (for Y3), which leaves CIP an official balance of \$916,794 (Table F1). However, there are pending partner expenses for Q3 that will only be captured in CIP’s official accounts in August 2018 amounting to \$201,904 and pending adjustments to CIP expenses amounting to (\$70,423). With these adjustments, the level of expenditure for the period comes to a revised \$1,396,615, reflecting a 65% expenditure rate. Therefore, the adjusted balance for the period is \$763,897 (Table F2). These adjustments are due to timing differences between CIP’s financial monthly schedules and CIP’s financial procedures establish that by the 8<sup>th</sup> of the following month, a period will be closed in our accounting system. In practice this means that any information received or reviewed after the monthly close will only be captured in the following month. The adjustments reflected above are due to:

- BNFB partners submitted their Q3 financial reports after CIP had already closed its July official accounts; therefore these have been captured in our August official numbers.
- During the review of the financial report some expenses were identified as incorrectly coded to BNFB. And although these have already been adjusted since CIP accounts were already closed for the month of July, these will be officially reflected in August.

Subgrants:

During this reporting period CIP has registered \$287,782 related to partners’ expenditure. As per the explanation above, partners have reported an additional expenditure of \$201,904, which has been captured in CIP’s accounts as of August 2018. These combined reports bring the adjusted partner expenditure to \$489,686, reflecting a 66% expenditure rate and a balance of \$246,924 (Table F2).

**Table F1. Total expenditure against the approved Y3, Q3 (interim progress report, November 2017–July 2018)**

Year 3 Budget Categories	Y3 Budget (\$)	Y3 Expenditures (\$)	Y3 Budget Balance (\$)	Spent (%)
Personnel	589,643	457,925	131,719	78
Travel	93,000	50,490	42,510	54
Consultants	88,000	28,464	59,536	32
Other Direct Costs (ODCs)	371,453	247,014	124,439	66
Sub-awards	736,610	287,782	448,828	39
Total direct cost	1,878,706	1,071,674	807,032	57
Indirect cost	281,806	172,043	109,763	61
<b>TOTAL BUDGET</b>	<b>2,160,512</b>	<b>1,243,718</b>	<b>916,794</b>	<b>58</b>

Variances in the categories highlighted in Table F1 for personnel, consultancies, and other direct costs are presented in Table F2. Explanations for these variances are provided in Table F6 below.

**Table F2. Adjusted report—total expenditure with adjusted expenditures not captured in CIP accounts as of 31 July 2018 against the approved Y3, Q3**

Y3 Budget Categories	Y3 Budget (\$)	Y3 Expenditures (\$)	Y3 Adjustable Expenditures (\$)	Y3 Total Adjusted Expenditures (\$)	Y3 Budget Balance (\$)	Spent (%)
Personnel	589,643	457,925	-29,474	428,451	161,192	73
Travel	93,000	50,490	0	50,490	42,510	54
Consultants	88,000	28,464	-5,040	23,424	64,576	27
ODCs	371,453	247,014	-24,617	222,397	149,056	60
Sub-awards	736,610	287,782	201,904	489,686	246,924	66
Total direct cost	1,878,706	1,071,674	142,773	1,214,448	664,258	65
Indirect cost	281,806	172,043	10,124	182,167	99,639	65
<b>TOTAL BUDGET</b>	<b>2,160,512</b>	<b>1,243,718</b>	<b>152,897</b>	<b>1,396,615</b>	<b>763,897</b>	<b>65</b>

Table F3 shows that the expenditure rate during the project life based on CIP's official accounts as of July 2018 was 82%. However, after adjustments were made the rate was 85% (Table F4).

**Table F3. Project life expenditures against project budget**

1264-BMGF	Project Budget (\$)	Y1 Expenses/ Budget (\$)	Y2 Expenses/ Budget (\$)	Y3 Expenses (\$)	Total Project Expenses (\$)	Project Budget Balance (\$)	Spent (%)
Personnel	1,491,450	347,524	554,283	457,925	1,359,732	131,718	91
Travel	239,502	61,393	85,109	50,490	196,992	42,510	82
Consulting	251,141	40,258	122,883	28,464	191,605	59,536	76
ODCs	851,511	125,078	354,980	247,014	727,072	124,439	85
Sub-grantees	1,514,222	91,937	685,675	287,782	1,065,394	448,828	70
Total, ODCs	4,347,826	666,191	1,802,929	1,071,675	3,540,795	807,031	81
15% Indirect Costs	652,174	99,929	270,439	172,043	542,411	109,763	83
<b>GRAND TOTAL</b>	<b>5,000,000</b>	<b>766,120</b>	<b>2,073,368</b>	<b>1,243,718</b>	<b>4,083,206</b>	<b>916,794</b>	<b>82</b>

**Table F4. Adjusted project life expenditures against project budget**

1264-BMGF	Project Budget (\$)	Y1 Expenses/ Budget (\$)	Y2 Expenses/ Budget (\$)	Y3 Adjusted Expenses (\$)	Total Project Expenses (\$)	Project Budget Balance (\$)	Spent (%)
Personnel	1,491,450	347,524	554,283	428,451	1,330,258	161,192	89
Travel	239,502	61,393	85,109	50,490	196,992	42,510	82
Consulting	251,141	40,258	122,883	23,424	186,565	64,576	74
ODCs	851,511	125,078	354,980	222,397	702,455	149,056	82
Sub-grantees	1,514,222	91,937	685,675	489,686	1,267,298	246,924	84
Total, ODCs	4,347,826	666,191	1,802,929	1,214,448	3,683,568	664,258	85
15% Indirect Costs	652,174	99,929	270,439	182,167	552,535	99,639	85
<b>Grand Total</b>	<b>5,000,000</b>	<b>766,120</b>	<b>2,073,368</b>	<b>1,396,615</b>	<b>4,236,103</b>	<b>763,897</b>	<b>85</b>

Table F5 shows the expenditure of partners for the project life and their cash position till July 2018.

**Table F5. Y3, Q3 partners expenditure (\$) based on funds disbursements**

	A	B	C (A - B)	D	E (C + D)	F	G (E - F)	
Sub-Grants	Y1 Disbursements	Y1 Reported Expenditures	Y1 Carry Over Cash Balance	Y2 Disbursements	Y2 Cash Balance Available	Y2 Reported Expenditures	Y2 Cash Balance	Y2 Spent (%)
<b>Organization</b>								
CIAT: Biofortified beans-Tanzania	96,236	25,648	70,588	172,194	242,782	162,030	80,752	67
FARA: Regional Advocacy	64,593	18,976	45,617	47,205	92,822	96,474	-3,652	104
CIMMYT: Biofortified Maize-Tanzania	129,200	17,754	111,446	116,801	228,247	142,280	85,967	62
IITA: Biofortified Maize -Nigeria	104,430	18,098	86,332	119,362	205,694	265,716	-60,022	129
SRI Kibaha: Seed Systems	14,881	11,461	3,420	28,603	32,023	19,175	12,848	60
<b>TOTAL</b>	<b>409,340</b>	<b>91,937</b>	<b>317,403</b>	<b>484,165</b>	<b>801,568</b>	<b>685,675</b>	<b>115,893</b>	<b>86</b>
	H	I (G + H)	J	K (I - J)				
Sub-Grants	Y3 Disbursements	Y3 Cash Balance Available	Y3 Reported Expenditures	Year 3 Cash Balance	Year 3 Spent (%)			
<b>Organization</b>								
CIAT: Biofortified beans-Tanzania	102,192	182,944	92,996	89,948	51			
FARA: Regional Advocacy	74,648	70,996	21,348	49,648	30			
CIMMYT: Biofortified Maize-Tanzania	126,240	212,207	44,450	167,757	21			

IITA: Biofortified Maize and - Nigeria	166,271	106,249	110,223	3,974	104
SRI Kibaha: Seed Systems	27,613	40,461	18,765	21,696	46
<b>TOTAL</b>	<b>469,351</b>	<b>612,857</b>	<b>287,782</b>	<b>325,075</b>	<b>47</b>

Although the cash balance reflected in Table F5 above amounts to \$325,075 as per CIP's accounts up to July 2018, there are pending expenses which refer to this period but will only be captured in CIP's accounts in August 2018. After considering those adjustments, the remaining adjusted cash balance available to partners for the period ending in July 2018 is \$123,171.

## 2. Latest Period Variance

Provide explanation for any cost category variances outside the allowable range. Explain causes, consequences for the project, and mitigation plans if relevant. Report whether or not approval for the variance has been obtained from your Program Officer.

Note: "Latest period variance" compares actuals to previous projections for the period. See "Financial Summary & Reporting" sheet in the foundation budget template for calculated variance. If you are using an older version of the budget template, this information could be in a different location in your template. Allowable variance is defined in your grant agreement.

The project does not have any cost category variances outside the allowable range. At the end of Y3, Q3 the project utilized 65% of overall budget (after adjustments; see Table F2). The summary below explains the expenditures. Table F6 explains the expenditure variances for personnel, consultancies, ODCs, and sub-awards based on CIP's official accounts.

**Table F6. Y3, Q3 explanation of total expenditure variances**

Budget Categories	Expenditures (\$)	Spent (%)	Comments
Personnel	457,925	78	This is on track, once pending adjustments are considered the expenditure rate is 73% (Table F2).
Travel	50,490	54	This is on track. Major progress report expenditures which include the review and closeout meeting, the project steering committee meeting among other regional meetings will be captured in August 2018.
Consultants	28,464	32	This appears low and goes further down to 27% after adjustments. This is because payment for most of the consultants will be captured in August and September 2018. The projections for August–October 2018 outline other consultants who will be engaged and paid for specific tasks. This will increase the expenditure rate for the consultancies budget line category. There has been a delay in finalizing the updated ToT manual because some subject matter specialists were not able to submit their write-ups to the consultant in time, hence the consultant has not been paid. Consultancy for updating the investment guide was dependent on findings of the RAC ex-post evaluation on how the advocates and champions were using the tool and their recommendations on how to improve it. BNFB carried out a quick SurveyMonkey during July 2018 to determine whether to proceed with the update and what content to add. The consultant for updating the investment guide on biofortification and formatting the ToT manual based on the format and style used for other learning modules in this series has been commissioned and will be completed in September 2018. Other consultancies that will be completed before October 2018 are presented in the projections section below.
ODCs	247,014	66	This is on track as some of the expenditures incurred had not been captured in the system when CIP closed the accounts in July 2018. The percentage will initially go down to 60% after adjustments but will increase gradually as the project teams finalize pending activities for Q4.
Sub-awards	287,782	39	This appears low. But as presented in Table F2, partners have reported an additional expenditure of \$201,904 which has been captured in CIP's accounts as of August 2018. These combined reports bring the adjusted partner expenditure to a total of \$489,686, reflecting a 66% expenditure rate and a balance of \$246,924.

Table F7 shows the actual expenditure status of partners.

**Table F7. Project partners actual expenditure status**

	Organization	Total Expenditures as of July 30, 2018 (\$)	Expenditures Registered after July 30, 2018 (\$)	Total Expenditures (\$)
1	CIAT: Biofortified beans-Tanzania	44,450	50,898	95,348
2	FARA: Regional Advocacy	18,765	40,365	59,130
3	CIMMYT: Biofortified Maize-Tanzania	110,223	58,257	168,480
4	IITA: Biofortified Maize and -Nigeria	92,996	32,753	125,749
5	SRI Kibaha: Seed Systems	21,348	19,631	40,979
	<b>TOTAL</b>	<b>287,782</b>	<b>201,904</b>	<b>489,686</b>
		Y3 Budget		736,610
		% spent by mid-year		66%

Table F8 presents actual budget expenditures, balances as at July 2018 and projections for activities to be implemented during Q4. Details on activity expenditures for August–October 2018 are presented below under the section on detailed projections for Q4.

**Table F8. Projections and forecast**

Budget Categories	BUDGET Y1–Y3	Expenditure up to July	Adjustments	Total with Adjustments	Balance	Forecast of Expenditure	Total Expected Expenditure	Expected Balance
<i>Personnel</i>	1,491,450	1,359,732	-29,474	1,330,258	161,192	161,192	1,491,450	-
<i>Travel</i>	239,502	196,993	-	196,993	42,509	42,509	239,502	-
<i>Consultancies</i>	251,141	191,604	-5,040	186,564	64,577	54,822	241,386	9,755
<i>ODCs</i>	851,511	727,072	-24,617	702,455	149,056	122,056	824,511	27,000
<i>Sub-grants</i>	1,514,222	1,065,394	201,904	1,267,298	246,924	198,602	1,465,900	48,322
CIAT: Biofortified beans-Tanzania	396,170	280,674	50,898	331,572	64,598	64,598	396,170	-
FARA: Regional Advocacy	204,620	136,798	40,365	177,163	27,457	20,194	197,357	7,263
CIMMYT: Biofortified Maize-Tanzania	403,800	204,484	58,257	262,741	141,059	100,000	362,741	41,059
IITA: Biofortified Maize and -Nigeria	431,632	394,037	32,753	426,790	4,842	4,842	431,632	-
SRI Kibaha: Seed Systems	78,000	49,401	19,631	69,032	8,968	8,968	78,000	-
<i>Subtotal- Direct Costs</i>	<i>4,347,826</i>	<i>3,540,795</i>	<i>142,773</i>	<i>3,683,568</i>	<i>664,258</i>	<i>579,181</i>	<i>4,262,749</i>	<i>85,077</i>
<i>Indirect Costs</i>	<i>652,174</i>	<i>542,411</i>	<i>10,124</i>	<i>552,535</i>	<i>99,639</i>	<i>86,877</i>	<i>639,412</i>	<i>12,762</i>
<b>Total</b>	<b>5,000,000</b>	<b>4,083,206</b>	<b>152,897</b>	<b>4,236,103</b>	<b>763,897</b>	<b>666,058</b>	<b>4,902,161</b>	<b>97,839</b>

### 3. Total Grant Variance

Provide explanation for any cost category variances outside the allowable range. Explain causes, consequences for the project, and mitigation plans if relevant. Report whether or not approval for the variance has been obtained from your Program Officer.

Note: “Total grant variance” compares actuals plus current projections to the budget. See “Financial Summary & Reporting” sheet in the foundation budget template for calculated variance. If you are using an older version of the budget template, this information could be in a different location in your template. Allowable variance is defined in your grant agreement.

During this reporting period, there was no budget variance outside allowable ranges.

#### 4. Sub-awards (if applicable)

Use the chart to provide the name(s) of the sub-grantee(s) or subcontractor(s), actual disbursement for this reporting period, total disbursement to date from the primary grantee to sub-awardee, total spend to date by the sub-awardee and total contracted amount.

Note: The total of actual disbursements for this reporting period should equal the actual Sub-awards expenses reported on the "Financial Summary & Reporting" sheet in the foundation template for this reporting period. If you are using an older version of the budget template, this information could be in a different location in your template.

**Table F9. Names of sub-grantees, actual disbursements, total expenditure, and contracted amount in Y3—midterm**

Organization	Actual Disbursement for this Reporting Period (\$)	Total Disbursed from Primary Awardee to Sub to Date (\$)	Total Sub-Awardee Spent to Date (\$)	Total Contracted Amount (\$)
CIAT: Biofortified beans-Tanzania	102,192	370,622	280,674	396,170
FARA: Regional Advocacy	74,648	186,446	136,798	204,620
CIMMYT: Biofortified Maize-Tanzania	126,240	372,241	204,484	403,800
IITA: Biofortified Maize and -Nigeria	166,271	390,063	394,037	431,632
SRI Kibaha: Seed Systems	27,613	71,097	49,401	78,000
<b>Total</b>	<b>469,964</b>	<b>1,390,469</b>	<b>1,065,394</b>	<b>1,514,222</b>

#### 5. Other Sources of Support (if applicable)

List and describe any sources of *in-kind* project support or resources received in the reporting period.

Note: Names of the other sources of funding and their contributions (U.S.\$) should be included in the budget template on the "Financial Summary & Reporting" sheet in the foundation budget template in the Funding Plan table. If you are using an older version of the budget template, this information could be in a different location in your template.

All project partners and implementing institutions are complementing the work of BNFB from other institutional resources (human talent and financial). The technical and administrative teams backstop various activities and processes that are difficult to quantify financially (e.g., reviewing and revising the learning modules based on their technical expertise).

Describe how interest earned and/or currency gains were used to support the project.

Interest earned during the reporting period amounts to \$889.29. CIP intends to use these funds to print extra copies of the Investment Guide on Biofortification.

#### Privacy and Non-Confidentiality Notice

The foundation is required by the IRS to publish a list of its grants. We may also provide a general description of our grants and contracts on our web sites, in press releases, and in other marketing materials. Subject to the foundation's [Privacy Policy](#), the foundation may also share information you provide to us (either orally or in writing) with third parties, including external reviewers, key partners and co-funders. This document is subject to the foundation's [Terms of Use](#).

## For Foundation Staff to Complete

**Analysis** (required if contingent payment or PO assessment differs from grantee/vendor assessment)

### Progress Analysis

*Include analysis of significant project variances and key learnings that may inform portfolio discussions for progress against the strategic goals.*

--

### Budget and Financial Analysis

*Include analysis of unexpended funds or over expenditures. Refer to the [Unexpended Grant Funds Policy](#) for options available when recommending how to handle unexpended grant funds, or reach out to your primary contact in GCM.*

--

Scheduled Payment Amount	\$
Carryover Amount	\$
Recommended Payment Amount	\$

### Approver Comments (if applicable)

Name	Title	Date Approved

### Comments

--



## APPENDICES

### APPENDIX 1. RESOURCES MOBILIZED (OCT. 2015–JULY 2018)

Implementing Institution	Category of Implementing Institution	Donor	Project Focus	Budget (\$)	Location of Project	Status of Project	Duration of Project/Activity
Chunya District Council, Tanzania	Local government	Local government	Vine multiplication, dissemination, nutrition, and education	10,000	Tanzania—Chunya District	Ongoing	2017/22
Gairo District Council, Tanzania	Local government	Local government	Vine multiplication, dissemination, nutrition, and education	6,000	Tanzania—Gairo District	Ongoing	2017/18
Iramba District Council	Local government	Local government	OFSP production	1,794	Tanzania—Iramba	Ongoing	2017/18
Mkalama District Council	Local government	Local government	OFSP production	4,484	Tanzania—Mkalama	Ongoing	2017/18
Bahi District Council	Local government	Local government	Production of biofortified crops	7,175	Tanzania—Bahi District Council	Ongoing	2017/18
Manyoni District Council	Local government	Local government	OFSP production	2,242	Tanzania—Manyoni	Ongoing	2017/18
SRI-Kibaha	NARI	ENRICH (HarvestPlus & World Vision)	ToT courses on OFSP	27,336.1	Tanzania—multiple	Phase 1	2016/17
Agricultural and Rural Management Training Institute	Public tertiary training institution	Federal government	ToT courses on OFSP	35,000	Nigeria—multiple	Phase 1	2016/17
CRS	NGO	USAID	Distribution of biofortified crop planting materials	300,000	Nigeria—multiple	Ongoing	2016/18
Premier Seed Company LTD	Private	Private	Production and marketing of PVA maize seeds	983,486.1	Nigeria—multiple	Ongoing	2016/17
Save the Children	International organization	DFID	Vine multiplication, dissemination, nutrition, and education	500,000	Nigeria—multiple (northern Nigeria)	Ongoing	2018-2020
CRS	NGO	USAID	Training materials (OFSP and yellow cassava)	15,000	Nigeria—multiple	Ongoing	2017/2018
CIP leading	International organization	AfDB	OFSP production and marketing	260,000	Nigeria & Tanzania—multiple	Phase 1	2017/18
Multiple (HarvestPlus and partners)	Federal and state governments	Federal and state governments	Production, processing, and marketing of	2,000,000	Nigeria—multiple	Ongoing	2017

Implementing Institution	Category of Implementing Institution	Donor	Project Focus	Budget (\$)	Location of Project	Status of Project	Duration of Project/Activity
	and INGOs	and INGOs	yellow cassava				
CIAT	International organization	AfDB and PABRA	HIB production and marketing	600,000	Tanzania—multiple	Phase 1	2017/18
TFNC	Public institution	Central government	Machinery	90,000	Tanzania—multiple	Ongoing	Open ended
Meru Agro Tours	Private sector	Private sector	Multiplication of PVA maize grain	61,000	Tanzania—multiple	Ongoing	2017/18
Helen Keller International	International organization	Mondelēz International Foundation	Production and use of OFSP and other vegetables	878,315	Nigeria—multiple	Ongoing	
SUGECO	Private	Private	OFSP VC	318,000	Tanzania—Multiple	Ongoing	2017/18
Perfect Farm Group	Private	Private	Production & processing of OFSP, HIB, and PVA maize	18,200	Tanzania—Multiple	Ongoing	2017/18
AFCO Investments LTD	Private	Private	Investment in processing, storage facilities, awareness creation, marketing	27,300	Tanzania—Multiple	Ongoing	2017/18
<b>Total</b>				<b>6,145,332.2</b>			

## APPENDIX 2. RESOURCES IN THE PIPELINE

Submitting Institution	Category of Submitting Institution	Donor	Project Focus	Budget (\$)	Location of Project	Status of Project	Duration of Project/ Activity
GAIN/FMARD and CIP	Multiple	EU	Production of biofortified crops	10,000,000	Nigeria- multiple	Concept note	2018/21
Farm Africa/ SUGECO	Multiple	AGRA	Production of biofortified crops	2,400,000	Tanzania–multiple	Concept note	2018/20
AFCO LTD	Private	USAID	OFSP and PVA value addition	50,000	Tanzania–multiple	Concept note	2018/19
Research, Community and Organizational Development Associates (RECODA)	NGO	SIDA	OFSP production	400,000	Tanzania–multiple	Concept note	2018/20
MoA, Tanzania	Public	Government	Production of biofortified crops	45,000	Tanzania–multiple	Budget allocation	2018/19
SRI-Kibaha	Public	FAO	OFSP production and marketing	51,180	Dodoma region	Proposal	2018/19
<b>Total</b>				<b>12,946,180</b>			

### APPENDIX 3. COUNTRY ADVOCATES—NIGERIA

#	Name	Position	Organization
1	Towobola Zainab	Head, Nutrition and Food Safety Unit	FMARD
2	Gabriel Roselyn Ronke	Deputy Director	MBNP
3	Adeola Ojo Mojirade	Deputy Director	RMRDC
4	Onadipe Rotimi Bolaji	CEO	YEC
5	Oguzor Buduzhi Gift	Nutritionist	PHCDA
6	Moses Nagbiku, Celia Penny	Health Educator	CS-SUNN
7	Ayoola Olobunmi Olutoyin	Director	O-Meal
8	Olatunde Ganiyat Olayinka	Lecturer	FUNAAB
9	Okey-Onyema, Ebere Mercy	Farmers' Coordinator	NGO
10	Onyi Esther	Farmers' Coordinator	NGO
11	Afolabi Samson	Manager	Premier Seed
12	Fashire Yemisi	Farmer	Private sector
13	Olayiwola Adeola	Youth Coordinator	Osun Youth Empowerment Scheme
14	Faruq	Rural Facilitator	National Development of Employment
15	Loko Veronica Dayo	OFSP Desk Officer	FMARD
16	Okoro Clementina	Nutritionist Coordinator	FCT
17	Akinbinu Adeyinka	Assistant Director	FMARD
18	Uruakpa John	Nutrition Officer	Ministry of Health
19	Adesanmi Abimbola	National Team Leader	Home Grown School-Feeding Program
20	Onabolu Adeyinka	Senior Advisor	FMARD
21	Virgy Claire	Farmer	Private Sector
22	Samuel Folake	Senior Lecturer	University of Ibadan
23	Akanbi Babatunde	Professor	Ladonko Akintola University
24	Moma Philippa	Consultant	Private Sector
25	Jane Arinze Egemonye	Advocate	CS-SUNN
26	Okanlawon Foluke	Farmer	Private Sector
27	Iheonu Mary	Assistant Director	ADP-FCT
28	Alonge Temitope	Farmer	Private Sector
29	Ayansanwo Taiwo	Program Manager	ADP
30	Jubril Elizabeth	Farmer	Private Sector
31	Caroline Felix-Doko	Farmer	Private Sector
32	John Oveh-Atah	Assistant Director	ADP

#### APPENDIX 4. COUNTRY ADVOCATES—TANZANIA

No.	Name	Position	Organization
1.	Areth K. Teophil	Researcher	TOSCI
2.	Faraja Kassim	Communication Officer	PANITA
3.	Dr. E. Towo	Food Scientist	TFNC
4.	Mussa Twangilo	Journalist	TBC
5.	Tumain E. Mkange	Programme Officer	Farm Africa
6.	Regina Kapinga	Advocacy & Resource Mobilization	IITA
7.	Tumaini Mkindo	Executive Director	PANITA
8.	Joyce Lyimo –Macha	Associate Professor	SUA
9.	Hussein Mansoor	Director of R&D	MALF
10.	Kiddo Mtunda	CO-PI	SRI-Kibaha
11.	Firmin Mizambwa	Chief Executive Officer	ASA
12.	Joseph Mwambije	Journalist	ITV
13.	Mary G. Mdachi	Researcher	ARI-Selian
14.	Gerald Kitabu	Journalist	The Guardian
15.	Alain Mhando	Assistant Program Officer	TASTA
16.	Bob Shuma	Executive Director	TASTA
17.	Obey Assery	Director	Prime Minister's Office
18.	Dr. Vicent Assey	Director General	TFNC
19.	Celestin Mgoba	Research Scientist	TFNC
20.	Dr. Ladislaus Kasankala	Research Scientist	TFNC
21.	Novatus Tesha	Economist	PMO
22.	Sarah Mshiu	Economist	PMO
23.	Pascal Vyagusa	Economist	PMO
24.	Godfrey Benegura	Extension Officer	Wanging'ombe DC
25.	Domana Metha	Director	Perfect Farm Group
26.	Jolenta Joseph	Nutritionist	SUGECO
27.	Revocatus Kimario	Director	SUGECO
28.	Paschal M. Nchunda	Executive Director	TAMA
29.	Idda Paul	Director	Manyara
30.	Dominick Ringo	Director	RECODA
31.	Cuthbert Mwinuka	DAICO	Mkalama DC
32.	Audax Rukonge	Director	ANSAF
33.	Stephen Ruvuga	Director	MVIWATA
34.	Isaka Mashauri	Director	TANSEED INTERNATIONAL
35.	Joseph Kiraiya	Assistant Director	PMO
36.	Watanga Chacha	Executive Director	Meru Agro
36.	Edith Kadege	Principal Scientist	Tanzania Agricultural Research Institute–Selian
37.	Salma R. Kikwete	Member of Parliament	Parliament of Tanzania
38.	Daphroza Jerome	Nutritionist	MoA
39.	Margret Natai	Nutritionist	MOA
40.	Aggrey Mshana	Nutrition Officer	MOHCDGC
41.	Grace Moshi	Nutrition Officer	MOHCDGEC
42.	Rehema mzimbiri	Food Scientist	TFNC

## APPENDIX 5. REGIONAL CHAMPIONS

	Name	Organization	Position	Country of Residence
1	Anna-Marie Ball	HarvestPlus		USA
2	Mariam Akiror	Africa Strategic Alliances- HarvestPlus	Advocacy Specialist	Uganda
3	Julia Tagwireyi	Independent consultant in Food and Nutrition	Member of NEPAD Food and Nutrition expert panel	Zimbabwe
4	Francis Zotor	University of Health and Allied Sciences	Immediate Past President, African Nutrition Society	Ghana
5	Kefilwe Moalosi	NEPAD	Nutrition Programme and Research Officer	South Africa
6	Laila Lokosang	AUC	Food and Nutrition Advisor	Ethiopia
7	Nelson Ojijo	Access Agriculture	Executive Secretary	Kenya
8	Mawuli Sablah	FAO Regional Office for Africa	Chief Technical Advisor, CAADP, Nutrition	Ghana
9	Matilda Steiner-Aseidu	University of Ghana	Prof of Nutrition & Dean, School of Biological Sciences	Ghana
10	Isatou Jallow	Formerly of NEPAD	Senior Nutrition Advisor; Independent Consultant	Gambia
11	Rossana Agble	Formerly of Nutrition Unit, Ministry of Health, Ghana	Director, Nutrition Unit	Ghana
12	Mohamed Ag Bendeck	Formerly of FAO	Former Regional Nutrition Officer	
13	Josephine Kiamba	Formerly of NEPAD	Independent consultant	Kenya
14	Dia Sanou	Nutrition Officer for Eastern Africa	FAO	Ethiopia
15	Gloria Essilfie	Postharvest Specialist	University of Ghana	Ghana
16	Yemi Akinbamijo	Executive Director	FARA	Ghana
17	Rose Omari	Consultant	FARA	Ghana
18	Dr. Margaret Akinyi Wagah	Development Concern International	International Food & Nutrition Security Consultant	Kenya
19	Mr. Anthony Morrison	Ghana Chamber of Agribusiness	President / Youth	Ghana
20	Ms. Roseline Delali Ashigbui	Delchris Africa Ltd	Entrepreneur/ Managing Director / Youth & Woman	Ghana
21	Mr. Eric Nyikwagh	Freelance Consultant on agribusiness and food security	Consultant / Youth	Nigeria
22	Mr. Kofi K. Acquaye	FARA	Programme Officer for YPARD Africa / Youth	Ghana
23	Mr. Calistus Tandong	Freelance Journalist	Journalist / Youth	Cameroun
24	Ms. Mmachukwu Onyinye Orizu	Food Processing	Entrepreneur / Youth	Abuja, Nigeria
25	Ms Naomi Kidumbuyo	AFCO Investment Company Ltd	Marketing and Communications Manager/ Youth	Tanzania
26	Ms. Jolenta Joseph	SUGECO	Lead Technical Nutritional Advisor to Youth/ Youth	Tanzania
27	Ms. Amina Ramadhan Mhando	SUGECO	Entrepreneur/ Youth	Tanzania

#### APPENDIX 6. INSTITUTIONS WITH CAPACITY TO SCALE-UP BIOFORTIFICATION NIGERIA

Name of Institution	Area of Focus
<b>Enugu State ADP</b> 1. Kogi State ADP 2. Ogun State ADP 3. Taraba State ADP	Production, dissemination, processing, and marketing of OFSP
4. Premier Seed Company 5. Seed Co. 6. Value Seed Company 7. Maslaha Seed Company	Research, production, and marketing of PVA maize seed
8. Federal Ministry of Budget and National Planning 9. Federal Ministry of Health 10. Redeemed Christian Church of God (RCCG) 11. Raw Material Research & Development Council (RMRDC) 12. FMARD	Policy Implementation and advocacy

#### APPENDIX 7. INSTITUTIONS WITH CAPACITY TO SCALE-UP BIOFORTIFICATION TANZANIA

Name of institution	Area of focus
1. Selian–ARI 2. Uyole–ARI 3. Maruku–ARI 4. Arumeru District Council 5. Moshi District Council 6. Hai District Council 7. Mbulu District Council 8. Monduli District Council	Research and production of HIB
9. Meru Agro Ltd 10. MAMS 11. Tanseed International 12. AFCO Co. Ltd	Research, production, and marketing of PVA maize seed
13. Wanawake Waumini Wakristo (WWK) 14. Sajaranda Bible College in Tanzania 15. Hombolo Research Institute 16. SUGECO 17. RECODA 18. Mkalama District Council 19. Ilindi District 20. Tanzania Agricultural Modernization Association 21. Ushirika wa Neema (a religious organization from Moshi) 22. Worldvision Tanzania 23. FarmAfrica Tanzania	Production, dissemination, processing, and marketing of OFSP
24. Tanzania food and nutrition center 25. The Prime Minister’s Office 26. Tanzania Agricultural Journalist Forum (TAJF) 27. Partnership for Nutrition Tanzania (PANITA)	Policy Implementation and Advocacy



## ANNEXES

- Annexes 1–3, 5, and 7–12 are pdf files; Annexes 4 and 6 are Excel files.
- Annex 1: Information on the two HIB varieties released in Tanzania (Selian 14 and Selian 15)
- Annex 2: Infographic on biofortification
- Annex 3: Success story on the impact of the 10-day training of trainer’s course on a participant/ advocate who has stepped down the course and advocated for biofortified crops in Nigeria
- Annex 4: Tool to collect data on investments made to implement NMNAP
- Annex 5: Report of the 2nd PVA Maize Platform and Seed Systems Meeting—Tanzania
- Annex 6: Results tracker
- Annex 7: Wanawake Waumini Wakristo training report
- Annex 8: Report on the orientation workshop on biofortification with prime minister’s office officials
- Annex 9: Report on advocacy of government officials’ meeting
- Annex 10: Advocacy seminar for the parliamentary group on nutrition for supporting allocation of resources for invested in biofortification programs
- Annex 11: Interim survey results on the BNFB partnership assessment
- Annex 12: Survey results on the utilization of the OFSP investment guide toolkit