



Building  
Nutritious  
FoodBaskets

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# Building Nutritious Food Baskets

## An integrated advocacy and capacity strengthening approach

The Building Nutritious Food Baskets (BNFB) project completed the situation analysis reports and advocacy strategies and strengthened the capacity of 50 advocates and champions in Nigeria, Tanzania and at the regional level to engage policy makers and raise new investment for biofortified crops. BNFB helped incentivize and build the capacity of national and community supportive agencies including training institutions, non-governmental organizations, seed companies and agro-processing companies as well as individuals. In total, 577 (263 female) change agents (283 Nigerians and 294 Tanzanians) have been equipped with the capacity to design and implement gender sensitive projects on orange-fleshed sweetpotato, pro-vitamin maize, and high-iron beans.



Fig 1. The nutritious food basket of biofortified crops

### What is the problem?

Hidden hunger is particularly severe in sub-Saharan Africa (SSA), where many people do not consume enough essential micronutrients to lead healthy and productive lives. This is especially true among poor, rural, and other vulnerable populations. About 44% of pre-school children are vitamin A deficient while 39% of women of reproductive age in SSA are anemic. In Tanzania, the prevalence of vitamin A deficiency (VAD) is 33% and 42% among children aged 6-59 months and women of reproductive age respectively (TDHS, 2010); while that of anemia between the same groups is 58% and 45%, respectively (TDHS, 2016). In Nigeria, the prevalence of VAD is 23% among children under the age of five years of age, 13% among women of reproductive age and 19% among pregnant women, while the prevalence of anemia for

the same groups stands at 34%, 25% and 48%, respectively. Therefore, there is need for scaling up utilization of multiple biofortified crops (Fig. 1) to ensure access to affordable micronutrients to small-scale farmers and the poor communities in rural and urban areas who do not have access to diversified diets.

### What do we want to achieve?

The three-year Building Nutritious Food Baskets (BNFB) project (November 2015 – October 2018) adopts a multi-crop (food basket) approach (Fig. 2) and is being implemented in Nigeria and Tanzania and at the regional level. It builds on the success of the Reaching Agents of Change (RAC) project that tested innovative approaches to generate investment, reach policy makers and train advocates and implementers using nutritious orange-fleshed sweetpotato (OFSP) to combat VAD in selected countries in sub-Saharan (SSA). BNFB advocates for increased investment in biofortified staples as a sustainable way to combat hidden hunger, especially among young children under the age of five years and women of reproductive age. BNFB also focuses on strengthening the enabling environment for increased investments in biofortified crops and developing institutional and individual capacities to produce and consume biofortified crops. The portfolio for BNFB includes: yellow cassava, high iron beans, orange maize and OFSP. Our efforts contribute to the broader Sweetpotato for Profit and Health Initiative (SPHI), which aims to improve the lives of 10 million SSA African



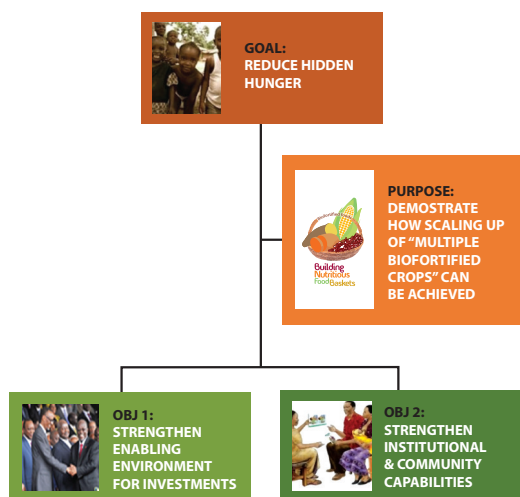


Fig. 2 BNFB goal, purpose and objectives

families by 2020 by increasing their access to improved sweetpotato varieties and their diversified use. Figure 2 highlights the goal, purpose and objectives of the project.

### Who are we working with?

BNFB is led by the International Potato Center (CIP), and is implemented through a consortium of partners with diverse expertise: the International Center for Tropical Agriculture (CIAT) - high iron beans; the International Maize and Wheat Improvement Center (CIMMYT) - pro-vitamin A (orange) maize; CIP - orange-fleshed sweetpotato (OFSP), advocacy and capacity development; the International Institute of Tropical Agriculture (IITA) - vitamin A (yellow) cassava, pro-vitamin A (orange) maize; HarvestPlus - scaling up biofortification at country level; Forum for Agricultural Research in Africa (FARA) - responsible for policy engagement and advocacy at regional level; the Governments of Nigeria and Tanzania, and a range of national implementing partners from public, private and civil society organizations. The project leverages other projects and on-going initiatives on biofortified crops.

### What have we achieved so far?

The BNFB project is focusing on catalyzing sustainable investment for the utilization of biofortified crops at scale. A consortium of partners is working together on advocacy, policy development, nutrition education, and behavior change communication (BCC) for demand creation, capacity strengthening, and institutional learning to support the scaling up of multiple biofortified crops. Overall, the project impact will be demonstrated by a general increase in policy action in the national arenas of food production and nutrition, increased access and intake of biofortified foods that are rich in vitamin A and iron, and increased food and nutrition security at the household level. BNFB endeavors to create synergy with complementary ongoing projects and initiatives to add value and fill critical gaps. It is anticipated that 2,175,000 additional households will adopt biofortified crops in the two countries as a result of the BNFB investment by 2020.

**Key achievements under objective 1: Strengthen the enabling environment for investments in biofortified crops**  
Advocacy efforts catalyze policy change and help generate new investments -- by governments, developmental partners, and the private sector - to scale up adoption and utilization of multiple biofortified crops.

- To raise awareness, BNFB held a series of promotion and sensitization events, and high level advocacy engagements at regional and national levels with senior policy makers and key stakeholders in development organizations, public, private and civil society sectors. BNFB has participated in exhibitions at key conferences, sensitization workshops, shows and fairs (Fig. 3)
- The regional and national situation analysis (SITAN) studies on biofortification and advocacy strategies were completed and validated. The advocacy strategies are being implemented in Nigeria, Tanzania and at regional level. The SITAN studies provided baseline information for evidence-based advocacy for fundraising and policy change strategies.
- BNFB participated in several strategic regional and national events where they created awareness and advocated for prioritization and inclusion of biofortification in regional policy documents, strategies and plans and the scaling up of biofortified crops.
- Advocacy efforts in Nigeria and Tanzania have helped influence the inclusion of biofortification in five policy/strategy/plan documents that have helped to accelerate the scaling of biofortified crops within wider agricultural and nutrition/health/education sectors. These documents comprise:
  - The National Policy on Food and Nutrition in Nigeria;
  - Nigeria Food security and Nutrition Strategic Plan;
  - Tanzania National Multi-sectoral Nutrition Action Plan for Prevention of Micronutrient Deficiencies (NMNAP2);
  - Tanzania Ministry of Agriculture, Livestock and Fisheries – Food Security draft five-year strategic plan;
  - Tanzania Food and Nutrition Center's five-year strategic plan.
- BNFB identified 50 (13 regional, 21 in Tanzania, and 16 in Nigeria) influential and respected advocates and champions from diverse backgrounds and institutions to support regional and national advocacy efforts for



Fig. 3 Tanzania Vice President H. E. Samia Suluhu Hassan learning about Biofortification from a BNFB Champion at the 'Nane Nane' Agriculture show grounds 2017 (credit G. Kitabu)



**Fig. 4** Learning all about OFSP at Sokoine University of Agriculture in Tanzania (credit J. Maru)

biofortification, and equipped them with technical and advocacy skills through advocacy retreats.

- To date, a total of US\$329,243 has been raised to support programs on biofortification. In 2017, US\$ 94,243 new investment (US\$16,000 in Tanzania and US\$78,243 in Nigeria) was raised to support programs on biofortified towards the dissemination of planting materials, production and consumption and processing of OFSP.
- Advocacy efforts by BNFB influenced the inclusion of biofortification in the Tanzania National Food Fortification Alliance. This helped to embrace fortification and biofortification as complementary approaches to ending micronutrient deficiency in Tanzania.
- BNFB has developed a range of advocacy and communications materials and formats including a document folder, factsheets, flyers, leaflets, pull-up banners, videos, posters, success stories in English and Kiswahili, radio programs and memorabilia - BNFB T-shirts, pens and flash disks. BNFB widely disseminated print and electronic materials and uploaded on them on the Sweetpotato Knowledge Portal <http://www.sweetpotatoknowledge.org/project/building-nutritious-food-baskets-bnfb/> and the newly launched BNFB web page <https://cipotato.org/bnfb/> for wider access. The webpage is part of BNFB's knowledge management efforts. The page further acts as a repository for all BNFB outputs and products. It also improves the visibility of the project. More than 8,675 print copies of print materials have been disseminated in Nigeria and Tanzania. BNFB has optimized other tools and media to create awareness and improve the understanding of scaling up of biofortified crops and has produced a series of blog stories and highlights of events, with a backlink on the CIP / partner websites. BNFB has also been active on various social media platforms including twitter, facebook and AgTube.

#### **Key achievements under objective 2: Strengthen institutional and community capabilities to produce and consume biofortified crops**

- BNFB has helped strengthen institutional (national and community) capacities and competencies of training institutions, community based organizations,

extensionists, researchers, lead farmers, investors and other executing institutions to design and implement technically strong, cost effective and gender-sensitive investments that drive uptake of biofortified crops. BNFB has continued to support the efforts of the Agricultural and Rural Management Training Institute (ARMTI) in Nigeria, Sokoine University of Agriculture (SUA), and the Research, Community and Organizational Development Associates (RECODA) in Tanzania. These institutions continue to offer the training of trainers (ToT) courses on OFSP post-RAC era, using funds from the Government and fees from self-sponsored participants. To date, ARMTI has held two 10-day ToT courses, while SUA and RECODA have conducted one ToT course each (Fig. 4).

- Those trained have stepped down the skills and knowledge acquired for increased production and consumption of biofortified crops for increased income for farmers and improved nutrition.
- Both ARMTI and SUA have institutionalized biofortification into their curricula. For example, the course now appears in ARMTI's list of annual courses and their budget requests to government.
- The existing OFSP ToT manuals have been updated and the revised modules are expected to be published in October 2017.
- Three (3) Training of trainers (ToT) courses on OFSP have been conducted (two in Nigeria and one in Tanzania). A total of 14 step-down courses on PVA maize (3);



**Fig. 5** Community field days for sensitization (credit G. Kitabu)

high-Iron beans (1) and OFSP (10) have been conducted - five in Nigeria and eight in Tanzania. Through the training course, 577 (263 female) change agents (283 Nigerians and 294 Tanzanians) have been equipped with the capacity to design and implement gender-sensitive projects on PVA maize; high-iron beans and OFSP.

#### **Seed systems**

- Biofortification has been mainstreamed in the National Agricultural Research System crop programs including the National Root Crops Research Institute in Nigeria and the Agricultural Research Institute (ARI) in Tanzania.
- Orange-fleshed sweetpotato
  - To date, 644,00 vines (158,400 vines in Nigeria and 485,700 in Tanzania) have been distributed to seed producers;
  - Field days and sensitization events have been held in

Nigeria and Tanzania where lead farmers, farmers, extension officers, seed multipliers and community leaders have been sensitized and demonstration plots established (Fig. 5)

- Working in close collaboration with Sugarcane Research Institute - Kibaha and Agricultural Research Institute Uyole, and other CIP projects, BNFb contributed to the mother-baby trials established for 16 OFSP varieties. The varieties are being evaluated in Dodoma and Singida (Central zone), and Mbeya and Iringa (Southern Highlands). Fourteen mother trials and 140 baby plots are involved;
- Breeding work has led to selection of 10 genotypes and 12 on-farm trials have been established for 2017 for release of at least 2 additional improved OFSP varieties in Nigeria;
- The Sokoine University Graduate Entrepreneurs Cooperative (SUGECO), AFco Investments Company Ltd. and Matoborwa Company are processing and marketing products made from OFSP (sold in 11 major supermarkets in Dar es Salaam). Several smaller agro-processors have also emerged.

#### **PVA (orange) maize**

- Two varieties of PVA maize have been released (2016) in Tanzania and two in Nigeria (2016 & 2017);
- Breeder seed has been provided to seed companies in Nigeria and Tanzania for multiplication and with biofortified seeds to conduct multi-location trials to facilitate release of new maize varieties;
- PVA maize platforms were launched in Tanzania and Nigeria;
- One PVA genotype was submitted to the national release committee in Tanzania;
- 36 hybrids are being tested by two partners in Tanzania for identification of new PVA products;
- Four PVA maize hybrids are entering the multiple location and farmer assessment stage in the release process in Tanzania;
- BNFb supported seed companies such as Meru Agro, Tanseed international, MAMS, Aminata as PVA maize seed registration partners, and AFco Company Ltd. to import and process PVA grain. AFco is processing and marketing various PVA maize and OFSP products. This has helped create demand for nutritious biofortified crops products in Tanzania and is expected to drive the production and supply of PVA maize seed as soon as the seed becomes available on the market. In Nigeria, IITA has supported MASLAHA and Premier Seed, Seed Company to produce PVA maize seed.

#### **High iron beans - Tanzania**

- Multi-location trials and farmers/consumers' evaluation were conducted and Tanzania Official Seed Certification Institute (TOSCI) is carrying out the National Performance Trials (NPT) for two promising biofortified climbing bean varieties (MAC44 & RWV 1129). These are expected to be released in the last quarter of 2017;
- Study on consumer willingness to pay more for high iron beans in Tanzania was carried out and findings indicate that consumers are willing to pay 25% higher for the biofortified bean varieties than the ordinary bean prices;
- Bean biofortification research has been mainstreamed in national research programs Agricultural Research Institute - Uyole and Maruku, as well as in Selian Agricultural Research Institute in Tanzania.

#### **What's next?**

During Year 3 of project implementation, BNFb will continue:

- Implementing national and regional advocacy strategies for increased policy engagement on the development and implementation of policies, strategies, and plans that prioritize support to biofortification to accelerate scaling to hit the population and beyond;
- Strengthening national policy platforms and promoting evidence-based support for biofortification;
- Strengthening capacities of national and community stakeholder agencies to develop and implement technically strong, cost-effective and gender sensitive investments along the value chains of OFSP, PVA maize, vitamin A cassava and high iron beans that drive uptake of biofortified crops;
- Facilitating crop specific and seed systems platforms to spearhead production and marketing of biofortified crops at community level and help bring together all stakeholders along their value chains; and
- Publishing findings, documenting processes and lessons learned to contribute to global understanding of scaling up approaches.

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