Biofortified crops enabling nutrition security in Africa

The vast majority of the world’s hungry people live in developing countries, where 12.9 percent of the population is undernourished. They suffer multiple nutrient deficiencies because they do not consume enough micronutrients required to lead healthy and productive lives. The Building Nutritious Food Baskets (BNFB) Project through a multi-crop (food basket) approach, advocates for increased investment in biofortified crops as a sustainable way to combat hidden hunger (micronutrient deficiencies), especially among young children under the age of five and women of reproductive age. BNFB also focuses on developing institutional capacity to design and implement gender-sensitive programs and projects to ensure wide access and utilization of biofortified crops in selected African countries.

BNFB is a three-year project (November 2015 – October 2018) in two project countries (Nigeria and Tanzania) to provide new knowledge and capacities for improving access and utilization of multiple biofortified crops. The goal of BNFB is to scale up biofortified crops for nutrition security and to help reduce hidden hunger by catalyzing sustainable investment for the utilization of biofortified crops at scale in Nigeria and Tanzania.

The objectives of the project are to:

- Strengthen the enabling environment for increased investments in biofortified crops
- Strengthen institutional and community capacities to produce and consume biofortified crops
- A multi-partnership and multidisciplinary approach

BNFB is implemented through a consortium of partners with The International Potato Center (CIP) being the lead partner, implementing with a range of partners including governments of Tanzania and Nigeria, four CGIAR centers and a range of other National and regional partners and programs working on nutritious staple crops. The project endeavors to forge linkages with complementary, ongoing projects and initiatives filling critical gaps for greater synergy and value addition.

The partners include:
- The International Potato Center (CIP) lead partner with expertise in biofortified pro-vitamin A crops; the International Institute of Tropical Agriculture (IITA) with expertise in biofortified pro-vitamin A crops; the International Centre for Tropical Agriculture (CIAT) with expertise in biofortified pro-vitamin A maize; the International Institute for Tropical Agriculture (CIMMYT) with expertise in biofortified pro-vitamin A maize; HarvestPlus with expertise in country level promotion of biofortification; the Forum for Agricultural Research in Africa (FARA) which is responsible for policy engagement and advocacy at regional level.

2.175 million additional households will adopt biofortified crops in the two countries (Nigeria and Tanzania) as a result of the BNFB investment over the next five years.

Country level

Advocacy efforts aimed at catalyzing policy change, combined with efforts to generate new investments—by governments, developmental partners, and the private sector to scale-up adoption and utilization of multiple biofortified crops. This will be done through strengthening the enabling environment for investments in biofortified crops in the two project countries. A team of change agents—advocates (at national level) and champions (at regional level) will seek to influence leaders in all the fields of agriculture, health, nutrition education as well as NGOs and donor organizations to expand investment in the promotion, production and utilization of the multiple biofortified crops (iron rich beans and vitamin A rich cassava, maize and sweetpotatoes). The change agents will advocate for creation of favorable policy environments and investment for food-based interventions to combat hidden hunger in Tanzania and Nigeria. Efforts will be made to reach different target populations in rural and urban areas.

Region level

The BNFB project will foster a cadre of champions who will ensure inclusion of biofortified crops as an integral part of strategies endorsed by regional and sub-regional bodies in Sub-Saharan Africa to address nutrition insecurity and micronutrient malnutrition such as The African Union; The science agenda for Agriculture in Africa (SLA); and the Comprehensive Africa Agriculture Development Program (CAADP) and the New Partnership for Africa’s Development (NEPAD). A multi-country approach to research, development, and global advocacy will provide the basis for an enabling environment and institutional learning to support the scaling up of biofortified crops in the two project countries (Nigeria and Tanzania) as a result of the BNFB investment over the next five years. The project hopes to achieve the following milestones:

- At least $15 million investment devoted to biofortified crops programs in Nigeria and Tanzania by public, private and NGO sectors in support of biofortification
- At least 7 country and 3 regional policies/strategic plans developed/formulated and implemented that prioritize support to biofortification to accelerate the scaling of biofortified crops within agricultural and nutrition/health sectors
- At least 5 technical programs supporting or utilizing biofortification designed and implemented by 2018
- Biofortification included as a standard approach in national crop development programs of at least 2 crops. At least 10,000 change agents have the capacity to design and implement gender sensitive programs (programs/projects/activities at the community level) and champions (at regional level) will advocate for creation of favorable policy environments and investment for food-based interventions to combat hidden hunger in Tanzania and Nigeria. Efforts will be made to reach different target populations in rural and urban areas.

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BNFB will develop national and community capabilities to produce and consume biofortified crops for improved nutrition and increased incomes, particularly for adolescent girls and women of child-bearing age and young children, in both rural and urban areas. The project will also develop capacity of national implementing agencies to design and implement technically sound gender-responsive programs and interventions that will drive uptake of biofortified crops. Among other approaches, BNFB will support technical training and step-down modular courses in priority areas identified as key gaps to be addressed along the respective value chains of the four biofortified crops at institutional and community levels.

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Building Nutritious Food Baskets (BNFB) Project

A ‘food basket’ approach for scaling-Up Biofortified Crops and enhancing Nutrition Security in Africa

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BNFB is a three-year project (November 2015 – August 2018) in two project countries (Nigeria and Tanzania) to provide new knowledge and capacities for improving access and utilization of multiple biofortified crops. The goal of BNFB is to scale up biofortified crops for nutrition security and to help reduce hidden hunger by catalyzing sustainable investment for the utilization of biofortified crops at scale in Nigeria and Tanzania.

The objectives of the project are to:

1. Strengthen the enabling environment for increased investments in biofortified crops
2. Strengthen institutional and community capacities to produce and consume biofortified crops

A multi-partnership and multidisciplinary Approach

BNFB Initiative is implemented through a consortium of partners with The International Potato Center (CIP) being the lead partner, implementing with a range of partners including governments of Tanzania and Nigeria, four CGIAR centers and a range of other National and regional partners and programs working on nutritious staple crops. The project endeavors to forge linkages with complementary, ongoing projects and initiatives filling critical gaps for greater synergy and value addition.

The partners include:
- The International Potato Center (CIP), lead partner with expertise in orange-fleshed sweetpotato (OFSP)
- The International Center for Tropical Agriculture (CIAT) with expertise in orange rich beans
- International Institute of Tropical Agriculture (CIMMYT) with expertise in biofortified pro-vitamin A maize
- The International Institute of Tropical Agriculture (IITA) with expertise in vitamin A cassava and pro-vitamin A maize
- HarvestPlus with expertise in country level promotion of biofortification
- Forum for Agricultural Research in Africa (FARA) which is responsible for policy engagement and advocacy at regional level.

What does BNFB want to achieve?

The BNFB Project will work on catalyzing sustainable investment for the utilization of biofortified crops at scale, advocacy for policy change, nutrition education, and behavior change communication for demand creation, capacity development, and institutional learning to support the scaling up of multiple biofortified crops (vitamin A rich cassava, vitamin A rich beans, vitamin A rich sweetpotato, and iron rich beans).

- **BNFB** will develop strong advocacy efforts at country and regional levels.

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Country level

Advocacy efforts aimed at catalyzing policy change, combined with efforts to generate new investments — by governments, developmental partners, and the private sector to scale-up adoption and utilization of multiple biofortified crops. This will be done through strengthening the enabling environment for investments in biofortified crops in the two project countries. A team of change agents — advocates (at national level) and champions (at regional level) — will seek to influence leaders in the fields of agriculture, health, nutrition and education as well as NGOs and donor organizations to expand investment in the promotion, production and utilization of the multiple biofortified crops (iron rich beans and vitamin A rich cassava, maize and sweetpotatoes). The change agents will advocate for creating favorable policy environments and investment for food-based interventions to combat hidden hunger in Tanzania and Nigeria. Efforts will be made to reach different target populations in rural and urban areas.

Regional level

The BNFB Project will foster a cadre of champions who will ensure inclusion of biofortified crops as an integral part of strategies endorsed by regional and sub-regional bodies in Sub-Saharan Africa to address nutrition insecurity and micronutrient malnutrition such as The African Union, The science agenda for Agriculture in Africa (SLA), and the Comprehensive Africa Agriculture Development Program (CAADP) and the New Partnership for Africa’s Development (NEPAD).

b) Develop Institutional Capacity for Biofortified Crop Programs

BNFB will develop national and community capabilities to produce and consume biofortified crops for improved nutrition and increased incomes, particularly for adolescent girls and women of child-bearing age and young children, in both rural and urban areas. The project will also develop capacity of national implementing agencies to design and implement technically sound, gender-responsive programs and interventions that will drive uptake of biofortified crops. Among other approaches, BNFB will support technical training and step-down modular courses in priority areas identified as key gaps to be addressed along the respective value chains of the four biofortified crops at institutional and community levels.

c) Seed Systems

The Building Nutritious Food Baskets project will catalyze impact-oriented seed systems. The project will work with on-going initiative and add value by addressing prioritized key gaps along the respective seed systems value chains. The project will assess and approve the demand for seed/planting material of the selected biofortified crops; establish specific champion’s platforms to speed/hatch production and marketing of biofortified crops; work with national seed agencies, the private sector and farmer/women/youth groups for strategic largescale production of biofortified crops and facilitate maintenance and continuous supply of broader seeds. Ultimately the goal is to ensure that biofortification is mainstreamed in national crop programs and biofortified varieties of staple crops prioritized in the development and release processes of seed.

How will BNFB measure impact?

It is anticipated that 2.175 million additional households will adopt biofortified crops in the two countries as a result of the BNFB investment over the next five years. The project hopes to achieve the following milestones:

- At least $10 million investment devoted to biofortified crops programs in Nigeria and Tanzania by public, private and NGO sectors in support of biofortification
- At least 7 country and 3 regional policies/strategies developed/formulated and implemented that prioritize support to biofortification to accelerate the scaling of biofortified crops within broader agricultural and nutrition health sectors
- At least 5 technical programs supporting or utilizing biofortification designed and implemented by 2018
- Biofortification included as a standard approach in national crop development programs of at least 2 crops. At least 10,000 change agents have the capacity to design and implement gender sensitive programs (programs along the value chains that drive uptake of biofortified crops)
- Biofortification mainstreamed in national crop breeding programs and extension services (private and public), and biofortified varieties of staple crops prioritized in the development and release process
- At least 11 varieties of biofortified crops fast-tracked for release in the two countries
- At least 4 commercial processors processing biofortified products for large scale consumption

Overall the Project impact will be demonstrated by a general increase in policy action in the national arenas of food production and nutrition as well as increased diversification of diets, micronutrient (vitamin A and iron) intakes and food and nutrition security at the household level.