

Partnering to Scale Biofortified Crops in Uganda

Under the USAID funded activity, “Meals for Nutrition: Biofortified Solutions”, a total of 82,800 farmers have been reached with orange sweetpotato vines and 176,079 farmers with high iron beans in 25 districts, between August 2017 and August 2018. This has been achieved through partnerships with five NGOs, six seed companies and 32 multipliers. Farmers access seed through seed loans and payback mechanisms and seed/vine sales by seed producers. Over 50 schools now purchase OFSP and iron beans from farmers for school feeding both at primary and secondary school level (Fig. 1). In addition, in partnership with Ministry of Agriculture, the National Biofortification Technical Working Group was constituted to lobby for biofortification in government.



Fig 1. Children at Canaan Junior School in Kamuli being served OSP and High iron beans for lunch (Credit S. Magezi)

What is the problem?

Nutrition-related factors contribute to about 45% of deaths in children under 5 years of age (WHO 2017). In Uganda, one out of every two children is anaemic and one out of every three children has vitamin A deficiency. These deficiencies compromise immunity and productivity, impair mental and physical development and increase risk of women during child birth. Consistent consumption of biofortified crops has been shown to reverse these deficiencies improve cognitive performance and reduce incidence of diarrhoea.

Where are we working?

Currently HarvestPlus works in 25 districts with both smallholder and commercial farmers, seed and vine producers, mainly through NGOs.

How are we working?

HarvestPlus is engaging local governments and institutions to mainstream biofortified crops into feeding and food security programs.

HarvestPlus has engaged government to ensure inclusion of biofortification in the Nutrition Policy and the Uganda Nutrition



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CGIAR: International Food Policy Research Institute (IFPRI), International Potato Center (CIP)

Local: BioCrops (U) Ltd, Senai Biosciences, Caritas Hoima Diocese, Community Entreprises Development Organisation, Kigarama Cooperative and Marketing Society, Makerere University, Health Child Uganda Project, National Crops Resources Research Institute/National Agricultural Research Organisation (NaCRRI/NARO), Volunteer Efforts for Development Concerns (VEDCO), Africa 2000 Network, Farm Radio International, Samaritan's Purse, World Vision, NASECO seeds, Pearl Seeds, Farm Africa, Local Governments



Fig. 2 Processing chips for composite flour by Kyere farmers (Supported by Farm Africa) (Credit S. Magezi)

Action Plan (UNAP 2018-2022). It also supported the formation and convening of the Biofortification Technical Working group together with Ministry of Agriculture Animal Industry and Fisheries.

In addition to our efforts, government has scaled up dissemination through schools in 15 districts under the Multi-sectoral Food Security & Nutrition Project and will scale up further the dissemination of iron beans through the Agriculture Cluster Development Program. Over 50 schools now purchase OFSP and iron beans from farmers for school feeding both at primary and secondary school level.

In addition, HarvestPlus is engaging processors and food manufacturers to include biofortified crops in their processing lines. At community level, it is working with partners is supporting farmers diversify and improve ways of processing and drying OSP to increase its utilization (Fig. 2). This will increase consumption across different market segments and eventually production.

There is also increasing engagement with exporters dealing in sweetpotatoes for export.

Through outreach and public awareness campaigns, HarvestPlus is leveraging extension services, mass media and other information sharing events to promote biofortified crops and increase awareness of the nutritional benefits of OSP and iron beans.

HarvestPlus is also leveraging funds together with other partners to reach refugees in Adjumani district and disabled women in the Busoga region with biofortified crops.

What have we achieved so far?

This year several new players interested in orange sweetpotato (OSP) and beans have emerged including Maama Care Foundation, a high tech nutrition processing plant that will process snacks and ready to eat foods for children and refugees (Fig. 3). OSP and high iron beans are some the ingredients selected for use. HarvestPlus is working with farmers to increase production of OSP for these new initiatives in addition to providing technical support.

In addition, achievements to date include:

- Inclusion of biofortification in Nutrition Policy and Nutrition Action Plan;
- Initiation of a functional technical working group on Biofortification with members from Ministry of Agriculture, Health, Education, Academia, Farmer Federation, NARO, Bureau of Standards and HarvestPlus;

- A national declaration by Ministry of Agriculture recognising biofortification as one of the most sustainable strategies to combat hidden hunger;
- Increased participation of the private sector in the value chain from seed production to processing,
- Increased consumption of biofortified crops in institutions especially schools and prisons;
- Supported the production and marketing of 1,706 MT of orange sweetpotato roots and 56,866 bags of orange sweetpotato vines by 32 vine multipliers;
- Supported the production of 192 MT of iron rich bean seed and 960MT of iron rich bean grain by three seed companies and three Local community seed multiplication associations;

What are the next steps?

In the coming year, we intend to:

- Continue engagement of institutions (schools, hospitals, army, and prisons) to mainstream biofortified crops into their feeding programs
- Increase private sector engagement to increase supply of biofortified food products and create markets for smallholder farmers producing biofortified crops
- Continue engaging government and key stakeholders for more inclusion of biofortification in policies and plans programs
- Support the ratification of sweetpotato guidelines for vine inspection to enable increased vine purchases by government and NGOs
- Continue to scale up biofortification to reach more farm households

Our goal is to see biofortified crops mainstreamed into key channels throughout Uganda.



Fig. 3 Sylvia Magezi (L) and Haris Buptani (R) during a tour at Maama Care processing Plant (Credit A. Atero)

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