



HarvestPlus improves nutrition and public health in Zambia by promoting **maize** and **orange sweet potato** that provide more **vitamin A** in the diet. We work with more than 30 partners drawn from government, business, and civil society.

### Better Crops for Better Nutrition

We use a process called biofortification to conventionally breed staple food crops that are richer in essential vitamins and minerals and can be grown by rural communities that are often missed by other interventions, such as supplementation and food fortification. Our food-based approach relies on familiar staple foods that people already eat regularly and that can be part of other efforts to improve nutrition, such as dietary diversification.

### The Costs of Vitamin A Deficiency

- Vitamin A deficiency lowers immunity, impairs vision, and may lead to blindness and even death.
- 54% of Zambian children under 5 are estimated to be vitamin A deficient (*WHO*).
- Zambia loses over \$186 million annually due to vitamin and mineral deficiencies (*World Bank*).

## Crops for Zambia

Maize is the primary staple food in Zambia. Consumers like the color, taste, and aroma of foods made from vitamin A maize as much as white maize. With added information on the benefits of vitamin A, they prefer it to white maize.



### Vitamin A Maize

Zambia ranks number 3 out of 107 countries suitable for investing in vitamin A maize.

**Nutritional Benefits:** Provides up to 25% of daily vitamin A needs; as effective as supplements.

**Farmer Benefits:** High yielding, disease and virus resistant, drought tolerant

**Biofortified Varieties:** GV662A (Kamano Seed), GV664A (ZamSeed), GV665A (SeedCo)



### Vitamin A Orange Sweet Potato

Zambia ranks number 17 out of 75 countries suitable for investing in vitamin A orange sweet potato.

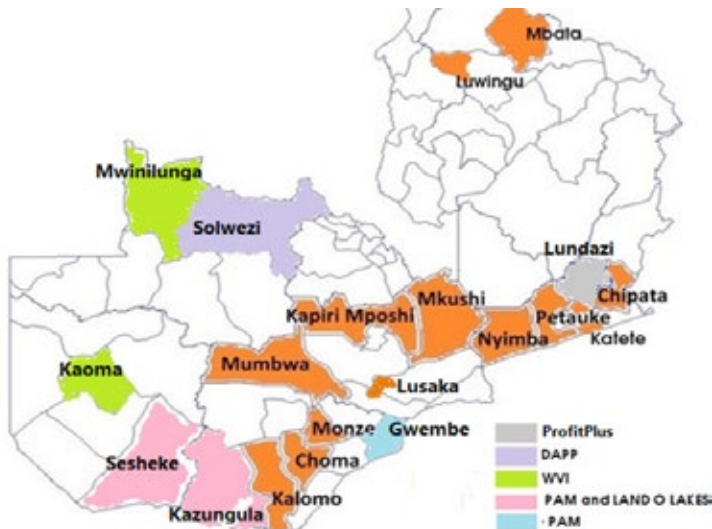
**Nutritional Benefits:** Provides up to 100% of daily vitamin A needs

**Farmer Benefits:** High yielding, early maturing, drought tolerant

**Biofortified Varieties:** Olympia, Twatasha, Kokota, Chiwoko, Zambezi

## On the Ground

HarvestPlus works with a wide range of partners to promote the availability, adoption and consumption of vitamin A maize across Zambia. Our goal is that 500,000 Zambian farming households will be growing vitamin A maize by 2018.



## How We Work

HarvestPlus supports the Zambia Agriculture Research Institute (ZARI) to breed, test, and release varieties of vitamin A maize developed through our partnership with the International Maize and Wheat Improvement Center (CIMMYT) and the International Institute of Tropical Agriculture (IITA). Released vitamin A maize varieties are licensed to private seed companies to produce seed for sale to farmers. This commercial seed is distributed through agrodealer networks, NGOs, and the government-sponsored Farmer Input Support Programme (FISP) targeting vulnerable smallholder farmers. We support commercial seed and grain sales, identify and link buyers and processors to grain suppliers, and increase awareness of vitamin A maize through consumer education, advertising, and the media. These efforts are complemented by the Zambia Biofortified Maize AgResults Pilot initiative, which supports the rollout of vitamin A maize by providing incentives aimed at industrial millers.

Sweet potato is also an important food in Zambia. We are part of a program led by the International Potato Center to promote vitamin A orange sweet potato.

Cassava is the second most important staple food crop after maize in Zambia and is being field tested in cassava-consuming communities that include Luapula, Western, North-Western, and Northern provinces.

*“I tasted vitamin A orange maize at the launch of the USAID Feed the Future program. I found it tastier than our usual white maize. This is the chance for Zambia to start moving out of white maize and adopt a more nutritious and tastier orange maize.”*

~ Mr. Chance Kabaghe

Former Deputy Minister of Agriculture & CEO of Food Reserve Agency

## Partners

**CGIAR:** Centre for International Forestry Research (CIFOR) • International Institute of Tropical Agriculture (IITA) • International Maize and Wheat Improvement Center (CIMMYT) • International Potato Centre • WorldFish • **Local:** Civil Society Organisation on Scaling Up Nutrition (CSO-SUN) • Development Aid From People to People (DAPP) • Government Ministries: Agriculture, Education, Health • Indaba Agricultural Policy Research Institute (IAPRI) • Kamano Seed • Land O’ Lakes • National Food and Nutrition Commission • National Institute for Scientific and Industrial Research • Peace Corps • ProfitPlus • Programme Against Malnutrition • SeedCo • Star Milling • Tropical Disease Research Center • University of Zambia • World Vision • Zambia Agriculture Research Institute (ZARI) • Zambia Seed Traders Association (ZASTA) • ZamSeed • **Other:** Iowa State University • Johns Hopkins Bloomberg School of Public Health • Michigan State University • Micronutrient Malnutrition Taskforce • Purdue University • SEED Solutions, SEED Infotech Ltd. • University of California, Davis • University of Wisconsin-Madison • World Food Programme

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HarvestPlus improves nutrition and public health by developing and promoting biofortified food crops that are rich in vitamins and minerals, and providing global leadership on biofortification evidence and technology. HarvestPlus is part of the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH). CGIAR is a global agriculture research partnership for a food secure future. Its science is carried out by its 15 research centers in collaboration with hundreds of partner organizations. The HarvestPlus program is coordinated by two of these centers, the International Center for Tropical Agriculture (CIAT) and the International Food Policy Research Institute (IFPRI).



RESEARCH  
PROGRAM ON  
Agriculture for  
Nutrition  
and Health

LED BY IFPRI

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