The Commercialisation of Biofortified Crops Programme

Expanding the reach of nutrient-enriched staples
The challenge

2 billion people primarily in low- and middle-income countries, do not get enough essential vitamins and minerals (micronutrients) in their daily diets.

This “hidden hunger” increases their vulnerability to serious health problems, particularly in women and children, including:

- stunting
- blindness
- poor brain development
- weakened immunity
- anaemia

The cost of hidden hunger to societies is staggering:

Chronic child underweight and poor growth have irreversible developmental effects.

The lost human potential means average 11% annual GDP losses for Asian and African countries.*

The response: biofortified staple crops

The Commercialisation of Biofortified Crops (CBC) Programme was launched in 2019 to address widespread hidden hunger in Africa and Asia by significantly expanding the reach of foods and food products made with biofortified staple crops (Figure 1).

These micronutrient-rich crops are developed through conventional breeding techniques (they are not genetically modified) to increase their density of iron, zinc, or vitamin A – all critical micronutrients for maintaining good health and human development. They are also bred with other traits demanded by farming families, including high yield, drought tolerance, and resistance to disease and pests.

Biofortified staple crops, foods, and food products can be practical, affordable, and natural sources of nutrition for billions of people.

*Source: 2016 Global Nutrition Report

Figure 1: The CBC Programme promotes foods made with these biofortified crops

*Iron*
- beans
- pearl millet

*Zinc*
- rice
- wheat

*Vitamin A*
- cassava
- maize
The CBC Programme

The CBC Programme works with commercial value chain actors – including seed producers, farmers, aggregators, and processors – to catalyse commercial markets for biofortified seeds, grains and food products in six countries with pervasive levels of malnutrition: Bangladesh, India, Kenya, Nigeria, Pakistan, and Tanzania. Our programme vision is to enhance food systems so that they are able to deliver nutrition cost-effectively and sustainably to all people.

The partnership brings together two leading actors in global nutrition. It combines the deep expertise of HarvestPlus in all aspects of biofortification with GAIN’s proven track record of working with fortification and food companies to create sustainable market models for nutritious food systems.

Figure 2: Annual GDP losses from hidden hunger in current CBC Programme countries*

Current CBC countries selected based on:
- Demonstrated need/micronutrient deficiency
- Availability of officially released varieties of biofortified crops
- Strong political support
- Interest among value chain actors


Our goals

- **Overall vision**: Scale up commercialisation of biofortified foods to sustainably improve diet quality and tackle hidden hunger.
- **GOAL 1**: Improve access to inputs and markets for biofortified seeds and food products
- **GOAL 2**: Strengthen demand for these nutrient-rich staple foods
- **GOAL 3**: Improve the enabling environment for biofortified foods and food products

The CBC Programme is co-led by:

- Gain: Global Alliance for Improved Nutrition
- HarvestPlus: Better Crops, Better Nutrition

with funding from:

- Federal Ministry for Economic Cooperation and Development
- Government of the Netherlands
Our desired impact

This will be achieved by:

- Increasing participation and capacity of value chain actors in the production, processing, and marketing of biofortified seeds, grains and food products
- Ensuring market penetration of biofortified foods and food products through their integration in markets, including as replacements for non-biofortified goods.
- Over the longer term, expanding the Programme to more countries seeking to address hidden hunger.

How the CBC Programme works

The CBC Programme works with country partners on a value chain approach to creating sustainable commercial pathways for biofortification. We do not start from scratch; existing value chains for comparable non-biofortified staple crops and foods are leveraged, and any gaps or barriers to producing or trading biofortified versions are identified and addressed.

The flow chart below lays out the process followed for each CBC country/crop combination:

**Figure 3: The full value chain for biofortification – CBC is active in 3 to 8**