



Addressing malnutrition and improving public health in Bangladesh

HarvestPlus presence in Bangladesh

In 2004, HarvestPlus started its journey in Bangladesh to address hidden hunger through biofortification of rice, a staple crop, in collaboration with the Bangladesh Rice Research Institute (BRRI) and the International Rice Research Institute (IRRI). In 2013, BRRI succeeded in developing and releasing the first-ever biofortified zinc rice variety in the world, BRRI dhan62, through HarvestPlus support.

HarvestPlus works with public sector, private sector, and nongovernmental partners to multiply and distribute seed, educate farmers on the benefits of zinc rice, and promote wider adoption and consumption of the crop through public awareness campaigns. It also provides training and technical support to partners, including the government's crop breeding and agricultural extension programs.



The cost of micronutrient deficiency in Bangladesh

- **45% of children under 5** in Bangladesh do not get enough zinc in their diet.
- Bangladesh loses over **USD 700 million** in GDP annually to mineral and vitamin deficiencies (World Bank).

ZINC RICE

- *Nutritional benefits:* Provides up to 70% of daily zinc needs.
- *Farmer benefits:* High yielding, disease resistant, wider adaptability, short duration.

ZINC WHEAT

- *Nutritional benefits:* Provides up to 55% of daily zinc needs.
- *Farmer benefits:* High yielding, disease tolerant, heat and drought tolerant.

IRON/ZINC LENTIL

- *Nutritional benefits:* Lentils contribute to daily iron and zinc needs
- *Farmer benefits:* High yielding, heat and drought tolerant.

“ Zinc is an essential micronutrient to arrest stunting and poor immunity in children. Zinc-containing rice is the easily available source for all consumers, particularly low-income. This is a cost-effective and sustainable approach which low-income people can afford for easy access to micronutrients through staple food. ”

— Dr. M.A. Hamid Miah, Recipient of the “Independence Award 2013” and Fellow of the Bangladesh Academy of Sciences

Services and support offered by HarvestPlus

In addition to reaching and empowering farmers, HarvestPlus provides technical, logistical, training, and marketing support to a wide array of partners in seed and food value chains to build strong biofortified food systems.



Crop Development: HarvestPlus started its crop development program in Bangladesh with Bangladesh Rice Research Institute (BRRI) and International Rice Research Institute (IRRI) in 2004. Through support of the HarvestPlus Bangladesh program, Bangladesh has released nine zinc rice varieties so far.



Seed Multiplication: The released biofortified zinc rice varieties are licensed to Bangladesh Agricultural Development Corporation (BADC) and private seed companies to multiply seeds for farmers.



Seed and Grain Distribution: HarvestPlus connects buyers and processors to farmers. Commercial seed is distributed through agro-dealers, government agricultural input support schemes, and NGOs.



Consumer Engagement: HarvestPlus increases awareness of biofortified crops through consumer education, training, farmers' field days, courtyard meetings, and school sensitization programs.



Market Development: HarvestPlus supports the commercial processing of biofortified crops into popularly consumed products, thus providing an output market and income for farmers from their surplus and allowing non-farming consumers to benefit from the nutritional value of biofortified produce.



Policy Engagement: The National Agricultural Policy 2018, Bangladesh 8th Five Year Plan, 2020-2025, National Strategy on Prevention of Micronutrient Deficiency Bangladesh 2015-2024 and Second Country Investment Plan, Second National Plan of Action for Nutrition 2016-2025 are a few policies that include provisions on biofortification that were advocated by HarvestPlus Bangladesh.

PROJECTS

Commercialisation of Biofortified Crops (CBC) Program (2019-2022).

Project Focus: To address hidden hunger in Bangladesh by significantly expanding the reach of nutrient-rich biofortified crops and foods in the market. • *Funder:* The governments of Germany and the Netherlands.

Implementing Partners: Global Alliance for Improved Nutrition (GAIN) and HarvestPlus. • *HarvestPlus Role:* Advocating for the scale-up and commercialization of biofortified crop varieties to improve food security in Bangladesh.

An Integrated Food Systems Approach to Build Nutrition Security Project (2021-2022).

Project Focus: To improve food and nutrition security while safeguarding livelihoods by preventing an emerging food and nutrition crisis in the pandemic. • *Funder:* Government of Canada. • *Implementing Partners:* HarvestPlus.

HarvestPlus Role: Improving the affordability and access to biofortified seeds for the vulnerable populations and strengthening the capacity of smallholder farmers and SMEs to generate positive economic returns.

Enhancing Nutrition Services to Improve Maternal & Child Health (ENRICH) Project (2016-2021).

Project Focus: To contribute to mortality reduction through addressing malnutrition and improving food and nutrition security for maternal and child health care in Bangladesh. • *Funder:* Government of Canada.

Implementing Partners: Nutrition International (NI), HarvestPlus, and the Canadian Society for International Health (CSIH). • *HarvestPlus Role:* To date, 94,130 farm households have received biofortified zinc rice seed from HarvestPlus. A total of 470,650 people are benefited from zinc rice directly more than 92,000 people learn about biofortified zinc rice in Thakurgaon through different awareness creation activities.

Bangladesh Initiative to Enhance Nutrition Security and Governance (BIeNGS) Project (2018-2022).

Project Focus: To improve children and mothers' nutrition status in vulnerable districts by promoting a multi-sector, pro-poor governance model. *Funder:* European Union. • *Implementing Partners:* IFPRI-HarvestPlus, World Vision Bangladesh, Unnayan Sangha (US), and Institute of Development Studies (IDS). • *HarvestPlus Role:* Facilitating the uptake of biofortified rice, wheat, and lentil seed through subsidies and engagement initiatives in the districts.



ACHIEVEMENTS

2.7M households
reached directly with zinc rice in 65 sub-districts (upazila) of 29 districts in all 8 divisions.

514,884
people learnt about biofortified crops through farmers' field days, courtyard meetings, school sensitization programs, etc.

25,013 people
developed skills through training and exchange visits.

2,226 MT zinc rice seed
produced by Bangladesh Agricultural Development Corporation (BADC) and private seed companies in 2020, which is 1.4% of the national total.

500,000 households planned to reach with biofortified crops in 2021.

Partner with us to make food systems more nutritious, inclusive, and sustainable.

PARTNERS – Agricultural Advisory Society (AAS), Amra Kaj Kori (AKK), AVA Development Society (AVA), Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMRAU). Bangladesh Institute of Nuclear Agriculture (BINA), Bangladesh Rice Research Institute (BRRI), Christian Commission for Development in Bangladesh (CCDB), Department of Agricultural Extension (DAE), Friends In Village Development, Bangladesh (FIVDB), Natun Zibon Rochi (NAZIR), Prokash Gano Unnayan Kendra (PGUK), RDRS Bangladesh, Shariatpur Development Society (SDS), Shawdesh Unnayan Kendra (SUK), Society Development Committee (SDC), Thengamara Mohila Sabuj Sangha (TMSS), Voluntary Rural Development Society (VRDS), World Vision Bangladesh, Agrani Trading, Agromars Limited, Ali Seed Farm, Bhai Bhai Traders, Supreme Seed Company Limited and Bakerganj Forum, Kobadak Enterprise, Mother Seed & Agro Industries Ltd., National Agricare Import & Export Ltd., South Bengal Seed Association (SBSA), Ushi Seeds and Uzirpur Organic Multipurpose Co-operative Society Ltd. (UOMCSL)

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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) and is based at the International Food Policy Research Institute (IFPRI).

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RESEARCH PROGRAM ON Agriculture for Nutrition and Health

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