HarvestPlus 2024 Annual Report

Scaling Impact, Enriching Lives

Dear Friends,

In 2024, the Global South continued to face food and nutrition insecurity driven by conflict, economic shocks, forced displacement, and climate extremes. Malnutrition persists at high levels, especially among children, while funding for solutions is declining. A fundamental rethink is needed about how to sustainably meet the food and nutrition needs of vulnerable populations.

At HarvestPlus, we are acting urgently to scale up nutrients in diets in Asia, Africa, and South America. By the end of 2024, over 360 million people benefited from more nutritious diets through biofortified foods—a nine percent increase over last year. There is an additional reach of biofortified crops through organizations like International Potato Center (CIP), The Alliance of Bioversity International and CIAT, IITA, and others civil society actors which is heartening to note.

We continued to empower women smallholder farmers along the value chain with knowledge, business skills, and opportunities. They are driving change by developing and marketing nutrient-enriched foods within their communities, making their local food systems more resilient.

Improving the nutrition of children and adolescents is a vital focus of our work. This year, we strengthened local supply chains and facilitated the inclusion of home-grown nutritious crops in school meal programs. As a result, over one million schoolchildren in Asia and Africa had access to meals enriched with biofortified foods. These efforts, combined with our delivery of nutrition education, are shaping healthier, more productive futures. A special thank you to Chef Sanjeev Kapoor for championing this work in India under our Nutri-Pathshala school meal model.

Partnerships with CGIAR centers and national agricultural research and extension systems (NARES) enabled the release of 12 new biofortified crop varieties in five countries in 2024. These varieties provide farmers with competitive yields and more nutrients—adding diversity to the agricultural system while enriching the food system. By boosting supply and demand, we are making nutrient-rich foods more affordable, available, and accessible for the most vulnerable.

Our delivery models scale innovations like biofortification and other nutritious crops and technologies rapidly and at low cost, ensuring they reach those who need them most and create impact at scale. In Pakistan, over 50 percent of wheat grain production is now zinc-enriched, funded primarily through public and private seed sector investments. In Nigeria, over 10 million people are consuming vitamin A maize on farms, with the private sector playing a major role in its scale-up. Going forward, these delivery models will be deployed through our scaling arm, HarvestPlus Solutions.

We are encouraged by strong interest from the private sector in partnering with HarvestPlus Solutions. These partnerships are central to our long-term development work, particularly in the current funding environment. In 2024, we continued to transition HarvestPlus' delivery and commercialization work to HarvestPlus Solutions and its network of partners. Sustainability is at the core of our approach, where local actors lead local solutions at the last mile.

Our progress in 2024 is thanks to the collective dedication and passion of our team, partners, and donors. We have come a long way, but there's still more to do. With continued support, we can deepen our impact, accelerate innovation, and nourish millions more.

Thank you for being part of this journey. Together, we are transforming food systems and improving the health and livelihoods of those who need it most.

With gratitude,
Arun Baral

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 works across CGIAR as part of the International Food Policy Research Institute (IFPRI).

HarvestPlus SOLUTIONS

IFPRI CGIAR

Key Metrics in 2024:

360M

people were consuming biofortified foods, representing a nine percent increase from the previous year. The biofortified food in the market was enough to feed an estimated 245 million. In addition, 23 million smallholder farming households which consist of over 115 million people who ate what they grew on their farms.

273,000

metric tons seed of biofortified staple grain crops produced and distributed, representing a 10 percent increase from the previous year.

1,000,000+

school learners eating nutritious foods in Asia and Africa.

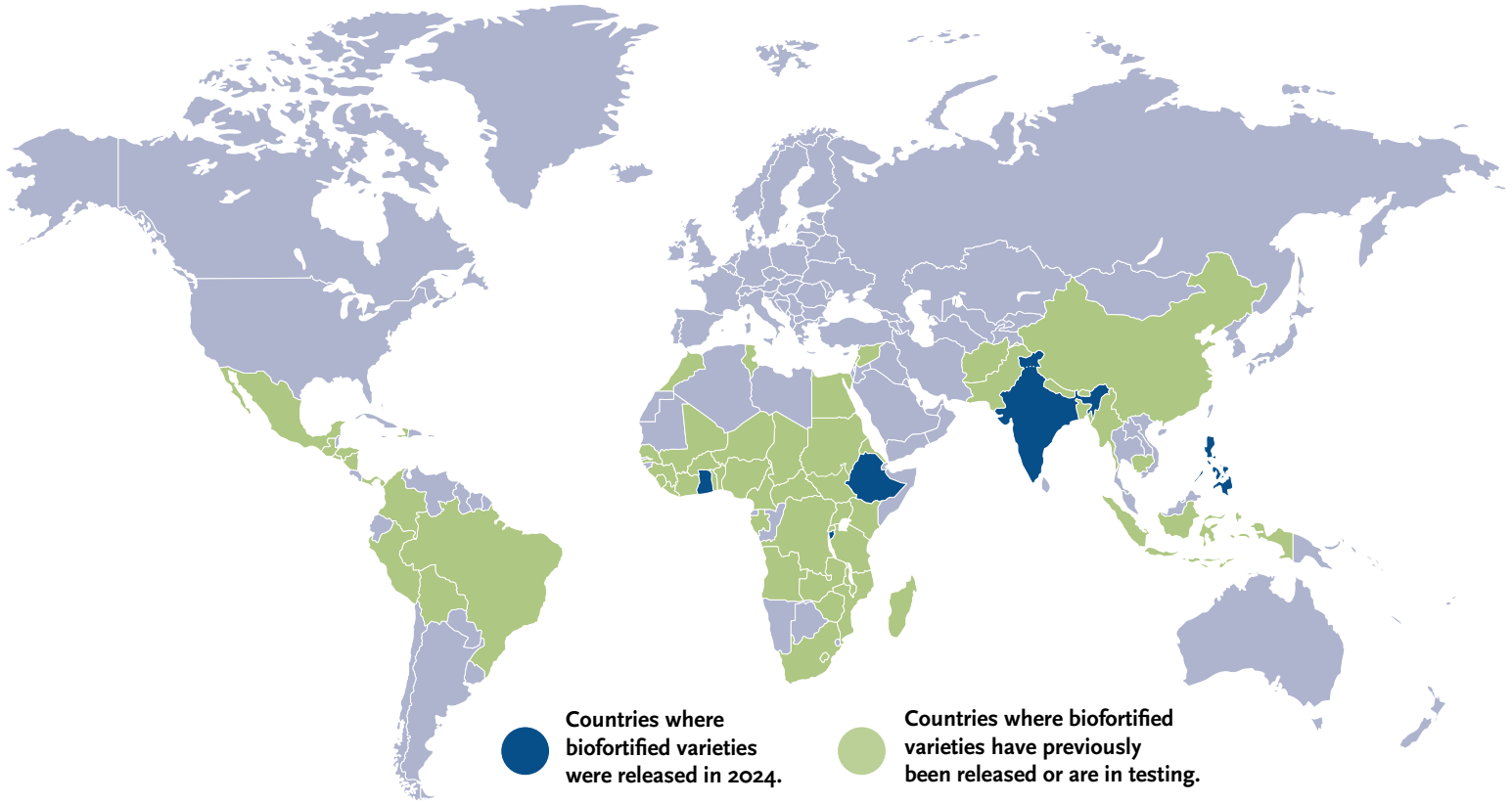
3600+

partners, representing a 20 percent increase from the previous year, committed to scaling up biofortification, mostly small and medium-sized enterprises.

881,000

farmers and value chain actors —a threefold increase from the previous year— received in-person training and technical support to enable them and to strengthen their capacity to grow and market biofortified crops and foods.

458 varieties of 13 biofortified staple crops available for farmers to grow*



12 new biofortified varieties were approved by governments for farmers to cultivate them in five countries in 2024.

3 new varieties of Zinc Wheat

4 new varieties of Vitamin A Cassava

3 new varieties of Iron Pearl Millet

2 new varieties of Vitamin A Maize

** This represents all the biofortified varieties of which development and release was supported by HarvestPlus, CGIAR, and national research partners.*

Advancing Global Progress through Nutrient-Enriched Crops

In 2024, HarvestPlus continued to advance global nutrition by developing, mainstreaming, and scaling up biofortified crops rich in essential vitamins and minerals. Through collaborative efforts with our public and private sector partners, the nutritious food produced was enough to reach over 360 million people. This includes more than 115 million people who grow and eat biofortified crops on their farms, representing a 12 percent increase over 2023. A journey to transform food systems continued gaining momentum.

Over 273,000 metric tons of seed of biofortified staple grain crops, representing a 10 percent increase over the previous year, were produced and planted by farmers. More than 458 varieties of 13 biofortified crops were available to farmers in over 40 countries.

In Pakistan, zinc-biofortified wheat variety Akbar 2019 maintained its momentum and remained Pakistan's top variety, driving private sector investment. In the 2024-2025 crop season, 187,000 tons of certified zinc wheat seed were planted, mobilizing USD 85 million in seed business and expected to produce over 15 million tons of biofortified wheat grain worth approximately USD 5 billion. This grain will be enough to feed over half of the country's population for one year.

In India, through its catalytic scaling model and collaboration with ecosystem partners, HarvestPlus is driving the adoption of new biofortified crops. Notably, zinc wheat saw a 37 percent increase, iron pearl millet an 18 percent, and zinc rice a 65 percent increase over last year. Given that farmers are often risk-averse and slow to adopt new varieties, our model catalyzes the private sector to create impactful change at scale.

In Nigeria, the journey from crop seed variety release to commercialization typically takes at least three to four years to build seed systems. This slow process particularly hinders adoption of better and nutritious crop varieties. However, the successful release and commercialization of the first iron pearl millet variety in Nigeria was achieved in just one year through the HarvestPlus Accelerated Release and Commercialization.

In Democratic Republic of Congo, despite the fragile context and challenges such as poor road infrastructure and security issues in eastern DRC, over 55,000 farming households—representing approximately 275,000 on-farm consumers—were reached in South Kivu, Kwilu, and Kasai, with distribution of biofortified seeds including vitamin A maize, cassava, sweet potato, and iron beans.

In Bangladesh, our work continued gaining momentum and over 3.55 million people are consuming biofortified foods. In 2024, 38 percent more people were reached with zinc rice as compared to 2023.

In Indonesia, through continued evidence-led advocacy at the national level and ongoing engagement by HarvestPlus, the Government of Indonesia has continued to implement policies strengthening nutrition and food security. Notably, the government supported 750,000 farmers in planting zinc rice on 250,000 hectares, marking a 25 percent increase in investment compared to the previous year.

The detailed country wise summary of progress is in the annexure.

Driving Impact through Nutritious School Meals

In 2024, HarvestPlus achieved a significant milestone in combating child malnutrition, providing over one million school-age children across India, Kenya, Malawi, and Tanzania with nutritious school meals through its Nutritious School Meals Program. This success highlights the potential of school meal programs to improve child health, school attendance, educational outcomes, and build local food systems with nutritional impact and sustainability at their core.

The 2024 CAADP Partnership Platform Meeting and African Day for Food and Nutrition Security featured a HarvestPlus and AUDA-NEPAD side event. The session, "Building Sustainable Safe and Nutritious Homegrown School Feeding Programs," emphasized transforming school feeding programs into sustainable, safe, and nutritious initiatives.

Home-Grown Nutritious School Meals Program

Essential micronutrients like iron, zinc, and vitamin A play a vital role in children's cognitive and physical development. Iron supports brain function and focus, zinc fuels growth and immune systems, and vitamin A enhances vision and overall health. This makes it pivotal that school meals must be nutritious, laying the foundation for a healthy and thriving future.

The Home-Grown Nutritious School Meals Program, a signature intervention by HarvestPlus and its scaling arm, HarvestPlus Solutions, represents a new generation of school feeding initiatives, combining nutrition-sensitive agriculture, community empowerment through nutrition education, and public-private collaborations. By leveraging locally produced, nutrient-enriched crops, these programs help combat food insecurity and hidden hunger, driving lasting impact on children's growth and cognitive development while empowering communities. Through nutrition education, children learn about diverse, healthy

diet and help improve the overall food environment, including in their households. The program strengthens local food ecosystems by supporting farmers to grow nutrient-rich crops, creating stable markets through institutional procurement, and collaborating with governments, NGOs, and private sector partners to integrate biofortification into national nutrition strategies.

In Uganda, the Expanding Nutrients in Food Systems project is transforming school nutrition by incorporating biofortified crops like vitamin A orange sweet potato, iron beans, and vitamin A maize into school meals. School gardens serve as both educational tools and food sources, enabling students to participate in food production and ensuring a steady supply of nutritious staples.

In Tanzania, the National School Feeding Conference in Dodoma (July 2024) marked a significant milestone, highlighting the importance of school gardens, healthier school canteen policies, and value chain development for biofortified crops. HarvestPlus, in collaboration with AGRA and the Rockefeller Foundation, is supporting this vision through a three-year program aiming to reach 400,000 students with biofortified school meals. The initiative prioritizes seed access, farmer training, and institutional market linkages to ensure a reliable flow of high-quality nutrition to schools while supporting rural livelihoods.

NutriPathshala - A Holistic Approach in India

The Health and Nutrition for School-Age Children program is transforming school meals in India by combining delivery of locally sourced nutritious foods with nutrition education. Key highlights include:

- Incorporating biofortified grains like zinc wheat and rice into meals for children in malnourished regions
- The Nutri-Pathshala school meals model, which provides nutritious meals, promotes nutrition education, hygiene, and community engagement, empowering children, teachers, and parents to adopt healthier food choices and habits.
- The nutrition education children gain through school is reaching parents and other children at home, helping to transform food systems into more nutritious and resilient ones.

HarvestPlus, HarvestPlus Solutions, and the Ministry of Tribal Affairs India have partnered to implement an initiative targeting 17,000 school children. By integrating biofortified foods into school meals, the partnership aims to address micronutrient deficiencies, providing essential nutrients like iron and zinc crucial for physical and cognitive development.

Accelerating Scaling of Innovations through HarvestPlus Solutions

HarvestPlus Solutions (HPS), the scaling arm of HarvestPlus, delivers and scales innovations that transform food systems into more resilient and nutritious ones. HPS is emerging as the go-to organization for delivering and scaling our innovations to the last mile. While HarvestPlus continues to focus on research, policy, and facilitating crop development, HPS is driving the action globally, getting biofortified crops to farmers, reaching communities, and scaling solutions where they matter most.

HPS's mission is to build sustainable food systems that foster better diets and resilience sustainably, by catalyzing ecosystems and leveraging private sector engagement for long-term impact. The transition of scaling and delivery activities from HarvestPlus to HPS is progressing well, with Asia largely completed in 2024 and Africa set to follow in 2025.

- In India, through partnership with Yara International, HPS advanced the use of biofortified seeds and agronomic biofortification in staple crops like zinc rice and wheat, boosting productivity, nutrition, and incomes.

- In Indonesia, HPS partnered with FMC Indonesia and Badan Standarisasi Instrumen Pertanian to drive innovation in rice farming, boosting rice productivity and nutritional value. The results of field trial showed 20 percent increase in rice yields and a 60 percent rise in zinc content, making rice more nutritious for consumers.

- In Nigeria, HPS is empowering Nigerian seed and food companies through sustainable outgrower business models, enhancing their raw material sourcing capacities and fostering a thriving agricultural sector.

- In Kenya, a pilot project connected bean farmers with processors, promoting biofortified beans and enhancing value chain transparency through end-to-end traceability. The next phase will link processors to school feeding programs, supporting food security and child nutrition through locally sourced beans.

HPS also forged new partnerships to co-create and scale value-added products, advancing nutrition-sensitive supply chains, and embedding commercial viability across the food system.

A key focus area is improving child nutrition through school feeding programs, recognizing that healthy learners are more likely to thrive. HPS's nutritious school meal program is growing rapidly across Asia and Africa, making significant strides in collaboration with partners like The Rockefeller Foundation, AGRA, The Happel Foundation, Cargill, COFCO International, GIZ, and PATH.

HPS remains committed to scaling locally rooted, evidence-driven innovations, championing nutrient-enriched staples as a foundation for healthier food systems.

Empowering Women through Nutrient-Enriched Crops

A Pathway to Gender Equality and Economic Resilience

Women in low- and middle-income countries face significant challenges in agricultural ecosystems, including limited access to resources, training, and markets, as well as higher rates of malnutrition and food insecurity. Across Africa and Asia, women are driving change in agriculture despite these challenges. Women empowerment is central to our mission, driving resilient food systems, family health, and a more equitable world. HarvestPlus empowers women by providing access to biofortified crops, building capacity on agricultural technologies, promoting improved nutrition, economic empowerment, and gender equality. Millions of women are benefiting from our work, and a few examples are mentioned below to showcase how our work is benefiting them.

In Zimbabwe:

- Mariet Muroyiwa increased her income nearly eightfold by transitioning to value-added food products with the Expanding Nutrients in Food System project supported by the Government of Canada.
- Loice Matienga turned a modest investment in vitamin A sweet potato vines into a thriving nursery business, earning enough to cover her children's education and expand her farm.
- Solar dryers in Guruve district, enabling women like Abigirl Chigangaidze to preserve nutrient-rich crops, reduce post-harvest losses, and create new income streams.

In Uganda:

Madina Nangendo and Mariam Nalongo achieved impressive grain yields and improved family nutrition with iron-rich bean varieties, despite harsh weather.

In Pakistan:

Pakistan ranks lowest in the Global Gender Index, and the agriculture sector is no exception. Recognizing this challenge, HarvestPlus has trained over 5,000 women farmers on zinc wheat, resulting in improved crop yields, increased access to nutritious food for their families, and enhanced economic empowerment through biofortification.

Building Partnerships to Deliver Nutritious Foods

At HarvestPlus, we believe that partnerships make progress possible. Throughout 2024, HarvestPlus strengthened and expanded strategic alliances with academia, research and development institutions, national governments, and extension services across Africa and Asia, catalyzing change in food systems and advancing nutrition security.

HarvestPlus and the Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) have formalized a partnership through the signing of a Memorandum of Understanding aimed at enhancing rural development and nutrition security across Asia and the Pacific. The partnership aims to foster a cooperative and mutually beneficial relationship between HarvestPlus and CIRDAP to address food and nutrition security challenges.

Access to Nutrition Initiatives (ATNI) and HarvestPlus entered into a strategic collaboration to increase the micronutrient content of staple food commodities procured by global food businesses. One focus area for the collaboration is connecting smallholder farmers with food businesses to expand consumer access to nutritious foods.

HarvestPlus and Cargill announce the NutriHarvest project, a 36-month initiative. This multi-year project will increase access to nutritious food for over 119,000 farmers across India, Kenya, Tanzania, and Guatemala, delivering more than 17 million nutritious meals.

In Pakistan, HarvestPlus, its local network partner—Nutritious Agrifuture, and academic institutions—including the University of Agriculture Faisalabad and the University of Veterinary and Animal Sciences Lahore—signed two tripartite agreements. These agreements aim to advance biofortification research, product development, technology transfer, capacity building, and advocacy efforts, ultimately increasing the production, availability, and consumption of nutrient-enriched crops to combat malnutrition in Pakistan.

Advancing Research in Nutrient-Enriched Crops

A recent study published in the *Journal of Nutrition* analyzed data from Bangladesh, Indonesia, and the Philippines to determine the optimal zinc level in rice for maximal public health benefits. The research explored the impact of biofortified rice with varying levels of zinc content on zinc intake among women and children under five. Results showed that zinc inadequacy significantly decreased with increasing zinc levels, with the greatest effects observed in high rice-consuming countries like Bangladesh and the Philippines.

A trial in Pakistan is investigating zinc biofortification of wheat to address the dual challenge of hidden hunger and non-communicable diseases. In Sindh province, a controlled feeding trial among 1,000 adolescents and young women explored the potential of zinc wheat and post-harvest fortified wheat flour to reduce the risk of type 2 diabetes, with results expected in 2025.

Twenty years ago, biofortification was an unproven approach to addressing micronutrient deficiencies. Today, an estimated 360 million people globally are benefiting from biofortified foods. A recent comprehensive review, "Biofortification: Future Challenges for a Newly Emerging Technology to Improve Nutrition Security Sustainably," chronicles the progress over the past two decades. The review outlines the rationale behind biofortification, documents achievements, and highlights future challenges, recognizing that development and deployment of this scalable innovation require sustained collaboration among public, private, and non-governmental sectors.

Evidence-based Advocacy and Policy Engagement for Sustainable Growth

The Indonesian government has taken a significant step towards improving public health and nutrition with the release of two key policies driving biofortification and food diversification efforts over the next two decades. The Long-term National Development Plan 2024-2045 (Law No. 59, 2024) provides a 20-year framework for expanding biofortification, emphasizing crop production and food diversification, including local staples. Presidential Decree No. 81, 2024 prioritizes local food diversification and tasks the National Research and Innovation Agency with advancing biofortification research. HarvestPlus played a crucial role in shaping these policies through its collaboration with key government bodies, in positioning biofortified crops as a national priority in combating malnutrition.

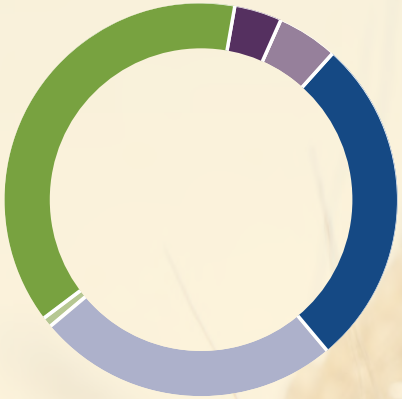
Prioritizing Nutrition and Climate Resilient Agriculture

At HarvestPlus, we recognize the intertwined challenges of malnutrition and climate change. We tackle this challenge by developing climate-resilient, nutrient-rich biofortified crops. As a result of our catalytic efforts, 12 new biofortified crop varieties were released in five countries, including three iron pearl millet, two vitamin A maize, three zinc wheat, and four vitamin A cassava varieties.

These innovations have made it possible to use breed for yield and nutrition together in crops, and CGIAR is working to mainstream nutrition traits in major staple crop breeding programs. This approach aims to enhance food security, improve nutrition, and support sustainable agriculture for a healthier planet.

Explore this website to find out which biofortified crops have been released by country, as well as information about how biofortified crops are developed, and how they are being mainstreamed in global and national crop breeding programs.

2024 Financials



Contributer by Type

- International Finance Institutions (1%)
- National Governments (38%)
- Non-profits (4%)
- Multilateral Donors (5%)
- Bilateral Donors (27%)
- Private Foundations (25%)

Donors to HarvestPlus

AGRA

Asian Development Bank

Cargill

The Church of Jesus Christ of Latter-Day Saints

Gates Foundation

Food and Agriculture Organization of the United Nations

Institute of Food Technologists

UK International Development

The Government of Canada

The Government of the Democratic Republic of the Congo

Happel Foundation

The Rockefeller Foundation

CGIAR

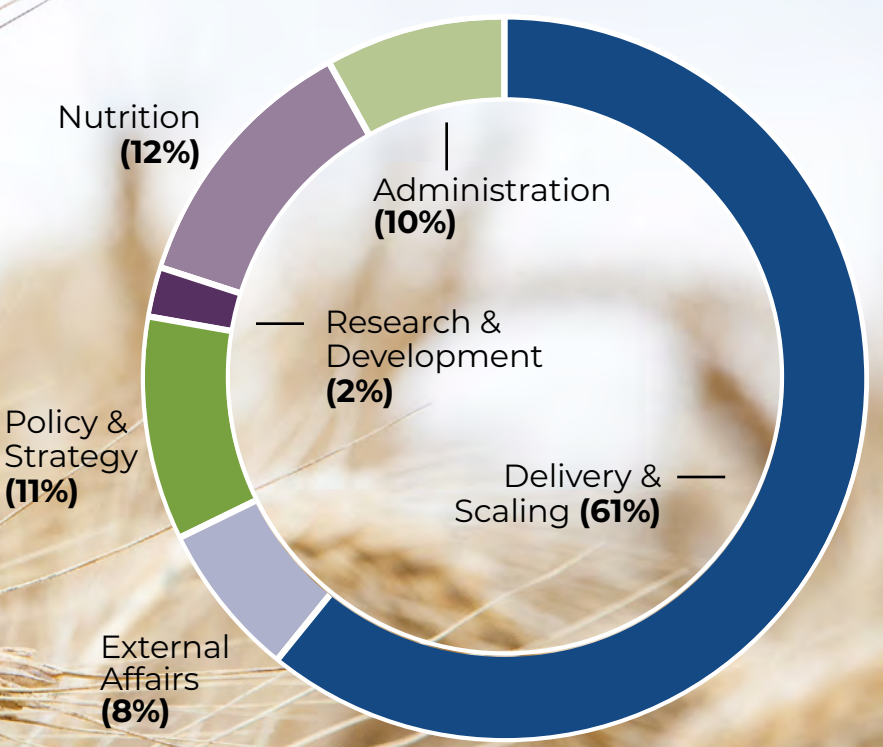
United States Agency for International Development/
US Feed the Future Initiative

World Vision

VIAMO

Disbursements by Category

(percentage of total; figures rounded)



Annexure: Country Updates

Bangladesh

• In Bangladesh, 3.55 million people are consuming biofortified foods. In 2024, 38% more households were reached with zinc rice as compared to 2023. In addition, the Scaling Biofortified Crop Production" project funded by The Church of Jesus Christ of Latter-day Saints has expanded zinc rice production to 38,000 farming households in three new districts (Pabna, Sirajganj, and Natore).

Democratic Republic of Congo

• The Democratic Republic of Congo is building resilient food systems in a fragile environment with the support of HarvestPlus and its partners. In 2024, 1.4 million farming households were growing and eating biofortified foods. Over 55,277 households in South Kivu, Kwilu, and Kasai received biofortified seeds including vitamin A maize, cassava and sweet potato, and iron beans. HarvestPlus and its partners, provided access to essential micronutrients to the most vulnerable populations despite the civil strife in the country.

India

• India made significant strides in biofortified seed production through our catalytic scaling model, which worked with ecosystem partners to rapidly increase the adoption of new biofortified crops. Notably, zinc wheat saw a 37 percent increase, iron pearl millet 18 percent, and zinc rice 65 percent increase over last year. As a result of these efforts over three million farming households are growing and consuming nutrient-enriched foods.

• HarvestPlus built sustainable supply chains for nutritious crops and connected them to schools, resulting in over three million nutritious school meals served alongside nutrition education in 700 Nutri Pathshalas under the HarvestPlus-led school meals program. Read more here.

• Through the Hatching Hope program, supported by Cargill, HarvestPlus is building the capacity of backyard poultry farmers in India. This initiative marks a crucial step toward providing affordable, nutritious, and diversified diets for the most vulnerable populations.

Indonesia

• As a result of sustained evidence-led advocacy at the national level and ongoing engagement by HarvestPlus, the Government of Indonesia has continued to implement policies strengthening nutrition and food security. Notably, the government supported 750,000 farmers in planting zinc rice on 250,000 hectares, marking a 25 percent increase in investment compared to the previous year.

• In collaboration with FMC, a private sector partner, and the Agricultural Instrument Standardization Agency of Indonesia, as a part of driving public and private sector partnership with ecosystem players, HarvestPlus introduced agronomic biofortification technology, which has been proven to increase yields by 20 percent and boost zinc concentration in grains. The partnership aims to demonstrate wheat and zinc application, enhancing farmers' income, food security, and nutrition.

Kenya

• Over 135,000 learners benefited from iron beans through partnerships with AGRA and The Rockefeller Foundation, as a direct result of integrating biofortified beans into home-grown school feeding. The First Lady of Kenya continued to champion iron beans, cultivating them in the state house gardens. Our partnership with World Vision and the Government of Canada helped accelerate nutrition outcomes through both nutrition-sensitive and nutrition-specific interventions.

• A new project with funding support from Cargill was launched to promote three nutritious, climate-smart crop value chains: vitamin A sweet potato, iron beans, and green grams. The project supports the development of sustainable supply chains for locally produced, diverse, and nutritious foods.

Nigeria

• The journey from crop variety release to commercialization typically takes at least three years, leaving many promising varieties from reaching farmers. This slow process particularly hinders nutrition-focused initiatives, where timely access to nutrient-dense crops can significantly impact public health. However, the successful release and commercialization of the first iron pearl millet variety in Nigeria was achieved in just one year through the HarvestPlus Accelerated Release and Commercialization model. Read more here.

• The 10th edition of the HarvestPlus annual signature event, Nutritious Food Fair was held in Niger State, attracting high-profile dignitaries from public and private sector fostering investment to advance bifortified crops and foods. Governor of Niger state announced plans to invest in 30,000 hectares of vitamin A maize to enhance food security and nutrition. Read more here.

• HarvestPlus and the Nigerian Meteorological Agency collaborated to achieve a groundbreaking milestone: harvesting iron-enriched pearl millet twice in one growing season in Jigawa State. This climate-smart crop developed with the support of HarvestPlus and its partners matures in just 65 days. These two harvests are playing a crucial role in improving nutrition and livelihoods of vulnerable communities.

• HarvestPlus, in collaboration with NARES partners in Bangladesh and Nigeria, has achieved a historic milestone by developing the first zinc-enriched rice varieties in Africa, with anticipated release in 2025. This initiative is enhancing cooperation in the region and accelerating access to new technologies that increase food, nutrition, and builds resilience of food systems in global South.

Malawi

• In Malawi, the Home Grown Nutritious School Meals Program achieved a significant milestone: in 318 schools, over 200,000 learners gained access to nutritious meals and received nutrition education. Through HarvestPlus' collaborative efforts, four partners now promote nutritious school meals made with iron beans and vitamin A maize.

• Engaging Early Childhood Development schools and utilizing 1-2-acre school plots for biofortified crop production has boosted the availability and consumption of nutrient-rich crops among children under five. This approach is emerging as a promising strategy to increase intake of essential micronutrients, such as iron through iron beans and vitamin A through orange maize.

Pakistan

• The zinc-biofortified wheat variety Akbar 2019 maintained momentum and remained Pakistan's top variety for the second consecutive year, driving private sector investment. In the 2024-2025 crop season, 187,000 tons of certified zinc wheat seed were planted, mobilizing USD 85 million in seed business and expected to produce 15 million tons of biofortified wheat grain worth approximately USD 5 billion.

• HarvestPlus organized 29 gender-sensitive training programs across the country to empower smallholder farmers, particularly women, which were attended by over 8,500 participants (61 percent women), focusing on nutrition benefits, cropping technologies, and product development.

• A targeted zinc wheat awareness campaign, leveraging digital media, effectively reached over 17 million people, including smallholder farmers, during the wheat planting season. The campaign featured expert testimonials, stories, and radio broadcasts, successfully raising awareness about the benefits of zinc wheat.

Tanzania

• HarvestPlus successfully integrated biofortified crops into home-grown school meals with the funding support of AGRA and The Rockefeller Foundation, reaching over 120,000 learners through public-private partnerships. In addition, this initiative reached over 162,000 smallholder households, including at least 20,000 marginalized households, which benefited from vitamin A maize, sweet potato, and iron beans, in partnership with World Vision and the Government of Canada.

• To strengthen ongoing efforts in building resilient home grown school meal program, HarvestPlus launched another project with funding support from Cargill to scale up delivery of nutritious school meals and increase farmer incomes.

Uganda

• More than 1.8 million farming households were growing and eating biofortified crops, with over one million accessing iron beans, 0.7 million accessing orange sweet potato vines, and 61,000 accessing vitamin A maize. Notably, 10,000 households from refugee and host communities in western and northern Uganda benefited from these efforts, facilitated through partnerships with Food for the Hungry, Action Against Hunger, and the Lutheran World Federation.

• HarvestPlus supported 80 schools in accessing seed of biofortified crops and establishing school gardens which were utilized to produce nutritious school meals. As a result of our consistent evidence-led advocacy, biofortified crops have been included in the National School Menu Guidelines, which is expected to further boost demand as schools integrate these nutritious foods into their diets.

Zambia

• Strategic engagement with major seed companies and demand creation efforts by HarvestPlus, in collaboration with its public and private sector partners, introduced and catalyzed demand for iron beans, driving a significant increase in seed production. As a result, private sector companies have fully taken up bean production and marketing, ensuring sustainability in the supply chain. These efforts yielded over 4,000 metric tons of seed, a 283 percent surge compared to 2023, underscoring the impact of targeted interventions in scaling up biofortified crop production.

• Under the Institute of Food Technologists-funded project, a nutritious school meal porridge was developed and slated for launch in 2025, further accelerating the scaling of biofortification. This initiative not only showcased the potential of biofortified crops in enhancing nutrition but also highlighted the crucial role of women-led Small and Medium Enterprises (SMEs) in creating markets for these crops, driving both economic empowerment and nutritional impact

Zimbabwe

• HarvestPlus, in collaboration with Zimbabwe's Ministry of Agriculture's Crop Breeding Institute, has introduced zinc wheat to its breeding pipeline. With this addition, all three essential micronutrients are now available in Zimbabwe, which will significantly enhance food and nutrition security in this fragile environment. The nutrient dense crops now include vitamin A maize, iron beans, vitamin A sweet potato, iron pearl millet, iron cowpeas, and zinc wheat.

Biofortified Crops

IRON BEAN

For Nutrition: Provides up to 80% of daily iron needs
For Farmers: High yielding, virus resistant, heat and drought tolerant • *CGIAR Partner:* The Alliance of Bioversity International and CIAT

IRON PEARL MILLET

For Nutrition: Provides up to 80% of daily iron needs
For Farmers: High yielding, mildew resistant, drought tolerant • *CGIAR Partner:* ICRISAT

VITAMIN A ORANGE SWEET POTATO

For Nutrition: Provides up to 100% of daily vitamin A needs • *For Farmers:* High yielding, virus resistant, drought tolerant • *CGIAR Partner:* CIP

VITAMIN A CASSAVA

For Nutrition: Provides up to 100% of daily vitamin A needs • *For Farmers:* High yielding, virus resistant • *CGIAR Partner:* IITA and Bioversity/CIAT

VITAMIN A MAIZE

For Nutrition: Provides up to 50% of daily vitamin A needs • *For Farmers:* High yielding, disease and virus resistant, drought tolerant
CGIAR Partner: CIMMYT and IITA

ZINC WHEAT

For Nutrition: Provides up to 50% of daily zinc needs • *For Farmers:* High yielding, disease resistant • *CGIAR Partner:* CIMMYT

ZINC RICE

For Nutrition: Provides up to 40% of daily zinc needs
For Farmers: High yielding, disease and pest resistant
CGIAR Partner: IRRI and Bioversity/CIAT

ZINC MAIZE

For Nutrition: Provides up to 70% of daily zinc needs
For Farmers: High yielding, virus resistant
CGIAR Partner: CIMMYT and IITA

HarvestPlus

IFPRI INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

CGIAR

SOLUTIONS

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