Advancing Nutritious Food Crops: The Role of the Public Sector

The public sector plays a vital catalytic role, through enabling policies and programs, in ensuring that biofortified crops like iron pearl millet, zinc wheat, and zinc rice reach the most vulnerable populations to address the problem of ‘hidden hunger’.

In late 2019, hundreds of farmers gathered at events in the Buxar and Gaya districts of Bihar State to learn about two wheat varieties being launched in the market. The farmers received sample packs of these “biofortified” wheat seeds, which were conventionally bred to be high in zinc—an essential mineral for good health. The varieties are also high yielding and disease resistant, making them competitive for cultivation. In addition, they retain their high zinc level harvest after harvest, providing nutrition over the long term after an initial investment in crop development. When eaten as a regular part of the diet, biofortified wheat can provide up to 50 percent of daily zinc requirements.

Zinc wheat is expected to reach more than one million farming households in Bihar in the next five years, promising positive health impacts in a state where zinc deficiency contributes to India’s highest rates of stunting. Zinc deficiency also leads to loss of appetite and weakened immunity, which increases the risk of contracting diarrheal diseases and respiratory infections. The World Health Organisation (WHO) estimates that nearly four in 10 Indian children under the age of five are zinc deficient.

India’s smallholder farming families and other low-income rural residents are particularly vulnerable to mineral and vitamin deficiencies—a condition known as “hidden hunger”—because their diets tend to be dominated by nutrient-poor staples. This is because they cannot afford to buy more-nutritious foods such as fruits, vegetables, and animal-source foods. Typically, this segment of society does not normally benefit under food fortification and supplementation initiatives of the government.

Since 2004, HarvestPlus has been supporting several cross-sector alliances that advance zinc rice and zinc wheat, high-iron pearl millet, and other biofortified crops in India as natural, practical, and cost-effective approaches to addressing hidden hunger. For example, the development and distribution of zinc wheat has involved the Indian Council of Agricultural Research (ICAR), State Agricultural universities, the CIMMYT, seed companies, and non-governmental organisations. All work together to generate impact. Read More..