

# Outlook

## Bio-Fortification of Rice, Wheat, Oil, Will Help Take Forward Poshan Abhiyaan, Say Experts

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Bio-fortification of wheat, rice, oil and salt with iron, zinc, and vitamins will go a long way in addressing hidden hunger – or micro-nutrient malnutrition -- among the people, especially children, and help take forward the government's Poshan Abhiyaan mission, experts said.

Nearly half of India's population, especially children, suffer from micro-nutrient malnutrition, which can lead to health issues like acute anaemia, cognitive delays, weakened immunity and increased risk of birth defects. Fortification of food and its supply through the Public Distribution System or serving such food at the Mid Day Meal scheme and the ICDS will help reach the poorer sections and fill the nutrition gap.

Dr DK Yadav, ADG (Seeds), Indian Council of Agriculture Research (ICAR), addressing a conference on Agri-Nutrition, said 70 percent of an Indian person's diet comprises cereals, and 30 percent of pulses, and vegetables and fruits.

“Bio-fortification of food should be introduced. It is a cost-effective, sustainable way to address malnutrition. This way the fortified food reaches the masses easily,” said, Yadav, adding that for the last 4-5 years ICAR has been stressing on bio-fortification.

He said the fortification of food is done according to international standards.

The government is trying to commercialise the bio-fortified varieties of rice, wheat, maize and oil through the PPP mode and also trying to spread awareness about it, the scientist said.

The government is also trying to create “Agri-Nutri Smart Villages” – to spread the message of nutrition, he added.

Dr Howarth Bouis, the 2016 World Food Prize Laureate, and founder-director HarvestPlus, said that high iron and zinc-fortified rice and wheat would go a long way to take forward the Poshan Abhiyan or National Nutrition Mission. The bio-fortification does not change the taste or colour of the food in any way, he said, in a video message at the National Conference on Agri-Nutrition held earlier this month.

Dr Vinod Kumar Paul, Member Niti Aayog, said that India needs to shift from food security and focus on nutrition security. “We need to combine food security with nutrition security, and for this a policy formulation is imperative,” he added.

With India having the highest prevalence of anemia globally at nearly 40 percent, and with women and children the most affected, fortification of food with iron would go a long way in tackling the issue, said KMS Khalsa, Deputy Secretary, Dept of Food and Public Distribution, Ministry of Consumer Affairs, Food and Public Distribution.

“For 65 percent of the people, rice is the staple. Rice fortification would reduce anaemia,” Khalsa said.

Rice fortification has been taken up in 15 districts as a pilot project, and would be scaled up, he added.

The food served as part of the Mid Day Meal Scheme should be fortified so that children get their nutrient needs for proper growth. Fortified grains should also be supplied at the ICDS (Integrated Child Development Services) government programme which provides food, preschool education, primary healthcare, immunization, health check-ups and referral services to children under 6 years of age and their mothers, experts said.

According to data, more than 57% of children in India suffer from Vitamin A deficiency, while a high proportion of pregnant women and their newborns suffer from Vitamin D deficiency.

Since both the vitamins can be dissolved in fat, fortification of edible oils and fats with vitamin A and D has been taken up to address micronutrient malnutrition. Fortified oil is known to provide 25%-30% of the recommended dietary allowances for the two vitamins.

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According to the National Family Health Survey 4 (NFHS 4), 38.4 percent of children in India are stunted and 21 percent wasted. India remains one of the highest-ranking countries in the world in terms of the number of children suffering from malnutrition.

The Global Hunger Index 2017 ranked India at 100th position out of 118 countries.

In October 2016, the Food Safety and Standards Authority of India (FSSAI), operationalized standards for fortification of five staples, namely wheat flour and rice (with Iron, vitamin B12, folic acid), edible oil and milk (with vitamin A and D) and salt (with iron in addition to iodine). FSSAI released the +F logo as an identity of the fortified food. It also established the Food Fortification Resource Centre, in association with Tata Trusts, for coordinating and promoting food fortification activities across the country.