

Large-scale Food Fortification



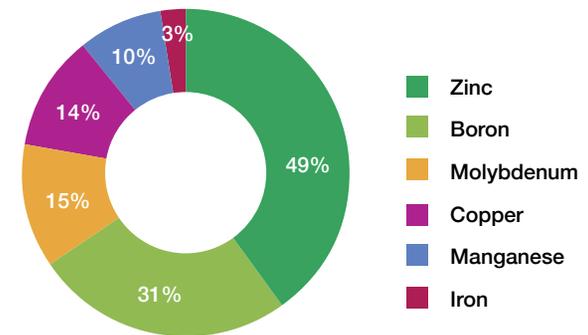
Actionable Area

Implementing and scaling up food fortification programme to ensure access to safe and nutritious food for all.

Issue

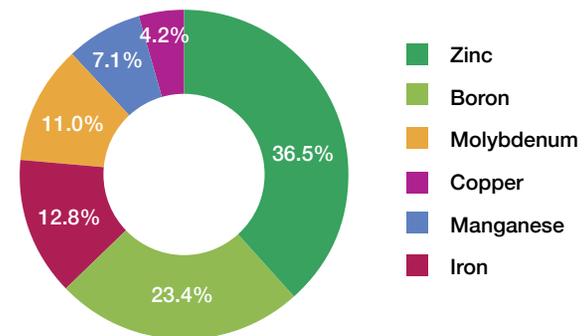
- The deficiency of various micro-nutrients, leading to malnutrition, anaemia, stunting, and mortality, is a major persistent problem of India as child malnutrition rates are unacceptably high. Over 70% of the Indian population consumes less than half the daily Recommended Dietary Allowance (RDA) of micronutrients a day. World Health Organization (WHO) estimates that more than two billion people suffer from micronutrient deficiency globally, and one-third of them are in India. This number is likely to grow amidst the COVID-19 pandemic.
- One solution to overcome this problem is staple food fortification. It is one of the most cost-effective large-scale programs to combat malnutrition as micronutrients such as zinc, iodine, folate, and iron are added to rice, wheat, cooking oil, and other staple foods people consume daily. It is done without changing taste, smell and looks. It can yield significant results in a short period of time.

Global micronutrient deficiency status



Source: ICAR - Central Institute of Post-Harvest Engineering & Technology, Annual Report 2018-19

Micronutrient deficiency in Indian soil



Source: Indian Journal of Fertilisers, 2018 and PwC analysis

Status

Government Initiatives

- Food fortification began in the 1950s with vegetable oil fortification and salt iodisation. Then after a 60-year gap, the government introduced in the 2000s the fortification of other commodities such as rice and wheat. When the Food Safety and Standards Authority of India (FSSAI) established standards for fortification of rice, wheat flour, edible oil, double fortified salt (DFS), and milk in 2016, the momentum for fortification accelerated and in 2018 fortification regulations were also in place. Now, food fortification is on the national agenda and is likely to take centre stage, given persistently poor health statistics year after year. With fortified staples- wheat flour (with Iron, folic acid and B12), oil (with vitamin A & D), salt (with Iron and iodine), problems of iron deficiency anaemia, neural tube defects, iodine deficiency disorders and deficiencies related to vitamin A, D and B12 can be addressed effectively. The FSSAI established the Food Fortification Resource Centre (FFRC) and developed the '+F' logo to identify fortified foods.
- Moreover, the FSSAI, after staple fortification, issued gazetted notification for standards of mandatory fortification of processed foods such as breakfast cereals, buns, rusk, pasta, noodles, buns and fruit juices with permissible levels of micronutrients (15-30 % of the Indian adult RDA) Also, products that are high in fat, salt and sugar (HFSS) will be “excluded” from the fortified processed foods category as per Food Safety and Standards (Fortification of Foods) Regulations, 2018.
- In 2011, the Ministry of Women and Child Welfare (MWCD) and Ministry of Human Resource Development (MHRD), Government of India, initiated the proposal of making mandatory use of fortified foods. Through its communications dated 10th July 2017 and 2nd August 2017, the mandate has been established to use fortified oil, fortified wheat flour, and double fortified salt in Mid-day meals (MDM) and Integrated Child Development Services (ICDS) programmes.
- Department of Food and Public Distribution, Government of India, through its letters dated 3rd November 2014, 22nd December 2016, and 18th September 2018, asked all states which distribute ‘atta’ through PDS to supply fortified ‘atta’ and pass on the cost to the consumers. A pilot scheme was approved in February 2019 for three years from 2019-20 onwards, wherein one aspirational district in each of the 15 predominantly rice-eating states was selected for the provision of fortified rice. Initially, Andhra Pradesh, Gujarat, Maharashtra, Tamil Nadu, and Chhattisgarh had started the distribution of fortified rice in their identified pilot aspirational district at the time of review. It has now been expanded to 112 specially identified aspirational districts of the country. The food ministry has decided to scale up the distribution of fortified rice under the ICDS and MDM, covering all their centres across the country from April 2021.

- The Food Corporation of India (FCI) has also been mandated to scale up the annual supply of Fortified Rice Kernels (FRK) from the current 15,000 tonnes to at least 1.3 lakh tonnes to meet country-specific needs (2021-2022). If done through PDS, then 350 lakh tonnes of rice needs to be fortified, ensuring an uninterrupted supply pipeline of FRK for which existing rice mills (28,000 in the year 2020) need to be equipped with blending infrastructure for the production of fortified rice.

India's 10th, 11th, 12th Five-Year-Plans, POSHAN Abhiyan (National Nutrition Mission) and Anaemia-Mukt Bharat Mission recommend food fortification as an important strategy to tackle micronutrients malnutrition. In his Independence-Day speech on 15th August 2021, Hon'ble Prime Minister Narendra Modi announced that fortified rice would be distributed through various food schemes to combat malnourishment among the poor. Be it the rice available at ration shops or the rice provided to children in their mid-day meals, the rice available through every scheme will be fortified by the year 2024. Various states have adopted fortification of several commodities across the government safety net programmes (SNP).

Private sector initiatives

- Presently, 157 brands of five fortified staples are available in the open market with a pan India presence. There has been tremendous traction in the oil and milk industry. As per recent estimates, 69% (7.94 million tonnes/annum edible oil) of packaged edible oil sold across India is fortified. More than 40% of the organised milk industry fortifies its products as per FSSAI standards.

Civil Society Initiatives

- Several development partners have been working in coordination with the Food Fortification Resource Centre (FFRC) at FSSAI to coordinate the scale-up of staple food fortification across the country through open market and social protection schemes. Detailed roadmaps for scaling up fortified edible oil, milk, wheat flour, rice and double fortified salt were drawn up by POSHTIK Network partners.
- In addition to the scale-up universal adoption of fortified staples by social protection schemes and through the open market, there is increasing emphasis on ensuring that the fortified staples available to the population comply to national fortification standards and are of good quality. This will be achieved through strengthening regulatory monitoring at the production and market levels, further strengthening the capacity of food laboratories to accurately test for micronutrients and ensuring that data is available transparently across the value chains. These efforts require coordinated action from the government, food industries, citizens supported by development agencies, civil society organizations and academia.

Vision 2030

-  Leverage fortification and biofortification as complementary strategies to prevent and control micronutrient deficiencies. End all forms of malnutrition-related adverse outcomes and ensure a nutritionally secure generation by 2030.
-  Universalise fortification of edible oil, milk, and other relevant staples.
-  Ensure food and nutrition security by emphasising sustainable ways of increasing the availability, accessibility, affordability, and consumption of fortified products by consumers and vulnerable groups through social protection schemes and open market.

Anaemia in India



Rs 1.5 lakh crore in GDP lost in 2016

Due to Anaemia, as per an IndiaSpend report.



41%

of pre-schoolers, 24 per cent of school-age children and 28 per cent of adolescents were anaemic, with the greater prevalence among children below two years of age. According to the CNS report 2019.



40%

Female adolescents had more than twice the prevalence of anaemia, than that of male adolescents (18%).

Pathways

IMPLEMENTATION



Coordinate efforts of different sectors: various government departments, food industry, regulators, civil society to ensure mainstreaming of fortified staples (wheat flour, oil, and salt) into the government schemes and programmes like the ICDS, MDM, PDS and TPDS, as has been done for rice.

Encourage fortification of the staple to be done at the source to minimise logistics and other related costs.

Address supply-side constraints and catalyse investment through better market signalling, such as provisioning of longer-term procurement contracts.

Provide technical assistance to the food industry, especially the small business enterprises, SMEs/MSMEs, to adopt fortification and encourage the setting up of more food fortification plants in the private sector.

Create an eco-system enabling long term engagement of local micronutrient producers and organisations to build momentum around fortification.

Launch mass movement on the lines of Jan Andolan for creating community awareness. Agricultural and home science colleges to be engaged for disseminating knowledge to the community.

Promote the +F logo devised by FSSAI for consumer awareness and identification of fortified products.

Pathways

POLICY



A **comprehensive framework** needs to be created to integrate biofortification and fortification to address micronutrient deficiencies as they play a complementary role.

Strengthen regulatory monitoring to ensure the quality and efficacy of fortified foods. This can be achieved by strengthening the referral laboratories for quality checks and building the capacity of already existing laboratories.

Create differential incentives to ensure price parity /competitiveness of fortified staples. GST rates need to be rationalised for packaged and branded fortified foods vis a vis unbranded products.

Expand social infrastructure for meaningful interactions and interventions focussing on mass awareness of nutrient density of foods among people at all three levels- individual, household and community.

KNOWLEDGE AND RESEARCH



Institutionalise a diet study/survey of consumption patterns and nutrient intake at regular periodicity representing the national/regional sample. This will create the foundation for data /science-based standards and a framework for periodic assessment and review of standards and regulations from a public health standpoint.

Institutionalise a monitoring framework addressing safety and technical aspects of adding nutrients to the food in terms of the anticipated consumption of the food to be fortified the physiological availability (bioavailability) of the added nutrients, the likely impact of fortification on overall nutrient(s) intake as well as the associated risk with excessive intake among the specified population.

Run educational, consumer marketing campaigns to build awareness around the concept and benefits of nutrient-rich /fortified foods leveraging social media, influencers and other mass media tools, including radio etc.