

Food Fortification And Its Role In Nutrition Security Measures

Food fortification is considered an efficient public health strategy because it can reach wider susceptible populations through existing food delivery systems without requiring major changes in existing consumption patterns

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14October, 2018

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One of the main objectives of the Government's nutrition security programmes such as the Mid-Day Meal (MDM) Scheme, Integrated Child Development Services (ICDS), etc., is to provide

access to nutritious food to the underserved communities. Fortification of foods by adding essential micronutrients such as vitamin A, iron, iodine, zinc, folate, etc., to staple foods is an effective short-term measure that can improve the nutritional value of the wholesome meals supplied through these schemes and improve the health of the beneficiaries.

Supplementing the regular dietary pattern with fortified foods are an important means to tackle micronutrient deficiencies within affected groups of a population. Especially within a region having epidemiological evidence of micronutrient deficiencies, food fortification can be seen as a therapeutic approach. These deficiencies are among the leading causes of malnourishment. Micronutrient deficiencies are also prevalent among people with a high calorific diet and can have adverse effects on various aspects of children's health. For instance, iodine deficiency can have a bearing on children's cognitive functions, whereas deficiencies in vitamin A and zinc can affect their immunity.

Over 70% of the Indian population still consumes less than half of the Recommended Dietary Allowance (RDA) endorsed micronutrients[1]. This is a major contributing factor to prevalent health concerns such as stunting, low immunity, cognitive losses, and physical impairments.

The World Health Organisation (WHO), the Food and Agriculture Organisation (FAO), and the Copenhagen Consensus have recognised food fortification as one of the top four methods for reducing micronutrient malnutrition at the global level[2]. Currently, 79 countries have made it mandatory to fortify at least one major grain[3]. These grains are usually fortified with vitamin A, iron, and folic acid, which help prevent blindness, anaemia and birth defects, and improve cognitive abilities.

In India, nutrition security measures such as the MDM Scheme and ICDS are designed to address health and nutrition issues among infants, children, and pregnant and lactating mothers. An effective way to secure micronutrients for beneficiaries is to include fortified foods as an additional supplement to the nutritious meals that are served to them as part of such programmes. Adding fortified foods are also useful in lowering the risk of the multiple deficiencies that can result from deficits in food supply or a poor quality diet.

Large-scale programmes such as the Mid-Day Meal Scheme, which serves up to 94.6 million children across the country every school day, or the ICDS catering to 84.4 million beneficiaries, are the best-suited means to impact more beneficiaries with fortified foods. While food fortification is being carried out in these schemes, there exists the necessity and scope to increase its reach to more beneficiaries. The inclusion of fortified foods in the Public Distribution System (PDS) can provide calorie-dense food at an affordable cost to larger sections of the underserved communities. The maximum impact of food fortification can be

observed when fortified food is provided to specific groups which have shown evidence of prevalent nutritional deficiencies.

Currently, 20 states are providing Double Fortified Salt (DFS) through the MDM Scheme. Under the Scheme, Maharashtra provides fortified wheat flour in three districts; Haryana introduced fortified wheat flour and rice in Ambala, and Rajasthan provides fortified oil. Karnataka serves fortified rice in mid-day meals in three districts and will be extending to additional districts. Provision of fortified foods through the ICDS has begun in certain parts of Haryana and will begin in other states soon. Few states are also providing fortified wheat flour and fortified oil through the PDS.

Compared to other nutrition interventions, food fortification is also more cost-effective, if advantage can be taken of existing technology and large-scale distribution systems such as the MDM Scheme, ICDS, PDS, etc. It is estimated that inclusion of fortified rice and wheat flour in ICDS and MDM Scheme will require an additional amount of ₹300 crore, which is a small percentage of the annual allocation for these schemes (about ₹28,345 crore). It is estimated that through these programmes, benefits of food fortification could reach around 180 million beneficiaries and if extended to the Public Distribution System (PDS), the fortifying foods could benefit close to 800 million people.

Food fortification is considered an efficient public health strategy because it can reach wider susceptible populations through existing food delivery systems without requiring major changes in existing consumption patterns. It acts as an effective short-term approach to address the nutrition gaps within a population. The long-term, sustainable approach would be to diversify people's dietary patterns by encouraging higher consumption of locally produced, seasonal food.

While simultaneously building such sustainable approaches in bringing diversity in the dietary habits of the citizens, food fortification can be seen as one of the important ways forward in improving the health of the citizens of the country.

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