

What is Biofortification?

www.textbooq.in



textbooq

Why in News?

Centre announces uniform norms for fortified rice

In his Independence Day speech, Prime Minister Narendra Modi has announced the fortification of rice.

News Source: The Indian Express



The primary causes of under nutrition are immediate (infection and diet), underlying (household food insecurity and unhealthy environment) and basic (social, economic and political). (File photo)



What is Biofortification?



Biofortification can be defined as a process to *increase the bioavailability* and the *concentration of nutrients* in crops through both conventional plant breeding and *recombinant DNA technology*.

Note: It is a practice of adding vitamins and minerals to commonly consumed foods during processing *to increase their nutritional value*.



What is the Context?

Centre government, for the first time, issued uniform specifications for **Fortified Rice Kernels** (FRK) for grade A & Common Rice.

The specifications have been issued by the **Ministry of Consumer Affairs, Food and Public Distribution**.

The fortified rice is to be distributed under various government schemes, including the **Public Distribution System (PDS)** and **midday meals** in

In India, the regulation of all activities related to Food fortification is governed by *Food Safety and Standards (Fortification of Foods) Regulations, 2018*.



Need for Rice Fortification

- It is a proven, safe and cost-effective strategy for improving diets and for the **prevention and control of micronutrient deficiencies**.
- The country has high levels of **malnutrition** among women and children.
- **India ranks 94 out of 107 countries** and is in the 'serious hunger' category on the **Global Hunger Index (GHI)**.
- **Malnutrition** and lack of essential nutrients in poor women and poor children pose major obstacles in their development.



Biofortification Vs Food Fortification

- **Biofortification** is the process by which plant breeder's breed in traits of improved nutrition to crops.
- **Food fortification** is defined as the practice of adding vitamins and minerals to commonly consumed foods during processing to increase their nutritional value.



What are the Benefits of Fortification?

- **Fortification** is a safe method as it does not pose a health risk to people.
- It does not require any changes in the food habits and patterns of people.
- This method is **cost-effective** especially if advantage is taken of the existing technology and delivery platforms.
- It provides a food-based, ***sustainable and low-dose alternative to iron supplementation.***



Challenges for Biofortification in India

- ***Lack of consumer acceptance*** due to colour changes (e.g. ***golden rice***) and last-mile reach of fortified food remains a big challenge.
- The ***adoption of farmers*** and the cost involved in the process of fortification also poses a challenge for biofortification in India.
- The existence of an effective seed and rural extension system for the multiplication and dissemination of new varieties will also pose a challenge.



Ways Forward

- Existed platforms like **Integrated Child Development Services, National Health Mission, Mid-Day Meal Scheme, Rajiv Gandhi Schemes for Empowerment of Adolescent Girls** namely SABLA, Indira Gandhi Matritva Sahyog Yojana for direct targeted interventions are to be pushed more.
- ***The government should facilitate public-private partnerships.***

