

Food Fortification [UPSC Notes]

According to a recent report by the Alliance for Sustainable and Holistic Agriculture (ASHA), there exists a conflict of interest in the Indian food fortification sector. In this context, it is important to understand what is food fortification, what is its status in India, and the benefits and concerns associated with food fortification for the [IAS exam](#).

What is Food Fortification?

Food fortification is the process of adding vitamins, minerals or other micronutrients to food items during the production process. There is another type of fortification known as point-of-use fortification where the minerals and vitamins are not added to the food during the processing of the food items but just before the consumption of such items that occurs either at homes, schools or any child care facilities.

Food fortification is different from biofortification. Read more about [biofortification](#) in the linked article.

- Food fortification helps in addressing the issue of “hidden hunger” i.e. micronutrient deficiency and thus it helps in preventing diet-related non-communicable diseases.
- Especially in low and middle-income countries there exist a lot of such vitamin and mineral deficiencies which compromise the physical and mental capacities of their vast populations.
- Therefore to prevent such micronutrient deficiencies many governments in the developing world have asked for mandatory food fortification for certain items.
- The process of food fortification at a large scale first started in Switzerland.
- If we look at the current statistics, till 2019 food fortification was made mandatory for at least one food in 137 countries while 68 countries have mandated the fortification of at least two foods.
- Among the micronutrients with which the food items are fortified, the most common ones are vitamins A and B, Iron, Iodine and Zinc.

Food Fortification in India

Currently, more than 70% of India's population consumes less than the daily recommended levels of micronutrients. This deficiency is affecting all the strata of the population be it rich, poor, young, old, urban or rural. However, women and children are more significantly affected by these deficiencies. For example, while 80% of the total population has a vitamin D deficiency when it comes to women, it is 91% and for children, it stands at 93%.

- To address this issue, the government, just after our independence, in the 1950s, started with the process of food fortification. Initially, only salt and vegetable oils were fortified with nutrients. However, in 2000, the fortification started for other commodities as well like wheat and rice.
- In the year 2016, the [FSSAI](#) established food fortification standards for various items like rice, wheat flour, milk, double-fortified salt and edible oil. Along with that the FSSAI also established the FFRC which came up with the “+F” logo on the packets of items that have been fortified so that people can make a judicious decision while buying any food products.
- Currently, the Government of India is also using fortified staples in many of its programs like the [Public Distribution System](#), the Integrated Child Development Services, the Mid Day Meal Scheme, and the Pradhan Mantri Garib Kalyan Yojana. This is an important development because a majority of the population depends on food from the schemes for their fulfilment.

Status of Food Fortification in India

According to a study by a global advocacy agency Dalbarg, India suffers from low levels of fortification. According to it, less than 20% of our Business to Customer salt, milk, and edible oil has been fortified. In the case of wheat flour, it is just 3% and for rice, it is even lower at 0.1-0.2%.

Apart from that almost 40 to 60% of the products that are fortified for the target population (the women and the children) are either not reaching them or not being consumed by them.

What are the reasons for this?

1. Lack of tandem between the central government decisions and the state-level actions that are taken on those decisions, as the latter has limited powers to ensure any kind of compliance, and a lack of coordination between the various departments that are involved in the process of food fortification.
2. A high capital cost of the machinery is required for the food fortification process. This high cost often makes these machines unavailable for small millers. The cost of these machines can be from 5 to 15 lacs for rice and 1.3 lakhs for wheat fortification processes.
3. Since the oil and salt Industries have been in place since the 1950s, they are very consolidated. However, the industries that are involved in the fortification of rice, milk and wheat flour are of very small scale and mostly informal producers are involved in this. This makes it very difficult to increase fortification in these food items because of the high cost of fortification and also the difficulty in capacity building of these small-scale informal producers.

4. Also, despite the efforts of the government, a lack of awareness among the people regarding the use of fortified items exists. Apart from this, there is also an issue of misinformation regarding the use of fortified products.
5. Sometimes fortified products can change the food aesthetics, for example, the double fortified soil salt can cause a discolouration of the food because of which there can be a reduction in demand for such items.

Food Fortification Resource Centre (FFRC)

It was set up in the year 2016 under the FSSAI. It provides a common platform for the various stakeholders like the representatives from the central ministers, the development partners, food manufacturers, food processors and people who produce the fortification premix for food fortification.

Its primary functions include:

- Disbursement of food fortification-related information.
- Sensitize states regarding the benefits of food fortification.
- Technical support to the small food manufacturers.
- Training and capacity building for large-scale food fortification.

ASHA Report on Food Fortification

The FFRC is the leading authority for food fortification-related information dissemination in India. It also has the role of advising the central and state governments and motivating them with regard to the same. According to an [RTI](#) file by ASHA, it was found out that FFRC is an industry-led organisation which is placed under the Indian food regulator.

- A concern raised about the report was whether a body with a profit motive can be placed as a part of a regulator.
- The FSSAI has the mandate to regulate food production and consumption in the country and it is guided by the principles of food safety.
- For this, it needs to undertake independent risk assessments and transparent public consultations in order to protect the consumers.
- On the other hand, FFRC, which is an industry-led initiative, has a promotional role; it just needs to promote the products in the market.
- The report states that many of the members of the FFRC stand to be economically benefited in case the consumption of fortified food items in the country increases.
- This is the background in which many individual expert members of the FSSAI have raised their voices against the fortification of food with iron.

- As already stated, fortified food is being given under the public distribution system without any screening.
- People suffering from diseases like [sickle cell anaemia](#) are asked to refrain from consuming iron-fortified items, but they lack this knowledge and consume the PDS-provided products.
- Moreover, until now, there have been no impact studies undertaken regarding the benefits of providing fortified rice under the PDS system.
- The report states that fortified food is being projected as a panacea, an item which is a cure-all solution for micronutrient deficiency. This is a very one-sided approach since any impact studies haven't been undertaken for them in India yet.