

To,

Shri Arun Singhal,

FSSAI CEO

Date - November 5, 2020

**Subject: Regarding FSSAI's planned mandatory fortification of Edible Oil with Vitamin A and Vitamin D and Rice with Vitamin B12, Iron and Folic Acid**

Dear Sir,

By way of introduction, ASHA (Alliance for Sustainable and Holistic Agriculture) is an informal alliance of more than 400 organisations from across India working amongst other themes on sustainable agriculture and safe, diverse, sufficient and nutritious food for all citizens.

We understand from recent media coverage that FSSAI is considering mandatory fortification of edible oil with Vitamin A and Vitamin D <sup>[1]</sup> and rice with Vitamin B12, Iron and Folic Acid <sup>[2]</sup>. Whilst we agree with FSSAI's diagnosis that India faces a huge nutritional challenge, we strongly disagree with its prescription. For reasons mentioned below, we strongly urge FSSAI not to pursue this route and at the same time promote and highlight alternatives as well.

### **1. Health risks with fortification and benefits of (rice) fortification still unproven**

Studies show that benefits of rice fortification are still unproven – and must undergo greater independent research and field studies before its mandatory usage can be considered safe and beneficial. Industry groups like GAIN (Global Alliance for Improved Nutrition) with which FSSAI's Food Fortification Resource Centre works on fortification should not be involved in such assessment at all. GAIN has companies like BASF, Royal DSM <sup>[3]</sup><sup>[4]</sup> amongst others, which carry a serious conflict of interest in that they benefit from the huge market to be gained from fortification and their involvement is highly objectionable.

A global meta-analysis on fortification of rice <sup>[5]</sup> with vitamins and minerals for addressing micronutrient malnutrition which included 17 studies in 4 continents (including 4 studies in India) came to the conclusion that – “Fortification of rice with iron alone or in combination with other micronutrients may make little or no difference in the risk of having anaemia. Fortification of rice with iron and other micronutrients such as vitamin A or folic acid may make little or no difference in the risk of having vitamin A deficiency or on the serum folate concentration.”

There are concerns around Overdose, which is a major issue with mandatory fortification in that it does not discriminate for dosage within a given population. It provides these supplemental nutrients to everyone without assessing whether it is even needed in the consumers or not. A study last year by Dr Anura Kurpad, head of physiology at St John's Medical Institute,

Bengaluru had cautioned that food fortification and iron tablet supplementation may expose women to excess iron. <sup>[6]</sup>

In recent years, questions are being raised in China whether universal salt iodisation is necessary and that communities consuming sea-food and/or residing in high water iodine areas might be consuming too much iodine through iodised salt and hence non-iodised salt has started to be supplied as well. <sup>[7]</sup>

## **2. Hands over Huge Rice and Oil Processing Market to Foreign Companies**

Reports indicate <sup>[8]</sup> how rice fortification will create an assured market of Rs 1,700 crore to 5 multinationals (Germany's BASF, Switzerland's Lonza, France's Adisseo, & Netherlands's Royal DSM and USA-based ADM). This will threaten livelihoods of small rice and oil processing units across the country and goes against the drive to make India and her people self-reliant. Importantly, farmers who would like to sell their produce directly to consumers will be affected adversely with mandatory fortification requirements.

## **3. Erosion of Diversity and Nutritional Value of Foods**

The root causes for the nutritional problem confronting us lie in structural issues of social justice, and related access to productive resources, purchasing power etc., amongst the malnourished. Further, it is the intensive agricultural paradigm adopted and promoted by the government and the markets that has led to erosion of valuable food and varietal diversity which, coupled with depletion of nutrients in our soils, in turn affects the nutritive characteristics of our food. Data from National Institute of Nutrition shows how our food's nutritional quality is reducing rapidly. <sup>[9]</sup>

Instead of tackling such root problems, mandatory large scale fortification solutions will further deepen this vicious cycle, further erode our biodiversity, pushing monocultures and depleting soil health.

We need a holistic approach to be adopted while tackling malnutrition. Kitchen gardens providing dietary diversity and agricultural/forest pathways need to be emphasised as primary approaches, based on traditional varieties of crops, agro-ecological ways of managing soil fertility, and integrated farming systems approaches in agriculture with livestock and fisheries integrated in farming as well as diets. In addition, FSSAI must conduct a needs, benefits and alternatives analysis to fortification which will lead it to lasting, sustainable solutions mentioned below.

### **Real Solutions –**

Data from National Institute of Nutrition has shown come out how our food's nutritional quality is reducing rapidly. <sup>[9]</sup> However there are solutions as well. A recent prize-winning paper by Siddharth Jaiswal presented in 2nd National Conference of Indian Society of Clinical Nutrition AllMS had shown that food grown through amrut krishi (one of the organic farming techniques) had led to an increase in food nutrition.

Breast feeding with proper latching techniques can make critical impacts on nutrition deficiency in the critical first 1000 days. There are a whole variety of real, proven solutions for enhancing nutrition at lower costs than fortification, which FSSAI needs to promote along with relevant agencies/departments to help tackle the nutrition crisis in India. While FSSAI as a food regulator cannot directly promote these solutions, by assuming reductionist regulatory roles without assessment of benefits and risks, it cannot compromise on its own mandate either.

### **Kitchen Gardens to help tackle Nutrition-Deficiency Anaemia –**

A study in Maharashtra had shown how vegetables grown in organic kitchen gardens have been found to increase haemoglobin levels. <sup>[10]</sup>

In studies across the world, this has been found to have benefitted in increase in various micronutrient parameters as well.

There has been an increasing monoculture in our farms and the traditions of growing vegetables and greens for self-consumption has slowly eroded over the last few decades. In the recent past, there has been a revival of interest in vegetable gardens. In rural areas, civil society organisations and government bodies have been working with schools, anganwadis, rural livelihood missions (SHGs). MGNREGA funding is already available for this but not widely known or promoted as it should be. Urban vegetable gardens through terrace/balcony gardens in homes and schools and community farming in parks. In addition to vegetables, these gardens are also now starting to expand to include fruits, herbs as well.

The benefits go beyond just health benefits to economic benefits (by helping reduce expenditures on purchase of vegetables), improved immunity and reduced medical expenses, greater inter-generational connect and more learning opportunities on principles related to soil, biodiversity, plants and human nutrition.

Unlike other technological solutions, these have been found to have greater acceptance as they do not have side-effects, often reported in iron and folic acid tablets as well.

**Bran in diet** – Whilst FSSAI pushes rice fortification, it misses that bran (rice, wheat) is a rich source of nutrition of various micronutrients including vitamins (including Vitamin B complex, Vitamin E) and minerals (including Potassium, Magnesium, Phosphorus, Iron, Manganese, Selenium, Copper, Zinc). Unfortunately the polishing processes for rice and wheat over the last few decades have led to a decline of consumption of bran. High processing leads to a decline in nutrient content in crops. There is a need for widespread public education and inclusion of less-processed/unpolished rice in the PDS.

**Nutrition-rich diverse varieties of crops** – India has had a history of diverse grains, vegetables, fruits and other crops. Not only has there been an increasing monoculture in our farms, there have also been fewer varieties of these crops in our farms and our food. These varieties have had diverse range of nutrition benefits. For instance, a nutritional composition study of garib-sal rice (which was once recommended for patients with gastro-intestinal

infections) revealed that it has higher amount of Vitamin B complex and other micro-nutrients such as Iron, Zinc, Manganese and others. <sup>[11]</sup>

Fortunately work to preserve and revive these varieties has been going on. FSSAI needs to play a greater role in awareness building on these amongst consumers.

FSSAI has a mandate for laying science-based standards for food, to regulate food-based themes, disseminating information/promoting awareness of food safety and nutrition in India and ensuring availability of safe and wholesome food for human consumption. It is sad and worrying that such a mandate is being kept aside to promote fortification - which is an industry-prescribed and risky solution and completely in opposition to the concept of atma nirbharta or self reliance available through other approaches to improving nutrition as above.

We urge that FSSAI to do a course-correction to serve the Indian people through effective, sustainable and economical solutions that do not erode the livelihoods of the poor benefiting corporates from the assured market provided by the Government.

To conclude, FSSAI –

- Must not push for mandatory oil and rice fortification, of doubtful benefit and potential harm
- Conduct greater independent and transparent studies on fortification
- Promote awareness, working with other bodies and non government organisations who are working on low cost, sustainable solutions, such as kitchen gardens, bran in diet and nutrition-rich diverse varieties of crops
- Launch a major awareness campaign on the importance of micronutrients and their availability in millets, microgreens, vegetables and fruits as awareness itself can alter behaviour beneficially

Kind Regards,

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Co-Convenor

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- 1) Hon'ble Minister, Ministry of Consumer Affairs, Food & Public Distribution
- 2) Secretary, Food & Public Distribution
- 3) Hon'ble Minister, Ministry of Agriculture & Farmers Welfare
- 4) Secretary, Ministry of Agriculture & Farmers Welfare
- 5) Hon'ble Minister, Ministry of Health & Family Welfare
- 6) Secretary, Ministry of Health & Family Welfare
- 7) Hon'ble Minister, Ministry of Women & Child Development
- 8) Secretary, Ministry of Women & Child Development
- 9) Vice Chairman, Niti Aayog
- 10) Adviser, Health & Nutrition, Niti Aayog

## References

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- [3] – <https://sunbusinessnetwork.org/about/governance/>
- [4] – <https://www.gainhealth.org/partnerships/gain-nordic-partnership>
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- [10] – <https://www.sahayaktrust.org/wp-content/uploads/2020/01/Correlation-of-Organic-Nutrition-Kitchen-Garden-Awareness-of-Consumption-of-Vegetables-and-Nutritional-Deficiencies-Anemia.pdf>
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