

## **RICE FORTIFICATION IN INDIA**

### **AN UNDEMOCRATIC, INEFFECTIVE, AND RISKY APPROACH TO NUTRITION**

#### **Background:**

Food fortification refers to the addition of chemical/synthetic vitamins and minerals (like Iron, Folic Acid, Iodine, Zinc, Vitamins B12, A, D etc.) that are not available naturally in particular foods, to those foods in the post-harvest stage during processing. A variant of such food fortification is through purposive breeding of plant varieties, including by using genetic engineering technologies, which is called bio-fortification. It is well-known that under-nutrition constitutes a major public health problem in countries like India, even if opinions differ on the exact prevalence of malnutrition related conditions like anemia. There is however, no dispute on the fact that such malnutrition must be tackled by governments through serious, scientific, safe and sustained interventions.

As a principal strategy to address malnutrition in India, the Government of India has started promoting fortification of our key staples (rice, wheat, oil, salt and milk). Edible oil and milk are getting fortified with Vitamin A and Vitamin D, while salt is to be fortified with iron and iodine. The Government has also hinted that rice fortification could be mandatory, and for all practical purposes, for the poor in India who depend on government food schemes (PDS, ICDS and MDMS), rice fortification is on its way to becoming mandatory/inescapable since rice supplies in these schemes will be fortified. Such large-scale, near-mandatory rice fortification by the Government poses serious concerns, listed below. The Government of India should stop its current aggressive top-down undemocratic push of rice fortification, and address such concerns.

#### **Concerns with large scale (near-) mandatory food fortification**

*Real community-controlled solutions neglected and eroded:* When the Government aggressively promotes an easy reductionist corporate-controlled solution, a myriad diverse local and natural solutions get neglected and even eroded. These diverse local and natural solutions primarily revolve around enhancement of dietary diversity and providing adequate calories for the affected. Nutrition cannot be approached through a micro-nutrient by micro-nutrient formula but needs a holistic approach. For instance, for hemoglobin synthesis to take place, it is clear from all available evidence that adding more iron into diets without a host of supportive enzymes, quality proteins, and other vitamins does not lead to iron absorption but only to higher ferritin levels, which is associated with biological risks pertaining to increased stores of iron in this form. The government's rice fortification policy promotes polished white rice as the staple that Indians must rely on for most nutrients. Polished white rice, born out of a narrow genetic base of modern breeding, begins to be viewed as a one-size-fits-all solution, just because it is fortified. The excessive consumption of cereals like rice, referred to as the 'cerealization of Indian diets' is actually a potential public health problem, increasing the risk of large-scale diabetes and hypertension, both a result of heightened triglycerides and insulin resistance from too much carbohydrate consumption. Moreover, large scale fortification will lead to irreversible market shifts, with concomitant infrastructure changes in the supply chain. On the other hand, protein-rich

diets, millets, healthy fats, traditional rices that are nutritionally superior, staple grains that are traditionally processed to preserve their nutrients, local (uncultivated) greens, diverse forest foods, and other material that can come from millions of kitchen gardens and other locally led efforts, will all be neglected by such a policy.

*Food fortification is a multi-million-dollar corporate controlled industry:* In the government-promoted reductionist approach, profits will be reaped by big MNCs, that too a handful of them, since the global supply of micronutrients for food fortification is an industry controlled by a few mega-corporations. India will have to import these micronutrients since most are not produced in the country. In this import-dependency approach, in the name of tackling under-nutrition, our food chain will get more corporate-controlled and out of the hands of communities.

*Synthetic fortification is not proven to be effective, and can even be toxic:* The massive investments and irreversible changes in the name of food fortification are not preceded by any ex-ante in-country impact assessment studies that are in the public domain, nor is there published evidence to show that this is effective. While the benefits are unproven, there are serious concerns around over-dosing of iron, which can be highly toxic if not monitored carefully. The risks are even greater for those citizens for whom there are contra-indications to iron, such as those with sickle cell anemia, thalassemia and other hemoglobinopathies, or those with acute infections like malaria or tuberculosis, which can worsen if iron is given. In this one-size-fits-all solution, fortified rice is being pushed onto unsuspecting citizens who have not given their prior informed consent.

*Threat to local livelihoods:* The majority of our food is produced, processed and sold in the unorganized sector and is led by small and medium players. Even as rice fortification will create assured markets for German, French, Dutch and Swiss micronutrient mega companies amongst others, any push towards mandatory fortification will threaten local livelihoods including those social enterprises that promote ethical, environmental and healthy food supply chains through better processing technologies and practices. In fact, the threat to livelihoods is also to small rice millers all over the country because of the expensive infrastructure required to fortify rice.

*Policy Decisions are ridden with Conflict of Interest:* In the Government's rice fortification push, the presence of foreign corporate lobbies is clear. Entities that will benefit from the rice fortification push are even housed in regulatory bodies like Food Safety and Standards Authority of India (FSSAI). These vested interests are wielding disproportionately enormous influence on policy decision-making even as the primary stakeholders like poor communities have not been informed or consulted. No pilot studies have been made public and in fact, scaling up is happening without waiting for public evaluation or scrutiny of pilot interventions.

Several concerns as listed above have been raised by civil society members with the Government, and can be found [here](#) and [here](#). No satisfactory or scientifically acceptable response has been provided so

far to the questions raised. Meanwhile, the fortification effort is being scaled up massively with all anganwadis being covered in scores of districts across the country. It is clear that this would sideline real alternatives like diverse diets (including animal proteins which are being pushed aside in a religio-fundamentalist atmosphere), nutritionally-superior processing options, nutritionally-rich crops and farmers' varieties that can be grown agro-ecologically (soil nutrients and soil health status determine plant nutrient status and thereby human nutrition too). The government's rice fortification push is unlikely to resolve the problem of malnutrition- while leading to corporate capture of our food system.

#### **WHY ARE WE OPPOSING THIS FORTIFICATION PUSH?**

- Food fortification is not proven to be an effective strategy for tackling malnutrition - results of pilots have not been put in the public domain for citizen scrutiny and expert review even as massive scaling up is being attempted.
- Food fortification increases the dependence on cereals for nutrients (cerealisation of our diets) and is likely to create new health problems like diabetes and hypertension, both a result of heightened triglycerides and insulin resistance from too much carbohydrate consumption.
- Food fortification can lead to toxicities - that of overdosage, or for particular contra-indications like sickle cell anemia, thalassemia, and acute infections.
- Food fortification is corporate-controlled and import dependent.
- Food fortification, in its one-size-fits-all approach jeopardizes local small enterprises and producers.
- India's food fortification policy decision-making is being pushed by vested interests - meanwhile, the poor in the country who depend on government food schemes have not been informed and not consulted. Their prior informed consent does not seem to matter, on something as basic as food.
- Sustainable and equitable community-controlled, diverse local solutions based on natural foods will be given a short shrift in the aggressive push of rice fortification, and risks being eroded without adequate support.

If you would like to join this effort of addressing malnutrition in India through diverse, community-controlled solutions, and resist the rice fortification push by the Government, do write to us at [asha.kisanswaraj@gmail.com](mailto:asha.kisanswaraj@gmail.com)