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Food fortification and micronutrient malnutrition

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ABSTRACT

Food fortification is the addition of vitamins and minerals to a staple food or condiment consumed in fairly consistent and huge amounts. Pre-determined quantities of vitamins and minerals beneficial to the health and well-being of the population are added at the processing stage. The decision regarding which additive to use is based on the severity of the vitamin and mineral deficiencies in the consuming population, the added cost of delivering these nutrients and the compatibility of the food vehicle to their acceptance. Fortification of common food staples and condiments with micronutrients is one of the key strategies to control micronutrient malnutrition and should be done judiciously to maximize its benefits for the people. International Association of Infant Food Manufacturers (IFM) is also developing its new strategies and research and development to explore the opportunities in Asian and African countries in order to increase their reach for the healthy society with vast range of fortified food products including salt, sugar, flour, chocolates, milk, etc. Still there is a vast gap to be filled up in fortification and micronutrient malnutrition with the joint efforts from industry players, public and private partners, Social institutions, Financial institutions, Government, and most important the consumers.

Key words : Malnutrition, Food fortification, Anaemia, Goitre, Micronutrient, Macronutrient

INTRODUCTION

Food fortification is the addition of vitamins and minerals to a staple food or condiment consumed in fairly consistent and huge amounts. Pre-determined quantities of vitamins and minerals beneficial to the health and well-being of the population are added at the processing stage. The decision regarding which additive to use is based on the severity of the vitamin and mineral deficiencies in the consuming population, the added cost of delivering these nutrients and the compatibility of the food vehicle to their acceptance. Fortification of common food staples and condiments with micronutrients is one of the key strategies to control micronutrient malnutrition and should be done judiciously to maximize its benefits for the people. Fortificants used to enrich food are antioxidants, bioactive peptides, micronutrients- vitamins and minerals and macronutrients -proteins.

WHO (World Health Organization) and ILSI (International Life Science Institute) say that the major disorders due to micronutrient malnutrition are goitre,

anaemia, blindness and other mental disorders. Fortification of staple foods like rice, wheat, biscuits, milk, etc. are the simple process to fight malnutrition.

The government had given very attractive break-up of costing and taxation for the food processing industry. The company going for fortification will be enjoying tax benefits and their costing would be up to 0.5 to 1 % where as company not going for this will be bearing cost up to 5-7% without tax benefits. Now we can see many MNC (Multinational Corporation) like General Mills, Olam International, etc. are into fortification of various categories.

Global Alliance for Improved Nutrition (GAIN) , ICDS, Take home rations (THR), Supplementary nutrition programme (SNP), Mid day meals, etc. have been designed and introduced so that child malnutrition and other allied diseases can be eradicated.

Effective nutrition interventions are available to prevent MND (Micronutrient deficiency) and their consequences. Short-term strategies such as nutrient supplementation (giving a large dose of the micronutrient