

Editorial

The fortification or enrichment of staple food with essential vitamins and minerals is not a new concept. Since the first trials in the 1920s, it has been an effective public health strategy to prevent micronutrient deficiencies in general populations and today many countries in the world fortify one or more staple foods. The food items most frequently fortified are cereals (wheat and maize flour), milk and milk products, edible oils, sugar, salt, and specialized foods such as fortified blended food. The potential for using rice as a vehicle to increase the intake of essential vitamins and minerals is huge. Rice is the dominant staple food of approximately half of the world's population. In Latin America and the Caribbean (LAC), it supplies on average 27% of daily caloric intake, ranging from 8% in Central America to 47% in the Caribbean (FAOSTAT). The region produces more than 28 million tons of paddy annually – the vast majority in South America – representing more than 5% of the world's output.

Over the past decades, scaling up of rice fortification has been hampered by technological limitations. Today, affordable technology exists to produce fortified rice kernels that look and taste like non-fortified rice. Advances in coating and extrusion technologies allow micronutrients to be retained effectively even after long washing and cooking processes, which makes rice fortification an effective and affordable strategy.

Hidden Hunger in LAC

Globally, micronutrient deficiencies (MND), also known as Hidden Hunger, are the most widespread form of malnutrition, with over two billion people affected. They generally result from inadequate intake and losses due to insufficient food intake, poor quality diets, poor bioavailability of micronutrients in the foods consumed, or frequent infections. MND affect various metabolic processes, resulting in the impairment of sensory and cognitive functions, the weakening of the immune system and ultimately increases morbidity and mortality. Beyond the human factor, the consequences of MND throughout the life cycle result in low productivity and net economic losses for households, communities and nations. In 2012, The Copenhagen Consensus (a group of leading economists and development experts) identified micronutrient interventions as among the top ten most cost-effective actions for development. Clearly there is a moral imperative to tackle MND, but doing so also makes good economic sense.

In LAC, significant economic progress has been made in the past decade, resulting in improvements in the health and

nutritional status of populations. Since the 1940s pioneering policies and programs aimed at eradicating MND – such as the fortification of sugar with vitamin A in Guatemala – have been developed and implemented. Today they are still models for other countries. Nonetheless, MND remain pervasive throughout the region. The most prominent problem remains anemia in children and women of reproductive age, of which about half is estimated to be due to iron deficiency, according to the World Health Organization. In the region, anemia is a public health problem in 16 out of 17 countries for women of reproductive age and in 15 countries for children under the age of five. Other deficiencies such as zinc, iodine, vitamin A, folate and vitamin B₁₂ are widespread or affect specific vulnerable groups, requiring public health action.

Scaling up rice fortification now

Today, six countries globally have passed legislation for the mandatory fortification of rice, including three in Central America (Honduras, Costa Rica and Panama). However, the law is effectively implemented only in Costa Rica at the moment. In August 2016 the Government of the Dominican Republic and the World Food Programme (WFP) jointly organized the First Forum for the Scaling up of Rice Fortification in Latin America and the Caribbean. This *Sight and Life* supplement participates in that effort. In this publication you will find a comprehensive overview of why fortifying rice with multiple micronutrients can be part of an affordable, effective strategy to increase the intake of essential vitamins and minerals in countries and reduce the prevalence of conditions that result from them, such as chronic undernutrition. This issue is a compilation of original articles from leading public health professionals, as well as articles from the supplement on Scaling Up Rice Fortification in Asia published in 2015 in collaboration between *Sight and Life* and the WFP.

We hope that you will find in it the inspiration to redouble efforts to scale up rice fortification in the Latin American and Caribbean region.

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A young boy looking forward to eating his lunch, Nicaragua 2014