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Most national mandatory flour fortification standards need review

by Food Fortification Initiative

Half of the countries that fortify maize and wheat flours with iron, zinc and vitamin B12 may need to update their standards to meet the World Health Organization's (WHO) current recommendations, according to a recent study published in *Food Policy*.

For decades, many countries have recommended or required that their food industries produce fortified foods by adding small amounts of vitamins and minerals – micronutrients – into basic food staples and condiments which almost all consumers can afford.

For example, wheat flour with added iron or folic acid.

Food is fortified to prevent micronutrient deficiencies that can in turn boost a child's academic achievement, strengthen maternal health and prevent disabling or fatal birth defects.

According to Food Fortification Initiative estimates, only 21 percent of industrially milled cereal grain was fortified in 2019.

Globally, 86 countries have legislation to mandate fortification of at least one industrially milled cereal grain: wheat, maize or rice.

This gap represents a tremendous opportunity for fortification to improve the lives of millions. Fortification improves a country's productivity and reduces healthcare expenditures.

Fortification addresses several of the Food and Agriculture

Organization's (FAO) Sustainable Development Goals and can restore nutrients lost in crops as a result of climate change.

"While we continue efforts to increase accessibility to affordable, diverse and healthy diets, fortification of staple foods can provide populations – especially of the most vulnerable – with the vitamins and minerals that are the most difficult to obtain," explained Dr Nancy Aburto, Deputy Director of Nutrition and Food Systems for the FAO and former World Food Programme (WFP) Chief of Nutrition.

To make sure people get the nutrients they need, countries set standards outlining the types and amounts of vitamin and minerals, as well as the optimal fortificant that millers and other food producers can use when fortifying food.

"Fortification standards must include the most efficacious vitamin and mineral compounds, in the right amounts, to safely meet their public health purpose.

"It is possible to accelerate progress towards reducing anemia and neural tube defects, and this paper shows key policy gaps that need to be addressed to do so," stated Luz María de Regil, Head of the Unit of Multisectoral Action in Food Systems, WHO.

In the study, country standards for wheat and maize flour fortification were compared to international guidelines for nutrient levels and compounds that deliver such nutrients. The intent of the study was to identify opportunities for countries to review their national fortification standards and ensure consumers receive the nutrients they need.

Out of the 72 countries analysed in the study, less than 50 percent had nutrient levels in flour fortification standards that



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met the current WHO international guidelines for iron, zinc and vitamin B12. Conversely, most countries' standards for vitamin A, thiamin, riboflavin, niacin and pyridoxine levels met or exceeded WHO recommendations for nutrient levels. The majority of countries included in their standards recommended compounds for all nutrients studied.

The study, which pulls expertise from leading institutions in nutrition including Emory University, WFP, UNICEF, US Centers for Disease Control and Prevention, WHO, Oak Ridge Institute for Science and Education and the Food Fortification Initiative, is the first to compare all national standards for wheat and maize flour fortification to international guidelines.

“Research such as this is incredibly useful in evaluating international alignment to the flour fortification standards outlined by WHO,” adds Katya Bobrek, from Emory University.

Dr Aburto adds, “For fortification initiatives to have maximum benefit, data are needed to fine-tune policies and programs to meet population needs. This research sheds light on where and how national initiatives can be enhanced to ensure the most people get the most benefit to help eliminate hidden hunger.”

The researchers hope these findings will help countries create or update national standards that lead to a smarter, stronger and healthier future.

To view countries' national standards, information on fortification and more please visit the Food Fortification Initiative's website (<https://www.ffnetwork.org>) and the Global Fortification Data Exchange (<https://fortificationdata.org/>), available in English and Spanish (en español).

Find out more at: <https://www.sciencedirect.com/science/article/pii/S0306919220302025>