

GLOBAL STATUS OF FOOD FORTIFICATION

Technical Brief | May 2021



Global Fortification DATA EXCHANGE

This brief presents the current status of food fortification (one of the most scalable, sustainable and cost-effective interventions to combat micronutrient malnutrition) in 196 countries for five foods: maize flour, oil, rice, salt, and wheat flour.

INTRODUCTION

Diets low in vitamins and minerals can lead to poor health outcomes, serious birth defects of the brain and spine, and poor cognitive development. These irreversible damages adversely affect communities and the economies of entire nations. Children do not develop fully, adults cannot work productively, and excessive resources are spent to treat a variety of nutrition-related health problems.

Globally, more than
2 billion people
are affected by vitamin and
mineral deficiencies.[1]

KEY MESSAGES

Hidden hunger, also known as micronutrient deficiencies, is a lack of critical vitamins and minerals. It can be life threatening and cause lifelong conditions, including intellectual disability, preventable blindness, and birth defects. Today, it affects more than a quarter of the global population – 2 billion people.

Food fortification is one of the most scalable, sustainable and cost-effective interventions to combat micronutrient malnutrition. Fortification adds essential vitamins and minerals to commonly consumed foods to prevent nutritional deficiencies.

As of 2020, fortification is mandatory in 85 countries for wheat flour, 17 countries for maize flour, 7 countries for rice, 27 countries for oil, and 124 countries for salt.

WHY FORTIFY

Food fortification, the addition of essential vitamins and minerals to commonly consumed foods such as maize flour, edible oil, rice, salt, and wheat flour, is one of the most cost-effective and proven interventions to address vitamin and mineral deficiencies. Food fortification is a complementary intervention to preventing and treating vitamin and mineral deficiencies and should be considered as part of a broader nutrition strategy that includes other nutrition-specific and nutrition-sensitive interventions.

Food fortification spreads the burden of implementation costs between the public and private sector and the consumer. While it is the private sector that fortifies the food, the government can create a more enabling environment for industry by passing mandatory legislation (which creates an even playing field for industry), setting standards to ensure adequate and

safe levels of nutrients are added, and monitoring the production of fortified foods.

THE ROLE OF THE GFDX

Designed for, and by the fortification community, the GFDx provides all the data necessary to track global progress on food fortification, and to enable decision makers to use data to improve the quality of national fortification programs.

The GFDx aggregates and visualizes data on five commonly fortified foods: maize flour, oil, rice, salt, and wheat flour. The GFDx includes indicators on food fortification legislation from 1940 to present, fortification standards, and food availability and intake, legislation scope, proportion of foods industrially processed, availability of regulatory monitoring protocols, fortification quality, and population coverage for 196 countries.

FIGURE 1. FORTIFICATION TIMELINE

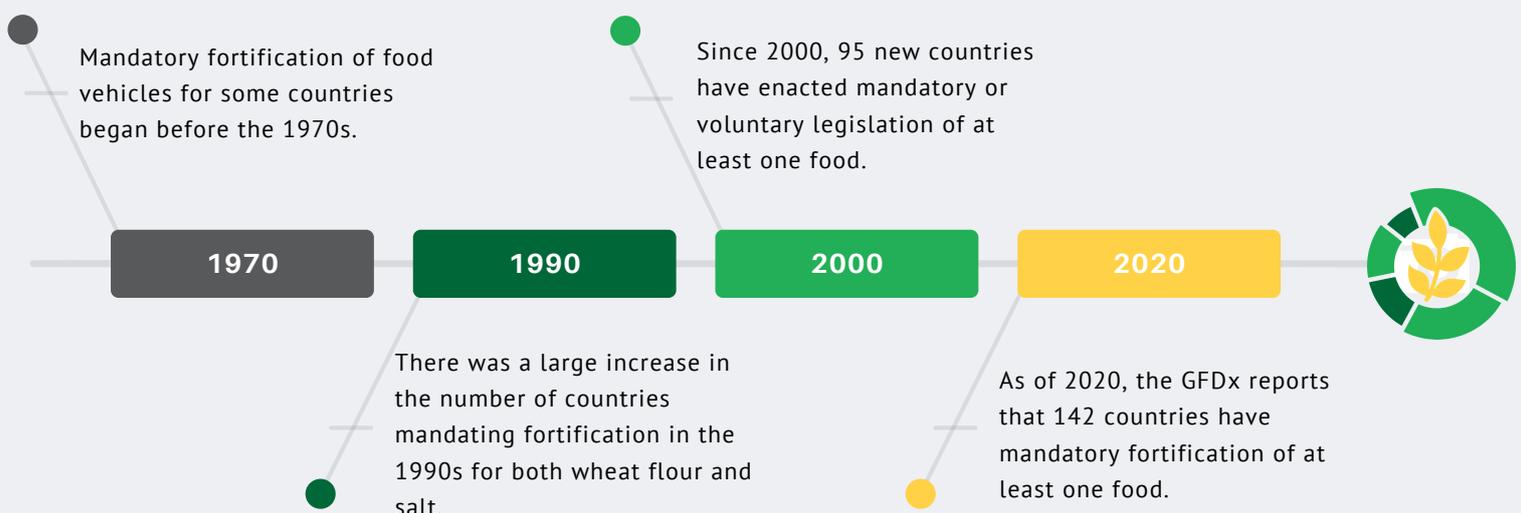


FIGURE 2. GLOBAL MAP OF MANDATORY AND VOLUNTARY FORTIFICATION LEGISLATION, 2020

The country has legal documentation that has the effect of mandating fortification of a food with one or more vitamins or minerals

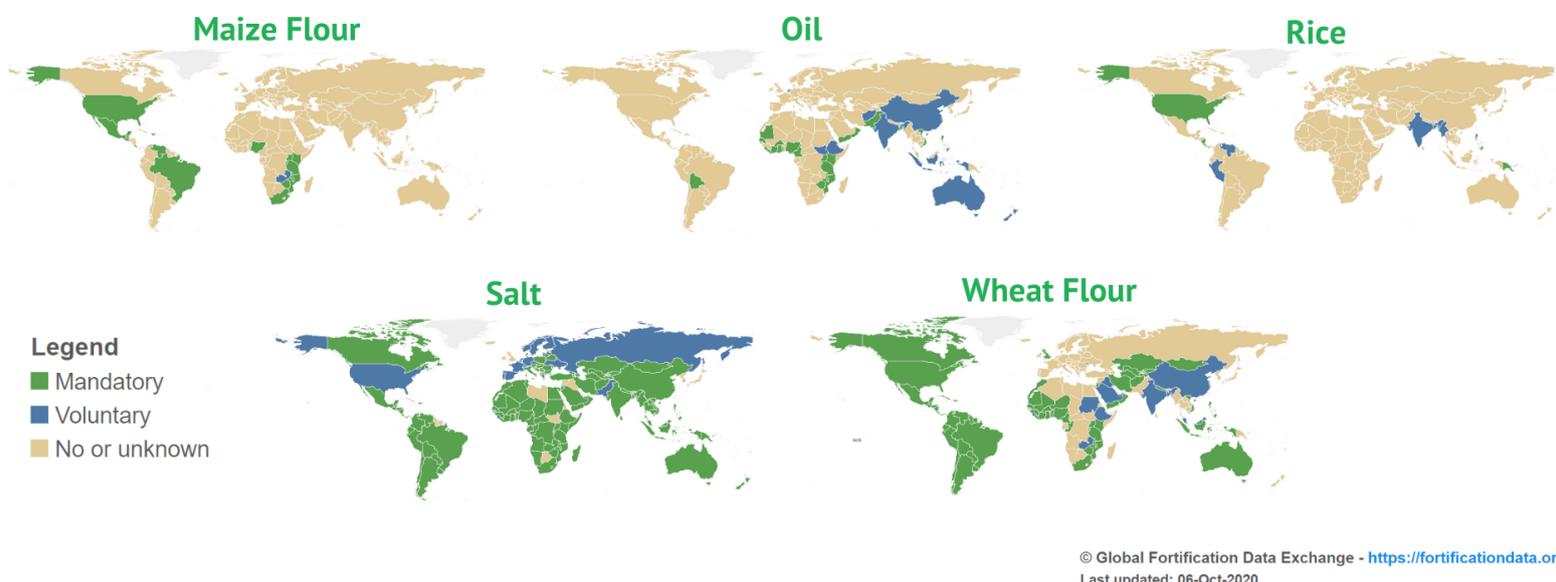
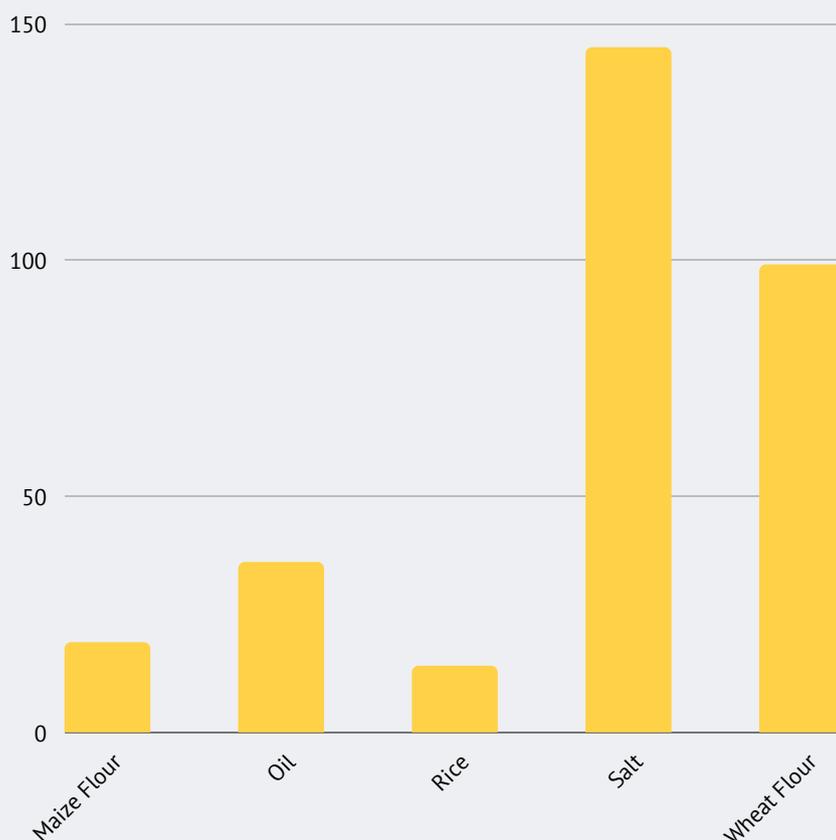


FIGURE 3. NUMBER OF COUNTRIES WITH MANDATORY OR VOLUNTARY FORTIFICATION

- In 2019, 161 countries had mandatory or voluntary legislation of at least one of the foods.
- Salt is the most widely fortified food with 145 countries having mandatory or voluntary legislation.
- Regionally, the Americas had the highest proportion of countries with fortification legislation of one of the foods, with all 35 countries fortifying wheat flour.



NUTRIENTS IN STANDARDS

Food standards are legal documents that define criteria for food in a country – fortification standards refer to the nutrients specified for addition to a food, the amount, and nutrient compounds that can be used. A country can have a fortification standard and not have mandatory fortification legislation. The following are some nutrients and food vehicles that are used in fortification globally:

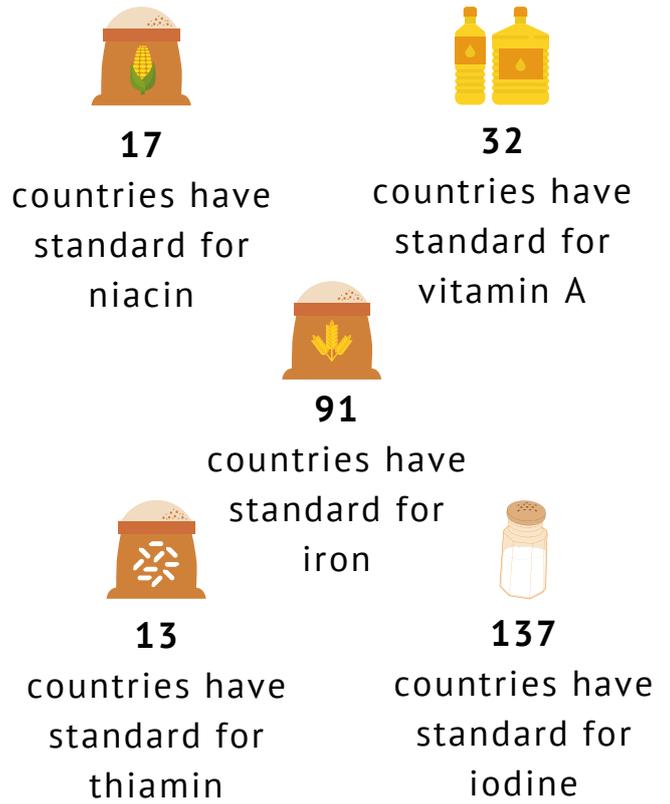
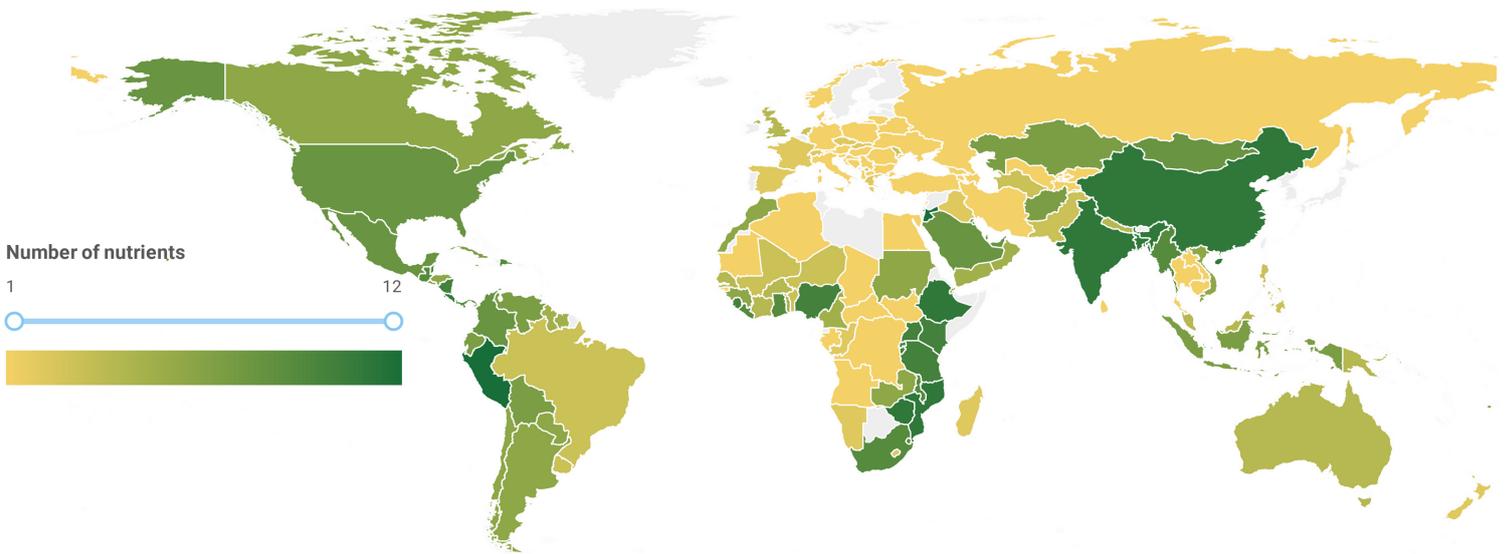


FIGURE 4. COUNT OF NUTRIENTS IN FORTIFICATION STANDARDS, 2020



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Last updated: 14-Oct-2020

153 COUNTRIES HAVE AT LEAST 1 NUTRIENT IN ANY FORTIFICATION STANDARDS

18 COUNTRIES HAVE AT LEAST 10 NUTRIENTS IN ANY FOOD FORTIFICATION STANDARDS

CONCLUSION

Although countries began passing legislation for mandatory food fortification before the 1970s, there are still wide gaps between the different food vehicles. The fortification of salt is practiced the most in over 100 countries whereas the fortification of rice is practiced in less than 10 countries. While the fortification of the grains are present predominately in the Americas, the fortification of oil is mainly seen in Asia and Africa.

Food fortification can address severe micronutrient deficiencies and herefore it is important to encourage countries to implement fortification

programs. For programs to be successful, a broad set of stakeholders across private sector, government, civil society, development agencies and academia must come together to collaborate. The World Health Organization provides recommendations and guidelines for fortification compounds and levels. Countries can use these recommendations to create the desired public health impact. The GFDx became the solution for improved reporting, greater data accountability and enhanced accessibility to inform program refinements, launch new initiatives as well as identify populations and geographies in need.

SUGGESTED CITATION

Global Fortification Data Exchange. Technical Brief: Global Status of Food Fortification. 2021. Accessed dd/month/yyyy. [<http://www.fortificationdata.org>.]

CONTACT US

If you have any questions, want to share your experience using the GFDx, contribute data, or provide any other comments and feedback, please reach us at the email below or visit our website to learn more about fortification resources.

 www.FortificationData.org

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REFERENCES CITED

1. Food and Agriculture Organization of the United Nations, International Life Sciences Institute. Preventing micronutrient malnutrition a guide to food-based approaches - Why policy makers should give priority to food-based strategies. 1997. [<http://www.fao.org/3/x0245e/x0245e00.htm#TopOfPage>]

