

## **A conversation with Food Fortification Initiative, October 20, 2017**

### **Participants**

- Scott Montgomery – Director, Food Fortification Initiative
- Sarah Zimmerman – Communications Coordinator, Food Fortification Initiative
- Josh Rosenberg – Senior Research Analyst, GiveWell

**Note:** These notes were compiled by GiveWell and give an overview of the major points made by the Food Fortification Initiative.

### **Summary**

GiveWell spoke with Mr. Montgomery and Ms. Zimmerman of the Food Fortification Initiative (FFI) to get an update on progress in 2017 and future plans. FFI is a GiveWell standout charity. Conversation topics included progress FFI has made since our last update, FFI's plans for the future, fortification studies published by various countries, FFI's room for more funding, and the impact of GiveWell funding.

### **Progress since our last update in March 2016**

FFI works to reduce micronutrient deficiencies globally by promoting the fortification of rice and flour with vitamins and minerals.

#### **Fortification work in the Solomon Islands, Malaysia, and Indonesia**

##### *The Solomon Islands*

FFI was funded by a grant from the Australian government's Department of Foreign Affairs and Trade (DFAT) to assist the Solomon Islands with the implementation of its fortification program. Wheat flour is now being fortified in the Solomon Islands, but FFI is continuing to advocate for legislation mandating rice fortification. DFAT is committed to fortification in the Solomon Islands and has extended its grant to FFI.

##### *Malaysia*

Malaysia's government has published standards for fortification, a goal that FFI and UNICEF have been collaborating on for several years. FFI believes that legislation to mandate fortification in Malaysia could be enacted as soon as 2018.

##### *Indonesia*

FFI has been advocating for the modification of Indonesian fortification standards to incorporate the recommended iron compound for reducing iron deficiency anemia in Indonesia. It expects to see the standards changed by 2018. Country leaders are testing fortified flour products to ensure that changing the iron compounds (and potentially the folic acid level as well) will not affect the flour's organoleptic properties (qualities related to human senses).

## **The Global Fortification Data Exchange (GFDx)**

In September of 2015, a meeting was held in Tanzania that focused solely on global fortification to address vitamin and mineral deficiencies (meetings and forums regarding micronutrient deficiency generally discuss multiple interventions). Attendees of the meeting formed a consensus around developing a database where donors, country officials, or other stakeholders could view fortification food vehicles (e.g., oil, salt, wheat flour, etc.), nutrients being added to foods, and other global fortification indicators across different countries or regions. This goal resulted in the GFDx (<http://fortificationdata.org/>), which launched in September of 2017 and is a collaboration between the Iodine Global Network (IGN) (works on improving iodine intake, often by fortification of salt), the Global Alliance for Improved Nutrition (GAIN) (works on the fortification of oil and other interventions), FFI (works on the fortification of grains), and the Micronutrient Forum (global catalyst and convener). These groups are called the “core group.” The GFDx is an interactive, online analysis and visualization tool with global food fortification data populated by IGN, GAIN, and FFI from their respective organizational databases. Users are able to sort data by the country’s income group, fortification standards, food vehicle, and more.

The GFDx was a large and time-intensive project for FFI over the past year. Its input was critical, as it had previous experience with creating databases and mapping.

### *Use for planning fortification programs*

One of the main benefits of the GFDx is that a country can use the tool to plan fortification programs by looking at what food vehicles countries in its region are fortifying, what nutrients they are fortifying with, what standards they use, and when they began fortification. If a regional standard is being proposed, countries can use the tool to see the fortification standards of other nations around the world. A country can also use the GFDx to see if it is unnecessarily fortifying foods with an excess of a particular nutrient.

If a country only plans to fortify a single food vehicle, it could consult with one organization (e.g. IGN for data on salt, GAIN for data on oil, etc.) in order to retrieve the necessary information. However, it is more often that a country wishes to fortify multiple food vehicles or compare food vehicles. Prior to the GFDx, a country may have had to consult with various organizations and databases to plan a fortification program that involved multiple food vehicles. Now, it can use the GFDx platform to access all of the information.

### *Standardizing definitions through collaboration*

The process of combining data caused IGN, GAIN, and FFI to standardize the definitions of various terms that each organization had used differently.

### *Monitoring and evaluation*

FFI, IGN, GAIN, and the Micronutrient Forum will evaluate the GFDx mainly through Google Analytics, which displays where visitors are referred from, how the website is being used, and other indicators related to website traffic.

### *Future plans*

The next set of goals for the GFDx includes:

- **Adding indicators** – The core group hopes to add more indicators to the GFDx platform, including a monitoring indicator that measures whether or not countries have protocols for monitoring fortification. It would like to add an indicator that measures fortification coverage levels, but many countries do not have coverage data. The core group would also need to standardize a definition for “coverage.”
- **Populating the “Resources” page** – On the GFDx website, there is a “Resources” page that does not yet contain much additional material. The core group hopes to populate this page with best practices for fortification and is currently reviewing different pieces of information for this purpose.
- **Establishing an application programming interface (API)** – As of now, the GFDx can only be updated by manually entering new data. The core group hopes to establish an API—an interface that enables multiple pieces of software to communicate—so that data will be automatically populated on the GFDx.
- **Finding a permanent host for the website** – The core group hopes to locate a host for the GFDx, so that it does not remain an independent platform. The Micronutrient Forum or the World Health Organization may be suitable hosts.

### **West Africa rice consumption and supply chain study**

When countries established fortification programs, many believed fortifying wheat flour would be sufficient. However, certain African countries do not consume large quantities of wheat. When FFI now advocates for fortification in various countries, it thoroughly examines staple foods, consumption patterns, and potential reach of fortification.

One of FFI’s most significant undertakings of the past year was an analysis of the rice consumption in 19 countries in West Africa that consume over 75 grams of rice daily. The study also looked at a variety of features of the rice supply chain, including levels of industrial rice milling, quantities of locally produced rice compared to imported rice, modes of transportation, shipping practices, and most common exporters of rice to the target countries. This analysis was partially funded by GAIN.

### *Findings of the study*

From the study, FFI determined that in 12 of the 19 countries analyzed, there is potential for the passage of laws mandating that imported rice is fortified at origin. While many of these 12 countries have mandatory fortification for foods like oil, salt, and wheat flour, people either do not consume enough of those products or are not receiving the sufficient mixture of micronutrients from consuming those products. In the majority of these countries, rice is consumed more than any other cereal grain. For example, in Senegal, an average of 102 grams of wheat flour per capita is available daily, whereas an average of 198 grams of rice per capita is available daily (based on data from the Food and Agriculture Organization of the United Nations).

FFI is advocating for legislation on imported rice because domestically produced rice is mostly hand-pounded or processed in small scale mills that are not feasible for fortification. FFI will, however, advocate for legislation mandating the fortification of industrially milled rice that occurs domestically. Currently, Senegal is the only country out of the 12 target countries that operates an industrial rice milling complex, although Nigeria may also be building capacity for industrial milling. Fortification for imported rice may also be particularly important because many of these 12 countries encounter “hungry seasons,” during which imported rice is often the only substantial food available at markets.

### *Potential impact of legislation*

If fortification of imported rice is mandated in these 12 countries, it could impact as many as 130 million people (located in predominantly urban areas).

### *Compliance with fortification*

80-90% of imported rice in Africa is produced by multinational corporations (MNCs). MNCs are likely to comply with any law that mandates fortification for imported rice, as the potential loss in brand equity from violating a mandate would be costly. Therefore, FFI does not expect that monitoring the implementation of fortification laws will be difficult.

### *Future plans*

The set of actions FFI plans to take following the study it conducted include:

- **Planning fortification programs** – Since rice is consumed as a whole grain, fortification will require the manufacture of coated or extruded rice kernels that appear indistinguishable from unfortified rice kernels. Since fortification of rice is not yet being done at large scale (under 1% of rice is fortified globally), the cost of manufacturing fortified kernels is high. However, if fortification legislation is passed in the 12 targeted countries, fortified rice production will increase significantly—reducing the cost of manufacturing fortified kernels. Legislation may also prompt countries that export rice to West Africa (e.g. Vietnam, Thailand, Pakistan, India,

etc.) to build larger and higher quality manufacturing plants to produce fortified kernels. The micronutrient mixture will likely include folic acid and iron. FFI will then analyze each respective country to determine the other necessary nutrients to include. Most of the 12 countries currently fortify oil with Vitamin A. Zinc and most B vitamins except riboflavin can also be included in fortified kernels (riboflavin is orange and may dissuade people from consuming rice fortified with riboflavin).

- **Gauging political will and passing legislation** – In November of this year, FFI is attending a joint partner meeting focused on education and advocacy, from which it hopes to gauge the political will for passing legislation. FFI believes there will be significant political will, as many of the 12 countries have already passed various fortification laws. It has created a comprehensive plan to pass legislation, which includes a list of proposed activities, necessary resources, and a budget. Its plan is contingent on building a majority coalition from the 12 countries that will support mandatory fortification for imported rice. If a majority of the 12 countries support legislation, rice fortification can be scaled up to create a significant impact. A single country's support will not create the necessary scale.

### *Funding*

FFI will need to raise additional funds to undertake a project for passing mandatory rice fortification laws in West Africa. It is in the process of creating a budget proposal to present to donors. The most recent version of the proposal plans for a three-year project, with a \$1.8 million total budget. The project's first year, which would be focused on building political will, would cost \$800,000. The next two years would cost \$530,000 each. FFI plans to add an impact evaluation component to the proposal.

FFI also plans for the project in West Africa to be a partnership, although it has not confirmed who the partners will be or what the various roles and responsibilities will be. Potential partners include Helen Keller International, GAIN, UNICEF, and the World Food Programme. FFI is open to partnering with any organization that would like to work on the project.

## **Plans for the future**

### **Mandating fortification in China**

China, which has a population of over 1 billion people, faces significant health risks from iron deficiency and neural tube defects (birth defects of the brain and spine that are largely preventable with folic acid). FFI believes that a project to mandate the fortification of wheat flour and rice in China will have significant impact. China operates some of the largest and most automated mills in the world, which would make fortification relatively simple. China's National Health and Family Planning Commission (formerly the Ministry of Health) and the Chinese Center for Disease

Control and Prevention are both supportive of fortification. However, the final decision is made by the central government, so FFI will need to build significant political will in order to mandate fortification.

FFI will need to raise additional funds to undertake this project in China. It is in the process of creating a budget proposal to present to donors that includes a request for approximately \$10 million over five years. The budget includes hiring an experienced and accomplished staff member to work and connect with the government, a required resource for building political will. FFI has not yet determined who this person should be. The budget also includes the cost of hiring a nutritionist and conducting studies to determine features of wheat and rice supply chains across Chinese provinces.

FFI plans for the fortification project in China to be a partnership, although few of its current partners work in China. UNICEF may be a potential partner.

### **Recently published fortification studies**

Many studies indicate that fortifying foods with micronutrients reduces micronutrient deficiency—in a controlled setting where compliance is regulated. However, there is less evidence from individual countries on the population-level impact of fortification.

FFI has recently observed more countries publishing fortification impact evaluations. A study from Cameroon was published recently (<http://jn.nutrition.org/content/early/2017/06/07/jn.116.245076>), indicating that mandatory fortification of wheat flour improved levels of folate, zinc, iron, and vitamin B-12 in the target population. Another similar report from Tanzania was published recently. A while ago, a report from Fiji was published demonstrating how the fortification of wheat flour (which is widely consumed in Fiji) reduced anemia and other health issues related to micronutrient deficiency.

### **Room for more funding**

FFI has been approved by the Dutch government for €1.33 million of funding over five years to continue working on Smarter Futures, a network of partners that advances the food fortification agenda in Africa. The Dutch government asked GAIN to move the Smarter Futures funding into a larger grant to lessen administrative handling. The Smarter Futures component will be treated as an independent work stream by GAIN. FFI will need to raise additional funds for proposed projects to mandate fortification in West Africa and China. In addition, FFI has a clear strategy to move fortification forward in India for both wheat flour and rice with the potential of reaching more than 500 million people. FFI is currently in the process of seeking partners and funding for the effort.

## **Impact of GiveWell funding**

Funding from GiveWell has been imperative for FFI to continue its ongoing work. GiveWell funding became particularly important after Bunge Limited cancelled funding for 2017 that FFI had been planning to utilize.

*All GiveWell conversations are available at <http://www.givewell.org/conversations>*