



Food Fortification Initiative (FFI)

Vision: Smarter, stronger, healthier people worldwide by improving vitamin and mineral nutrition.

Mission: Support fortification of industrially milled cereal grains by collaborating with multi-sector partners.

Progress: Measured against a five-year strategic plan and annual work plans.

Staff: 13 people worldwide.

Global Secretariat: At Emory University with support from the US Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, USA.

Oversight: 10-member [Executive Management Team](#) representing global leaders in public health and grain industries plus observers from the CDC and World Health Organization.

Opportunity at a Glance

Reach: Gain political support for sustained wheat flour and rice fortification to reach 1.4 billion people

Cost: US\$ 9,139,988

Time: Five years

33,000 Serious Birth Defects of Brain and Spine Every Year

An estimated 33,000 pregnancies in China are affected by serious birth defects of the brain and spine every year - this is 13% of the global total and second only to India in number of pregnancies affected.¹ With a prevalence of 199 per 10,000, China's Shanxi Province has reported the world's highest ever observed rate of these birth defects.²

Adequate folic acid (vitamin B9) intake before conception and in the early days of pregnancy greatly reduces the risk of a birth defect of the brain or spine.

Fortifying wheat flour with folic acid has reduced the prevalence to less than 24 per 10,000 in 13 countries, with some countries reporting prevalence at only 3 per 10,000 after fortification.³

Birth defects of the brain and spine are anencephaly and spina bifida. These are largely invisible in China as an estimated 24,571 of affected pregnancies end in terminations, and 904 are still births.¹ Anencephaly is always fatal while spina bifida has varying degrees of severity and can cause lifelong disability. Of infants born with a birth defect of the brain or spine, 75% die before their fifth birthday.¹

Inadequate nutrient intake is rarely limited to one vitamin or mineral. China is also adversely impacted by anemia, which is linked to deficiencies of iron, zinc, vitamin B9, and vitamin B12. An estimated 20% of pre-school age children, 20% of non-pregnant women of reproductive age, and 29% of pregnant women in China are affected by anemia.⁴

Anemia affects national economies as it causes debilitating fatigue, lowers productivity, limits cognitive development in children, and contributes to maternal deaths.

¹ Blencowe [2018](#) and personal correspondence ² Zaganjor [2016](#) ³ Food Fortification Initiative [2018](#) ⁴ World Health Organization [2015](#)

Five-Year Proposal to Gain Political Support for Fortification in China

China's wheat flour and rice industries are positioned to fortify and rapidly improve the quality of the Chinese diet. In addition, fortifying rice in China would result in global economies of scale and make rice fortification more economically feasible in other countries.

Several studies in China have demonstrated that wheat flour fortification is effective. Yet while China has a mandate to fortify salt with iodine, it has no requirement to fortify wheat flour or rice. Some businesses in China voluntarily fortify wheat flour and soy sauce, but availability of these fortified products is too low to have a widespread health impact.

In China, foods made with wheat flour, such as those pictured at right, are common in the northern parts of the country while rice is more commonly consumed in southern regions. Fortifying both wheat flour and rice is necessary to reach the majority of the Chinese population with critically needed nutrients.

Staged Approach

FFI's five-year action plan for China is in three stages and emphasizes securing central government political will to plan and implement mandatory fortification of both wheat flour and rice.

Engagement – Years 1 and 2

Activities

- Seek support from the National Health Family Planning Commission for mandatory wheat flour and rice fortification in China
- Organize high-level advocacy meetings to engage with policymakers at regional and national level
- Review legal regulatory framework in China for introducing and enforcing mandatory fortification
- Secure political commitment to introduce fortification legislation and supporting standards
- Collaborate with the National Health Family Planning Commission to develop multi-year workplans with planned transition to government counterparts



Photo by Karen Codling

Milestones

- Political commitment to introduce mandatory fortification of wheat flour and rice
- Implementation work plans endorsed by National Health Family Planning Commission

Strategy Implementation – Years 3 and 4

Activities

- Engage with private sector to create awareness around the value of fortification and train for internal monitoring
- Address potential concerns over sensory changes

Milestones

- Private sector successfully integrates fortification quality control and quality assurance steps into milling practice
- Public sector successfully integrates fortification regulatory practices into food control system

Transition – Year 5

Activities

- Transition oversight of the program to the government
- Provide focused support as needed for sustainability

Milestone

- Government commits resources to continue program implementation



When wheat flour and rice are adequately fortified, individuals such as this seamstress in China will likely be healthier and more productive because their nutrient intake has increased by consuming fortified grains. Istockphoto.

Learn More

The Food Fortification Initiative (FFI) helps countries promote, plan, implement, and monitor sustainable grain fortification programs. To learn more, e-mail info@ffinetwork.org or visit www.FFInetwork.org.

Donations can be made via [GiveWell](https://www.givewell.com), which ranks FFI as one of seven “standout charities” or the [CDC Foundation](https://www.cdcfoundation.org/), a US based 501(c)(3) public charity which serves as FFI’s grant administrator.