

SAVING
LIVES
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LIVES



Improving Nutrition through Rice Fortification

Partnerships, initiatives and
success stories from 9 countries



October 2018

Untapped potential

Food fortification – adding vitamins and minerals to commonly eaten foods – has proven to be an effective strategy in reducing micronutrient deficiencies. Countries in North America and Europe have been fortifying foods since the 1920s, which led to the virtual eradication of nutrition-related diseases like goiter, rickets, beriberi and pellagra. But today 2 billion people across the world still suffer from vitamin and mineral deficiencies, as nutritious foods are still not accessible to all.

Until now, one staple has been largely neglected in global fortification efforts: rice. Rice is a staple for half the world's population and can contribute up to 70 percent of people's energy intake, particularly in low and middle-income countries. Places where rice is an important contributor to the diet often overlap with areas where micronutrient deficiencies are most common. Here lies an enormous opportunity as fortifying

rice has great potential to help fight micronutrient deficiencies on a large scale.

Over the past decade the World Food Programme (WFP) has been working with governments in Asia, Latin America and Africa to introduce and scale up rice fortification to fight micronutrient deficiencies. We have done so through many avenues – from working with lawmakers to legislate mandatory fortification of rice, to advocating for supportive policies, to providing technical support to the private sector in producing fortified kernels.

Through stories from nine countries on three continents, this booklet gives a brief overview of different ways in which WFP is working with governments and partners to support the scale up of rice fortification and improve the nutrition of the world's most vulnerable people.

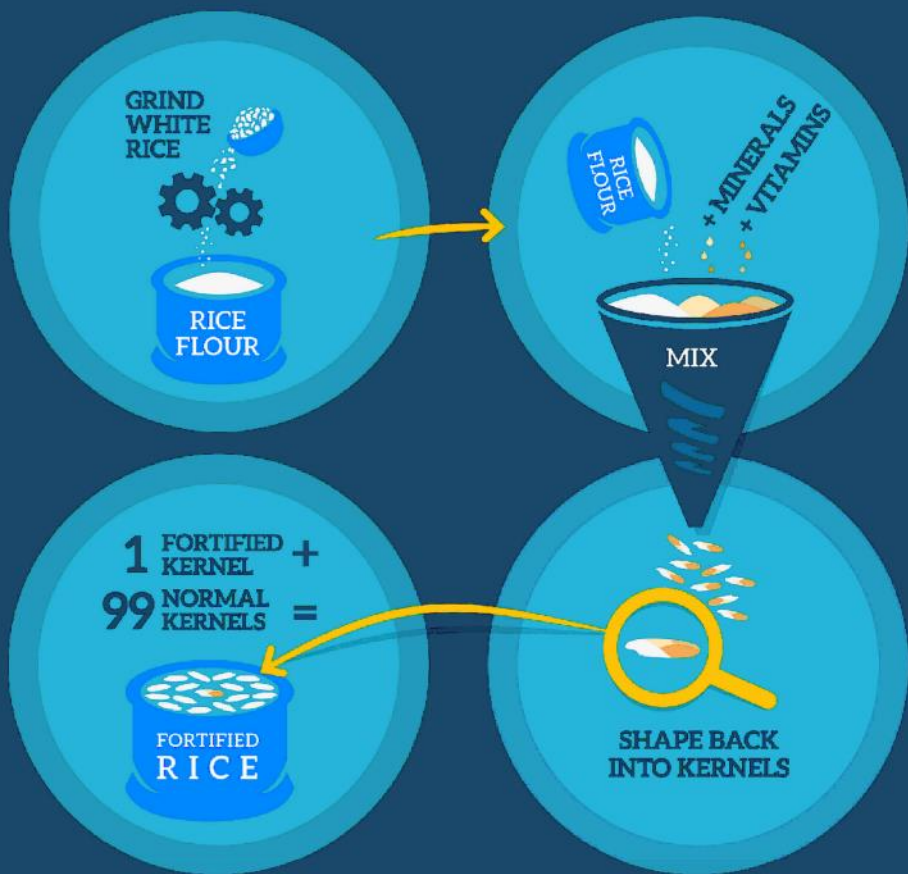


How WFP helps make rice more nutritious

RICE FORTIFICATION



World Food Programme



Understanding the landscape:

Research and analysis



Cambodia

Any initiative to introduce fortified foods must be built on a solid foundation of research and understanding. Cambodia has been a pioneer in research and evidence on the feasibility and health impact of fortified rice.

WFP and partners have supported the government to conduct scientifically robust research. In 2010 and 2015 WFP and the Institute of Research for Development (IRD) carried out acceptability trials of fortified rice and found it to be well received among women, teachers, parents and school children. Together with PATH (Program for Appropriate Technology in Health) and IRD, WFP also carried out research to understand the impact of fortified rice and found that it improved vitamin A, zinc and folic acid status of school children as well as cognitive performance.



Pioneering research



Acceptability trials



Strong advocacy and communication

The findings have been used for advocacy and sensitization and provided the evidence base needed to engage governments and key partners to support rice fortification. Based on the promising outcomes of the research, the recommendation to fortify rice in school meals was approved and supported by the government of Cambodia.



Engaging small-scale producers



Implementing a fortification programme in a system with many small- or medium-scale producers is more complex than working in a system where a small number of large producers dominate the market. However small millers often sell to the most vulnerable and so are critical in improving the nutrition of those furthest behind.

WFP is currently supporting a project in Peru to engage small- and medium-scale rice millers in Sechura Province – one of the largest rice producing areas in the country, home to over 600 producers. Rice millers participate in capacity building and knowledge transfer activities on topics such as social protection and



Economic empowerment



Improving local food systems



Harnessing social safety nets

good manufacturing practices.

WFP is also working with local producers and millers and the government to promote the use of locally fortified rice in social safety net programmes.



Scaling up success



India has several food-based safety net schemes that already distribute rice to the most vulnerable. These existing systems therefore have enormous potential to reach large numbers of people who are most at risk of malnutrition. WFP has been working with the government across the entire value chain of rice: introducing rice fortification into safety net programmes, conducting policy advocacy with governments, devising evidence-based standards, facilitating knowledge-sharing events, and sensitizing the private sector.

Through continuous advocacy and policy dialogue, rice fortification is gaining momentum, and many states are mainstreaming rice fortification in their social safety net programmes. In June



Strong advocacy efforts



Private sector partnerships



Harnessing social safety nets

2018, the government announced a plan to introduce fortified rice through the Public Distribution Scheme which provides subsidized grains to a large percentage of the population. Once scaled up, rice fortification in India's food-based safety nets has the potential to reach 800 million people.



Advocacy: Getting all players on board



Sri Lanka

Introducing fortified foods requires coordinated advocacy efforts to encourage governments to create supportive policies. Continuous advocacy efforts by WFP and the Food Fortification Initiative have been instrumental in introducing fortified rice in Sri Lanka after it was identified by the Ministry of Health as an effective strategy to reduce micronutrient deficiencies.

Advocacy activities have included a visit of a Sri Lankan delegation to India to see rice fortification production and distribution at work, and organization of a high-level meeting for stakeholders to understand the benefits of fortified rice in social programmes.

Mobilization of multi-sector stakeholders, including public supply chain distributors,



South-south cooperation



Strong communication



Multi-sector engagement

proved to be a successful platform for raising and advancing the agenda of fortified rice among government policy makers and planners. As a result of the combined efforts over the last eight years, the Cabinet of Ministers has approved the proposal made by the Minister of Health to use fortified rice in social safety nets.



Supporting local rice growers



Importing fortified kernels and blending them in-country with locally grown rice has a two-fold benefit: addressing micronutrient deficiencies while supporting the local agriculture.

WFP endeavoured to test whether this model was feasible and acceptable in a West African context. In this innovative project, kernels fortified with eight vitamins and minerals were imported from Thailand and blended with local rice. The rice was distributed to 600 schools supported by WFP, reaching 118,000 school children and providing between 37 and 100 percent of their daily needs for these nutrients.

Preliminary results of the project indicated that it was technically feasible to blend fortified kernels with local rice



Engaging local farmers



Creating nutrition-focused food systems



Supporting educational goals

and that no significant differences were observed when blended and cooked. Focus group discussions with school committees, parents, cooks and students revealed that including fortified rice in school meals was favourably perceived, preparation was easy, and the taste was enjoyed by all.



Making school meals more nutritious



Bhutan

In 300 schools across Bhutan, 70,000 school children now enjoy a more nutritious school meal, with the addition of fortified rice to the lunch menu.

WFP supported the introduction of fortified rice in school meals through various activities. A delegation from Bangladesh was brought to Bhutan to share their knowledge and experiences in rice fortification. A Bhutanese delegation then visited India on a study tour to observe rice fortification programmes in action. WFP also partnered with a private company to import fortified kernels, for use in schools.

Within five years, WFP and the government hope to provide fortified rice to all 500 schools in the country.



South-south cooperation



Private sector partnerships



70,000
schoolchildren reached

Interventions will include baseline and end-line micronutrient surveys to understand the impact on nutrition, setting national standards, stimulating local production of fortified rice kernels, developing a regulatory framework for food fortification, and capacity building of two public partners.



Harnessing existing social safety nets



With rice a national staple and a high prevalence of micronutrient deficiencies, Bangladesh was identified as an ideal setting to improve nutrition through fortifying rice. A government-run social safety net was already providing food to the most vulnerable families and served as a perfect entry point.

WFP worked with the government to carry out studies on feasibility and acceptability of fortified rice, as well as organizing capacity strengthening activities, experience exchanges and study visits for government officials. WFP also provided technical support to private sector companies who produced the vitamin premix used to make fortified kernels, and to blending facilities where



Knowledge sharing



Private sector partnerships



800,000 people receiving fortified rice

fortified rice kernels were blended with non-fortified rice.

Under the social safety nets, now almost 800,000 people have access to fortified rice, with this number steadily growing as the government continues to invest.



Reaching the most isolated



Introducing fortified rice into existing distribution systems provides the opportunity to improve the nutrition of isolated communities, who may not have access to adequate diets.

Such is the case in Nepal where many poor communities live in hard-to-reach mountainous areas and rely on rice distributions in a government-run safety net programme.

A landscape analysis of the rice milling sector was conducted in Nepal in 2016 with support from WFP. It concluded that rice fortification could be a viable strategy to deliver essential vitamins and minerals to vulnerable groups through social



Landscape analysis



Costing planning



Harnessing social safety nets

safety net programmes.

WFP is assisting Nepal in preparing a costed three-year plan to provide fortified rice to 150,000 vulnerable people in remote and food-insecure districts.



Enforcing existing law



Mandating food fortification so that all millers producing over a certain volume must fortify their rice is an effective way of improving the nutrition of a rice-eating population. However, having legislation in place does not ensure fortification if it is not enforced. Such is the case in Panama, which introduced mandatory fortification of rice in 2009 to address multiple micronutrient deficiencies, but to date has seen only one miller comply.

On request of the government, WFP has been collaborating with the Institute of Nutrition of Central America and Panama and the Ministry of Health to facilitate a revision of the law and ensure that it is implemented as intended, starting by



Gathering consensus



Harnessing social protection programmes



Strong partnerships

ensuring that all social protection programmes in the country buy fortified rice. WFP will also support in the design and implementation of a country-specific quality control and assurance system.



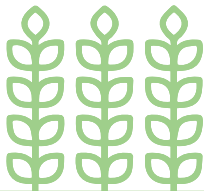
What's next?

With the potential of rice fortification to reach large numbers of vulnerable people with better nutrition, WFP will continue to scale up support to governments in this area. In countries where rice is a staple and micronutrient deficiencies are common, we will continue to help governments introduce fortified rice in their social protection systems, which serve those most at risk of malnutrition.

We will also continue to integrate fortified rice in our own operations, for instance, by including it in our food distributions and school meals. Even when we are not providing food directly, but rather cash or vouchers to buy food, we will collaborate

with food producers and retailers to ensure that fortified rice is available on the market.

To have a significant impact on micronutrient deficiencies, fortification must involve a number of actors and partners, from governments to nongovernmental organizations, advocacy groups and the private sector. WFP will continue to work with all of these groups in a joint effort to improve nutrition, with the ultimate goal of harnessing the potential of rice fortification in the creation of nutrition-focused food systems, where it can play an integral part in reducing micronutrient deficiencies in a sustainable way.



Partner with us



If you would like to find out more about WFP's work with food fortification, write to:

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Or find out more about WFP and nutrition at:

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