

Opportunities to Improve Micronutrient Intake through Food Processing in USAID's Feed the Future Program

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BACKGROUND

Food processing has the potential to improve micronutrient availability, bioavailability, and density. USAID's Feed the Future projects can increase year-round access to and use of micronutrient-rich foods, in part through food processing, but little is known about food

processing in these projects. This study sought to better understand the use of and opportunities for food processing to improve micronutrient intake in the Feed the Future program.

RESEARCH METHODS

USAID Advancing Nutrition searched the USAID Development Experience Clearinghouse, USAID website, and implementing partner websites for documents on Feed the Future projects with investments in food processing. Of the **142** projects we reviewed, **63** had a food processing component and **26** of those included food processing with a nutrition objective.

We used these definitions:

Food processing = any deliberate physical, chemical, or microbiological step to change food from its raw form.

Nutrition objective of a food processing activity = an effort to improve nutrient intake and/or nutritional status at the household or population level through food processing.

Staff reviewed the food processing components to determine if they worked to improve micronutrient intake and status, for which micronutrients, and how. We searched publications from the first **9.5** years of the Feed the Future initiative (January 2010 to June 2019), analyzing and synthesizing information using an Excel spreadsheet. The availability of documents varied by project, and the lack of final evaluation reports limited the analyses.

FINDINGS

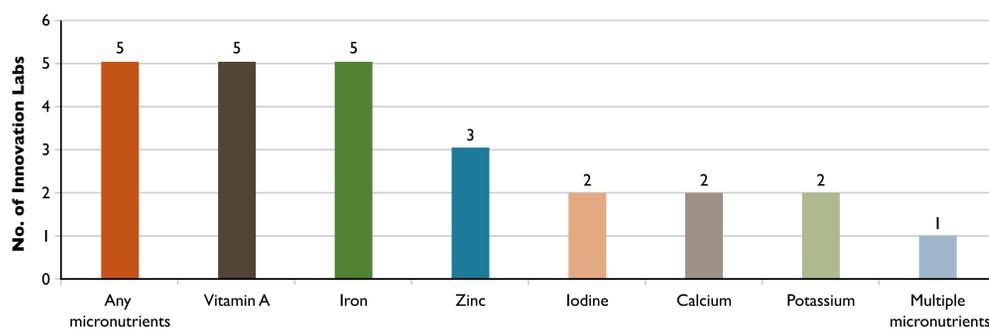
Of the **26** projects with a food processing component and nutrition objective, **9** were Feed the Future Innovation Lab projects and **17** were country-level Feed the Future projects. Only half of the projects mentioned included food processing interventions to improve micronutrient intake. The most common micronutrients targeted were vitamin A and iron (figure 1, figure 2). A few projects aimed to improve zinc, iodine, calcium, potassium, or multiple micronutrients.

Two Innovation Labs collaborated to design processed food formulations to meet nutrient gaps in the diets of women and young children, namely vitamin A, iron, and zinc, while another used orange-fleshed sweet potato to improve vitamin A intake. One Innovation Lab conducted

research on the use of ready-to-use supplementary food fortified with multiple micronutrients to treat moderately malnourished pregnant women, while another analyzed policy around fortification of processed foods.

Country-level projects included processing pro-vitamin A maize, orange-fleshed sweet potato, and fortified sunflower oil to improve vitamin A intake; iron biofortified millet to improve iron intake; fortified corn-soy blend and ready-to-use therapeutic food to improve the intake of multiple micronutrients for acutely malnourished children; and dairy processing to improve calcium intake. Two projects supported fortification of milled maize but did not mention which micronutrients were used.

Figure 1. Number of Feed the Future Innovation Labs with a Food Processing Component to Improve Micronutrient Intake and Number Working on Specific Micronutrients



Projects can use food processing strategically to increase micronutrient intake.

RECOMMENDATIONS

To strengthen food processing to increase micronutrient intake for optimal health in targeted populations, USAID and implementing partners can take the following actions.

4 Actions for Future USAID Projects/Activities

- 1. Assess diet and micronutrient gaps** in target populations and design food processing interventions to better use safe, nutritious processed foods to fill micronutrient gaps across seasons, geographic regions, and socio-economic strata and other demographic groups.
- 2. Scale up effective, proven nutrition-sensitive, micronutrient-rich food processing technologies developed** through Feed the Future Innovation Labs.
- 3. Improve project-level monitoring and evaluation** of food processing activities designed to increase micronutrient intake, including indicators on cost, reach/coverage, demand for micronutrient-rich processed foods, and diet quality.
- 4. Include a specific objective** to improve diet quality by increasing micronutrient intake.

4 Actions for Implementing Partners

- 1. Conduct adequate assessments** on diet and micronutrient gaps to inform project design.
- 2. Scale up/adapt available, effective, proven, nutrition-sensitive, micronutrient-rich food processing technologies** and products developed by Feed the Future Innovation Labs.
- 3. Develop and implement project-level monitoring, evaluation, and learning** with indicators on cost, reach/coverage, demand for micronutrient-rich processed foods, and diet quality.
- 4. Include a specific project result** to increase micronutrient intake as part of improving diet quality.

Figure 2. Number of Feed the Future Country-Level Projects with a Food Processing Component to Improve Micronutrient Intake and Number Working on Specific Micronutrients

