



## Optifood: A New Tool to Improve Diets and Prevent Child Malnutrition in Guatemala

Posted by [Monica Woldt and Gilles Bergeron, FANTA/FHI 360](#) on Wednesday, September 11th 2013

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*This blog is part of a series to coincide with [A Promise Renewed in the Americas: "Reducing Inequalities in Reproductive, Maternal and Child Health Summit"](#) during September 10-12 in Panama.*

What does it REALLY take to ensure young children get the proper nutrition to grow strong and healthy? This is an especially important question in poor rural communities in [Guatemala](#), where about half of the [children under five years](#) of age are stunted (too short for their age—a sign of long-term deficits in the quantity and/or quality of food, including the right vitamins and minerals). In some parts of western Guatemala, more than eight in ten young children are stunted.

Now there's a new tool to help answer the question: [Optifood](#) is a computer software program, developed by the [World Health Organization](#) (WHO) in collaboration with the [London School of Hygiene and Tropical Medicine](#), [Food and Nutrition Technical Assistance III Project \(FANTA\)](#), and [Blue Infinity](#), that provides scientific evidence on how to best improve children's diets at the lowest possible cost using locally available foods.



Woman nourishes her child. Photo credit: INCAP

Optifood identifies nutrient gaps and suggests food combinations the local diet can fill—or come as close to filling. It also helps identify local foods' limits in meeting nutrient needs and test strategies for filling remaining nutrient gaps, such as using fortified foods or micronutrient powders that mothers mix into infant or young children's porridge.

The Government of Guatemala is fighting stunting through its [Zero Hunger Initiative](#), which aims to reduce stunting by 10 percent by 2015 and 24 percent by 2022 through nutrition, health, agriculture, and social safety net programs. The U.S. Government and USAID are supporting these efforts through [Feed the Future](#) and [Global Health Initiatives](#) focused on the Western Highlands. [USAID/Guatemala](#) asked the USAID-funded [FANTA/FHI 360](#) to help find strategies to improve the nutritional quality of children's diets in the region. The challenge was to develop realistic and affordable diets for children that both meet their needs and are firmly based on scientific evidence. FANTA worked with its local partner, the [Institute of Nutrition of Central America and Panama](#) (INCAP), to collect the diet data needed for Optifood from communities in two departments of the Western Highlands, Huehuetenango and Quiché. FANTA then used Optifood to analyze the information.

The Optifood analysis found that a combination of locally available foods including tortillas, potatoes, beans, eggs, green leafy vegetables, and a fortified cereal known

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as Incaparina, along with mother's breast milk, could satisfy children's nutrient needs, except for two nutrients required for children 6-8 months—iron and zinc. Optifood results showed that adding a micronutrient powder, known locally as Chispitas, would help make sure these very young children get enough iron and zinc. It is important to note that the [Guatemalan Ministry of Health](#) already provides Chispitas in some areas, but it does not yet reach all parts of the country where it is needed.



Woman tends to crops. Photo credit: INCAP

FANTA then found out how much this diet would cost and whether families in the Western Highlands could afford it. One feature of Optifood is it provides cost information and can identify the lowest-cost diet that meets or comes close to meeting nutrient needs.

Optifood found that it would cost about 25 to 50 U.S. cents a day to give this improved diet to a child 6–23 months old in Guatemala. At first, this may not seem like much money, but for the 51 percent of the population in the Western Highlands who earn less than US\$3.15 a day, it amounts to 8 percent to 15 percent of their daily earnings.

Next steps in the process include testing the diet to see whether mothers can really feed it to their young children. We'll be asking questions like, "Do mothers have any difficulties? Is cost really a problem? Are the recommendations hard to understand or follow? Do children like the combinations of food?"

Once the diet is found to be practical, feasible, and affordable, FANTA will work with partners to develop a strategy and plan to promote the recommended foods in the right combination, quantity, and frequency to improve children's diet intake as well as promote the use of Chispitas to help meet iron and zinc needs.

FANTA is also working with the Government of Guatemala, USAID, development partners, and the private sector to make fortified foods for young children even better and test their nutrient levels with Optifood. FANTA is collaborating with the [Guatemalan Ministry of Agriculture and Livestock](#) to develop extension messages and materials to support production of the nutritious foods identified by Optifood, disseminate messages and improve practices through USAID-funded Feed the Future demonstration sites, with support from INCAP. In collaboration with the Ministry of Health, FANTA will also help health workers (through an e-learning program) and community health workers learn about and promote the Optifood diet, and as needed, FANTA will provide additional ongoing training and technical expertise.

Optifood, which will soon be available for free download on the WHO website, is a truly powerful tool that can strengthen Guatemala's ability to help its children thrive and reach their full potential.

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