**Optifood**

**Pathway Component:** food prices; diet; food access

**Search Category:** food access; consumption; value chains & market systems

**Date of Design:** 2013

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**URL:** http://www.fantaproject.org/tools/optifood

**Content Summary**

**Brief Description:** Optifood is linear programming software that uses mathematical optimization to calculate how to improve diets at the lowest cost using locally available foods. Optifood identifies gaps in current diets, and suggests locally available foods to fill them. It also indicates the limits of locally available foods in providing essential nutrients, and provides information on products (such as fortified foods or micronutrient powders) that could be added to the local diet to result in an adequate diet.

**Uses:** Optifood allows users to:
- Formulate food-based recommendations.
- Identify locally available nutrient-dense foods that are important for improving dietary quality.
- Test food-based recommendations to determine whether they are likely to ensure a nutritionally adequate diet if adopted.
- Identify key problem nutrients (that local food supply is unlikely to provide in sufficient quality).
- Compare food-based strategies based on cost and likely reduction in prevalence of nutritional inadequacies.
- Identify the lowest cost nutritionally adequate diet.

**Tool Components:** There are five main steps in the Optifood process:
- Step 1: Collect dietary and food cost data
- Step 2: Complete analysis in Optifood
- Step 3: Review Optifood analysis results with local stakeholders; decide on final set of recommendations
- Step 4: Evaluate feasibility of successfully promoting recommendations via community trials
- Step 5: Develop and implement a social and behavior change communication (SBCC) strategy to promote recommendations

**Operations**

**Number of Staff Required:** Not specified.

**Time:** Not specified. When Optifood was used in Guatemala, data collection took place between July and September 2012. The time required to fully analyze each target group should not be underestimated, as at least one or two days per target group is required.

**Cost of Assessment:** Not specified; this will vary depending on the context and geographic scope of the study.

**Training:** Specific training to use the software will be required.

**Geographic Targeting:** Not specified; in Guatemala, data was collected from 40 rural communities of 9 municipalities in 2 departments.

**Type of Data Collection:** Optifood used household, anthropometric, and market surveys.

**Degree of Technical Difficulty:** Considerable time is required to collect high-quality dietary data from a randomized sample of individuals from each target group to reflect the target population’s actual food consumption practices. The process of data preparation for analysis in Optifood requires considerable effort.

**Complements other Resources:** The Optifood program uses the cost data from the Process for the Promotion of Child Feeding (ProPAN) market survey to determine the lowest cost diet that meets nutrient needs. Optifood captures a snapshot of dietary patterns and food cost/availability during one season; this should be complemented by qualitative methods that explore diets during other periods of the year.