CASE STUDY

More Power with a Small Fish Powder

A mother in Siem Reap prepares the fish powder at home to feed her small children by mixing it with family food.

Challenge

To prevent stunting, and give every Cambodian child the right start, children 6-23 months of age need food of animal origin daily. Fish, especially when the head and bones are included, contains most nutrients needed for optimal child growth and development. Although Cambodians are the largest consumers of freshwater fish in the world, and small fish are available much of the year, only one out of two children 6-23 months from poor rural communities eat fish amid the fears of children choking on the bones and the time it takes caregivers—busy farmers and laborers—to cook for children.

Initiative

To help children grow well, USAID and Feed the Future’ NOURISH Project led by Save the Children identified and tested a local sustainable solution: fish powder made from small rice-field fish.

Results

Safety First. Fish preservation is part of Cambodian cuisine; but none of the methods used by rural households is safe for small children. NOURISH identified three preservation methods for fish powder with children in mind. The Pasteur Institute of Cambodia tested three fish powder samples for safety after two and four months of storage. Food safety tests showed that fish powder made with oil contained fungus and sun dried fish contained fungus and bacteria. Whereas, fish powder made without oil was safe fungus and bacteria free and safe to eat. Once test results were confirmed, NOURISH focused its efforts on the small fish powder preparation without oil.

Children Like it—Mothers Approve. NOURISH led smell, taste and color tests to assess fish powder appeal and developed cooking recipes for children of different age groups from mashing it up with pumpkin to the family soup and omelet with vegetables—all made with ease at rural communities. Small children and adults alike enjoyed the taste of food with fish powder.

Just-in-Time Nutrients. The project made nutritional analysis of the fish powder after 3-4 months of storage: the results showed high protein content and many essential micronutrients. When combined with a source of fat, fish powder is ideal for children’s healthy growth and development when consumed by children 6-23 months. Three tablespoons (15 g) of fish powder:

- Contain 10.3 g of protein—94% of a child 6-12 months and 79% of the child 13-23 months recommended daily allowance;
- Contain Omega-3 fatty acid—key for brain development;
- Contain half of the daily needs of zinc for children 6-23 months required for children’s brain and body development as well as illness prevention;
- Meet all of the daily requirements of Vitamin B12 to support development of the nervous system and Calcium as a building block for the bones.

With core research completed, NOURISH is now training “first 1,000 days families” in rural communities how to make fish powder at home using local health volunteers and caregiver groups. More farmers are becoming familiar and comfortable with it. More power to the fish powder!