

Keeping the Nation Healthy with Fortified Foods
Reducing Anemia and Vitamin A Deficiencies by 30%



A seller of fortified fish and soy sauce in Siem Reap Province sits with her son.

Cambodia has some of the highest rates of malnutrition in Southeast Asia. The 2010 Cambodian Demographic and Health Survey (CDHS) found that 44.4% of women of reproductive age (WRA) and 55% of children under the age of five are affected by anemia¹. According to the World Health Organization, major consequences of anemia include “poor pregnancy outcome, impaired physical and cognitive development, increased risk of morbidity in children and reduced work productivity in adults. Anemia also contributes to 20% of all maternal deaths”². As the most common cause of anemia is iron deficiency, making iron fortified fish and soy sauce (common ingredients in Cambodian cooking) readily available to rural populations who are at risk for micronutrient deficiencies is a simple solution. However, RACHA’s study, performed in 2012 prior to beginning the Food Fortification project, found that many Cambodians surveyed—60%—had heard of iron fortified fish and soy sauce but did not know what ‘iron fortified’ meant or why it could help

them³. Therefore, RACHA’s goals with this project became twofold: not only to provide iron and vitamin A fortified foods, but also to educate the populations about why they are important.



Fortified fish sauce at a wholesaler's in Sotr Nikum, Siem Reap Province.

¹National Institute of Statistics and the Directorate General for Health. "Cambodia Demographic and Health Survey." Survey. September, 2011.

²"Anaemia." *World Health Organization Health Topics*. 2013. The World Health Organization. 25 March 2013. <<http://www.who.int/topics/anaemia/en/>>.

³National Institute of Public Health. "Baseline Survey for Iron Fortification of Fish Sauce, Soy Sauce and Vitamin A Fortification of Oil Program in Cambodia." Survey. May 2012.

RACHA began its pilot project of fortifying fish and soy sauce in 2005, with the EcheNgovHeng producer in Kampot, a province well known for producing fish sauce. In 2007 RACHA began a trial studies in Siem Reap (Sen Ry Plant) and Phnom Penh (Thai Hong Keat Plant), and by 2012 had expanded the project. RACHA is currently working with fish and soy sauce producers to get them involved with the project, while simultaneously producing IEC

materials and an education campaign to inform sellers and users about the importance and ease of using fortified products. Fish and soy sauce producers will benefit a great deal by getting involved with this project early on. Eventually, there will be a sub-decree issued by the



Men Pisey, a RACHA staff member, affixes donor labels to a tank used for adding iron premix to fish and soy sauce in Battambang. The mixing tank and premix were both donated by RACHA.

Cambodian Prime Minister requiring a percentage of fish and soy sauce to be

fortified. Producers who sign on now will get a great deal of assistance; through technical advice and subsidized materials, in creating new healthier foods. Six small scale production facilities in Battambang, as well as seven others in Banteay Mean Chey, Kratie, Kep, and Phnom Penh, received steel tanks for mixing large quantities of fish and soy sauce. In addition, they will receive 100% of the iron premix for free for the first year. Once the project gets off the ground, RACHA will subsidize less and less of the premix (which costs about \$20 per bag, or about two cents per bottle produced) until eventually the producers will be responsible for buying it themselves. However, the cost is quite small compared to the output.



His Excellency Chay Than visit the IFFS-SS products at the National Launching Workshop.

Currently, the National Sub Committee for Food Fortification (NSCFF), chaired by His Excellency NuthChanSokha, is encouraging fish and soy sauce producers to voluntarily fortify their products by providing guidelines from the Inter-Ministerial Technical Committee(IMTC) and the National Council for Nutrition (NCN). They are working towards creating mandatory regulations (sub-decree) that will eventually require the majority of fish and soy sauce to be fortified with iron. The Committee is in full support of RACHA's

project, and RACHA is thrilled to have the partnership of the government in creating such a large scale change.

As the NSCFF and RACHA work towards scaling up the project, fortified sauces are making their way from small individual sellers into larger markets, particularly in Battambang, Siem Reap, Banteay Mean Chey, Pursat, Kampong Thom, and Kampot Provinces.. RACHA visited markets in Sotr Nikum, SvayLeu, and Chi Kreng Districts in Siem Reap and found many local sellers with fortified products. While many individual retailers were unaware of the benefits of iron fortified foods, RACHA met with one wholesaler who both understood the importance and was excited about the potential of fortified foods. However, there was one consistent response from all sellers we interviewed: the sauce sells well because it is “chngang” (the khmer word meaning “delicious”).



A seller of fortified sauce in Siem Reap discusses the benefits of fortified foods with Men Pisey of RACHA, as he points out the fortified label on a bottle of fish sauce.

In Kampot province, however, where RACHA has piloted many of its educational initiatives, many sellers were quite aware of the benefits. In Kaun Sat Market in the Chhouk District of Kampot, Mrs. Yat Sambath, a 64 year old living in Kaun Sat and selling iron fortified fish sauce, told us she was “ready and excited to educate her customers about the benefits of iron”. The project has begun to scale up to a nationwide and the potential success is obvious. Sellers in markets who have been trained by RACHA staff about the benefits and necessity of iron fortified foods sell them well, while explaining these benefits to their consumers. These consumers then go home and cook with fortified foods (RACHA’s baseline study found that each adult consumed approximately 15 ml of fish sauce (median 12.5 ml) and 11.2ml of soy sauce (median 8.3)⁴). With consistent use of fortified products, iron deficiencies will absolutely decrease, eventually allowing us to achieve our goal of reaching at least 71% of the total population.

Comment [H1]: 71% of the total population

⁴National Institute of Public Health. “Baseline Survey for Iron Fortification of Fish Sauce, Soy Sauce and Vitamin A Fortification of Oil Program in Cambodia.” Survey. May 2012.