Case Study:
A fish sauce that smells good and sells well

Overview

The Regional Fisheries Livelihoods Programme (RFLP) supported a demonstration model in 12 coastal communities of central Viet Nam to improve the quality of traditionally made fish sauce and to promote development of small group businesses.

The case study revealed that it is actually more challenging to start new techniques for a traditional production activity as the old production practices are entrenched in the community. Therefore, it requires an effective pilot demonstration to convince people to adopt the new techniques.

Key lessons learned

- The introduction of new techniques should be based on the current available knowledge/understanding in the community. This fish sauce production pilot was particularly successful in the context of women already trained in this technique before by other programmes but who had never previously had the chance to practice it.
Background

In the 12 coastal communes of Vinh Linh, Gio Linh, Trieu Phong and Hai Lang districts of Viet Nam’s Quang Tri province, there are a large number of fishers involved in inshore fisheries. The catch from capture fisheries is mainly sold in local markets or processed into fish sauce, shrimp paste, or dried fish. In these communes, while most fishing households are engaged in production and/or trading of fish sauce mainly for household and local consumption, the quality of their product is rather inconsistent. More seriously, it has a short shelf life because of inappropriate production technology. Additionally, the market access opportunities for traditionally produced fish sauce remain limited and therefore fish sauce production and trading by local fisher households has to date been highly inefficient and only marginally profitable.

In order to assist the coastal communities to overcome the current situation, the Regional Fisheries Livelihoods Programme (RFLP) conducted a training course on fish sauce production, marketing and small-business management. In addition, fish sauce demonstration models were supported in RFLP target communes including Hai Khe, Trieu Van and Vinh Thai in Quang Tri province. The intervention was designed to help local fisher households to learn new production techniques, to enhance the quality of their fish sauce and to improve their business, with a special focus on marketing skills.

In turn this would contribute to improving household income and living conditions for coastal fishers. The activity was also designed to expand the filtration method of fish sauce production to other fisher households in the coastal communes of Quang Tri province.

Criteria for selection of beneficiary households

The Project Management Unit in Quang Tri in collaboration with the RFLP National Coordinating Office, developed a set of the criteria for the selection of beneficiary households. The criteria for selecting pilot households were:

- The beneficiary was a member of the commune Fisheries Association and at least 80% had to be women;
- The beneficiary or their spouse was involved in small-scale inshore fisheries and/or in fish sauce production;
- They were highly committed to complying with the production procedures and instructions given by the post-harvest and marketing national consultant;
- They agreed to carefully record and describe in details the production process from the selection of raw materials to completion and sale of final products; and,
- They agreed to return 10% of the investment cost to the Fisheries Association fund after completing the model.

Preparing the jars for production
The filtration method

RFLP carried out a fish sauce production demonstration pilot model based on the findings and recommendations of a comprehensive survey led by an international expert as well as community consultations to assess the strengths and weaknesses of their current livelihood options. The pilot model sought to add value to the marine catch, as well as to enhance the livelihoods of fisher households in the three coastal Quang Tri communities, namely Vinh Thai, Hai Khe and Trieu Van communes.

Although fish sauce making is a traditional craft, it has often been an ineffective means of generating income. Key problems include the labour intensive nature of the business, low/irregular output volumes, inconsistent product quality and the lack of brand name products, especially when attempting to penetrate fish sauce markets in other provinces.

RFLP provided practical training on better production methods involving an improved filtration system. In order to encourage trainees to put this knowledge into practice, new tanks, fish and salt were also provided. An experienced post-harvest and marketing consultant worked closely with these groups to give hands-on support especially during the first stages of implementation. He followed this up with regular visits and responded to urgent questions when and as needed.

SIMPLIFIED PRODUCTION PROCEDURE

At the base of the tank that contains the mixture of fish and salt, a special filter was constructed using various materials such as gravel or rice husks. After the filter was a drain-off tap. As fermentation proceeds, liquid was drained off daily and poured back into the top of the tank. This allows metabolites such as ammonia to blow off more effectively than would be achieved through stirring the sauce in the traditional vase system. These metabolites are the cause of bad odours and flavours in fish sauce. Meanwhile, by strictly following methods introduced by the RFLP national consultant, especially regularly cleaning the upper part of the container using a strong salt solution, this ensures that the fish sauce is maggot free.
The results

Although this filtering method had been introduced before by other institutions in other areas of Viet Nam, this was the first time it was applied in the field under the actual conditions for fish sauce production in these particular communes. At the completion of the demonstration model, all the beneficiaries were fully convinced of the improved food safety and reduced labour required to produce fish sauce using the improved filtration system.

When fish sauce was produced in the traditional way, with combined salting (i.e. mixing fish and salt), stirring and filtration methods, it took 10-12 months and the fish sauce colour and odour were of inferior quality. In addition producers often cut short the production cycle to 5-6 months to get quicker cash return on their investment. Consequently, the final product did not was not fully fermented and did not meet required quality standards including protein content, thus preventing the product from being licensed. As a result traditionally produced fish sauce was mainly sold in local markets, and at a relatively low price. The net profit from fish sauce production was therefore limited for most traditional small-scale producers.

Compared to traditional methods, the new filtration technique introduced by RFLP produced fish sauce of a significantly better quality, taking 7-8 months instead of 10-12 months to achieve full fermentation while the system was also much less physically demanding and labour intensive. With the traditional fish sauce method, the post-fermentation filtration also posed food safety threats due to the lack of an insect-proof room to prevent flies from hovering around and laying eggs, which later hatched into maggots, on the filtering equipment.

“Please come in! There's no bad odour at all, although I have more than 10 tanks of fish sauce in my house,” said Ms Le Thi Hue from Hai Khe Commune, Quang Tri province. Opening one of the tanks, a good smell of fish sauce in the early stage of fermentation fills the air. “Take a look, no maggots, you see! Totally different from the traditional method where the surface would be covered with a layer of maggots.” Growing up in a fishing community, Le Thi Hue has been passionate about making fish sauce for over 15 years. With her husband, a small-scale fisher, she visited and tried to learn better fish sauce techniques from famous producers in neighboring provinces. Yet Ms Hue is especially excited about her experiment with the "filtration" method of producing fish sauce, which has been supported by RFLP. While the filter system employs a similar fermentation process to the traditional method, it delivers a better quality product (more hygienic, food safe, and a consistent product quality with higher protein content) and also allows easy scaling up of production volumes.
In addition, the new method produces more sauce and so generates higher income. Using the improved filtration method 2 kg of fish produces 1.5 litres of fish sauce, including 1 litre of class-1 and 0.5 litre of class-2 fish sauce. With the traditional stirring method 2 kg of fish yielded only one litre of class-1 sauce.

First-time labeling for the local fish sauce

To boost sales, marketing support was also provided. Participants were taught basic principles of marketing and small business management. They were also assisted with bottling techniques and labeling, while for the first time, this local product was also registered.

According to Mr. Nguyen Thai Minh, RFLP National Consultant-Post harvest, “We are taking a two-fold approach by improving both product quality and market access. By enhancing the competitiveness of fish sauce products by groups of small scale women processors, we have added value to the catch landed by their husbands within the context declining of resources. In addition we have also empowered women in the supported fishing communities.”

Marketing of fish sauce products in Vinh Thai commune

A shop was set up on the tourist beach in Vinh Thai commune by the fish sauce production groups. A banner was hung in the front, introducing the product. Free bottles of fish sauce were also delivered to some small traders along the beach for promotion. As of 15 May 2013, 300 litres of class-1 fish sauce and 100 litres of class-2 fish sauce had been sold (of which 200 litres of class-1 and 50 litres of class-2 were sold by two vendors, and the remainder was sold to customers visiting the booth). All the fish sauce of Vinh Thai commune was sold out by the end of June 2013.
Way forward

The efficiency of fish sauce demonstration models has already encouraged the fish sauce production groups to invest in expansion of their production units. The Hai Khe commune groups have bought 10 more pottery jars, increasing their annual processing production capacity from 1.5 to 3.5 tons of fish per year. Two groups in Vinh Thai have invested in a 25 pottery jars, raising their annual processing capacity from 3 to 6 tons of fish.

Most participants (both technical staff and project beneficiaries) attending an RFLP experience sharing workshop in 2012, were very excited to observe the filtering method in fish sauce production during a field study visit to Vinh Thai commune. They were eager to learn from beneficiaries on how to build the filter mechanism, to circulate the brine liquid, to keep fish sauce jars clean and every other tip.

Currently this model is being further expanded in the communes as there is a need for better utilization of the available fisheries raw materials and for value addition to local products.

The Head of the National Extension Centre has committed that the total budget for the Central region of Viet Nam will be allocated for post-harvest fisheries activities, as this has been identified as a key priority under the 'Tam Nong' or New Rural Development Programme of the Government of Viet Nam. This commitment was made based on the successful demonstration of the improved fish sauce filtration model supported by RFLP Viet Nam.
Lessons learned

- The fish-sauce production cycle should be planned carefully so that a) the main raw material fish can be purchased when it is cheap and b) fermentation is completed and the fish sauce will be fully mature and ready for sale at the Lunar New Year Holiday as this is when people traditionally buy larger volumes of fish sauce than usual as an important ingredient in many traditional Tet dishes.

- Production improvement should be combined with marketing. Marketing-related assistance is the key to ensuring that model implementers can market their improved products and thereby benefit from the greater cash income.

- Income generation of this type improved the utilization of women free time (and also the free time of men when they were not at sea). Women were proud to be productive and to able to contribute cash to their household budget in addition to conducting housework. Despite the fact that this meant extra work for women, they did not mind as it gave an extra household income source against the context of declining fisheries resources.

Preparing the fish sauce for sale

This case study was written by Hoang Thi Phuong Thao, RFLP Viet Nam M&E Officer, Don Griffiths, RFLP Chief Technical Adviser and Steve Needham, RFLP Information Officer, with editorial and layout support from Angela Lentisco, RFLP Case Study Developer.

About RFLP
The Regional Fisheries Livelihoods Programme for South and Southeast Asia (RFLP) sets out to strengthen capacity among participating small-scale fishing communities and their supporting institutions in Cambodia, Indonesia, the Philippines, Sri Lanka, Timor-Leste and Viet Nam. The four-year (2009 – 2013) RFLP is funded by the Kingdom of Spain and implemented by the Food and Agriculture Organization of the United Nations (FAO) working in close collaboration with the national authorities responsible for fisheries in participating countries.