

SPECIAL REPORT

Utilization of Freshwater Fish For Value-added Products

By SEAFDEC Marine Fisheries Research Department (MFRD)

Freshwater fish is an important fisheries resource in many ASEAN Member States where it serves as a major source of animal protein especially for the marginalized and poorer segments of the population thereby contributing to food security in these countries. Freshwater fish is also an important source of raw materials for processing into a variety of traditional fish products in the ASEAN Member States. Freshwater fish products as with other traditional products in the region are largely processed by household producers and small- and medium-sized establishments which are usually family-owned operations with little mechanization. Upgrading of processing and packaging technology for the freshwater fish products will help to improve their quality and safety with the possibility of commercialization.

With Lao PDR, Cambodia, Myanmar and Vietnam becoming members of SEAFDEC, freshwater fish utilization is becoming an important area to study as these Member Countries have significant freshwater fisheries. Under the previous SEAFDEC Special 5-year Program (2001-2005), MFRD conducted a project on Utilization of Freshwater Fish with Cambodia in 2003-2004. However, MFRD was not able to extend the project to the other countries due to budget constraints. At the 42nd Meeting of the SEAFDEC Council in 2010, Singapore proposed to conduct a 3-year project from 2011 to 2013 on Utilization of Freshwater Fish for Value-added Products with Lao PDR, Myanmar, Vietnam and Indonesia (which requested to participate in the project) through its Post-Harvest Technology Division (PHTD) of the Agri-Food and Veterinary Authority (AVA) as the Collaborating Center of SEAFDEC to implement MFRD programs.

The objectives of the Project are to utilize freshwater fish species for the development of value-added products and to assist in upgrading the processing and packaging technology for freshwater fish products in the participating countries.

Project Inception and Planning Meeting

The Project Inception and Planning Meeting for the Project was successfully held in MFRD/Singapore on 26-27 April 2011.

Eight representatives, two each from Indonesia, Myanmar, Lao PDR and Vietnam attended the Meeting together with the Chief of MFRD Programs and the Deputy Director and staff of PHTD. Representatives from each country presented their country papers on the status and utilization of freshwater fisheries resources. The Meeting discussed and planned for all the project activities and project schedule, appointed the key project leaders and identified commercial co-operants in the participating countries.

The Meeting agreed that the new products to be developed in this project should be targeted at Small and Medium Enterprises and therefore should utilize simple and easy-to-use equipment and technology. The Meeting identified the types of freshwater fishes to be utilized and the products to be developed in each country. The Meeting also deliberated on the product development and processing trials to be conducted in the participating countries as well as the publication of the processing handbook on the products developed.



Project Planning and Inception Meeting held at MFRD/Singapore

Regional Training Course

A Regional Training Course on Processing of Value-added Products using Freshwater Fish was organized and conducted in MFRD/Singapore on 18-21 October 2011 with the objective of equipping the participating countries with the basic techniques and equipment necessary for the development of



Participants and trainers of the regional processing training course (above); and sensory evaluation of the products (right)



Hands-on practical session to make the value-added product, fish murukku

Fourteen participants – two each from the participating countries; two participants from the Malaysian Department of Fisheries and four industry participants from Singapore attended the training. Lao PDR, Myanmar and Indonesia had sent one participant each to represent the private sector (commercial co-operant).

Future Activities

Following the Regional Training Course, the participants from the four Member Countries are to return to their countries to conduct their own product development and processing trials including product shelf-life study in 2012. MFRD shall collate all the results for the publication of a handbook on processing of value-added freshwater fish products. An End-of-Project seminar will be held in 2013 for the participating countries to present and share the results of the project.



the value-added products. The training comprised lectures on the processing of value-added products, Good Manufacturing Practices (GMP), Hazard Analysis and Critical Control Point (HACCP) and product shelf life testing as well as hands-on practicals on the processing of six types of value-added products, namely: fish sausage, fish patty, spicy fish paste, fish murukku, fish siew mai and fish cracker.



Value-added products made by participants on the last day of the training