

# **A Case History of Fish Jelly Product Development in Sarawak, Malaysia**

**SUHAILI BIN LEE**  
*Marine Fisheries Department*  
*Sarawak, Malaysia*

## **Introduction**

Fish is an important source of protein of the food consumed in this country since it can be obtained readily and cheaply. Beside being consumed fresh, considerable quantities of fish are processed before being consumed. There are various methods of processing, which have been practised widely throughout the state, nevertheless these methods of processing are traditional in nature. The most common traditional methods of processing are by sundrying, smoking and fermentation (fish sauce, shrimp sauce and shrimp paste). Despite the inferior quality of these products, the overall demand has been very consistent, infact some of the products are prepared as traditional dish.

An important event was recorded in the history of fish processing in the state of Sarawak when fish jelly processing technique was first introduced in 1984. This new technique of processing ensured a better future for fish processing in this state, since it has flexibility in its application. It is hoped that with this new technology, the percentage of wastage of fish which is considerable, could be lowered since the "trash fish" could be utilised in the processing.

## **Technology Developments**

Traditional fish processing methods normally do not employ complicated devices and equipment in their operation. Since these methods are still widely practised in the state, therefore generally there has been little improvement in technology in this area especially at the fishing village level. Nevertheless in the major towns in the state, fish processors have shown interest in using new technology in fish-jelly processing. This is supported by the fact that since 1984 some seven new processing factories have been set up in the state using this new technology with the aid of new equipment such as meat-bone separators, strainers, mincers, mixers, fish ball forming machine, slicers and others.

## **Some Socio-Economics Factors Affecting the Development of the Fish Processing Industry**

Socio-economic factors play an important role in the development of the fish processing industry especially in relation to fish jelly processing in the state. Some of the factors which affect the development of the technology of fish processing are:

### **Attitudes**

Generally when a new product, such as fish jelly, is introduced to a community, it does not find acceptance at first sight, especially so where the community in question has been familiar with the traditionally processed product. Efforts to popularise fish jelly products in the fishing communities have been made for the last three years. Considerable interest has been noted on the part of the fishing community towards fish jelly products as a whole.

### **Preference**

Generally a community has its own preference in terms of the type of food it takes. This is influenced by the environment, beliefs and traditions. Because fish jelly products are less preferred by the local communities the market for the market for them is limited.

### **Standard of Living**

Normally the supply of fish jelly products is limited and thus the price of the commodity is slightly higher than the traditionally processed fish products. The pricing factor therefore affects the choice of the consumer on the whole, since the general standard of living is fairly low especially in the rural areas.

## **Geographical Factors**

In the state of Sarawak, fishing centres and villages, which are potential areas for development of fish processing, are scattered along the coastal areas where communication is a problem. Inadequate public amenities such as electricity and water supply also pose a

hindrance to the setting up of even small-scale processing factories in these centres.

For these reasons the progress in development of fish processing in the rural areas of Sarawak, particularly in the fishing centres, has been slow. The processors in these areas have had to be content with the traditional methods that they have been using since the old days.

### Mechanism for Transfer of Technology

It has been the intention of the government to raise the income of the rural populace, including the fishing community which is considered to be within the poverty circle. Various programmes are being carried out by government agencies such as the Fisheries Department and others to elevate the standard of living of the rural communities. In the fisheries sector, new technologies have been identified that could be used to enhance effective fishing efforts and to improve post harvest practices thus improving the income and standard of living of fishing communities.

The Fisheries Department through its extension programmes has established the "training and visit" system throughout the state. In this system, extension agents are posted in each Fishing District to implement various extension programmes including transfer of technology to the target group.

Another effort to execute the transfer of technology to the target groups is carried out through training courses conducted at our Extension Centres as well as at fishing village level. Training courses have been conducted among the fishing communities since 1984. To date, the department has trained 711 persons in fish jelly products processing (Table 1).

**Table 1.**  
**Number of course participants attending fish jelly products processing training course in Sarawak**

Year	No. of participants
1984	86
1985	198
1986	233
1987	194 (up to Oct. 1987)
<b>Total</b>	<b>711</b>

Up to now, the Fisheries Department has established two Extension Centres in Sarawak, located in Kuching and Belawai while two are

being constructed in Mukah and one is planned for Miri. These extension centres are equipped with wet and chemical laboratories. The facilities available in connection with fish jelly processing at the two Extension Centres are as follows:-

#### 1. Kuching

- a) Manpower — 2 officers  
— 2 technicians
- b) Chemical laboratory with sufficient basic chemicals and equipment
- c) Wet laboratory — equipped with the following machineries:-
  - (i) meat-bone separator
  - (ii) strainer
  - (iii) mincer
  - (iv) mixer
  - (v) fishball forming machine
  - (vi) slicer
  - (vii) freezer
  - (viii) refrigerator

#### 2. Belawai

- a) Manpower — 2 technicians
- b) Chemical laboratory
- c) Wet laboratory — equipped with the following machines:
  - (i) meat-bone separator
  - (ii) mixer
  - (iii) mincer
  - (iv) fish ball forming machine
  - (v) freezers
  - (vi) refrigerators
  - (vii) slicer machine

### Conclusion

Fish jelly processing could be developed into a viable scheme both at the fishing village level (cottage industry) and on commercial scale. This could be achieved if transfer of technology to the target group can be implemented smoothly. It is therefore recommended that extension officers be given sufficient training in this subject so that they could be competent to extend the knowledge to the target group.

Marine Fisheries Department of Sarawak, Malaysia.  
Annual Fisheries Statistics 1984, 1985 & 1986. MFD,  
Kuching, Sarawak.

Benor, D., Harrison, J.Q. and Baxter, M. 1984. Agricultural  
extension, the training and visit system; A World

Bank Publication. Washington, D.C., U.S.A.

Wan Rahimah, W.I. 1980. Status of small-scale fish utilisation  
technology in Malaysia. A seminar paper presented at the FAO Symposium on the Development and  
Management of Small-Scale Fisheries, Kyoto, Japan,  
21 — 23 May.