

Southeast Asian Fisheries Development Center

Aquaculture Department

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Making shrimp cake

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total calories of the serving. Most recipes will turn out just as well with only one teaspoon of fat per serving and will have fewer calories. Deep-fat frying should not be recommended as a method of cooking seafood; not because it is unflavorful, but because it is unhealthful. No one needs the additional fat taken up by seafood cooked in this way. Promote the leaner, healthier cooking methods instead.

As a guide for salt content, suggest using no more than an eighth of a teaspoon salt per serving; that is half a teaspoon in total for a recipe serving four. Most recipes exceed this amount. Reducing the salt level to this amount is barely detectable by taste and is doing a favor to the blood pressure. Never suggest adding salt to taste. Most people add far too much.

To improve the overall nutritional value of the product, consult a qualified nutritionist or registered dietitian. Encouraging the use of vegetables in seafood recipe is an opportunity to promote good nutrition indirectly through seafood. A line or illustration depicting the nutritional highlights of a recipe tells the reader that nutrition was a consideration in developing the recipe.

Source of Items Two to Seven: **Seafood Nutrition** by Joyce A. Nettleton, New York: Osprey Books, 1985.

MAKING SHRIMP CAKE

Balao or *alamang* (*Acetes indicus* or *Atya* sp.) is usually sold in dried form but spoils easily within six months. In Paracale, Camarines Norte and Cabusao, Camarines Sur, the people have developed an indigenous processing technology to produce shrimp cakes in order to prolong the storage life of *balao*.

Processing of *balao* is a traditional and practical way of extending the shelf life of the shrimps. The process is simple, requires low capital investment, and low technological input. It only involves the use of salt. Salting enhances the flavor of *balao*. The shrimps become more pleasing to the palate. Thus shrimp cakes have gained wide acceptance for 20-30 years in local and foreign markets.

Dried shrimps

Dried shrimps are easy to prepare but have limited shelf life. However, salting of shrimps into cakes improves the quality and storage life of the processed product. Salting preserves the product by lowering the moisture content up to the point where the food-spoiling agents are destroyed. This results in a product that could last for 1-2 years at ordinary storage conditions. Shrimp cake making, therefore, ensures better and more stable products in the market and provides better income for small fishermen. Shrimp cake could be a potential product not only for small-scale village processing in Bicol but also elsewhere where shrimps abound.

Technology generation

Recently, the Bicol University College of Fisheries, in collaboration with the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development, conducted a study on the technology of shrimp cake-making in Bicol which involved the development of a standard procedure for shrimp cake-making, quality assessment, and storage.

The traditional method of processing *balao* was studied and improved for better quality and longer storage life of products.

Results showed that a drying time of 3-5 hours is best for shrimp cake-making. With 39% moisture, the products using the modified process lasted for two years when packed in polyethylene bags at a low density. Shrimp cakes were also highly acceptable and nutritious.

Technology package

Methods. The two processing methods in shrimp cake-making in Bicol are the *sahod arao*, where the shrimps are sun-dried immediately after harvest from the sea, and *balao hapon*, where the shrimps are salted overnight before sun-drying. In both methods, the shrimps are moulded into one-kilogram cake or tube before packing.

Quality. The quality of a shrimp cake depends upon the freshness of the raw material, appropriate drying and pounding methods, and the use of clean processing equipment.

Figure 1 shows the steps in the modified shrimp cake process using the *sahod arao* method:

1. Wash and clean. Use only fresh shrimps immediately after harvest. Place the shrimps in baskets and dip in seawater several times to remove surface dirt. Remove fish, shellfish, seaweeds and other extraneous matter for these will affect the flavor and aroma of the product. Minimize handling to minimize the unintentional introduction of microorganisms.

2. Dry. Spread thinly the clean and drained shrimps on clean mats and dry under the sun for 3 hours. Elevate the mats to avoid contamination by stray animals. Protect the drying set-up from fly infestation and other sources of contamination.

During rainy days when sun-drying is not possible, however, the artificial dryer serves the purpose (Fig. 2). For oven-drying, the recommended drying time is 1.5 hours at 130°C.

3. Pound. Pound dried shrimps in clean and dry mortar and pestle for five minutes or until the texture becomes sticky.

4. Store. Wrap the pounded shrimps overnight in clean jute sacks and store overnight.

5. Mould. The following day, mould the shrimps by hand into small patties. This is done for easy drying of the pounded shrimps.

6. Dry. Sun-dry the shrimp patties for two hours. This reduces the product's moisture content to the desired level of 39%.

7. Pound. Pound the dried shrimp patties using mortar and pestle until the shrimps become finer in texture.

8. Mould. Mould the shrimps by hand into cake or tubular form. The weight of shrimp cake in either form is maintained at one kilogram as required by consumers.

9. Cool. After moulding, cool the shrimp cake at room temperature by air-drying.

10. Package. For convenience and economic reasons, use banana leaves as packing material. For longer keeping quality of the product, use low density polyethylene bags.

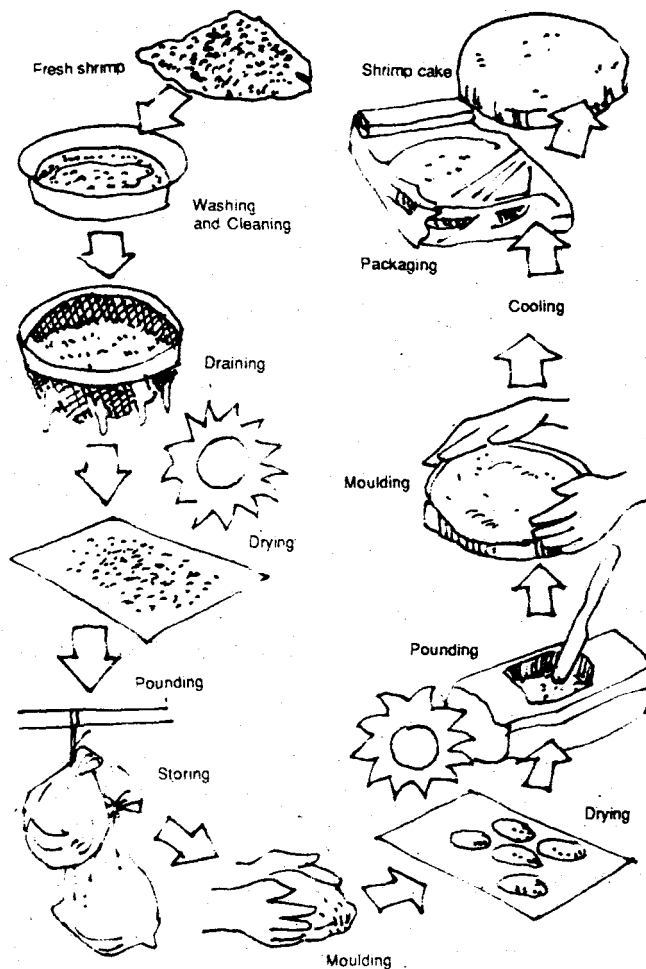


Fig. 1. General procedure in shrimp cake-making using the *sahod arao* method.

Packaging

Banana leaves and low density polyethylene bags are used for packaging the traditional shrimp cakes. Packing studies showed that the use of low density polyethylene bags results in better quality products with longer shelf life.

Storage

The traditional shrimp cake lasts for one to two years when stored at room temperature. Using the modified process, the shrimp cake can last even longer than two years.

Product evaluation

Shrimp cake using the modified process was found to be highly acceptable. Sensory evaluation tests revealed that the color, flavor, and general acceptability of the products were better with the traditional process.

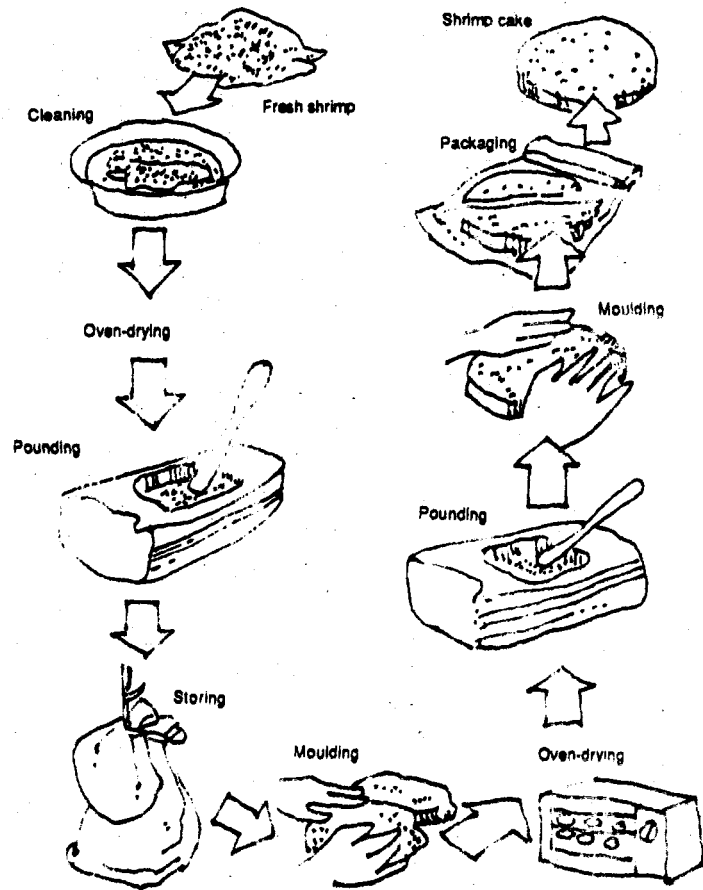


Fig. 2. General procedure in shrimp cake-making using an artificial dryer.

Source: The PCARRD Monitor, Vol. 17, No. 10, October 1989.

SEAFDEC/AQD LAUNCHES SEAFARMING AND COASTAL ENHANCEMENT PROGRAM

The Aquaculture Department of the Southeast Asian Fisheries Development Center (SEAFDEC/AQD) recently launched an integrated seafarming and coastal enhancement program. Hailed as an effective measure to close the worsening gap between fish demand and fish supply, it has the support of the Department of Agriculture and is funded partially by the International Development Research Centre (IDRC) of Canada.

Currently underway is Phase I of the project which shall establish a pilot seafarming and coastal enhancement center at a suitable location. Already, five candidate sites in Panay and Guimaras Islands have been identified.

The center will spearhead the following activities: (1) marine culture of selected finfishes, molluscs, shrimps, and seaweeds; (2) breeding of the selected species for release into coastal