

## Fish for Livelihoods

## Methods of Dried Fish processing for small scale fish processors

Fish drying is one of the traditional methods of preserving fish in Myanmar. However, adherence to food safety and quality control measures remains poor that can result in economic loss for processors and have harmful effects to health (diarrhea, food poisoning, parasite infestation, cancer, etc.) among consumers. Reports found that fish are usually laid on the ground with direct sunlight for about 3-5 days which poses risks of contamination by pests, insects, and animals (FAO, MOALI & LIFT 2016).

This document provides a brief guide on methods of drying fish observing food safety and hygiene practices to ensure good quality and safe product for consumption. Additional information on different methods of fish preservation is found on the Fish for Livelihoods funded by USAID "Training of Trainers for Small-scale Aquaculture Technology and Basic Nutrition" manual.

Choose the area that has enough wind and sunlight

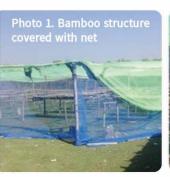
Cut the bamboo at appropriate height to build the structure

Install the bamboo securely on the ground and cover the whole structure with fine mesh nets (photo 1)

Once the whole structure is covered, carefully sew the edges of the net leaving no holes

Inside the covered area, build a bamboo racks where fish can lay (photos 2 & 3)

When sun drying is not possible due to poor weather conditions, an alternative method can be applied by setting up an electric heater with a coil of 3,000 watts and a fan in front of the heater. The fan spreads the hot air from the heater inside the structure which can dry the fish within 3-4 days based on fish species and size (photo 4). Moreover, to hasten the drying process, the heater can be used at night time and fish can be laid out in the sun during day time.







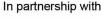


Based on the documents; Dried Fish processing - WorldFish Bangladesh, Improved Post harvest Training, DOF Myanmar, FAO Guidelines for Risk based fish inspection (http://www.fao.org/3/a-i0468e.pdf)



Project















## Fresh fish processing

Below show the steps on how to process fresh fish for drying observing food safety and hygiene practices.

Purchasing

Ensure that whole fish (marine or freshwater) are bought fresh and packed in ice when transported at processing area. Spoiled fish will be difficult to dry and will emit foul odor as a final product. Fish needs to be kept on ice until further processing. (See photo 5)

Washing

Upon delivery at processing area, fish should be washed appropriately utilizing clean water from the tap or from water tanks. Proper washing reduces the chance of getting hatchlings as some fish hold a few eggs from butterfly at the sales point. (See photo 6)

Dressing

Gut the fish and sliced it into desired ways (split, half, whole). Afterwards, wash the fish before proceeding to the next step. (See photos 7 and 8)

Salting

Add dry salt or soak fish in brine solution @360 grams per 1 liter of water for 24 to 36 hours.

Final Washing After soaking, wash the fish in clean water. On the other hand, if processor will not apply the method of salting, the process can go directly to sun drying.

Sun Drying

Dry the fish for 2-3 days until the moisture of below 20% is reached; approx. 1/3-1/4 of its fresh weight. E.g. 4 viss of fresh fish will produce 1 viss of dried fish. The big fish needs to hang with the bamboo vertically, while small fish is placed on the bamboo racks (follow earlier section on building an area for fish drying).

Packaging

Pack the final product using materials that provide adequate protection to minimize contamination, prevent damage, and accommodate proper labelling. Use packaging materials that is non-toxic and not pose a threat to the safety and suitability of food under the specified conditions of storage and use.

**Storing** 

Final product should be stored on shelves or tables, above the ground to prevent insects, animals, etc. from contaminating the product. It is recommended that storage area is dry and have air circulation to minimize molding of products.







Photo 9, 10. Dried fish sold at the local markets ©Daw May Kyi, DOF







## Acknowledgement

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