

Processing of seaweed taffi

Seaweed is one of the most important fisheries products of Indonesia, either as a source of fish farmers' income or for foreign exchange.

Seaweed (Fig. 1) can be used as an industrial raw material, or as fast food products like taffi. Seaweed taffi (Fig. 2) is a preserved food which can last longer than pudding and candy. Processing of seaweed taffi is ideal as a household or home industry.

Materials and equipment

Materials

- Seaweed (50-55 days old), dried up to 20% moisture content
- Sugar
- Coconut milk
- Calamondin
- Salt

- Ginger
- Vanilla
- Chemical substances: CaCo for washing, and KCl for boiling.

Equipment

- Thermometer
- Crude scale
- Analytical scale
- Baking pan
- Spatula
- Dry cloth
- Blender
- Stove
- Wok pan
- Oven



Fig. 1. Dry seaweed

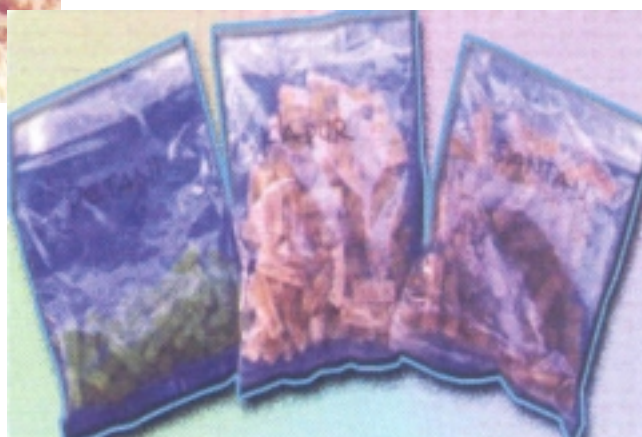


Fig. 2. Seaweed taffi

Food and Fertilizer Technology Center (FFTC)
5F, 14 Wenchow St., Taipei 106, Taiwan ROC
Tel.: (886 2) 2362 6239 Fax: (886 2) 2362 0478
E-mail: fftc@agnet.org Website: www.fftc.agnet.org

*FFTC: An international information center for
small-scale farmers in Asia*

Cooperating agency for this topic:

Jakarta Assessment Institute for Agricultural Technology
Jakarta, Indonesia

Traditional method

The traditional seaweed taffi processing by the Seribu Island (Indonesia) people is as follows:

- Soak dry seaweed for 2-3 days to reduce putrid smell.
- Wash seaweed by using clean water.
- Slice, then boil with a ratio of 1: 10 water and seaweed until dissolved and cooked.
- Filter.
- Heat the dough, add 8-10 parts of sugar to seaweed.
- Add ginger or Pandanus leaves extracts.
- Slice seaweed taffi approx. 1 cm x 2 cm x 1.5 cm
- Dry for as long as 4-5 days. Seaweed taffi lasts up to 1 month.

Improved technology assessed by the BPTP Jakarta

- Wash the dry seaweed repeatedly.
- Soak for 10 minutes in the water containing 20 g quicklime.
- Wash using fresh water.
- Soak for 2 days, then dry and mill.
- Extract/boil at a temperature of 90°C for 5 hours with a ratio of 1: 5 water and seaweed.
- Filter to separate filtrate from wastes.
- Cook filtrate and add white sugar with a ratio of 4:1, then add salt and vanilla according to taste.
- Stir the dough until it becomes unsticky.
- Pour the dough into a baking pan.
- Cool down for as long as 24 hours.
- Slice at 3 cm x 2 cm x 1 cm.
- Sun dry for 1-2 days.
- Bake in an oven at a temperature of 40°C for 6 hours.
- Package the seaweed taffi in a plastic box and then label.

Economic analysis

Components	Cost (Rupiah)*	
	Traditional technology	Improved technology
Added costs (oven, blender)	300,000	0
Production cost per month		
- Labor (one person)	0	0
- ½ kg dry seaweed	6,000	6,000
- 20 pcs. plastic boxes	4,000	4,000
- White sugar	32,000	16,000
- Label paper	0	5,000
- Added matter	1,000	1,500
- 2 liters fuel	1,500	1,500
Total cost per month	44,500	34,000
Income	20 boxes seaweed taffi @ 2.5 oz. x Rp. 2,500 = Rp. 50,000	20 boxes seaweed taffi @ 2.5 oz. x Rp. 2,500 = Rp. 50,000
Benefit	Rp. 50,000 - Rp. 44,500 = Rp. 5,500	Rp. 50,000 - Rp. 34,000 = Rp. 16,000
Processing frequency and income per month	4 x Rp. 5,500 = Rp. 22,000	8 x Rp. 16,000 = Rp. 128,000

* 1 USD = 9,071 Rp.