

***Picung* (Pangium Edule Reinw) as traditional food preservative**

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Author's Background

Wahyudi David was born in West Sumatera. His passion in traditional food preservative and food culture

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Summary

Sumatera is one of the most bio-diverse island in Indonesia as well as diverse in food recipe. Picung (Pangium Edule Reinw) has long been used as an ingredient in traditional cuisine in West Sumatra. Processing techniques, ingredient and spices are known by local people. Picung is one of the indigenous plants in West Sumatra

Background

In West Sumatera cost line, fish is one of the protein sources for local people, Fish meat is high in fat content which consist of 25 % unsaturated fatty acid and low cholesterol. Fish meat begins to deteriorate after 8- 12 hours post mortem. Traditional food preservation has been practiced since long time to preserve the quality and freshness of fish. One of the remarkable forest products has long been used as an ingredient in traditional cuisine in West Sumatera is *Picung*.

The Characteristic of Picung

Picung can live in a variety of soil conditions and grows wild in the forest or other places close to water. *Picung* are normally well-grow in the altitude of 300- 1000 meters above sea level, on the outskirts of the river, local teak forest, and dry land or wet, argillaceous soil, sometimes on stony ground. The trunked plants big and tall, trunk diameter of 2.5 meters and height can reach 10-40 meters, *Picung* begin to bear fruit at the age of 12-15 years and still be until 100 years old.

Ripe fruits will fall naturally and instantly broke and scattered. The sizes of fruit are ranged from 10 – 25 cm. In some varieties, the size of the fruit varies with 17-30 cm long and 7- 10 cm wide or more. The stalk size ranged 8-15 cm for long and 7-10 mm for diameter. Each fruits seed wrapped in yellow fruits flesh and it is containing 30 seed or more, while the small size fruit contains about 12 seeds. To describe the shape of the grains is rather difficult, but it has seeds *Picung* and we see that is called by the name "*Kluwak*" the core seeds, among others, as a spice in cooking vegetable

The seeds *Picung* consist of solid shell. The colour of nucleus is white and it solid have kernel (endosperm), where the core of the seed shell bounded by a brown thin membrane. Though the seeds have been cleaned from the flesh of the fruit and the seed membrane (brown) however still have webbed seeds.

Picung contain cyanide acid which is poisonous. However, local people know how to reduce cyanide acid: they have been use to make traditional recipe and an unique preparation before it consumes. *Picung* peeled and then boiled. Then *Picung* seed is immersed in flowing water and boiled again. After second boiled process, *picung* seed are placed in tray and let the fermentation process begin. Further, after a week, *picung* seed are wrapped with ash, and need more or less 40 days for second fermentation. The fermentation process gives specific flavour and taste

According to scientific investigation, cyanide acid can be inactive in one hour's boiled process. During boiled process Ginakardasse enzyme was inactive. This enzyme has main role in produce cyanide acid from hydrolyze Gynokadin.

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Figure 1. The picture of *Picung* (photos by Pemi Septiani)

Traditional Food Recipe

According to survey, there are two traditional recipes where *Picung* as the main spice:

1. Pado Fish

The importance step to make *Pado* fish is how to prepare a good dried powder *Picung*. Peel the fruit then drain. Mash beans in order to get seeds. Let the seed dry. Meanwhile, prepare dried coconut pulp. Mixed dried Powder *Picung* and dried coconut pulp cover fish with it. This mixture is left for 3-4 days in a banana leaf. After 3-5 days this mixture becomes a lightly browned.

The composition of mixture, for 0.5 kg fish need 0.5 kg seed of *picung*, 0.25 kg grated coconut pulp and 0.5, please make sure to mixed into a tray and then covered with banana leaves (to give a special aroma), it takes 3-5 days and then the fish become a *Pado*. This method can preserved the fish until several days or even weeks.

2. Kalio (Curry)

The ripened fruits are stored in the 7 days. The separation the seed of fruits meat started by way of boiled in the water with ratio 1: 2 for about 45 – 60 minutes. After that, the seed is immersed in water for 24 hours. When the seed has been clean it is ready to consume.

The *Kalio* can be made follow the recipe; all spices are mashed (Shallot, garlic, minced, chili, ginger, galangal, coriander, lime leaves, turmeric leaves, bay leaves, and lemon grass). Stir-fried spices until the flavor of spices become strong, and then add 500 ml water and coconut milk. The main ingredient can be added such as, chicken, shrimp or fish. This method can preserve the meat for several days with re-heated every day.



Picture 2. The picture of Pado Fish and Kalio (cury) (Photos by Yulia Rahma and Pemi Septiani)

Core messages and conclusions

This paper/oral presentation has given an account of utilization of *Pangium Edule Reinw* and the reason for widespread use of traditional recipe for preservative agent. The traditional recipe is one of feature to maintain local biodiversity.

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