

## Papaya Shredded Processing Training as a Business Opportunity for KKN Students in Brumbungan Lor Village

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### Abstract

*Probolinggo is one of the regencies that is famous for its abundant papaya fruit income, this is one of the interesting ingredients to be created by the nation's children in order to stabilize the Indonesian economy. The utilization of papaya fruit is an interesting business opportunity to be pursued, in meeting these objectives, this research article is published which focuses on processing young papaya into shredded which has a high and healthy taste that can be consumed as a substitute for side dishes, and for snacks from children to adults, as well as training in the Brumbungan Lor Village Community. The samples used in this study were 3 young papaya fruits obtained around Brumbungan. The processing technique was done by shredding, draining and frying. The result is shredded papaya which has a high taste and produces a distinctive color, taste, and aroma.*

**Keyword:** Training, Processing, shredded papaya

### Abstrak

Probolinggo merupakan salah satu Kabupaten yang terkenal akan penghasilan buah pepayanya yang melimpah, hal ini menjadi salah satu bahan yang menarik untuk dikreasikan oleh anak bangsa demi menstabilkan ekonomi bangsa Indonesia. Pemanfaatan buah pepaya ini menjadi peluang usaha yang menarik untuk ditekuni, dalam memenuhi tujuan tersebut diterbitkanlah artikel penelitian ini yang memfokuskan pada pengolahan pepaya muda menjadi abon yang memiliki cita rasa tinggi dan sehat yang bisa dikonsumsi untuk pengganti lauk, dan untuk cemilan dari anak-anak hingga dewasa, serta pelatihan pada Masyarakat Desa Brumbungan Lor. Sampel yang digunakan dalam penelitian ini adalah buah pepaya muda sebanyak 3 buah yang didapatkan disekitaran Brumbungan. Teknik pengolahan dilakukan dengan cara diparut, ditiriskan dan digoreng. Hasil berupa abon pepaya yang memiliki cita rasa yang tinggi dan menghasilkan warna, rasa, dan aroma yang khas.

**Kata Kunci:** Pelatihan, Pengolahan, Abon Pepaya.

## INTRODUCTION

Brumbungan Lor Village in Gending District has 14 RTs, from 4 Hamlets, the majority of whom are Farmers and Farmers. Therefore, many RTs have MSMEs (micro, small and medium enterprises) that process onions to help the household economy. Many people are involved in this MSME, but there are also those who later go bankrupt due to unknown obstacles. This product is usually marketed in various places such as markets or in typical Probolinggo souvenir shops. This focus is what makes the local community unaware of the potential of the natural products around them which are certainly no less helpful than young papaya fruit. Many people plant papaya plants, both in tropical and sub-

tropical areas, in wet and dry areas or in mainland and mountain areas. Papaya is a plant that comes from tropical countries. This papaya plant has stems that grow straight up with a stem height of 3-8 m. Under special conditions, papaya stems can reach a height of 10 m. Papaya trees usually have no branches, the leaves and fruit grow directly from the trunk which can have a diameter of up to 20 cm. Only on rare occasions when the trunk breaks can it form branches. Papaya can grow faster and has soft "wood". Papaya plants cannot stand cold.

Papaya fruit is a single true fruit, namely fruit consisting of flowers with only one fruit candidate. Papaya fruit has quite a lot of sap and this sap will disappear when the fruit is old

(ripe). Inside the papaya fruit there is a cavity containing quite a lot of small seeds. Papaya fruit appears in the axils of the leaf stalks and is green when it is young, then turns yellow to orange when it is old. Papaya fruit has thick flesh with a reddish color and tastes sweet and juicy.

Papaya fruit can be eaten for its flesh, both when young and ripe. The young fruit flesh is cooked as a vegetable. The flesh of the ripe fruit is eaten fresh or as a mixture in fruit cocktails. Papaya is also used leaves as a vegetable and meat tenderizer. In some places half-ripe papaya fruit is made into sweet fruit salad along with bengkoan fruit, pineapple, apples, star fruit, water guava. Papaya fruit sap is also relatively expensive because papaya sap is processed into papain powder which is useful for household and industrial needs. In herbal medicine, papaya can prevent cancer, constipation, eye health.

Papaya has many benefits and properties for our bodies, including strengthening the immune system, preventing the development of infections, preventing heart disease, preventing blood clots, improving the digestive system, reducing the risk of suffering from chronic diseases, bone health, contains important nutrients for the body, reserves energy that makes us not get tired easily, can help us sleep soundly every night and not experience insomnia, helps restore the body's condition after illness, stops cellular damage and also prevents the formation of wrinkles, helps reduce stress on the skin and removes dead skin cells, can also be used to treat acne.

Papaya fruit is a versatile fruit and has high nutritional value, especially levels of vitamin C and vitamin A. The entire papaya plant is very useful for human life. Papaya fruit can be used as food or animal feed. Papaya contains high levels of pectin, therefore it can be processed into shredded papaya. Papaya is a fruit plant from the Caricaceae family originating from tropical America, including Mexico, and then spread throughout the world, including our country, Indonesia.

In general, people always want something different, including culinary or food matters. Therefore, by making shredded papaya fruit,

people can make good use of papaya, especially young papaya, what's more, papaya is very easy to find and grows abundantly in the Probolinggo area. So far, most people do not use young papaya, only some people use young papaya to make vegetables or salad. Therefore, KKN students want to process young papaya into flavorful shredded meat, which can be eaten as a snack or served with rice.

## RESEARCH METHOD

This research was conducted on Friday, 18 August 2023 and disseminated to the community on 19 August 2023 at the Brumbungan Lor Village Office. The samples used in this research were 3 young papayas whose harvest had been determined in the Brumbungan area. The training was carried out with explanations of good and correct papaya fruit processing practices accompanied by KKN students. Following are the tools, materials and work procedures:

### A. Tool

In this research, several tools are needed, such as a knife, grater, basin, stove, frying pan, spatula, tray, and finally a sieve.

### B. Material

The ingredients needed are as follows: papaya, water, salt, stock powder, garlic, pepper powder, wheat flour, rice flour, oil, kitchen tissue, standing pouch.

### C. Work procedures

The first process in making Shredded Papaya is to peel the papaya using a knife, then separate the seeds from the flesh, grate the papaya flesh and set aside, soak the grated papaya flesh and soak it in salt water for a few minutes to remove the sap, prepare the wheat flour and rice flour. basin, mix well and add salt, stock powder, ground pepper and garlic and stir until evenly mixed, drain the grated papaya flesh, and mix little by little into the flour mixture, after coating in the flour, sift to reduce the remaining flour in the oil, heat oil in a frying pan, once hot, fry using medium heat, wait until golden brown, once cooked, remove and drain on

kitchen tissue to reduce the remaining oil on the shredded papaya, wait and air dry until the oil is absorbed on the kitchen tissue, pack on a stand pouch and label with product name.

## RESULTS AND DISCUSSION

### A. Papaya Classification and Morphology

Papaya trees generally do not have branches or have few branches, grow to a height of 5-10 m with leaves that form a spiral shape on the upper tree trunk, the leaves are five-pinnate with long stalks and are hollow in the middle. Papaya flowers have a pale yellow flower crown with a stalk on the stem. Flowers are usually found in the area around the shoots. The shape of the fruit is round to elongated, with the tip usually pointed. The color of the fruit when young is dark green and when ripe it is light green to yellow. The flesh of the fruit comes from thickened carpels, yellow to red in color depending on the variety. The middle is hollow. The seeds in young fruit are white and in ripe fruit they are black or blackish and covered in a kind of slimy layer to prevent them from drying out (Putra, 2015).

The scientific classification of the plant, papaya according to Putra (2015) is as follows:

Kingdom	: Plantae
Subkingdoms	: Tracheobionta
Super division	: Spermatophyta
Division	: Magnoliophyta
Class	: Magnoliopsida
Subclass	: Dilleniidae
Order	: Violales
Family	: Caricaceae
Genus	: Carica
Species	: Carica papaya L.

The name papaya in Indonesian is taken from the Dutch "papaja" and in other times it is taken from the Arawak "papaya". In Javanese it is called "kates" and in Sundanese it is called "gedang". Other regional names for papaya are peute, betik, ralempaya, punti wood (Sumatra), banana malacca, bandas, manjan (Kalimantan), kalajawa, padu (Nusa Tenggara), Kapalay, Kaliki, unti Java (Sulawesi). Foreign names

for papaya include papaya (English) and fan mu gua (Chinese) (Herbie, 2015).



**Figure 1.** Young papaya

### B. Process Making Shredded Papaya

The following is the process for making Shredded Papaya:

1. Tool
  - a. Knife
  - b. Grater
  - c. Basin
  - d. Stove
  - e. Frying
  - f. Spatula
  - g. Tray
  - h. Sift
2. Material
  - a. Pawpaw
  - b. Water
  - c. Salt
  - d. Broth Powder
  - e. Garlic
  - f. Pepper Powder
  - g. Flour
  - h. Rice flour
  - i. Oil
  - j. Kitchen Tissue
  - k. Standing Pouch
3. Working procedures
  - a. Peel the papaya using a knife, separating the seeds from the flesh.
  - b. Grate papaya flesh and set aside
  - c. Soak the grated papaya flesh and soak it in salt water for a few minutes to remove the sap
  - d. Prepare wheat flour and rice flour in a bowl
  - e. Mix well and add salt, stock powder, pepper powder and garlic and stir until evenly mixed

- f. Drain the grated papaya flesh, and mix it little by little into the flour mixture
- g. After coating with flour, sift to reduce excess flour in the oil
- h. Heat oil in a frying pan
- i. Once hot, fry over medium heat
- j. Wait until golden brown
- k. Once cooked, remove from heat and drain on kitchen paper to reduce the remaining oil on the shredded papaya
- l. Wait and air dry until the oil is absorbed into the kitchen tissue
- m. Pack it in a standing pouch and label it with the product name.



**Figure 2.** Papaya shredded processing training

### C. Composition Chemistry of Shredded Papaya Ingredients

#### a. Chemical Composition of Papaya

Young papaya is a food ingredient that is commonly consumed by Indonesian people. Young papaya does not taste as good as ripe papaya, but the contents of young papaya are no less healthy than ripe papaya. Papaya contains the enzymes papain and chypapain which are very good for digestion. This enzyme is also useful for converting protein into amino acids, cleaning the intestines, fighting nausea and preventing urinary tract infections in women. Young papaya contains vitamins A, B and C, and contains potassium and magnesium. The vitamin C content in ripe papaya fruit is higher than in unripe fruit because during the ripening period there is an increase in the percentage of carotene, xanthophyll and due to the metabolism of polysaccharides in the cell walls which

causes sugar levels to increase. The chemical composition of young papaya fruit in 100 g can be seen in the table below:

Component	Mark
Fat	0.1 g
Energy	26 kcal
Proteins	2.1 g
Carbohydrate	4.9 g
Potassium	50g
Phosphor	16 mg
Iron	0.4 mg
Vitamin A	50 IU
Vitamin B1	0.02 mg
Vitamin C	19 mg
Water	92.3 g

CSPI research results state that apart from being nutritious and healthy, papaya is also known as a fruit that is cheap, tastes good, has various varieties and is available throughout the year.

#### b. Chemical composition of Wheat Flour

Wheat flour is flour that comes from wheat. Apart from containing carbohydrates, flour also contains protein in the form of gluten. This gluten is what differentiates wheat from other flours. The higher the gluten content, the higher the protein content in the flour. The protein content of wheat flour ranges from 8-14%. The main components contained in wheat flour such as protein, fat, calcium, phosphorus, iron and vitamin A are quite high. The chemical composition of wheat flour in 100 g of ingredients is as follows:

Component	Amount
Energy	365 kcal
Proteins	8.9 g
Fat	1.3 g
Carbohydrate	77.3 g
Calcium	16 mg
Phosphor	106 mg
Iron	3.71 mg
Vitamin A	1.20 mg
Vitamin B1	0.12 mg
Vitamin C	0 mg



Water	12 g
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## c. Chemical composition of rice flour

Rice flour is flour made from pounded or milled rice. Rice flour should not be confused with rice starch which is made by soaking rice in an alkaline solution. Rice flour can be used as a substitute for wheat flour for people with gluten intolerance because rice flour does not contain gluten. The chemical composition table for rice flour can be seen in the following table:

Component	Amount
Energy	364 kcal
Proteins	7 g
Fat	0.5 g
Carbohydrate	80g
Calcium	5 mg
Phosphor	140 mg
Iron	1 mg
Vitamin B1	0.12 mg

## d. Chemical Composition of Salt

The definition of salt according to chemistry is an ionic compound formed from an acid and a base with components consisting of positive ions and negative ions to form a neutral compound. Salt is a white, crystalline solid object which is a collection of compounds with the largest portion being sodium chloride (>80%) and other compounds, such as magnesium chloride, magnesium sulfate and calcium chloride. These components have an important role for the human body, so it is necessary to consume the right amount of salt to support human health. Salt consumption per person per day is estimated at around 5-15 g or 3 kg per year per person (Winarno 1995 in Amalia, 2007).

## e. Chemical Composition of Garlic

The main benefit of garlic is as a cooking spice that makes dishes flavorful. The chemical composition of garlic per 100 g: protein 4.5 g, fat 0.20 g, charcoal hydrate 23.10 g, vitamin B1 0.22 mg, vitamin C15, calories 95 cal,

phosphorus 134 mg, calcium 49 mg and iron 1 mg. From several studies, garlic contains the active substances allicin, the enzyme alinase, germanium, sativine, selenium, skordinin. The content of garlic is useful as a bactericide, fungicide and can inhibit the growth of fungi and other microbes (Solihin, 2009).

## f. Chemical Composition of Pepper

Pepper or pepper is a food ingredient commonly consumed by Indonesian people.

## CONCLUSION

Papaya sap contains papain, chemopapain, lysozyme, lipase, glutamine, and cyclotransferase. Papaya sap contains more than 50 amino acids, including aspartic acid, threonine, serine, glutamic acid, proline, alanine, valine, isoleucine, leucine, tyrosine, phenylalanine, histidine, lysine, arginine, tryptophan and cysteine. Papaya fruit sap has several benefits that have been used in the medical world, namely as an anthelmintic (worm medicine), relieving pain, reducing stomach aches and for topical use on burned skin.

Papaya has many benefits and properties for our bodies, including strengthening the immune system, preventing the development of infections, preventing heart disease, preventing blood clots, improving the digestive system, reducing the risk of suffering from chronic diseases, bone health, contains important nutrients for the body, reserves energy that makes us not get tired easily, can help us sleep soundly every night and not experience insomnia, helps restore the body's condition after illness, stops cellular damage and also prevents the formation of wrinkles, helps reduce stress on the skin and removes dead skin cells, can also be used to treat acne.

This papaya shredded processing training attracted the enthusiasm of the mothers who attended the event. This enthusiasm can be seen during the processing practice, many mothers ask about the criteria for papaya and the processing process. Apart from gaining new knowledge, this should also be used as a

business opportunity to help the household economy.



**Figure 3.**Enthusiasm for trying the taste of shredded papaya

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