

KARAKTERISTIK SOSIAL EKONOMI PETANI SALAK SIDEMPUAN

(Studi Kasus : Desa Parsalakan, kecamatan Angkola Barat,
Kabupaten Tapanuli Selatan)

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ABSTRACT

South Tapanuli Regency is one of the regencies in North Sumatra, which has the highest production of salak. South Tapanuli Regency has an important role in efforts to fulfill North Sumatra's fruits, especially with agricultural products in the form of salak which is an advantage. Efforts to continue to maintain South Tapanuli Regency as one of the areas contributing to salak have a strategic role in regional and national development. This study aims to determine the socio-economic characteristics of salak sidempuan farmers in Parsalakan Village, Angkola Barat District, South Tapanuli Regency. This study entitled Socio-Economic Characteristics of Sidempuan Salak Farmers (Case Study: Parsalakan Village, Angkola Barat District, South Tapanuli Regency) This research is a qualitative descriptive study. The sample used was salak farmers in Parsalakam Village with a total of 25 farmers, the sampling method used was stratified random sampling with three strata, namely salak farmers with narrow land, salak farmers with medium land and large/large salak farmers. The data collection method in this study used the interview method, precisely semi-structured interviews. Determination of the population using purposive sampling technique, namely the determination of which aims based on certain criteria according to the problem and research objectives. Based on the results of research on salak farmers in Parsalakan Village, it shows that the majority of farmers are Batak Angkola, Batak Mandailing and also Javanese, then farmers are included in the category of not yet prosperous because the ratio of farmers' income is still below the minimum wage in South Tapanuli Regency, and the role of the government is still not directly touched by the benefits by farmers. barking.

Keywords: Social, Economic, Farmer, Salak

CHAPTER I

INTRODUCTION

1.1 Background of Study

Indonesia is an agricultural country with most of the people live on agricultural sector. The agricultural sector in Indonesia is one of the important ones to improve the national economy and attract workers. The agricultural sector is divided into horticultural crops, orchards and secondary crops. Horticultural plants varied and spread in every region of Indonesia have distinctive fruits. One of the Indonesia's fruit commodities is salak.

According to Ministry of Agriculture (2013), salak is a type of Indonesian major tropical native fruit commodity and one of the plants suitable for development. There are varieties of Indonesian salak: Pondoh Salak, Swaru Salak, Enrekang Salak, Gula Pasir Salak, Bali Salak, Padang Sidempuan Salak, Gading Ayu Salak, Pangu Salak, Sibakua Salak, Sangata Salak, Condet Salak, Manonjaya Salak, Kersikan Salak, and Bongkok Salak.

These salak productions can be found in almost all regencies/cities in North Sumatra. This can be seen on the data taken from the Plant and Food Agency of North Sumatra below:

Table 1. Harvest Area and Annual Salak Production in Each Regency/City in North Sumatra 2019

No	Regency/City	Harvest Area (Ha)	Production (Ton)
1	Nias	0.9	113
2	Madina	0.6	34.5
3	South Tapanuli	4,503.0	1,611,500
4	Central Tapanuli	3.3	24.0
5	North Tapanuli	19.5	1,030.0
6	Toba Samosir	0.7	44
7	Labuhanbatu	-	-
8	Asahan	16.9	15,618
9	Simalungun	0.7	30.3
10	Dairi	0.3	8.2
11	Tanah Karo	13.5	527.4
12	Deli Serdang	55.5	19,030
13	Langkat	7.2	3,942
14	South Nias	0.2	50
15	H.Hasundutan	270.0	269,138
16	West Pakpak	-	-
17	Samosir	0.1	3
18	Serdang Bedagai	0.3	366
19	Batu Bara	0.1	16
20	Paluta	-	-
21	Padang Lawas	1.0	13.0
22	South Labuhanbatu	0.1	2.2
23	North Labuhanbatu	-	-
24	North Nias	0.3	4.5
25	West Nias	0.1	0.7
26	Sibolga	-	-
27	Tanjung Balai	-	-
28	P.Siantar	0.0	0.6
29	Tebing Tinggi	-	-
30	Medan	0.6	12.9
31	Binjai	0.0	2.6
32	P.Sidempuan	66.9	1,469.0
33	Gunung Sitoli	-	-

Source: Department of Food and Horticulture of North Sumatra

Based on the table taken from the Department of Food and Horticulture of North Sumatra, the area with the largest salak production and the largest harvest area in North Sumatra is South Tapanuli Regency with harvest area of 3,703.4 ha and a production of 107,270.6 tons/year.

From the several areas that produced salak in North Sumatra, South Tapanuli was as the largest contributor to salak production. Almost every area in South Tapanuli produces salak with appetizing look, big size, thick skin, slightly bitter-sweet taste. Salak is one of the major commodities from South Tapanuli with a fairly high amount of production every year. It can be seen from the following table:

Table 2. Harvest Area and South Tapanuli Salak Production in 2014 - 2019

Year	Harvest Area (Ha)	Production (Ton)
2014	9,200	231,492
2015	11,874	340,485
2016	11,874	340,485
2017	12,260.94	257,036.40
2018	27,297.55	555,674.34
2019	18,774.00	197,416.00

Source: South Tapanuli Agricultural Agency

Based on table 1.2, we can see the salak production produced by South Tapanuli during 5 years period. Every year, the production rate fluctuated. However, in 2015 and 2016, salak production in South Tapanuli did not increase at all and had the same harvest area. Yet, after 2016, the salak production increased in 2017 by 257,036.40 tons and in 2018, the production reached 555,674.34 tons. It shows that salak production fluctuated back in 2019 with an area of 18,774.00 ha and 197,416.00 tons of total production. This shows declined compared to the data in 2018.

South Tapanuli Regency is divided into several districts where almost each district is a salak producer. However, from several districts, five districts were taken which were the largest salak producers and the main contributors of commodities to South Tapanuli Regency. The commodity in this case was salak. It is on the table below:

Table 3. Salak Harvest Area and Production in Each District, 2020

No	District	Harvest Area (ha)	Production (Ton)
1	Batang Angkola	35.00	350.00
2	Sayur Matinggi	0	0
3	Tantom Angkola	0	0
4	East Angkola	30.00	3.20
5	South Angkola	74.00	1 020,00
6	West Angkola	18,258.35	192,501.40
7	Angkola Sangkununur	0.27	1.30
8	Batang Toru	189.11	2,785.30
9	Marancar	180.00	656.00
10	Muara Batang Toru	3.00	44.50
11	Sipirok	3.26	44.70
12	Arse	0	0
13	Saipar Dolok Hole	0.70	9.60
14	Aek Bilah	0	0
15	Angkola Muara tais	0	0

Source: South Tapanuli Agricultural Agency

Table 1.3 shows that West Angkola District is the largest salak producer salak in South Tapanuli with a total production of 192,501.40 tons in 2020. It had the most harvest area than the other districts. West Angkola has 12 villages and 2 urban communities. The data of salak production in each village of West Angkola were not available at district office but from the interview conducted by the writer to the district officers of West Angkola. The result showed the Parsalakan village had the highest amount of salak production than than other villages. The Parsalakan Village annual total production was 1,327,500 kg or about 1,328 tons/year, with a salak area of 285 Ha. Parsalakan Village was one of the villages

in West Angkola district with a population of 2,596: 1,262 males and 1,334 females. The area of West Angkola district is 10,452.31 (ha) with a percentage of 2.40 (Source: South Tapanuli/West Angkola Salak Agricultural Agency 2019). Parsalakan is divided into 6 sub-villages: Huta Lambung, Huta Koje, Huta Tunggal, Lobu Jelok, Aek Lubuk, and Huta Tonga. Every sub-village in Parsalakan has varied areas. The majority of parsalakan villagers are farmers with side jobs. Parsalakan Village is also one of salak centers in West Angkola District, South Tapanuli Regency.

Parsalakan Village is located on the causeway between Padangsidimpuan and Sibolga which makes it a strategic location to sell their salak produces on the roadside since Passalakan has no market activity as it is in Sitinjak market. Sitinjak Market is the capital center of West Angkola District, South Tapanuli. Approximately 15 km from Padangsidimpuan to Sibolga, trucks are often found loading salak produced by the farmers in this area. "These salak will be distributing to markets in Pekanbaru and Baganbatu," stated Asrul Jamil Hasibuan (49), a local salak farmer. He was also a salak collector and reselling them to bigger buyers. Salak was the potential of South Tapanuli Regency, especially for the people in West Angkola. Currently, there are at least 20,000 hectares of salak orchards in this district. And the rest of about 804 hectares are rice fields. It means the locals generally depend on salak farming for a living. Asrul stated that his salak orchard was the land he and his wife Mardumawati Sihombing (46) worked on. There was this one hectare of his salak orchard which he called "satumpuk". It was the result of his hard work with his wife's where the area was not only planted with salak but also rubber plants as protections for the salak palms. "There are about 300 rubber plants for a protection for the salak

orchard”, claimed Asrul. He stated that the salak planted required at least five years before they could be harvested. Yet, some of Asrul’s salak palms had reached 20 years. "It turned out, the older the plants are, the more delicious the fruit will be," he explained. He also explained that 1 hectare of salak orchard can produce 20 sacks of fruits and the selling price was Rp. 70,000 for each sack. Salak can also be harvested once each two weeks. Which made in a month or about two harvests, Asrul obtained a sale of Rp. 1,400,000 from each hectare of his salak orchard. According to Asrul, if he only owned one hectare of salak orchard, he will not be able to support his family. Asrul also has 4 children, two of whom are currently studying in college which made rubber could increase his income. He also mentioned when the salak price soared during the last November in 2015 with Rp. 130,000 per sack, added with the rubber price that reached Rp 12,000 per kg. The West Angkola locals were prosper with their salak farming. “We had experienced it”, reminisced Asrul. He also told that the no-fruit period for salak occurs in July to August, September, and October. From the long period at that time, the salak production was very much decreased along with the demand due to the recent worsening of economic. “The production was low and the price fell”, he stated. He asked for the government to pay attention to salak farmers and find solutions in processing salak so farmers' production can be accommodated, the price remains stable, and the farmers remain consistent and enthusiastic on cultivating the salak palms.

(<http://www.medanbisnisdaily.com/news/read/2016/01/25/212201/kisah-petani-salak-andalan-tapanuli-selatan/>)

Meanwhile, the Head of West Angkola District, H. Ongku Muda, explained that the salak production and area is still positive. Yet, the demand for

fresh fruit tends to be constant but sometimes it changed, at times, there was a lot of demand and at times, it decreased. Hence, the salak processing method is necessary, he said. The South Tapanuli Agricultural Service noted that there was an increase in salak production of 18,993 tons or around 47 percent since 2014. In 2013, South Tapanuli salak production was 231,492 tons. In 2014 it reached 340,485 tons or an increase of 18,993 tons or about 47 percent," explained Secretary of the South Tapanuli Agricultural Agency, Adelina Siagian. She revealed that in 2013 data, the harvested area of South Tapanuli was 9,200 hectares with a production of 231,485 tons. The location is dominated by West Angkola and other sub-districts but not significant. West Angkola had the largest harvest area around 8,004 hectares since 2013 with a production of around 203,550 tons. (<http://www.medanbisnisdaily.com/news/read/2016/01/25/212201/kisah-petani-salak-andalan-tapanuli-selatan/>)

There was also a decline in production followed by a drop in quality of taste (sweetness), South Tapanuli (Antaraneews Sumut). Salak fruit in South Tapanuli experienced a decrease in production and income due to "danga" condition (the term for no fruit). Bidang Simatupang (48), one of the salak farmers, told Antara in Sipirok, that the danga condition has been around since early November 2018. Usually, during normal condition, in one hectare, he could produce about 10 - 12 sacks (one sack = 25 kilograms) of salak a week. "During danga, there were only 4-5 sacks," he stated. It also happened in Sisundung Village, Sigumuruh, Simatorkis, Parsalakan, and the other villages.

He said, “The decrease in production was followed by a drop in taste quality (sweetness). According to him, danga would take three months or more in every year, it is normal during the end of the year. (<https://sumut.antaranews.com/berita/182646/produksi-buah-salaktapanuliselatan-menurun>).

From some of the polemic information above, the writer assumed that many farmers were not very enthusiastic in salak farming for several reasons such as not being able to depend entirely on the results of salak farming. Thus the writer was curious and interested in researching the Socio-Economic Characteristics of Sidempuan Salak Farmers in Parsalakan Village, South Angkola District, South Tapanuli Regency.

1.2 Problem of Study

From the background outlined above, the problem in this research is how is the socio-economic characteristics of salak farmers in Parsalakan Village, West Angkola District, South Tapanuli Regency.

1.3 Objective of Study

Referring to the problem of study, the objective of this study is to determine the socio-economic characteristics of salak farmers in Parsalakan Village, West Angkola District, South Tapanuli Regency.

1.4 Significances of Study

The significances of this study are as the followings:

1. Suggestions for the farmers to improve their production.
2. As a consideration for the Department of Agriculture and related parties to improve the production/marketing.

3. As a consideration for the government and related parties to improve the community's economy.
4. As a research reference for the next researchers.

1.5. Theoretical Framework

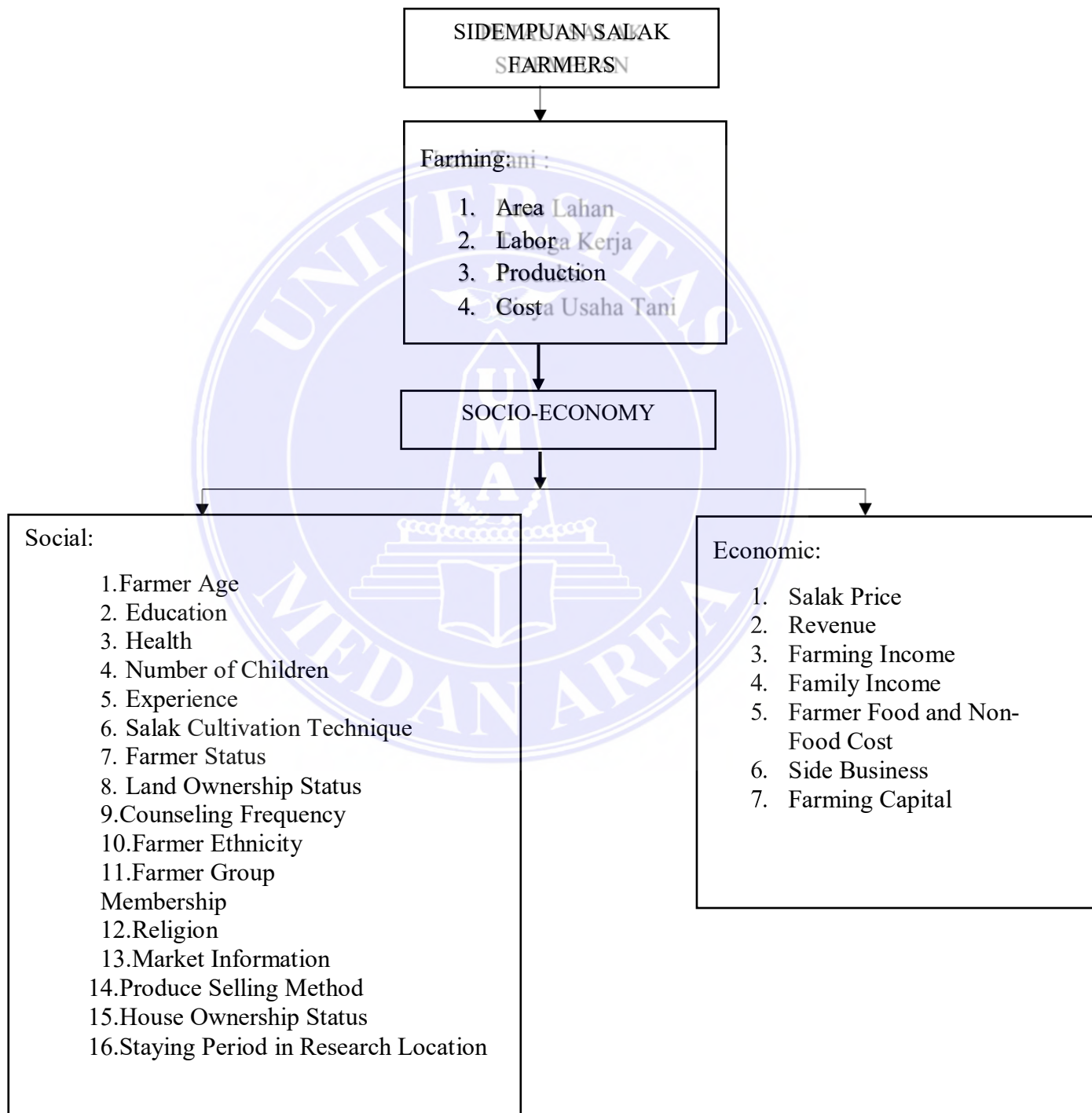


Figure 1. Theoretical Framework

CHAPTER II

REVIEW OF LITERATURE

2.1 Salak Palm

Salak is one of the fruit crops that have prospects as an agribusiness. The origin of salak palm is unclear, but it is thought to have come from Thailand, Malaysia and Indonesia. Some sources state that salak palm (*Salacca edulis*) comes from Java island. It is estimated that salak palm originated from the seeds brought by merchants during the colonial period throughout Indonesia, Philippines, Malaysia, Brunei and Thailand (Guntoro et al, 2010).

This plant grows in clumps and can reach 7 meters but the average growth is no more than 4.5 meters. This plant is a biennial plant that can produce separate male flowers from plants that produce female flowers. The thorny stems are almost invisible because of the densely grown leaf midribs. The leaves are arranged in a rosette like a sword with a length between 2.5-7 m. Male flowers and female flowers are compound flowers, each of which is arranged in a cob flower. The fruit is in bunches, each emerges from the axils of the leaves. The fruit is usually round or inverted oval with a tapered base. Salak skin has scales and is neatly arranged like a tile. The color varies from yellow to black. Each fruit consists of 3 pieces of fruit flesh. The taste varies from sweet, sour, to astringent or a combination of the three (Widyastuti, 1996).

According to Aralas (2009), salak is one of the fruits that have a higher antioxidant than other tropical fruits such as avocado, orange, papaya, mango, kiwi, lemon, pineapple, apple, rambutan, banana, melon and watermelon.

Salak is a seasonal fruit that is quite productive. It can produce abundant fruit throughout the year. Salak in a bunch have varied levels of ripeness and size

(Tim karya mandiri, 2010). Sidempuan salak has special characteristics compared to other salaks, The fruit is oval and tends to be round. The skin is large scaly and blackish brown. The thick flesh is uniquely dark yellow and has a red tinge. It tastes sweet mixed with sourness, juicy, and faint astringency. It has relatively large and light brown seeds. Its size varies from small to large.

According to Widyastuti (1996), salak palms can grow in almost all Indonesian regions. However, to grow productively, this plant requires an ideal environment. The required altitude ranges from 1-400 m above sea level with an average rainfall of 200-400 mm/month. 20°–30°C of daily air temperature area and 50-70% of sunlight exposure are the best requirements for its growth. Loose soil is the ideal soil type. It contains organic matter, shallow groundwater, and capable to store water and is not easily flooded.

There are quite a lot of salak variations in Indonesia, especially on the Sumatra such as the Sidempuan Salak species which is the highest salak production in North Sumatra. Sidempuan Salak (*salacca sumatrana*) has the red flesh characteristics. (Fransiskus,2010).

2.2 Salak Cultivation

2.2.1. Nursery

One of the factors to be considered in cultivating salak palms is the use of high quality seeds. Salak is an annual plant. Errors in seeds use will effect its exploitation. Although given a good technical culture treatment will not give the desired results, there will be loss in the farming. To prevent the problem, it is necessary to do a good method of salak seed nursery. Salak seeds can be taken from seeds (generative) or from saplings (vegetative). A generative method is a nursery using good seeds obtained from parent trees that have good

characteristics, such as: fast-growing fruit, bountiful fruit throughout the year, fruit yields are plentiful and uniformly, good plant growth, resistant to pests and diseases and unfavorable environmental influences.

Advantages of generative method:

- a) Easy and low-cost.
- b) Plentiful seeds.
- c) Healthier plants and can live longer.
- d) Easier seeds transport and storage.
- e) Strong roots and resistant to falling.
- f) Traits improvement for the hybrids.

Disadvantages of generative method:

- a) Different fruit quality from its parent due to the cross-pollination possibility.
- b) Difficult seeds gender identification.

1) Seed Requirements

To obtain good seeds, a selection is required. The seed requirements are:

- a) The seeds come from the qualified parent tree.
- b) The fruit taken as seeds must be picked at maturity.
- c) Have at least 85% of growth capability.
- d) Uniform and no defect seeds.
- e) Healthy without disease or pests.
- f) The seeds has no impurity.

2) Seed Preparation

a) Seeds:

1. Salak seeds are cleaned.
2. Soak in clean water for 24 hours and rinsed.

b) Seedlings:

1. Select good seedlings that come from good parent tree.
2. Prepare bamboo pieces and fill them with soil.

3) Seeding Technique

a) Seeds:

1. Salak seeds that have been soaked and cleaned are put in a perforated plastic bag and placed in a shady and humid place until the sprouts are 20-30 days old.
2. Urea, TSP and KCl fertilizer, each 5 grams, given every 2-3 weeks.
3. To maintain the humidity, water everyday.

b) Seedlings from wooden tub:

1. Make a wooden tub with 25 cm height. Width and length are adjusted as necessary.
2. Fill with 15-20 cm of fertile and loose soil.
3. Add 5-10 cm of sand on the soil.
4. The direction of the nursery is North and South and is shaded facing East.
5. The seeds are soaked in a hormone solution such as Atonic for an hour. The concentration of the solution is 0.01-0.02 cc/liter.

6. Plant the seeds in the tub with a distance of 10 x 10 cm.
7. The seeds are buried in an upright position, tilted/lying down with the buds to downright direction.

4) Nursery Maintenance

For the seeds, the nursery media is polybags with a size of 20 x 25cm filled with soil mixed with manure in a 2:1 ration. After the seedlings are 20-30 days old, they are moved to polybags. For the seedlings method, bamboos are placed right under the salak seedlings then watered every day. After a month, the roots have grown and the saplings are separated from the mother then planted in polybags. A teaspoon of Urea, TSP, and KCl fertilizers are given once a month.

5) Seed Transfer

For the seeds, they are transferred to agricultural land after 4 months. As for the seedlings, they need at least 6 months.

2.2.2. Land Cultivation

1) Preparation

The selection of salak orchard areas must consider the transportation and water sources factors.

2) Land Clearing

- a) Removing the unnecessary plants and taking out weeds from the planting area.
- b) Plowing to remove large lumps of soil.

2.2.3. Planting Technique

1) Making Planting Hole

Planting holes are made with a size of 30 x 30 x 30 cm and a spacing of 1 x 4 m; 2 x 2 m or 1.5 x 2.5 m. The size of the hole can also be made with 50 x 50 x 40 cm, with a space between 2 x 4 m or 3 x 4 m. Each hole is given 10 kg of manure.

2) Planting Method

Seeds are planted directly in the hole with 3-4 seeds per hole. A month later the seeds start to grow.

3) Miscellaneous

2.2.4. Plant Maintenance

After planted, salak palms need to be maintained properly and regularly to realize a productive orchard. This maintenance is carried out until the end of the salak palm production period.

1) Thinning and Overseeding

To obtain large fruit, when the stems start to get denser, thinning is necessary. Thinning is generally done in the 4th or 5th month. Overseeding is applied on young or newly planted plants, but die or have poor or stunted growth, or if there are too many female plants. For overseeding, extra seedlings (usually 10%) of the total are needed which has the same age with the other plants. The start of the rainy season is ideal for overseeding. The new plants are moved in a circular manner, which includes some of the soil covered the root area.

When digging out the plant, the base along with the soil is wrapped using plastic so the roots are protected from damage and it is carefully done.

2) Weeding

Weeding is removing and cleaning the weeds or other plants growing in salak palms area. If they are not eradicated, these weeds will snatch the nutrients and water intended for salak palms. The first weeding is done when the plants are 2 months old after the seeds are planted, the next weeding is done every 3 months until the plants reach a year. Weeding is enough once every 6 months or twice a year, done at the beginning and at the end of the rainy season.

3) Mounding

During weeding, soil is loosening and mounding to salak palms. This is to save the costs and for maintenance efficiency. The loosened soil is mounded to strengthen the roots and the bark of the salak palms. The mounding should not damage the surrounding trench.

4) Pruning

Old and unnecessary leaves should be trimmed including the leaves that are too thick or damaged by pests. Sprouts should be thinned, especially near the time when the plants bear fruit. With pruning, the clumps of salak palms are not too dense so the humid area due to poor air circulation can be improved.

Pruning also helps in spreading the food not only to the leaves or vegetative parts, but also to flowers, fruit or generative parts in a balanced way. Pruning is done every 2 months, but approaching the flowering or fruiting period, it is done once in a month.

If there are several tillers in the salak clumps, reduce the tillers before the plants bear fruit. One salak bunch needs only 1-2 tillers. The maximum number of tillers are 3-4. More than those numbers, the tillers will interfere with plant productivity. Pruning salak leaves should reach the base of the midrib. Do not cut

UNIVERSITAS MEDAN AREA or a part of the leaf since there is no use for the remaining parts.

Pruning in post-harvest period should still be done. Pruning should be done using a sharp machete or saw. Pruning carried out at the right time and manner will help plants grow well and optimally.

5) Fertilization

All substances given to plants with the aim of providing additional nutrients to improve plant growth and production are called fertilizers. There are fertilizers given through the root of the plant (root fertilizer) and sprayed through the leaves of the plant (foliar fertilizer). There are 2 types of fertilizers: Organic and inorganic fertilizers. Organic fertilizers are manure, green manure, compost, plant ash, blood meal and so on. Inorganic fertilizers are: Urea, TSP, KCl, ZA, NPK Hydrasil, Gandasil, Super Phosphate, Bay folan, Green Zit, and so on. Organic fertilizer generally used for salak palms is manure.

Plant age and fertilizer used:

- a) 0-12 months (1 x a month): 1000 manure, 5 grams urea, 5 grams TSP, 5 grams KCl.
- b) 12-24 months (1 x 2 months): 10 grams Urea, 10 grams TSP, 10 grams KCl.
- c) 24-36 months (1 x 3 months): 15 grams Urea, 15 grams TSP, 15 grams KCl.
- d) 36–and so on (1 x 6 months): 20 grams Urea, 20 grams TSP, 20 grams KCl.

6) Irrigation and Watering

Rainwater is a natural shower for plants. However, it is difficult to adjust rainwater as the plant's needs. Most of the rainwater will dissipate through evaporation, percolation and run-off. Only a small part of it remains in the root area. The remaining water is often insufficient for the plants. In salak cultivation, the need for water during growth period must be fulfilled. For that, water must be provided at the right time, amount, and manner.

7) Other Maintenances

After planted, bamboo or wood can support the plants from collapsing.

2.2.5 Pest and Disease

a. Pest

- 1) White Palm Aphid (*Cerataphis* sp.) that hides on the sidelines of the fruit.
- 2) Bud weevil (*Omotemnus* sp.).
- 3) Stem weevil.

They infect the tips of young leaves (the youngest), then dig into the stem. This does not only cause death for the plant, but also will grow many tillers. Controls: killed or by dripping and spraying a solution of insecticide (Diazenon) at 2 cc per liter dose on the tips of the infected leaves. In this case, the insecticide is dripped into the dug holes. Inserting a wire with a sharp end into the hole made by the insect to hit it can also be done to control the pests.

- 4) Wild boar, squirrel, mouse and mongoose

Controls:

- (1) To eradicate wild boars, special shooting can be done, or by fencing the salak orchard with dense male palms. Equipping the salak orchard fence with sharp wires is also effective;
- (2) To eradicate rats, use zinc phosphit, clerat, etc.
- (3) To eradicate Luwak and squirrels, banana can be used as a bait which mixed with Furadan 3 G. Method: cut the banana, approximately 0.5 grams of Furadan is mixed into the cut, then the banana is sewn and used as bait.

b. Disease

1) The disease that often attack salak palms is white fungus.

Signs: Rotting fruit. The quality of the fruit infected by this disease decreases since the skin looks unappetizing.

Control: reduce soil moisture by reducing the shade trees.

2) Black Spot

Cause: Pestalotia sp.

Signs: Black spots on salak leaves.

3) Rotting Red (pink)

Cause: Corticium salmonicolor.

Sign: Rotting fruit and stem.

Control: Infected leaves and plants must be cut and burned in separated places.

c. Weed

In several places on Java island, salak palms are planted on soil that used to be rice fields. So automatically, the weeds dominated the area are the ones commonly found in rice fields. Since rice fields generally covered with water are drained, the surviving weeds are narrow-leaved and creeping stem weeds which are very few to be found in rice fields. Weeds with thin upright stems and long leaves are less able to survive which makes few weeds can only be found. Manual control by digging using a hoe is sufficient. Chemical weed eradication for salak palms is not commonly implemented. For a small area of land, farmers still use

manual methods (pulling the grass by hand or digging them using a hoe). If the

salak area is large enough and has just been opened, more weeds are found and difficult to eradicate manually. For this situation, herbicides are needed since labor costs are relatively cheap and it is faster. The chemical reactions are also very fast.

Herbicides have a negative effect because the toxins can harm other living beings, including livestock and humans. The herbicide used needs to be suitable with the type of the weeds. Wrong choice will add the cost. The weeds from the grass family can be eradicated using Gramoxone, Gesapas, Basta or Diuron herbicides. Weeds from Cyperus family can be killed using Goal. Cogon grass can be eradicated by Round-up or Sun-up. The broadleaf plants can be handled using Fernimine and there are also herbicides that can eradicate more than one type of weeds.

2.2.6 Harvest

Salak with good quality is obtained when harvested at a good level of ripeness. Unripe salak fruit will not taste sweet and astringent. This makes harvesting done by selective picking so we should have knowledge in determining ripe and unripe salak.

a. The Harvest Age and Characteristics

Salak can be harvested after ripened on the tree, usually 6 months after the flowers bloom (anthesis). It is showed by its sparse scales, the blackish red or dark yellow skin, and clean spines. The tip of the fruit skin (the tapered part of the fruit) feels soft when pressed. According to other sources, the signs of the ripeness are: the clean color, easily separated from the fruit stalk when picked and has a unique salak scent.

b. Harvesting Method

Since salak do not ripen uniformly, selective picking method is used. Thing to be considered in harvesting is whether the salak will be stored for some time or be eaten immediately. If it will be stored for some time, the harvest is done when salak ripen (Javanese: gemadung) so it will not overripen on the tree. Overripe salak cannot last when stored for some time. Harvesting is done by cutting the stalk.

c. Harvest Period

There are 4 seasons of salak harvest:

- 1) Big harvest during November, December, and January.
- 2) Fair harvest during May, June and July.
- 3) Small harvest during February, March and April.
- 4) Rest period during August, September and October. If there are salak during these months, it is called a slandren. In other sources, salak big harvest is between October-January.

2.3. Farming

Agricultural science is a study on how a person manages and coordinates production factors such as land and the natural surroundings to provide the best possible benefits. As a science, agricultural science is a study on how farmers determine, organize, and coordinate the production factors as effective and efficient as possible so the business provides the maximum possible profits.

Mosher (1968) defines farming as the set of natural resources available on the site needed for agricultural production such as land and water,

improvements made to the land, sunlight, buildings, etc.

2.3.1 Land Area

Land area is the total area of salak orchard cultivated by the salak farmers. The size of an area affects the farmers' income. The wider the land, the greater the income is. According to Soekartawi (1990), the wider the land cultivated by farmers, the greater the production and the income are when handled properly. So the land area referred to is the area of the salak orchard cultivated by salak farmers.

According to Fhadoli Hernanto (1990), he classified land area into three groups:

- 1) Small sized land which is <0.5 ha
- 2) Medium sized land which is $0.5-2$ ha
- 3) Big sized land >2 ha

The land area referred in this study is the area of salak orchard cultivated by salak farmers.

2.3.1. Labor

Labor is anyone who is able to do work to produce goods or services to meet the needs of the community (Law no. 13 of 2003 concerning employment). In managing their farm land, farmers use labors to help their works. In managing the land, tenant farmers are not able to manage their own land so they need farm labors to lighten their work.

According to Hadi Prayitno and Lincolin (1987), labor consists of two elements: Quantity and quality. The required quantity can be fulfilled from

available family or outside the family while the quality that characterizes labor productivity depends on skills, physical condition, experience and training. The low productivity of labors is closely related to the quality of the human itself, low levels of education, malnutrition, and other limitations are the causes along with the farmers' income.

According to Subri (2003), labor is the demand for participation in producing goods, services or the population with age of 15-64 years. Labor is included in the workforce (people looking for work/unemployed and employed) and non-workforce (people who take care of households, attend school and earn income).

2.3.2. Production

According to Aigner (1985: 18), the philosophy and spirit of productivity have existed since human civilization since productivity is the human's will and effort to always improve the quality in all aspects. According to Basu Swasta and Ibnu Sukatjo (1998: 281), productivity is a concept that describes the relationship between the results (amount of goods and services produced) and the sources (labor, capital, raw materials, energy, etc.) to produce the products.

Sinungan (1985:8) stated that productivity can be interpreted as a comparison between the amount of expenditure divided by the number of income in a certain period. There are two important aspects in the concept of productivity which are efficiency and effectiveness. Efficiency is an ability to use resources to a minimum in order to achieve optimal results, while effectiveness is related to measuring success in achieving predetermined goals.

The concept of productivity can be viewed from two dimensions, the

individual dimension and the organizational dimension. The individual dimension views productivity in its relation to individual personality characteristics that appear in mental attitudes implying the desire and efforts of individuals who always try to improve their life quality while the organizational dimension views productivity within the framework of the technical relation between inputs and outputs. Therefore, increasing productivity is not only seen from quantity aspect, but also from quality aspect. So, productivity in general is defined as the efficiency of resource use to produce. Associated with the productivity of agricultural products, especially farm productivity and efforts to increase productivity are not only measured through farm land management, but there are other aspects affected them such as the business management of the farmers, institutional support, as well as farmers' psychological factors (Suhartoyo, 1987:35).

In agriculture, productivity is the ability of a production factor (such as land area) to obtain production results per unit area of land. Production and productivity are determined by many factors, such as soil fertility, varieties of seeds planted, the use of adequate fertilizers (both types and doses), availability of sufficient water, appropriate farming techniques, use of adequate agricultural tools, and availability of labor. Based on the statements, it can be concluded that productivity is the ability to process available resources to a minimum to obtain optimal results. In cultivation efforts, individual resources have a role in efforts to increase productivity and social factors also greatly influence the ability of farmers to cultivate land, business capital, age, education level, cosmopolitan level of farmers, and other aspects.

2.3.3. Farming Cost

According to Soekartawi et al (1986), the cost is the value of production facility uses, wages and others charged to the production process. Meanwhile, farming cost according to Rahim A and Hastuti DRD (2008), is a sacrifice made by producers (farmers, fishermen and ranchers) in managing their business in order to get maximum results. Farming cost generally is classified into two: Fixed cost and variable cost. Fixed costs are costs that are relatively fixed in number and continue to be issued even though the production obtained is large or small. So, the amount of this fixed cost does not depend on the size of the production. Meanwhile, variable costs are usually defined as costs that is affected by the production (Soekartawi, 2006).

Farming costs can be cash and calculated costs. Cash costs are costs that are paid in cash, such as the cost of purchasing production necessities, seeds purchase, fertilizers and medicines and the cost of labor. Calculated costs are used to calculate the actual working income of farmers, capital and the value of family work. Family workers are assessed on the basis of prevailing wages. The cost of depreciation of agricultural equipments and rent of owned land can be included in the calculated costs. Cost can also be interpreted as a decrease in farm inventory. The inventory value of an item can be reduced when the item is damaged, lost or depreciated.

Cost is a sacrifice of economic resources, measured in units of money that has happened, is happening or is likely to happen for a particular purpose. Cost is classified into:

- a) Fixed cost, a number of costs which changes in costs are not determined or affected by the company's operational activities. For example: rent, depreciation, interest expense, etc.
- b) Variable costs, a number of costs which changes in costs are determined or affected by the company's operational activities. For example: raw materials, fuel, wages, etc.
- c) Total costs, the sum of fixed costs and variable costs. Farming costs are divided into 3:
 - 1) The cost of external tools. All sacrifices given in farming to obtain gross income, except for interest on all assets used and costs for the entrepreneur's activities (entrepreneur's profit) and the wages of the family's workers.
 - 2) The operating cost, the cost of external equipment added with the wages of the family's own workers which is calculated based on the wages paid to external workers.
 - 3) The producing cost, the cost of operating added with interest on the assets used in farming.

2.4. Socio-economic Characteristics

Socio-economy according to Abdulsyani (1994) is the position or position of a person in a community determined by the type of economic activity, education level, income level, housing, and position in the organization.

According to Soerjono Soekanto (2001), socio-economy is a person's position in society in relation to other people in terms of the social environment, achievements, and rights and obligations to resources.

Bintaro (1977) and Fandi (2013) suggested that the notion of the community's socio-economic conditions is a joint effort in a community to overcome and reduce life difficulties, with parameters to measure the socio-economic conditions such as the level of education, health, land area owned, production of salak orchards, salak farmers' income, salak price, and other incomes and consumption.

Characteristics are identical with something whether it concerns humans or other materials. In this study, the researcher discussed the characteristics of farmers whose specialty is in salak commodity. Every farmer certainly has their own character and personality that tends to be different from one to another, and this is very affecting the farming activities.

Farmers also have families who always accompany them in their daily lives. Family affected every activity carried out, at home or at farm which were considered as a source of main income to fulfill the necessities of their families.

Farmers' characteristics are very varied and quite different from one farmer to another. The characteristics of these farmers were viewed from two aspects, the social characteristics and economic characteristics. Social characteristics include age, education, health, number of children, farming experience, salak cultivation techniques, farmer status, land ownership status, frequency of attending agricultural extension, ethnicity, membership in farmer groups, religion, market information, home ownership status, staying period in the research area. Economic characteristics include Salak Price, Revenue, Farming Income, Family Income, Consumption, Total household expenditure of farmers, Side business, and Total Farming Capital.

2.4.1. Social Characteristics

a. Age

Age is often becoming an obstacle for someone to carry out their duties or obligations. This also happens to farmers who always work their land sunny or rainy. Age usually affects health and indirectly affects work productivity. Moreover, the work requires a lot of energy and intensive attention to achieve the desired results.

b. Education

Education is all efforts mobilized in an integrated manner for the purpose to liberate the outer and inner aspects of humans (Ki Hadjar Dewantara).

The purpose of education is to train intelligence, strengthen willpower and refine emotions (Tan Malaka).

According to North Sumatra Central Bureau of Statistics in 2016, education can be interpreted as follows:

1. School is a learning activity in formal and non-formal schools starting in primary, secondary, and higher education, including the equalized education.
2. Those who do not or have never attended formal school. For example, have not finished kindergarten but do not continue to primary school.
3. In education is the people who are currently studying in primary, secondary, and higher education.

c. Health

According to the health law no. 39 of 2009, health is a state of health, both physically, mentally, spiritually and socially that enables everyone to live socially and economically productive lives.

c. Farmers' number of children

According to The National Population and Family Planning Board (2012), number of children in a family is the children who have been born based on gender, alive or showing signs of life such as breathing, having a heartbeat or pulsation of the umbilical cord or muscle movements. A small family is a family with a maximum number of 2 (two) children, while a large family is a family with more than two (>2) children. From this elaboration, the more the number of children in a family, the more effects it will give to the level of children's education. Families with many children can only afford a low level of education due to their economic condition that cannot afford to all children's education, in accordance with Ahmadi's opinion (2004). In general, families with many children are in a low socio-economic level. Parents who come from high and middle socio-economic levels tend to limit the number of their children to a relatively small number so they can afford their education to university. Based on this statement, the more the number of children in a family will affect the children's education level. Families with many children can only afford a low level of education due to their economic condition.

d. Farming Experience

Farming experience can affect the knowledge and skills of farmers since in a long period of farming, the agricultural insights they have can be seen.

e. Salak Cultivation Technique

Salak cultivation is an effort in a planned manner to maintain and cultivate salak plants to obtain beneficial results.

1. Soil Cultivation and Planting

Soil cultivation aims to create a suitable environment for plants to grow optimally and produce good quality produce.

2. Seeding and Planting

One of the factors to be considered in cultivating salak palms is the use of high quality seeds. Salak is an annual plant. Errors in seeds use will effect its exploitation. Although given a good technical culture treatment will not give the desired results, there will be loss in the farming. To prevent the problem, it is necessary to do a good method of salak seed nursery. Salak seeds can be taken from seeds (generative) or from saplings (vegetative). A generative method is a nursery using good seeds obtained from parent trees that have good characteristics, such as: fast-growing fruit, bountiful fruit throughout the year, fruit yields are plentiful and uniformly, good plant growth, resistant to pests and diseases and unfavorable environmental influences.

3. Maintenance

Maintenance in cultivation includes weed control, pruning, thinning, and controls of pests and disease.

4. Harvest

Physiologically, salak is a non-climacteric fruit which means the fruit does not have a peak (climax) in the ripening process. So, salak can only be harvested when ripened on the tree. The age of salak fruit from pollination to harvest is 4-6 months. The characteristics of the fruit when they are ready for harvest are the clean and shiny skin, more tenuous scales, soft when held and the skin is not coarse to touch, and the thorns on the surface of the fruit skin grow larger and give off a distinctive salak scent. Salak with good quality is obtained when harvested at a good level of ripeness. Unripe salak fruit will not taste sweet and astringent.

UNIVERSITAS MEDAN AREA harvesting done by selective picking so we should have knowledge in

determining ripe and unripe salak.

5. Harvest and Post-Harvest

Plants are able to flower throughout the year so the fruit can be harvested all year round. The frequency of harvesting is usually carried out in 14 days for 1 harvest, and big harvests occur with an interval of 10 days for 1 harvest. Salak harvest can be divided into three: Big harvest in January-April; Fair harvest in May-August; and small harvest in September-December.

Post-harvest also needs to be done since the purpose is to reduce damage and maintain the quality and the period of the fruit storage.

f. Farmer Status

Farmer status can affect their lives in society. Furthermore, it can also affect the activities they do, especially their farming business since a farmer who is married and having children can certainly lighten his workload. His family can help the farmer any time.

g. Land Ownership Status

Land ownership determines the status of land owned by a farmer since this affects the expenditure. This land ownership status can be categorized as owner, borrower, or tenant and these determine the production/operational costs.

h. Counseling Frequency

To farmers, counseling is an important aspect in the farming process. The farmers need to take part in counseling activities in order to improve their previous agricultural model. This also broaden the farmers' insights on agriculture.

i. Ethnicity

Ethnicity is one of the most important aspects to study the socio-economics of the community, especially the farmers. Since ethnicity is a system that exists in the society, passed down from generation to generation and becomes a custom or habit carried out both in farming and other social activities.

j. Farmer Group Membership

Farmer groups are a forum in solving any problems related to farming, especially for the members.

k. Religion

Religion is a system that regulates the system of faith (belief) and worship of God Almighty as well as the laws relating to the association of humans and their environments.

l. Market Information Access

Market information is an important aspect for farmers since it affects the post-harvest process in particular. The farmers also need to be aware of the current market developments.

m. Produce Selling Method

Method to sell the farmers' produce is also an important aspect for farmers, because this affects farmers' income of the agricultural products.

n. House Ownership Status

House ownership is a statement whether the house that a person resides in is their own or not. According to Kaare Svaltoga in Sumardi (2004), to measure a person's socio-economic level from his house, it can be seen from:

1). The status of the house resided, can be owned house, official residence, rent, relatives' or living with other people.

2). The physical condition of the building can be permanent, wood and bamboo.

Families with high socio-economic status generally reside in permanent houses, while families with lower socio-economic status reside in semi-permanent or non-permanent houses.

3). The size of the house, the bigger the house, generally the higher the socio-economic level.

n. Staying Period in Research Location

One of the social characteristics of salak farmers in the research area is how long the farmers have lived in the area. This can determine whether the farmers in the research area are immigrant farmers or farmers who have been hereditary in the area.

2.4.2. Economic Characteristics

a. Salak Price

Price is the amount of money charged for a product or service, or the amount of value that customers exchange for the benefits of having or using a product or service, (Kotler and Keller, 2009).

Price is the amount of money paid for goods and services or the amount that consumers exchange for the benefits of owning or using goods and services, (Kotler and Amstrong, 2004). The price depends solely on the company's policy and on various things. Low or high price of a product depends on the specifications and excellences of the product which is very relative.

b. Revenue

Gross farm income or farm revenue as the total production value of farming within a certain period of time, whether sold or not sold. To estimate the commodity or product that is not sold, the value based on the market price is used

by multiplying the production by the market price (Soekartawi et al 1986).

Revenue is gross income received by farmers from their farms that have not been calculated along with costs and expenses. Gross income is all income earned from all branches and sources in the farming business for a year, which can be calculated from the results of sales, exchanges or reassessments. While the net income (net return) of farming can be calculated by reducing the gross income with the cost of farming. Farming Revenue, which is the result of multiplication between production and the selling price of production (Gross Income).

Revenue Formula : $P \times H.P$

Where : P = Production
HP = Production Price

c. Farming Income

Income is remuneration of production factors use. According to Soekartawi (2006), farm income is the value between revenue and all costs. The income function fulfills daily needs and further farming activities. Soekartawi et al (1986) explained that the difference between farm cash revenue and farm cash expenditures is called farm net cash flow and is a measure of the farm's ability in obtaining cash. The income on cash is earned on costs incurred by farmers while income on total costs is from the deducting cash costs and calculated costs. Farming income can be formulated as follows:

$$Pd = TR - TC$$

$$TR = Y \times Py$$

$$TC = FC + VC$$

Where:

Pd = Farming income

TR = Total revenue

TC = Total cost

FC = Fixed cost

VC = Variable cost

Y = Farming produce

Py = Y price

Factors affecting farm income are divided into two, internal and external factors. Internal factors affecting farming income are land fertility, land area, labor availability, capital in farming, use of modern inputs/technology, cropping patterns, crop location, land fragmentation, land tenure status, output marketing methods, efficiency of inputs use and farmers' knowledge and skills as well as the labors. Meanwhile, the external factors affecting farming income are transportation facilities, trading system, new technology inventions, irrigation facilities, output and input price levels, availability of credit institutions, community customs and government policies.

d. Family Income

According to Mulyanto Sumardi (1982), income is the result obtained by a household which is the total amount of formal income, informal income, and subsistence income. Formal income is an income obtained through additional or side jobs, while subsistence income is an income obtained from production factors

which are valued in money.

According to (Soekartawi, 1996), income is a more permanent picture of the socio-economic conditions of a family in society. Income is a very important aspect in life. Big or small income will affect the level of prosperity of a population, especially in fulfilling the basic needs of a family, in accordance with the opinion of (Emil Salim, 1994) that low income will make it difficult to fulfill basic needs, such as clothing, food, shelter, housing, health and education.

e. Farmer Food and Non-Food Cost

The total expenditure of farmer households can be known by calculating food and non-food costs (Arida, et al, 2015). This study calculated the total expenditure of salak farmers' households by adding up all costs, both food and non-food in a month. The following formula is used:

$$TP = Pp + Pn$$

Where:

TP : Salak Farmer Household Total Expenditure (Rp/month)

Pp : Food Cost (Rp/month)

Pn : Non-Food Cost (Rp/month)

1. Food Cost

According to Central Bureau of Statistics (2017), household food cost of salak farmers are grouped into 14, grains, tubers, fish/shrimp/squid/shellfish, meat, eggs and milk, vegetables, nuts, fruits, oil and vegetables, coconut, beverage

ingredients, spices, other consumption, prepared food and beverages, as well as tobacco and betel.

2. Non-Food Cost

According to Central Bureau of Statistics (2017), non-food cost of salak farmers are grouped into housing and household facilities; various finished goods and services; clothing, footwear, and headgear; durable goods; taxes, levies, and insurance; as well as the needs for party, ceremonies or festivals.

f. Side Business

In addition to main business which is farming, farmers also have various side businesses to get additional income for their daily needs.

g. Farming Capital

Farming capital issued to each salak farmer is certainly different from one farmer to another since it depends on the type of salak and the land area owned by each farmer.

2.5. Previous Researches

A research conducted by Agus Putra Vianus Waruwu (2019) entitled Socio-Economic Condition of Rubber Farmers in Duria Village, West Nias District. This study aimed to determine the socio-economic conditions of rubber farmers in Duria Village, Lolofitu Moi District, West Nias Regency. The sample of this study were rubber farmers in Duria Village, Lolofitu Moi District, West Nias Regency. The results showed that the socio-economic conditions of rubber farmers were due to the decline in rubber prices in Duria Village, Lolofitu Moi District, West Nias Regency. The average education of the farmers' children was

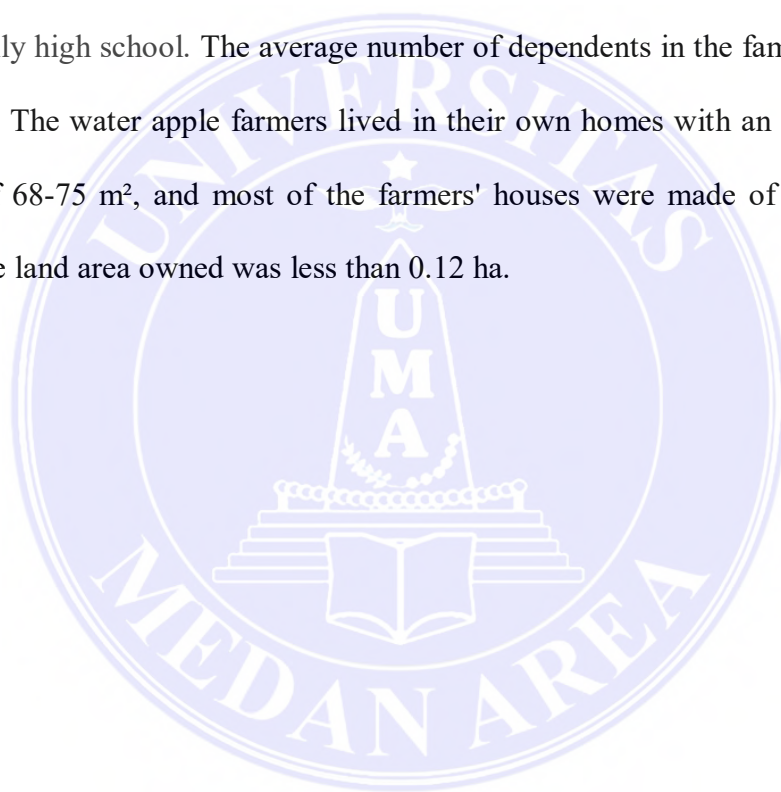
high school graduate, in good health condition, had own houses with zinc roofing, concrete and plate/concrete floor. Rubber farmers have an average of 3-5 people per house with an average consumption of Rp. 1.003,650, the average land area of rubber farmers was 1,785 with a production level of 140.3 kg and a selling price of Rp. 6,000/kg. In general, the income in rubber farming was low (could not fulfill basic needs). However, rubber farmers had other income besides the rubber. In addition to rubber plantations, farmers owned an average of 0.665 ha of land which was used in raising livestock and cassava leaves as animal feed. Rubber farmers in Duria Village saved their money in cooperatives.

A Research conducted by Deni Alfarizi (2017) entitled Socio-Economic Characteristics of Vegetable Farmers in Raman Aji Village, East Lampung. This study aimed to determine the socio-economic characteristics of vegetable farmers in Raman Aji Village. The results showed 97.46% of the respondents had narrow land areas. The respondents spent an average production cost of Rp.2,347,864 per season. 84.75% of respondents sold produce through distributors. 81.36% of respondents had income below the average. 86.4% of the respondents' children had low level of educations. The location to plant the vegetables was near water sources such as irrigation, rivers or swamps.

A research conducted by Desi Novianti (2016) entitled Description of the Socio-Economic Condition of Tenant Farmer Families in Rawi Village, Penengahan District, South Lampung Regency. The results of this study indicated that the land of the tenants was included in the medium category with an area of 0.50-0.99 Ha (47.82%). Farmers' farming capital was their own. Most of the workforce were from outside family members. The income from their side jobs was below the average of Rp. 1,567,391 per month. The education of the tenants'

families were classified as basic education of 59 people or 78.66%. Most families had large number of dependents while their ownerships on valuables were relatively low.

A research was conducted by Rafles Martua Hot Rambe (2019) with a title: The Socio-economic Conditions of Deli Hijau Water Apple farmers in Teluk Village, Secanggang District, Langkat Regency. The results of this study indicated that the characteristics of Deli Hijau water apple farmers' educations were generally high school. The average number of dependents in the family was 3 to 4 people. The water apple farmers lived in their own homes with an average house area of 68-75 m², and most of the farmers' houses were made of concrete. The average land area owned was less than 0.12 ha.



CHAPTER III

RESEARCH METHOD

3.1 Location and Time of Study

The research location was determined purposively in Parsalakan Village, West Angkola District, South Tapanuli Regency, with a consideration that this area is the largest salak producing area in South Tapanuli according to data obtained by the writer from South Tapanuli Central Bureau of Statistics. This research was carried out from September 2020 until it was finished.

3.2 Sampling Method

3.2.1 Population

According to Zulkarnain (2010), population is the entirety of individuals who are the object of data collection. The population in this study is the salak farming community in Parsalakan Village, West Angkola District, South Tapanuli Regency.

3.2.2 Samples

The sampling method used in this study was the stratified random sampling method and the sample is in Parsalakan Village, West Angkola District, South Tapanuli Regency with total population of 560 farmers.

Based on the Pre-survey in Parsalakan Village, precisely to the village head of Parsalakan Village, the total population in Parsalakan Village was 560. Land area of <0.5 ha were owned by 250 farmers, land areas of 0.5–2 ha were owned by 180 farmers and land area of < 2 ha were owned by 130 farmers. The sampling method in this study used the stratified random sampling method since

the special characteristics of this method are in align with the research objectives which makes it possible to answer the problems in this study. The majority of salak farmers in Parsalakan village owned a land area of 0.5-2 Ha so for this reason, the researcher limited the respondents' criteria with having a land area of <0.5 ha (small sized land), 0.5 - 2 ha (medium sized land), > 2.0 (big sized land). (Fhadoli Hernanto, 1990).

The population in this study was 560 salak farmers in Parsalakan Village, West Angkola District. The number of samples was determined using the Slovin formula (Umar, 2000). The formula is as the following:

Where :

$$n = \frac{N}{1 + N(e)^2}$$

n = Number of Sample

N = Total Population

e = Tolerance Level (20%)

$$n = \frac{560}{1 + 560 (0.20)^2} + \frac{560}{22.4} = 25$$

n = 25 Respondents

N_0	Land Area (Ha)	Sample Population	Sample
1	<0.5 ha	250	$250 : 560 \times 25 = 11$
2	0.5 - 2 ha	180	$180 : 560 \times 25 = 8$
3	>2 ha	130	$130 : 560 \times 25 = 6$
Total		560	25

Table 4 . Sampling Using Proportional Stratified Method

250 owned <0.5 ha of land, 180 farmers owned 0.5-2 ha of land and 130 farmers owned <2 ha of land. Therefore, the number of population taken was 25 farmers.

3.3 Data Collection Method

In every research, there is always a data collection, according to (Esterberg 2002). The primary data collection in this research was the interview method, where two people exchanged information and ideas through question and answer, so a meaning can be constructed in a particular topic. As for the method of interview, the writer used semi-structured interview. Sugiyono (2012), semi-structured interview is an interview that belongs to in-dept interview category where the implementation is more free than structured interviews. The purpose of this type of interview is to find problems more openly where the parties invited are asked for their opinions and ideas. In conducting this interview, the researcher needs to listen carefully and take notes on what the informants have to say.

Lofland in Moleong (2006: 157), secondary data is data needed in research to complete the information obtained from primary data. Secondary data can be a literature studie derived from books, field research, and documents related to the

research. Various documents are produced through research objects used to support primary data and strengthen the data in conducting the research. Secondary data were obtained from South Tapanuli Central Bureau of Statistics, North Sumatra Agricultural Service and other related agencies to this research, as well as the literatures that supported this research.

Based on the description, the data collection methods used in this research were observation, interviews, questionnaires, and literature reviews that completed the supporting data.

3.4 Variable Operational Definition

1. Farming, Farming science is a science that studies how a person cultivates and coordinates production factors in of land and the natural surroundings to provide the best possible benefits.
2. Land Area is salak area cultivated by salak farmers in Ha and possessed a status of self-ownership.

Fhadoli Hernanto (1990) groups land area into three:

- 1) Small sized: <0,5 ha
 - 2) Medium sized: 0.5-2 ha
 - 3) Big sized: >2 ha
3. Labor is anyone who is able to do work to produce goods or services to meet the needs of the community (Law no. 13 of 2003 concerning employment).
 4. Productivity according to Basu Swasta and Ibnu Sukatjo (1998: 281) is a concept that describes the relation between results (amount of goods and services produced) and sources (labor, capital, raw materials, energy, etc.) to

produce the goods.

5. Farming Costs according to Rahim A and Hastuti DRD (2008) are expenses made by producers (farmers, fishermen and ranchers) in managing their businesses in order to get maximum results. Generally it is divided into two, fixed cost and variable cost. Fixed costs are costs that are relatively fixed in number and continue to be issued even though the production obtained is large or small therefore, the amount of fixed cost does not depend on the production. Meanwhile, variable costs are generally defined as costs whose amount is affected by the production obtained (Soekartawi, 2006).
6. Characteristics are the characteristics of farmers' lives who are in this study, the salak farmers.
7. Socio-Economic is a joint effort in a society to overcome and reduce life difficulties. The parameters that can be used to measure socio-economic conditions are Farmer Age, Education, Health, Number of Children, Experience, Salak Cultivation Techniques, Farmer Status, Land Ownership Status, Counseling Frequency, Ethnicity, Farmer Groups Membership, Religion, Market Information, Produce Selling Method, House Ownership Status, Staying Period in the Research Area, Salak Price, Revenue, Farming Group Income, Family Income, Food and Non-Food Costs, Side Business, and Farming Capital.
8. Education Level is the educations that have been taken by salak farmers through (formal) education such as not completing elementary school, elementary graduates, middle school graduates, high school graduates, and undergraduate.
9. Health is a physical condition which is free from all diseases. Health can be

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- a. The most severe illness.
 - b. Common illness.
 - c. Last medical problem.
 - d. Monthly medical check-up.
10. Number of children is the total number of farmers' children.
11. Cultivation is an effort that is structured in a planned manner to maintain and breed plants or animals to remain sustainable and obtain benefits for human's needs.
12. Farmer status is whether a farmer has married or not.
13. Land Ownership is the farmers' land ownership. This can be categorized into owner, borrower, or tenant.
14. Counseling Frequency is farmers' activities in agricultural counseling participation.
15. Ethnicity is the farmers' customs or traditions.
16. Farmer groups membership is the farmers' activeness in every activity held in farmer groups.
17. Religion is the farmers' beliefs.
18. Market information is how farmers obtain the selling price of production.
19. Produce Marketing Method is a technique in marketing the produce.
20. House Ownership Status is the status of farmers' houses. The ownership status can be measured into:

- a. Own House
- b. Parents' House
- c. Rent

21. Stay Period in Research Location is a measure of time in years the farmers have lived in the area.

22. Salak Price is the price of salak given by buyers or collectors to salak farmers in rupiah per kilogram.

23. Revenue is the amount of money received by farmers for selling their produce.

24. Farming income according to Soekartawi (2006) is the difference between revenue and all costs. The income fulfills daily needs and next farming activities.

25. Family income according to Mulyanto Sumardi (1982) is the result obtained by a household which is the total amount of formal income, informal income, and subsistence income.

26. Food and Non-Food Costs according to Central Bureau of Statistics (2017), household food cost of salak farmers are grouped into 14, grains, tubers, fish/shrimp/squid/shellfish, meat, eggs and milk, vegetables, nuts, fruits, oil and vegetables, coconut, beverage ingredients, spices, other consumption, prepared food and beverages, as well as tobacco and betel. Non-food cost of salak farmers are grouped into housing and household facilities; various finished goods and services; clothing, footwear, and headgear; durable goods; taxes, levies, and insurance; as well as the needs for party, ceremonies or festivals.

27. Side business is other businesses other than farming started by farmers.

28. Farming capital is the money (rupiah) needed in farming.

