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FARMERS' PERCEPTIONS OF SMALLHOLDER OIL PALM REPLANTING IN SIMPANG KANAN DISTRICT, ACEH SINGKIL REGENCY (Case Study of Oil Palm Farmer In Lipat Kajang Village)

Ridani[1], Setia Budi[2], Irada Sinta[3]

[1,2,3] Department of Agribusiness, Faculty of Agriculture, Malikussaleh University, North Aceh

E-mail: [1)]ridani.180320082@mhs.unimal.ac.id [2)]Setiabudi@unimal.ac.id [3)] irada@unimal.ac.id

Abstract

Lipat Kajang Village is one of 25 villages in Simpang Kanan District, Aceh Singkil Regency which is the research location. This study aims to analyze farmer perceptions and analyze the relationship between farmer characteristics and farmer perceptions of oil palm rejuvenation in Simpang Kanan District, Aceh Singkil District. Farmers' perception of the source of capital/access to production facilities shows 43% that production facilities are not easy to access, the costs incurred for rejuvenating oil palm are very high showing 95% and technical rejuvenation of oil palm using the method of falling simultaneously is easy to do showing 64%. Furthermore, the relationship between farmer characteristics and farmers' perceptions of oil palm rejuvenation in Simpang Kanan District, Aceh Singkil Regency has a very strong relationship by obtaining a correlation coefficient of 0.008.

Keywords : farmer's perception, relationship between farmer characteristics, oil palm rejuvenation

1. PRELIMINARY

The role of the agricultural sector in Indonesia's development is very important, because agricultural development is directed at increasing agricultural production to meet food needs and industrial needs in the country, increasing exports, increasing farmers' incomes, expanding employment opportunities and encouraging business opportunities.

The agricultural sector is divided into several subsectors such as the food crop subsector, plantation subsector, forestry subsector, fisheries subsector, and livestock subsector. One of the agricultural subsectors that is growing rapidly today and has considerable potential is the plantation subsector. Plantations are one of the agricultural subsectors that support national development in order to improve the nation's economy. The plantation subsector has the potential to be developed to improve economic development.

One of the mainstay commodities of plantations that has enormous potential to be developed is oil palm. Oil palm (elaeis guineensis) is a commercially cultivated plant. Oil palm has

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an important significance for the development of national plantations. In addition to being able to create job opportunities that lead to community welfare, it is also a source of state foreign exchange earnings (Fauzi, 2017).

The rapid growth of palm oil plantation area in Indonesia is strongly influenced by the increasing demand for palm oil from various countries, the increase is due to the increasing number of products produced from palm oil, such as soap, margarine, beauty products, and biodiesel fuel.

Aceh Province is a tropical region that is very good for planting agricultural crops, especially in oil palm plants (Elaeis guineensis Jacq). The oil palm plant (Elaeis guineensis Jacq) is a plantation commodity that receives great attention both on large plantations and smallholder oil palm plantations.

2. LITERATURE REVIEW

Rejuvenation is an effort to develop plantations by replacing old/unproductive plants with new plants, both as a whole and gradually. Oil Palm Plantation is any activity of managing natural resources, human resources, means of production, tools and machines, cultivation, harvesting, processing and marketing related to oil palm plantation crops.

In Saputri's opinion (2018), replanting is a process of rejuvenating oil palm plantations, namely by replacing oil palm plants that are 20-25 years old with new oil palm plants because oil palm plants that are 20-25 years old are no longer productive, the yield decreases every month.

Regulation of the Ministry of Agriculture of the Republic of Indonesia number 18 / Permentan / KB.330 / 5/2016 concerning guidelines for replanting oil palm that in order to achieve more efficient and sustainable oil palm plantation business development, one of the efforts is carried out through the rejuvenation of less productive, old and / damaged crops (Permentan, 2016). There are generally four types of oil palm plant replanting systems, namely the unison fall system, the underplanting system, the gradual rejuvenation system, and the intercropping system.

3. RESEARCH METHOD

This research was conducted in Simpang Kanan District, Aceh Singkil Regency, precisely in the village of Lipat Kajang. Location determination is carried out intentionally (Purposive Sampling). The reason for choosing the location is because Lipat Kajang Village has decreased production and is the lowest productivity, due to the unproductive oil palm crop. The object of this study is oil palm farmers in Lipat Kajang Village. The scope of this study is the Perception of Farmers and the Relationship of Farmer Characteristics to Oil Palm Replanting in Simpang Kanan District, Aceh Singkil Regency.

The population in this study was oil palm farmers in Lipat Kajang Village, which numbered 43 people. The sample in this study was 43 farmers who were taken by census or sampling technique by taking a total of 43 farmers in Lipat Kajang Village.

The data collected in this study includes primary data and secondary data. Primary data, namely data obtained from information provided by farmers as respondents using a list of questions

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(questionnaires) that have been prepared previously. Secondary data, namely data obtained from reading books, articles and government agencies or agencies related to research needs.

The methods used in this study are descriptive qualitative and quantitative methods, and use a likert scale. The likert scale is a scale used to measure the perception, or opinion of a person or group of people regarding a social phenomenon or phenomenon using the weight of the score for each indicator (Sugiono, 2014). To facilitate data analysis use the following scores.

Table 1. Skala likert

Answer **(1)**	**Score** **(2)**	**Score description** **(3)**
A	1	Strongly disagree
B	2	Disagree
C	3	Agree
D	4	Strongly agree

Sumber : Sugiyono, 2014

Then using the spearman correlation test analysis to see the relationship between farmer characteristics and farmers' perceptions of oil palm replanting in Simpang Kanan District, Aceh Singkil Regency.

The Spearman correlation test aims to test the relationship between two variables that can be seen from significant values, using this spearmen correlation test to determine the relationship between farmer characteristics and farmers' perceptions in the implementation of oil palm rejuvenation.

According to (Sujarweni, V.W 2015) the decision criteria of the spearmen correlation test are:

if Sig > 0.05 then Ho is accepted meaning there is no relationship.
If Sig< 0.05 then Ho is rejected meaning there is a relationship.

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Furthermore, the results of the analysis will be ranked to determine the Relationship between Farmer Characteristics and Farmers' Perceptions of Oil Palm Replanting in Simpang Kanan District, Aceh Singkil Regency.

4. RESULTS AND DISCUSSION

Characteristics of farmers

Age of Farmers

Table 2. Distribution of Oil Palm Farmers by Age

	Age (Year)	Sum (People)	Percentage (%)
1	20-54 Year	38	88,38
2	55-65 Year	5	11,62
	Sum	**43**	**100**

Source : Primary Data (Processed) 2022

From table 2 it can be seen that the age of farmers is at the majority of the productive age. Age can affect a farmer's physical abilities and way of thinking. Younger farmers are usually more aggressive and more dynamic in their efforts when compared to older farmers, they tend to make changes in farming to increase the production and yield of their farming business (Suryani, 2019).

Level of education

Table 3. Distribution of Oil Palm Farmers by Education Level

No	Education level	Sum (People)	Percentage (%)
1	SD	5	11,63
2	SMP	11	25,58
3	SMA	25	58,14
4	S1	2	4,65

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Sum	**43**	**100**

Source : Primary Data (Processed) 2022

From table 3 shows that the percentage of the level of education of farmers is almost evenly distributed. The majority of the highest education is dominated by high schools with a percentage of 58.14%. Education will affect farmers' perceptions in replanting oil palm, because farmers' education and knowledge will help farmers to think more openly and thoughtfully, because farmers with a fairly high level of education are easier to receive new information and have broader insights so as to assist them in increasing production. The higher the level of education, the farmer will make decisions that will benefit him, if the crops that are no longer productive continue to be maintained, the production output that has decreased, the income will decrease, but if replanting is carried out, it will increase his income.

Farmer Experience

Table 4. Distribution of Oil Palm Farmers Based on Experience

No	Farmer Experience	Sum (People)	Percentage(%)
1	4-10	13	30,23
2	11-20	13	30,23
3	21-30	14	32,56
4	31-40	3	6,98
	Sum	**43**	**100**

Source : Primary Data (Processed) 2022

From table 4, it can be seen that farmers who have the highest level of experience are dominated by 21-30 years with a percentage of 32.56%. The interview results show that farmers who already have more than 20 years of experience in oil palm farming, they have been taught and know how to rejuvenate their crops. So they have good planning to rejuvenate their crops in order to maintain the sustainability of their farming business.

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Land Area

Table 5. Distribution of Oil Palm Farmers by Land Area

	Land Area(Ha)	Sum (People)	Percentage (%)
1	1- 2	16	37,21
2	3- 4	19	44,19
3	5- 6	6	13,95
4	7- 8	2	4,65
	Sum	**43**	**100**

Source : Primary Data (Processed) 2022

From table 5, it can be seen that farmers who have the highest land area are 3-4 ha with a percentage of 44.19%. Land area can affect farmers' perceptions in carrying out oil palm replanting, because the larger the area of land owned by farmers, the higher the costs that will be incurred by farmers to replant oil palm. The area of land owned by farmers in the research location is a large area of land, because the average land area is 4 ha.

Income

Table 6. Distribution of Oil Palm Farmers by Income

No	Income (Rp/Moon)	Sum (People)	Percentage (%)
1	1.500.000 - 3.000.000	-	-
2	3.000.000 - 5.000.000	23	53,49
3	≥5.000.000	20	46,51
	Sum	**43**	**100**

Source : Primary Data (Processed) 2022

From table 6, it can be seen that the most farmers have an income of 3,000,000-5,000,000 with a percentage of 53.49%. Farmers' income is one of the most important factors and affects farmers' perceptions, because the more yields farmers get, the greater the desire for farmers

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to replant oil palm. Meanwhile, farmers who have small incomes, they are less willing to carry out rejuvenation, because the results they get are only enough to meet the living needs of their families.

Sources of Capital

The source of funds for oil palm farmers in the research area uses their own capital. Farmers' perceptions of oil palm replanting activities are very good, but oil palm replanting is often delayed in its implementation due to various problems experienced by farmers. By and large, farmers are faced with capital problems. According to a statement from farmers as respondents, farmers do not prepare funds for rejuvenation, Because the cost of replanting oil palm is very high, it costs around 60-70 million per hectare, so most farmers have not yet replanted oil palm. In addition, farmers are also afraid of losing income during the oil palm replanting period.

Production Facilities

Table 7. Percentage of Value from Access to Production Facilities in Kajang Folding Village

Production Facilities	Percentage (%)	Category
Access to production facilities is easy to access	43	Not Easy
Sum	**43**	**Not Easy**

Source : Primary Data (Processed) 2022

From the table above, it can be seen that farmers' perceptions of access to production facilities do not agree, because according to information from farmers as respondents that production facilities are not easy to obtain, especially certified oil palm seeds because the number is very limited, even if they are sufficiently available and easy to obtain, the price is relatively high. At this time, the price of certified seeds is in the range of 35000-40000 / seedling and the price of uncertified seeds is 15000-20000 / seedling.

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Farmers also admit that obtaining fertilizer is difficult to obtain because the price is very high and the quantity is limited, while farmers really need fertilizer to increase their oil palm crop production. In addition, access to obtain fertilizer is very far, from Medan to Aceh Singkil must travel up to 8 hours. The types of fertilizers used for oil palm rejuvenation are urea fertilizer, KCL fertilizer, NPK fertilizer, Fospor (Phospat) fertilizer and others. The ability of farmers to obtain oil palm fertilizer is very difficult for farmers.

Farmers also admit that obtaining pesticides is difficult to obtain because the price is quite high and the quantity is also limited. Meanwhile, many farmers in Lipat Kajang Village need pesticides for their oil palm crops but are constrained because their availability is limited. The types of pesticides used are Paraquat, Glyphosate and others. The ability of farmers to obtain pesticides for oil palm crops is very difficult for farmers.

Costs incurred for replanting oil palm

Table 8. Percentage of Costs Incurred for Oil Palm Replanting

No	Costs incurred for replanting oil palm	Percentage (%)	Category
1	The costs incurred for replanting oil palm are very tall	95	Strongly agree
	Sum	**95**	**Stronglyagree**

Source : Primary Data (Processed) 2022

According to farmers as respondents in this study, the cost of replanting oil palm is very high, especially to buy subsidized seeds and fertilizers. At this time, the funds of Rp. 25-30 million per hectare are not enough, only enough for financing in the initial year. Oil palm replanting can currently cost around Rp. 60-70 million per hectare, but can be reduced to Rp. 55 million per hectare by utilizing some work that can be done by farmers themselves and the use of family labor such as fertilization and breeding to reduce labor expenditures. However, the cost of

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55 million rupiah is also still very high, so most farmers have not been able to rejuvenate their crops.

Table 9. Details of Oil Palm Replanting Costs

No	Types of rejuvenation activities	Cost (Rp)
1	Weighing and Enumeration	4.000.000- 5.000.000
2	Land clearing	2.000.000- 3.000.000
3	Pesticide spraying	4.000.000- 5.000.000
4	Planting pit making	3.000.000- 5.000.000
5	Oil palm seedlings	6.000.000- 7.000.000
6	Fertilizer	7.000.000- 8.000.000
7	Pesticides	3.000.000- 4.000.000
8	Fertilization	2.000.000- 3.000.000
9	Nursery	2.000.000- 3.000.000
10	Planting intermittent crops	500.000- 1.000.000
11	Tillage	2.000.000- 3.000.000
12	Weed control	12,000.000- 15.000.000

Source : Primary Data (Processed) 2022

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Technical Replanting of Oil Palm

Table 10. Technical Percentage of Oil Palm Replanting used by Farmers in Lipat Kajang Village.

Technical Replanting of Oil Palm	Percentage %	Category
Technical replanting of oil palm	64	Agree
Easy Unison Falling Method		
Done		
Average	**64**	**Agree**

Source : Primary Data (Processed) 2022

Based on the results of research that in Kajang Folding Village, the whole community chooses and uses a rejuvenating method or method with a system of falling in unison. The table above shows that farmers' perceptions of the technicalities of oil palm replanting are good because the selection of a unison fallen system is intended so that soil management can be carried out optimally, pest disturbance of plant diseases can be minimized, such as horn beetle pests (Oryctes rhinoceros) and Ganoderma boninense disease and provide ideal soil conditions for the growth of oil palm plants.

Based on the information from farmers as respondents that the unison fallen rejuvenation system is easy to do because farmers already have the experience to do it, and the tools used can also use manuals such as banging and chopping can use axes or chainsaws, spraying weeds can use a spraying machine, then planting intermittent crops such as legume plants is very easy for farmers to obtain, Then making planting holes can use a hoe and planting seedlings is also easy to do, because the seedlings used for seedlings that are ready for planting are 10-12 months old.

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The Relationship of Farmer Characteristics to Farmer Perceptions

Table 11. Spearman Correlation Analysis Results

Correlations

			Characteristic	Perception
Spearman's rho	Characteristic	Correlation Coefficient	1.000	402**
		Sig. (2-tailed)		008
		N	43	43
	Perception	Correlation Coefficient	402**	1.000
		Sig. (2-tailed)	008	
		N	43	43

Source : SPSS 25 Output Results Processed, 2022

Based on the output above, the correlation coefficient value obtained a value of 0.008. Therefore, it can be concluded that the relationship between the characteristics of farmers and the perceptions of farmers in the implementation of oil palm replanting is stated to be a very strong relationship. From the explanation above, both seen from the significant value and correlation coefficient, it turns out that it has a close relationship between the characteristics of farmers and the perceptions of farmers in the implementation of oil palm replanting.

5. CONCLUSIONS AND SUGGESTIONS

Conclusions

1. Farmers' perceptions of oil palm replanting are 1) farmers perceive that the cost of replanting oil palm is very high, 2) the technicality of oil palm replanting is easy to do 3) the source of capital / access to production facilities is not easy to access. All farmers in Lipat Kajang Village use the system of falling in unison.
2. There is a very strong relationship between the characteristics of farmers and farmers' perceptions of oil palm replanting, from the correlation coefficient value obtained a value of 0.008.

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Suggestions

1. To the government

   To be able to help better capital and production facilities, especially providing certified oil palm seeds to farmers to carry out oil palm replanting.

2. To farmers

   So that farmers can replant oil palm on crops that are no longer productive and apply gradual rejuvenation methods to minimize the costs that will be incurred for rejuvenation.

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