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# FARMERS' PERCEPTION OF FACTORS RELATED TO SALON AGRIBUSINESS IN THE FOOD ESTATE AREA IN HUMBANG HASUNDUTAN REGENCY

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## ABSTRACT

The food estate program is a government program made for Humbahas farmers as a food barn where one of their commodities is shallots. Shallot marketing is difficult due to the incomplete involvement of cooperation between stakeholders. The purpose of this study is to analyze farmers' perceptions of internal and external factors related to shallot agribusiness in the food estate area in Humbang Hasundutan Regency. The method of analysis of this research is descriptive quantitative analysis using a Likert scale measurement, using a questionnaire (questionnaire) on the components of internal and external indicators. The results showed that the level of farmers' perceptions of factors was relatively high. With an average score for internal factors of 3.18 and an average score for external factors of 2.70. Internal factors that have the highest influence on shallot farmers are land clearing capital from the government, production inputs supplied by investors and cross-road infrastructure that has been built. While the external factors that have the highest influence are the greater employment opportunities for farmers and the food estate agricultural technology used. Meanwhile, the factors that need attention are the price of shallots, the percentage of the profit sharing system, marketing of shallots and cooperation agreement contracts. While the external factors that have the highest influence are the greater employment opportunities for farmers and the food estate agricultural technology used. Meanwhile, the factors that need attention are the price of shallots, the percentage of the profit sharing system, marketing of shallots and cooperation agreement contracts. While the external factors that have the highest influence are the greater employment opportunities for farmers and the food estate agricultural technology used. Meanwhile, the factors that need attention are the price of shallots, the percentage of the profit sharing system, marketing of shallots and cooperation agreement contracts.

Keywords: ***Food Estate, Perception***

## 1. INTRODUCTION

Shallots are a type of tuber vegetable that is much favored by the people of Indonesia. In almost every typical Indonesian food, you can find processed foods with added shallots in it. Apart from being used as a mixture of cooking spices, shallots are also sold in processed forms such as shallot extract, powder, essential oil, fried onions and even as a medicinal ingredient to lower cholesterol and blood sugar levels, prevent blood clots, lower blood pressure and improve blood flow. As a horticultural commodity that is consumed by many people (Suriani, 2012). Based on these benefits, the potential for red onion development is highly expected, especially in North Sumatra as one of the provinces that supply this plant. The North Sumatra provincial government through the North Sumatra Food Crops Service (TPH) said shallot production in 2021 has reached 60% of North Sumatra's total yearly shallot demand. However, the Food Crops and Horticulture Service of North Sumatra is encouraging production to continue to be increased given the growing need for shallots. With the development of shallots in the Humbang Hasundutan Regency food estate, it is hoped that it will be able to meet the demand for shallots, especially in North Sumatra. The focus of developing a North Sumatra food estate is upland horticultural commodities, so in

2020 an area of 225 hectares has been developed, consisting of 215 hectares in one stretch in Ria-Ria Village, Pollung District, Humbahas Regency, where the largest area for the development of shallots is 105 hectares. , 55 hectares of garlic and 55 hectares of potatoes (Report of Commission IV DPR RI, 2021).

The data above shows that shallots are one of the commodities with the most extensive planting area, namely 105 hectares, meaning that the government wants the development of shallots in the food estate area to meet the needs in North Sumatra and Indonesia. However, according to Luhut in Kompas (2021), the yield of shallots is only 5.8 tons per hectare. The shallot yield is not optimal because it has not exceeded the average national shallot productivity in 2019 of 9.93 tons/ha which was obtained from the publication of the Central Bureau of Statistics and the Directorate General of Horticulture. The lack of optimal yields is motivated by several things, one of which is the perception factor that can lead to attitudes towards the food estate program, especially in the selection of shallots for cultivation. One that influences the success of a government program is the perception of farmers as implementers of the program, if the farmer's perception of the program is good then it will be one of the motivations for these farmers to do their best so that the program can run well so as to improve the welfare of these farmers. From the farmers' perceptions, the government as the program maker can also find out what parts of the program are inappropriate when viewed from the farmers' perspective, so that it will be used as evaluation material for the government in making and running the programs that have been designed.

## 2. METHOD

### 2.1. Methods of Determining Research Locations

The determination of the research area was carried out purposively, namely in Pollung District, Humbang Hasundutan Regency. The researcher chose Pollung District because this area was chosen by the government as a new food storage area with shallots as one of the commodities to be developed.

### 2.2.Determination method of population and sample

The sample is a part of the population that will be examined and is considered to be able to describe the population. The population in this study are farmers who cultivate shallots in their farm. The method used in sampling is the accidental sampling method, namely determining the sample based on people who are met by chance or whoever the researcher sees as suitable as a data source. The reason for using this method is because the population of shallot farmers in Pollung District is unknown. The number of samples studied were 30 samples from Ria-ria Village. The sample consisted of 26 food estate shallot farmer samples and 4 samples from Extension Extension, Marvest, Investor and local government informants.

### 2.3.Data Collection Method

The data collected in this study consisted of primary data and secondary data. Primary data, namely data on the condition of farming and the background of farmers obtained from observations and direct interviews with respondents, namely farmers who cultivate shallots, local Field Agricultural Extension (PPL), investors (companies) and local agricultural services, using a list of questions / questionnaire that has been prepared in advance. Secondary data such as regional topography and population data (demography) were obtained from the Agriculture and Plantation Office of Humbang Hasundutan Regency, the Central Statistics Agency and from various reference sources from the internet.

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**2.4.Data analysis method**

To test the results of the study used Descriptive Quantitative Analysis with a measurement scale, namely the Likert scale. The Likert scale is a scale that moves from 1 to 4 for each alternative answer that has its own value or score. The Likert scale is used to measure attitudes, opinions and perceptions of a person or group about events or social phenomena (Riduwan, 2019). Descriptive quantitative analysis is a way of analyzing by describing or depicting the data that has been collected as it is without making general conclusions or generalizations in a study of 26 respondents about farmers' perceptions of factors related to shallot agribusiness in the food estate area of Humbang Haundutan. Descriptive percentages are then processed by means of frequency divided by the number of respondents multiplied by 100%, as stated by Sudjana (2001) as follows: The data from the questionnaire in this study is quantitative data which will be analyzed descriptively with the following steps:

$$P = \frac{f}{N} \square\square\square\%$$

Information:
P = Percentage (%)
f = Score obtained
N = Number of Respondents
100%= Fixed Number

To determine the type of percentage description obtained for each indicator in the variable calculation percentage descriptions are then interpreted as sentences. To determine the level of the standard, the score (%) obtained along with a descriptive analysis of the percentages is then negotiated with a table of standards.

## 3. RESULTS AND DISCUSSION

### Farmers' Perceptions Regarding Internal and External Factors Related to Shallot Agribusiness in the Food Estate Area

Farmers' perception of internal factors is the magnitude of the food estate shallot farmer's response to internal factors related to shallot agribusiness in the Humbahas food estate. Meanwhile the perception of external factors is the magnitude of the food estate shallot farmer's response to factors from outside the environment related to the Humbahas shallot food estate agribusiness. Farmers' perceptions of shallot agribusiness in the food estate program at Humbahas have 17 internal components that can be assessed in this study. The components of these internal factors can be explained as follows.

1) **Land Conditions**
   Fertile land conditions are one important factor for plants. The highest 84.61% of farmers have the perception that the land used in the food estate program is fertile land. Laboratory test results soil pH was still pH 5.5 gradually increasing with pH 6.4-6.5 with the Endosol soil type, at the beginning of planting garlic and shallots at that time the production was still low but after that the production increased quite a bit because there was a large amount of compost. made society and sowing dolomite. According to Nazaruddi (2003), shallots will grow well in the pH range of 5.6-6.5. This means that currently the condition of the food estate land in Humbahas can be said to be very fertile and suitable for shallot cultivation.
2) **Institutional function**
   Active farmer groups are forums that can be used as learning media as well as exchange of knowledge and information in food estates. The highest 80.77% of farmers have a good perception of the role of institutions.

**3) Area of Land Clearing**

Extensive agricultural land is an advantage for shallot farmers to be able to plant more shallots, so that the output obtained is higher. As much as 100% of all farmers have the perception that the land cleared by the government is very large land. According to Arlis (2016) the size of the land area owned by a farmer will affect the amount of production cultivated and the level of welfare obtained.

**4) Management of land certificates**

Management of land certificates in the food estate program has been carried out by the Jokowi government together with the local government in Humbahas. As many as 73.08% of farmers have the perception that the management of land ownership rights granted is fairly clear. The results of Rahmayani's research, (2020) state that own land will have differences from leased land or arable land. If farmers use leased land, the income generated will be reduced by the cost of renting land. In contrast to their own land, farmers will be more flexible in managing the land and increasing the productivity they produce.

**5) Land clearing capital from the government**

In running any business or business requires large capital, especially if the business is a business that is just starting or pioneering. The food estate program is a program from the government which was created as a food barn program in Humbahas, where the aim is to provide enough food for the people there. This government program certainly requires large capital in clearing land. As much as 100% of the total number of respondents have the perception that it is very true in reality that the entire initial capital for land clearing comes from the government

**6) Onion production and quality**

As many as 80.77% of farmers have the perception that onion production is moderate with good quality onions. As stated by Marvest as the field coordinator when interviewed, the type of soil in the Humbahas food estate area is Endosol soil, meaning that this land is fertile soil and the types of plants that can be planted are vegetables (horticulture), flowers, tea, coffee and pine. . Having fertile soil is a source of good shallot production and quality. 7) Production inputs are supplied by Investors

As much as 100% of all respondent farmers have a very favorable perception of production inputs supplied by investors. Having investors in the food estate program is an advantage for farmers, especially for farmers who do not have enough capital to cultivate shallots.

**7) Warehouse**

The production storage warehouse is very important to be used to accommodate production if there is a delay in marketing the harvest. As many as 73.08% of farmers have the perception that warehouses are available but with inadequate capacity. For shallot commodities, the storage warehouse can be used as a hanger for shallots to reduce the moisture content of the onions, so that farmers can sell onions in the form of shallot seeds.

**8) Highway infrastructure**

Access to road infrastructure for the food estate program in Humbahas can be said to be good. As many as 88.46% of farmer respondents have the perception that 100% of the construction of the causeway has almost been completed in development, starting from the access to the main causeway to a number of access roads to land alleys. Many of the respondents who were interviewed acknowledged that the first biggest positive side of this program is the current good road access. This road access is very beneficial for farmers as easy and smooth access in marketing their crops.

**9) Farmer capital**

Limited capital is one of the main internal factor problems that is currently a weakness. As much as 84.62% of farmers have the perception that the capital they use is 70% personal capital and the rest is still borrowing from loan services. Meanwhile, to be able to become independent farmers, capital is the main thing that farmers must have.

**10) Requires post-harvest handling**

Post-harvest handling of food estate shallots needs to be done to avoid a number of reasons, including avoiding commodity damage due to the absence of an agent receiving the produce. In addition, post-harvest handling is needed to increase the selling price of shallots, according to farmers, which often drop. As many as 61.54% of the respondent farmers do post-harvest with the aim of facilitating the market.

**11) Profit sharing system**

Profit sharing is a system that is very problematic for farmers, where profit sharing does not make farmers get the full share, meaning that there are three parties who get the percentage of production sharing. The results of a survey of red bawnag food estate farmers found that 76.92% had the perception that the profit-sharing system applied did not harm farmers but only obtained small results. Therefore, becoming an independent farmer is the best way if farmers want to get the most out of shallot cultivation in a food estate area.

**12) Drip irrigation system**

Drip irrigation is one of the modern infrastructures built by the government in this food estate program. Based on the results of the questionnaire, as many as 50% of the respondent farmers had the perception that drip irrigation was only available, only installed, but could not be used, only pipes installed with water faucets on the land could be used.

**13) Onion cultivation area**

The limited capital of farmers causes many farmers to only grow a few shallots. Even though the red onion land clearing project is quite extensive. The results of data processing from all respondent farmers obtained an average of 50% of respondent farmers having the perception that the area of shallot land currently only reaches 0.56 Ha per farmer.

**14) Farmer experience**

Prior to the establishment of the food estate program, most of the farmers in Humbahas were cultivating hardwoods such as frankincense, coffee and other plantation commodities. However, after this program appeared, farmers in 2020 only learned about horticultural cultivation, one of which was shallots. The survey results show that as many as 76.92% of farmers have the perception that experience is still minimal, around under 5 years. According to Ira & Mujib (2014) farming experience is relatively new if it is less than 10 years. So it can be concluded that farmers in the food estate area of Humbang Hasundutan district are farmers who are new to the shallot commodity.

**15) Crop rotation/turnover**

Crop rotation or rotation really needs to be done with the aim of avoiding cycles of the spread of pests and plant diseases, besides that it also avoids the price of onions dropping sharply. As a result of this crop rotation, shallots cannot be harvested throughout the year. The survey results showed that as many as 84.62% of farmers had the perception that they had done crop rotation but annual crops harvested quickly, so the harvest rotation was not too long.

**16) Cooperation agreement contract (PKS)**

The existence of a clear cooperation contract agreement is needed so that no actors feel disadvantaged. The results of a survey of farmers revealed that as many as 57.69% of farmers had the perception that PKS was unclear (there was a collective agreement but it was not written), so PKS changed.

**Farmers' Perceptions of Shallot Agribusiness External Factors**

The component indicators in farmers' perceptions of the external factors of shallot agribusiness in the food estate area based on Table 5.1 can be explained as follows.

**1) The risk of loss to farmers**

Based on the survey results, as many as 65.38% of farmers have the perception of small farmers' losses, because the food estate program is a program whose initial capital is fully borne by the government. So that when farmers are cultivating shallots independently, automatic initial

expenditure costs such as building roads, irrigation and other infrastructure are not costs incurred by farmers. So that farmers are much more profitable. In addition, if in this food estate program, farmers cooperate with investors, farmers will also not receive losses, but what happens in the field is the loss on the investors as providers of capital from start to harvest.

2) **Access to farmer education**
   The survey results show that as much as 80.77% of farmers have a high perception of access to farmer education regarding the food estate program. The food estate program is a program that is carried out by linking several parties, starting from counseling, investors, marves, farmers and other parties. So from here farmers learn more starting from the use of more modern technology, new knowledge from investors and knowledge from agricultural extension workers. So that this program has a positive impact on farmers to explore education in developing shallot cultivation by using existing strengths. The opening of information access for farmers to extension workers will make it easier for farmers to get the information they need.
3) **Access to capital loans**
   The survey shows that as much as 57.69% of farmers have the perception that it is easy to borrow money as capital. The existence of land certificates that were legalized during the presence of President Jokowi became an opportunity for farmers to be able to borrow money as capital. Several food estate farmers are currently borrowing from various lending institutions such as banks, CU pardomuan Dolog Sanggul and other lending institutions such as KUR.
4) **Job opportunities within the family and outside the family**
   Based on the results of survey processing, it was obtained that 84.62% of farmers had very high perceptions of work opportunities within the family and outside the family.
5) **Food estate farming technology**
   As much as 46.15% of the survey results stated that farmers have sufficient perceptions of food estate agricultural technology, meaning that the technology is modern but the amount of supply is still not large. The existence of advanced agricultural technology such as cultivators, green houses, CCTV cameras on the land area, drip irrigation and other existing agricultural equipment is an opportunity for farmers to take advantage of all of this to increase the production and quality of shallot farming.
6) **Request for onions**
   Farmers' perceptions of the survey results obtained show that farmers' perceptions of the demand component for shallots are high. The good quality of shallots in the Humbahas food estate will be an opportunity for farmers to expand markets overseas or export so that the demand for shallots will increase.
7) **Red onion farmers' self-help**
   The survey results showed that 57.69% of the respondent farmers had a low perception of food estate independent smallholder shallots. Farmers who have been guided and educated in this program hope to be able to turn these farmers into independent farmers, because farmers have gained a lot of experience from the existence of partnership programs from several parties. In reality, on average, only 30% of farmers are self-supporting, but their only complaint is capital.
8) **Risk of damage to shallot production**
   Based on the survey results, it was found that 53.85% of farmers had a low perception of the risk of damage to shallot production. This means that only a few shallots experience physical damage. The existence of facilities such as production storage warehouses from the Ministry of Agriculture, production inputs from investors, is enough to open up opportunities for farmers to obtain onion production that is protected from damage before and after harvest.
9) **Attractions in the food estate environment**
   Based on the survey results, it showed that as many as 53.85% of farmers had the perception that the food estate environment in the future has potential as a tourist attraction, but this opportunity is still unlikely. With the available facilities and good road infrastructure with beautiful natural scenery in the food estate area, in the long term it will be an opportunity for

farmers to utilize their land as a place for visiting tourists or immigrants as a tourist attraction and educational land for visitors.

10) **Percentage of profit sharing system**
The survey results showed that as much as 50% of farmers had little perception of the profit sharing system.

11) **Onion marketing**
Based on the results of the survey, 53.85% of the farmers had a poor perception, that is, they were not clear about onion marketing (the rest of the agents sold it to the market themselves). The marketing channel for shallots is still unclear, making farmers currently confused about shallot marketing.

12) **The desire of farmers in the cultivation of shallots**
As much as 53.85% of farmers actually have a high perception of the desire in shallot cultivation. It's just that the price of shallots has fallen more frequently, both independently and with partners, causing fewer farmers to plant shallots. Most of them choose to cultivate potatoes or cabbage which are new commodities in the Humbahas food estate area.

13) **Climate and rainfall**
Climate is the main threat to farmers in shallot cultivation. The erratic climate in Humbahas is like weather with high rainfall, so plant diseases often disturb. As many as 84.62% of farmers have the perception that fluctuating climate and rainfall, such as long dry spells, also cause dry soil. The type of plant disease that often bothers me is powdery mildew, so that after it rains the shallots must be sprayed.

14) **Unemployment of food estate land**
Limited capital and labor in the food estate area has made land that has been cleared become unemployed, meaning land without being planted, as a result, much of the land is forested again.

15) **Government support**
Based on the survey, it has been found that as many as 53.85% of farmers have unfavorable perceptions. The food estate program that was created can be said to be a program that is still half and half running it. There are still many things that need to be fixed. From the start of production to marketing.

16) **Onion price**
Price is a supporting factor in the acceptance of farmers. High prices will result in high shallot acceptance. as much as 73.08% of farmers have a low perception that the price of onions fluctuates and they often get low prices. J

17) ***Sustainable*cooperation system**
The survey results showed that 84.62% of farmers had a fairly high perception. The existence of a cooperation agreement system that is still unclear means that the cooperation system between actors will be backward in this program, eventually farmers will lose their investors in a short time, while overall there are still many shallot farmers unable to become independent (independent) farmers, so need for continuity of cooperation system.

## 4. CONCLUSIONS AND SUGGESTIONS

### 4.1. CONCLUSION

1. The level of farmers' perception of internal and external factors related to shallot agribusiness in the food estate area is relatively high. With an average score for internal factors of 3.18 and an average score for external factors of 2.70.
2. Internal factors that have the highest influence on shallot farmers are land clearing capital from the government, production inputs supplied by investors and cross-road infrastructure that has been built. While the external factors that have the highest influence are the greater employment opportunities for farmers and the food estate agricultural technology used. Meanwhile, the factors that need attention are the price of shallots, the

percentage of the profit sharing system, marketing of shallots and cooperation agreement contracts.

### 4.2. SUGGESTION

1. to the government
   a. The government needs to re-evaluate the development of horticultural agriculture, especially the Humbahas shallot food estate.
   b. *Stakeholders*agriculture must be involved such as the livestock service, water service, trade service which work together in the program so that farmers are not confused, especially in terms of shallot marketing.
   c. If doing cooperation, there must be a written cooperation agreement with farmers and parties involved, so that the rights and obligations of the parties involved are clearer.
2. To Farmers
   a. Farmers need to be aware of the food estate program, that this program is a place for learning so that farmers can become independent farmers in the future, especially shallot food estate farmers.
   b. Farmers must be able to make the best use of existing facilities from the government to improve the human resources of farmers in developing horticultural agriculture, especially shallots.

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