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AGRIBUSINESS SEDAP MALAM FLOWER'S (*POLIANTHES TUBEROSA* L.) IN PASURUAN REGENCY: A STUDY OF PERCEIVED STRENGTHENING

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Abstract: Sedap Malam flowers (*Polianthes tuberosa* L.) are very popular behind the exotic market opportunities are still known to a variety of issues so need to explore the perceptions of business actors. The research objective is analyze the perceptions of farmers in the agribusiness Sedap Malam flowers and the policy of the Pasuruan Regency government in strengthening the agribusiness Sedap Malam flowers. The study was conducted in Rembang District, Pasuruan Regency with 55 farmers as respondents. The data analysis method uses a descriptive approach with the interpretation of the average value of the interval. The results of the study revealed that farmers' perceptions based on the conditions of land excretion put a statement Sedap Malam flowers (*Polianthes tuberosa* L.) cultivation with land that contains fertile clay and stipulating Sedap Malam flowers (*Polianthes tuberosa* L.) cultivation land did not conflict with the general spatial plan and regional layout of Pasuruan Regency were perceived better than other statements. Another interesting finding is that the understand technology places vegetative propagation of plants using tubers and determines the frequency and interface of fertilizer application based on crop needs, while farmers' perceptions of government policies on agribusiness Sedap Malam flower protecting of agricultural land for cultivation and pleasant Sedap Malam flowers (*Polianthes tuberosa* L.) as one of the regional icons, both are perceived very well to support the sustainability of farming. The policy support is a tangible form of strengthening that reflects the uniqueness of the region through its superior agriculture sector.

Keywords: Farmers, Perception and *Polianthes tuberosa* L..

Introduction

A fact nowadays that cut flowers are increasingly in demand along with the increasing welfare of the community, tourism development, expansion of residential areas, construction of hotels, offices and industry. This situation increases the economic value of cut interest to be high so that it can be relied upon as a profitable agribusiness commodity. Sedap Malam flower is one of the potential commodities that can be developed both on a small and large scale as evidenced by the increasing interest of the public in the demand for Sedap Malam flowers (*Polianthes tuberosa* L.). This is expected to be able to encourage the increasing number of businessmen to cultivate the Sedap Malam flower through the expansion of the planting area and the new development area. The demand reaches its peak in big days such as Eid al-Fitr, Chinese New Year, Christmas and New Year (Ardiansyah, Djohar and Muhandoyo, 2013) because of its beautiful shape and fragrant aroma so that it is not only as decoration and air freshener for formal events for example for weddings, office meetings and media facilities to support parties (Koesriwulandari, 2018).

Rahmatullah et.al. (2019) states the Sedap Malam flowers (*Polianthes tuberosa*) is a perennial green plant of the Agavaceae tribe. *Polianthes tuberosa* L. from Mexico with a spread area covering Europe, Africa, Asia and parts of China to Java. *Polianthes tuberosa* L. is not a native plant of Indonesia, but this plant has long been known in Indonesia and spread in various regions. In addition to cut flowers and sowing flowers, white flower oil is used in making perfumes. In line with the high variety of benefits, demand continues to increase. This condition is an opportunity for farmers to try to make a good Sedap Malam flowers.

Most of the people of East Java, of course no stranger to Sedap Malam flowers. Beautiful flowers with long stems have long been known by the people of Java. Sedap Malam flower is a "Flora Mascot" characterized by the white and scented barbau from East Java Province. Likewise with East Java Governor Decree No. 471 of 1991, Sedap Malam is determined as Flora Identity for the East Java Region. The existence of this stipulation is expected to be a separate icon and its existence can be sustained (Sihombing, et. Al., 2015).

Likewise with the Pasuruan Regency which makes Sedap Malam flowers as the mainstay of the area's flora. Sedap Malam flower as productivity in 2017 is known to be 9.45 stems / m², exceeding the target set in the 2013-2018 Pasuruan Regency of 7.09 stems / m² or 33.28%. When compared with the achievements in 2016 of 9.22 stalks / m², showed an increase of 2.49%. The increase in the productivity of plants is due to the use of superior varieties (Roro Anteng and Dian Arum varieties) intensive cultivation according to the procedure and early control of plant pest organisms. Sedap Malam flower planting area in Rembang District. There are several varieties developed by farmers members of GAPOKTAN Bunga Sedap Malam Rembang, such as national superior varieties Roro Anteng and Dian Arum. Sedap Malam flower blooms sequentially from the bottom up and

includes compound interest. The panicle length and number of buds influence the age of the display. *Polianthes tuberosa* L. are single cultivars from Pasuruan, including types whose flowers are tightly arranged and form a fairly thick flower petals with an average number of flower buds 39.40 cm (Pasuruan Regency Government, 2018).

However, behind the exotic market opportunities from the existence of cultivation, there are various problems faced by farmers during the flower cultivation process. These problems include shortages of water in the long dry season, poor quality seeds, pests and diseases and fluctuations in the price of Sedap Malam flower on the market. These problems can affect the quality and quantity of the flower petals at the time the harvest season arrives. Therefore, it is necessary to have appropriate and quick actions taken by farmers so that the cultivation can produce a lot of flowers with good quality. The problem that arises related to the marketing process of harvest, namely fluctuations in the price, which is very dependent on the state of the global market. Price fluctuation is a situation where the prices of materials sold in the market have increased or decreased prices.

Besides that, farmers everywhere are not considered to be real farmers, always given the stigma of "poorest". However, if examined further, the sector which contributes the most to state income lies in the agricultural sector. On the other hand, it can be seen that the policies regulated by the government have not yet fully led to holistic agricultural development. The conventional view of agriculture regards agriculture solely as a producer of food, clothing, and shelter that is easily measured and can be marketed. But the broader dimension of agriculture has multiple functions that are not yet well known, or are still ignored by various groups, so that the appreciation of the perpetrators (farmers) is also almost neglected. The success of leading agricultural commodities farming depends on the level of perception formed. Farmers' perceptions that are directly or indirectly related to farming become part of the social aspects study. Farmer's perception has a very deep meaning, therefore a holistic understanding is needed through the search for opinions expressed (Smith and Sullivan, 2014; Tancoigne et al., 2014). The purpose of this study was to analyze the perceptions of farmers in the agribusiness Sedap Malam flower (*Polianthes tuberosa* L.) including Pasuruan Regency government policy in strengthening the agribusiness Sedap Malam flowers.

Literature Review

1. The Economic Potential of Floriculture

Floriculture has economic value that is quite important in human life. This commodity, besides being traded domestically, can also be designed as an export material to the international market. Cultivation of ornamental plants and flowers on a commercial scale is a source of household and state economic income (Rukmana, 1997). Lately fans of ornamental plants are increasing in line with increasing social status, science, and technology. Thus the ornamental plants have excellent prospects when developed as an agribusiness venture. Consumers of ornamental plants are not only people in the country

alone, but foreign communities can also become very potential consumers. Therefore, ornamental plants should be developed as an agribusiness effort to increase non-oil exports. (Suryowinoto, 1997).

Lots of different types and cultivars of ornamental plants and flowers that have become a trade item in the international market. One of the types of ornamental plants that produce cut flowers that are potentially developed is Sedap Malam flowers. Based on BPS data (2019), in 2018, the production of all plants in the cut flower group will increase. The highest increase was experienced by roses with an increase of 17.61 million stalks (9.55 percent) followed by gerberas, chrysanthemums, orchids, smokin, anturium flowers, gladiolus, and carnations. Meanwhile, the majority of potted plants experienced a decline in production in 2018. The highest decline in production was experienced by fern with a decrease of 5.06 million trees (54.76 percent) followed by leaf anthurium of 440.41 thousand trees (31.46 percent), and Japanese frangipani at 248.20 thousand trees (24.81 percent). While the potted plants that experienced the highest increase in production were *Dracaena* with 4.69 million trees (197.22 percent), philodendrons with 4.39 million trees (42.41 percent), and haanjuang with 742.75 thousand trees (203.26 percent). Even though it has not developed as fast as the main commodities, in reality the farmers have planted in various cut flower production centers, such as in Brastagi (North Sumatra), Sukabumi (West Java), Pasuruan and Malang (East Java) also Bandung (North Java) in Indonesia.

2. Farmer's Perception

Perception that occurs in the brain, is the process of organizing, interpreting and giving meaning to objects and to understand what is happening around us. In addition to past experiences and learning, some personal factors give color to our perceptions. For example, familiarity with an object influences our expectations about how the object should look, even if we observe subtle changes in its appearance. Our perception is also influenced by our motivations, values, expectations, experience, culture, and personality (Morris, 2003).

Perception has a subjective nature, because it depends on the abilities and circumstances of each individual, so that it will be interpreted differently by one individual with another. This perception is shaped by the individual characteristics observed. Rachmat (2001) mentions the diversity of perceptions including personal factors in the form of age, education, knowledge, experience, and area of land tenure. Perception functions as a medium that connects individuals with their environment. Without an individual's perception there will be no experience and without a perception of social life it will also not occur, or with other understanding perceptions shaped by what we know, by what we think, and what we don't know (Renko, Shrader, and Simon, 2012). In fact (Khan and Akram, 2012) state that farmers' perceptions play an important role in their behavioral intentions, which usually leads to the behavior of actual adoption of agricultural technology.

Farmer's social environment is an environment where in that environment there is an interaction between individuals with each other that will affect someone in forming perceptions of something (Röös, et.al., 2019). Mardikanto (1993) states that the social environment that can affect changes in farmers is culture, public opinion, decision making in the family and the strength of social institutions. Actions taken by farmers are influenced

by their perception of the benefits or risks of the policy. The perception of risk or benefit (utility) may be different from the objective assessment of risk or benefit. So perception is a social construction, differences in personal experiences, expectations, trust in institutions can produce different decisions made between farmers from the same policy statement (Borges et al., 2015; McGuire, et.al., 2015).

Methods

1. Location

Determination of the location is determined by purposive, namely in the District of Rembang, Pasuruan Regency. The area is one of the areas of plant development and has great potential considering the climatic conditions and the soil is suitable for the growth of Sedap Malam flower (*Polianthes tuberosa* L).

2. Sampling

The population in this study is the Sedap Malam farmer's in the Rembang District, Pasuruan Regency. Determination of the sampling location was taken intentionally based on that region as one of the centers of Sedap Malam flower in East Java. Respondents were assigned as many as 55 farmers with the criteria of doing business farming for 3 years.

3. Data Collection

a. Interview

This method is carried out to obtain primary data by conducting interviews directly with respondents, using a list of statements that have been arranged. Data collection is done by means of surveys and direct observations in the field while conducting interviews with predetermined respondents. Determination of the respondent is assisted by the chairperson of the flowering farmers group.

b. Observation

This method is carried out to obtain preliminary data about the state of the area to be studied by conducting a survey directly to the research location. Observations were made to determine perceptions of the existing condition of land, technology, and government policy.

c. Literature Study

Namely by searching for literature on ornamental plant commodities and other literature related to research.

4. Measures

This study is measured by the scale of intervals or scales that have the same distance (interval) at all levels with an attribute to be measured or in this case the method of scaling using a Likert scale, where measured indicators can be used as starting points for making

instrument items in the form of questions answered by respondents. Each answer is related to the form of statement or attitude support expressed in the following words:

Strongly Agree / Very Appropriate / Very Available / Very Often = 4

Agree / Appropriate / Available / Frequent = 3

Disagree / Not Available / Not Available / Never = 2

Strongly Disagree / Very Disagree /

Very Not Available / Very Never = 1

Furthermore, using descriptive analysis. namely solving procedures that are examined by describing or writing the interest of farmers as an object of research systematically, factually, and accurately based on the facts available, so that it can be known where the average respondent's assessment of each element is and the extent to which variations, the scale range is (Umar, 2011)

Interpretation of Criteria Intermediate Value:

1-1,80 Very Not Good / Very Low

1.81-2.60 Not Good / Low

2.61-3.40 Fair / Moderate

3.41-4.20 Good / High

4,21-5,00 Very Good / Very High

Findings

1. Farmer's Perceptions in Agribusiness Sedap Malam Flower

a). Land Existing Condition

Rembang District is one of the centers for the development of Sedap Malam flowers. Located in the lowlands with an altitude of 18 meters above sea level with an average temperature of 28 - 32 0 C, rainfall 1800 - 2000 mm with Andosol soil types. The most important things in the maintenance of soil types are: fertile, loose, containing humus, good aeration and soil drainage and the degree of soil acidity (pH) between 5.0 - 5.7. As for measuring the interest of farmers based on the perspective of land specifications through statement items, it appears in table 1. Table 1. shows that farmers' perceptions based on the conditions of land are interpreted as the average interval value of 3.41-4.20 with the criteria "Good/High" especially in the statement "Establishing Sedap Malam cultivation land does not conflict with the general spatial and regional plan of Pasuruan Regency "which is 3.52 and then followed by the statement item "Sedap Malam cultivation with land that contains fertile clay "which is equal to 3 50 This can be explained that cultivation is very necessary to pay attention to the technical aspects that is cultivated on the type of clay with fertile conditions. While the next aspect that must be considered for cultivation is in accordance with local regulations issued by the local district government so that it does not cause

conflicts of interest in the future. Overall the average value is between the intervals of 3.40-4.20, it can be stated that farmers agree if agribusiness of Sedap Malam flower is based on the existing land conditions. According to McGuire, et.al. (2015), perceptions formed by farmers are generally with good land productivity because they are supported by fertile land types and sufficient water supply, so farmers tend to survive on their farming business.

Table 1. Farmers Perceptions based on Existing Land Conditions

Numb.	Statement	Total Score	Average Score
1.	Sedap Malam flower cultivation's land does not conflict with the general spatial and regional layout plan of Pasuruan Regency	193	3,52
2.	Rembang District has land suitability for Sedap Malam cultivation's	189	3,45
3.	Understanding porosity or soil degradation	185	3,36
4.	Understand the condition of land drainage / smooth drainage to anticipate the possibility of water overflow in the rainy season	182	3,31
5.	Sedap Malam cultivation with land that contains fertile clay	192	3,50
6.	Understand the position of the slope of the land with consideration of safe against landslides	190	3,45
7.	Understand the source of water around the cultivation area free of harmful contaminants (factory waste, etc.)	189	3,44
8.	Knowledge of land specifications is supported by agricultural extension	182	3,31

Source : Data Analysis (2020).

b). Potential for Cultivation

In general, farmers' knowledge about cultivation technology, post-production technology, and marketing is still low. This is due to the fact that farmers carry on from generation to generation and rely solely on experience due to the limited information and technology available. Table 2. shows that the interest of farmers based on mastery of technology with the dominant statement item is "Understand vegetative propagation skills by using tubers" which is equal to 3.40 and then followed by the statement item "Determining the frequency and interfal of fertilizer application based on plant needs" of 3, 35 is in the interpretation of the average value of the interval 2.61-3.40 with the criteria "Fair / Moderate". It can be explained that cultivation considering the multiplication of plants is the main key to the success of farming, certainly not separated from field extension workers who provide vegetative and effective techniques to support the availability of seedlings. In addition, also consider the frequency and interfal of fertilizer application based on plant requirements. Overall, the average value is between the categories 3.41-4.20, so it

can be stated that farmers perceive "Good" based on the understand of technology, especially when planting is being carried out. Potential area of plants in Pasuruan Regency until 2013 reached 6,636,650 trees (663.66 ha), total production of 59.702450 stems and productivity of 9 stems / m², the cultivation is spread in the Districts of Bangil, Rembang, Kraton and Pohjentrek. The varieties cultivated in Rembang District are local varieties, Roro Anteng and Dian Arum varieties, with the harvest time of this plant reaching its peak in October - December.

Koesriwulandari (2018), stated that interest is an agricultural commodity that has a perishable nature. Poor handling of marketing functions can affect the market power of the commodity. Therefore, consumers want beautiful and attractive flowers that are fresh, not withered, and at a relatively cheap price. The results of the interview concluded that the price of a cut flower for variety of Roro Anteng ranged between Rp. 500, - - Rp. 700, - at the farmer level, while sowing flowers cost Rp. 12,000 - Rp. 17,000, - / kg sowing flowers. Whereas in traditional markets the price on an ordinary day reaches Rp. 750 - 1000, - per stalk and Rp. 7000, - per bunch (10 stems) depending on the grade of interest, now an average of Rp. 30,000 per tie, while on holidays it can reach Rp. 1500 - Rp. 2000, - per stalk. When the harvest season arrives, the Sedap Malam flower can be harvested twice a week and sold directly to the market in Bangil. Flower products to be marketed must meet the quality and quality of flowers in accordance with market demand, which has a number of flower buds blooming 2-3, the length of the stems are uniform, straight and sturdy flower stalks, free from pests and diseases. Besides that, it must be packaged properly and the packaging is made of paper or rope which has standards for packaging and provides guarantees to traders and consumers.

Sedap Malam flowers from Pasuruan Regency are sold / marketed in Pasuruan, Malang, Surabaya, Probolinggo, Jember, Banyuwangi, Bali, and Jakarta. Domestic market opportunities are generally crowded ahead of major holidays, such as Christmas, Idul Fitri, New Year, Chinese New Year and August 17 Ceremonies. Whereas current foreign market opportunities are the Middle East, Japan and several European Economic Communities (Rukmana, 1995).

Table 2. Farmer's Perceptions in Sedap Malam Flower Cultivation

Numb.	Statement	Total Score	Average Score
1.	Understand the vegetative propagation skills of plants using tubers	187	3,41
2.	Understand the procedures for planting simple flowers enough to sow seeds then fertilized	171	3,11
3.	The period of cultivation is quite short	181	3,29
4.	Fertilizers are always used both chemical fertilizers and organic fertilizers	179	3,25
5.	Determine the frequency and interval of fertilizer application based on plant	183	3,45

	requirements		
6.	The use of chemical fertilizer strengthens the aroma of the flower	170	3,09
7.	Climate also affects cultivation	177	3,22
8.	Use a hand sprayer / power sprayer / back sprayer when spreading pest control pests	175	3,18

Source : Data Analysis (2020).

2. Farmer's Perceptions in Regional Government Policy Support for the Strengthening of Agribusiness Sedap Malam Flower

The government policy towards the strengthening of sedap malam flowers is aimed at the perceptions of 55 respondent farmers. Perceptions of each respondent to government policies differ, thus it can be seen what factors are driving the respondent in answering questions. The following are descriptions of each of the government policy criteria. Based on table 10. above it can be seen that the facilitation of assistance in the form of facilitation of post-harvest smoky facilities to farmers through social assistance distribution is provided in the form of cardboard packaging, and tricycle motorized carts from the Provincial Agriculture Office to the farmer groups receiving Rembang I and Rembang II in the village of Rembang, Rembang District. While the facilitation of assistance in the form of facilitation such as seed, fertilizer, pesticides, and knapsack power sprayers to the recipient farmer groups of nganglang and roses in Oro-Oro Ombo Kulon Village, Rembang District.

According to Inayah (2012), assistance through the mechanism of channeling goods directly to farmer groups refers to the Regulation of the Minister of Agriculture concerning Guidelines for the Management of Social Assistance of the Ministry of Agriculture in 2012 and Regulation of the Director General of Horticulture on Guidelines for Distribution and Management of Social Assistance. interviews can be seen that some forms of local government support in facilitation of post-harvest facilities, namely carton packaging assistance. Support for the facilitation of the strengthening of agribusiness of Sedap Malam flowers seedlings in the form of seeds, fertilizers, pesticides, and knapsack power sprayers. As for measuring the strengthening of agribusiness Sedap Malam flowers based on government policy through facilitation programs with statement items appearing in table 3. Based on table 3. it can be seen that statement items that have the highest average score related to government policies for of agribusiness Sedap Malam flower interest is "The government protects the ownership of agricultural land for cultivation" and "Sedap Malam Flower as one of the regional icons" both have a value of 3.35. This proves that the role of the regional government in the development of Sedap Malam flower agribusiness has been felt by farmers, moreover agricultural spatial policy as a regional icon in the hope of increasing demand and farmers can feel the economic benefits of their farming. Overall the average value is between the categories 2.61-3.40, so it can be stated that the "Fair / Moderate" means that even though the focus of the development has been felt, it should be continued to be improved. Borges et al., (2015); Khan and Akram, 2012; McGuire, et.al.,

(2015) agreed to state that the support of government policy is an important role of agricultural success by farmers so that it is a factor to be perceived.

Table 3. Farmer's Perceptions of Government Policies

Numb.	Statement	Total Score	Average Score
1.	The government protects the ownership of agricultural land for cultivation	184	3,35
2.	The government plans the Rembang District as a conservation area	176	3,20
3.	Sedap Malam Flower as one of the regional icons	184	3,35
4.	Government attention in the form of subsidies to farmers already exists	182	3,31
5.	Regency Government actively participates in maintaining the selling price	180	3,27
6.	Development of new varieties that are attractive to consumers	183	3,33
7.	Measured supervision of agricultural extension workers in the transfer of knowledge (cultivation to post-harvest) to farmers	162	2,95
8.	One level distribution regulation support (direct sales)	176	3,20

Source : Data Analysis (2020).

Conclusion

Farmers' perceptions in the agribusiness of Sedap Malam flowers based on conditions of land exclusion put the statement "Sedap Malam cultivation with land that contains fertile clay" and "Sedap Malam cultivation land does not conflict with the general spatial plan and regional layout of Pasuruan" in the perceived good compared to other statements. Associatively it becomes the thought of the savvy flower farmer, which is to consider if he wants to strengthen his cultivation by maintaining soil fertility and what is done is not contrary to the regulations of the district government which are often delivered by the agriculture department. On other hand, interesting findings that are known based on the mastery of technology put the statement "Understand vegetative propagation skills by using tubers" and "Determine the frequency and interfal of fertilization applications based on plant needs". This statement can be understood that the savvy flower farmers know well the techniques of plant propagation, especially using tubers. They farmers are also already skilled in applying fertilizer doses according to the recommendations for healing and plant development. In addition, the results concluded in the farmers' perception of the government's policy on agribusiness of Sedap Malam flower put the statement "The

government protects the ownership of agricultural land for cultivation" and "Sedap Malam Flower as one of the regional icons", both of which are perceived very well meaning farmers assess the Pasuruan Regency government strongly supports the sustainability of farming, especially regulation of the area of the development cultivation in line with efforts to maintain regional icons. The embodiment of policy support is a tangible form of strengthening carried out and can be adopted by other regions so that it reflects the uniqueness of the region through its superior agriculture sector.

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