

Research Article

Horticultural Farm Business Priorities in Jember

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Abstract: This study aims to: 1) determine the benefits and feasibility of horticultural farm in Jember. 2) determine priorities horticulture commodities that should be cultivated by farmers in Jember. This study uses primary data with the number of respondents of 544 farmers spread over 11 districts out of 31 districts. Sampling using *multi stage sampling*. The results showed that the benefits and feasibility of horticultural farming, starting from the highest, respectively is a great chilli, melons, small chilli, watermelon, beans, tomatoes, eggplant, cucumber, cabbage, and beans. Therefore, the priority of horticultural cultivated is great chilli, melons, small chili, watermelon, beans, tomatoes, eggplant, cucumber, cabbage, and beans.

Keywords: Priority, Farming, Business, Horticulture, Jember.

PRELIMINARY

Agribusiness system development needs to be a prime mover (*grand strategy*) development of Indonesia as a whole (*agribusiness led development*). It is based, for reasons: 1) Mandate constitution and political will; 2) The agricultural sector contribute greatly to the Gross Domestic Product (GDP); 3) the agricultural sector is the livelihood of most people in Indonesia. 4) The agricultural sector is able to provide a variety of food menu and nutrition for the community; 5) the agricultural sector is able to support the industrial sector, both upstream and downstream industries (Firdaus, 2012).

After achieving self-sufficiency in rice in 2008, the next challenge is how to keep the people of Indonesia can be more self-sufficient non-carbohydrate vegetable sources and animal food. For that, horticulture and animal husbandry will be more strategic in the future (Daryanto, 2012). Horticulture sub-sector is a commodity that has enough potential to be developed agribusiness, because it has economic value that is high enough.

Geographically, Jember is located in East Java province with an area of $\pm 3293.34 \text{ km}^2$. Jember district is divided into 31 districts comprising 28 villages with 226 rural districts and 3 city districts with 22 villages (Bappeda Jatim, 2016). Land use in Jember is

dominated by farming activities, where land is cultivated for agriculture is 46.41% of the total area, while the rest is used for the settlement area of 9.93%, the forest area of 21.17%, and others of 22, 49% (PPSP, 2012). Based on data from the Department of Agriculture Jember, productive agricultural land covering an area of 161,000 hectares, but from different geographical areas recorded, only 153,000 hectares have been realized as agricultural land (Ridwan, 2014). While paddy fields in Jember is ± 86568.18 hectares (Pemkab Jember, 2016).

Major food commodities in Jember include rice, corn, soybeans, peanuts, cassava, sweet potato, and vegetables, while plantation commodities are tobacco, coffee, rubber, cocoa and edamame. Contributions of food crops to the regional income are greater than the contribution of plantation commodities (ILO, 2007). Apart from being a center of rice and tobacco Jember is also known for horticultural commodities.

In line with the government's efforts of "prohibition" smoke from the Indonesian government and the world, the farmers have to find a way out. One way is by showing the other commodities that have the same economic value / almost equal to the tobacco Na Oogst. Of course, commodities were chosen to be "appropriate" to the circumstances of the local area. The

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alternative is a horticultural commodity, especially vegetables.

Horticulture is one of the commodities that have high economic value. Almost in every district in Jember has several commodities that is suitable and feasible to be developed. Even in some areas of South Jember, formerly known commodity Na Oogst Tobacco, a few years back began to be planted with a variety of horticulture, among others: chili, small chili peppers, watermelons, melons, cabbage, chili, etc.

Selection of the commodity to be cultivated instrumental in the success of agricultural production. High-value commodities will be a top priority. Commodities which have been further types / varieties in accordance with the conditions of terrain, climate and location of the planned (Said and Intan, 2004). Therefore, this study aims: 1) to determine the benefits and feasibility of horticultural farm in Jember. 2) To determine the priority scale horticultural commodities should be cultivated in Jember.

RESEARCH METHODS

Determination of Research Areas

The study was conducted in Jember Regency East Java Province (Java). The research location determined by purposive basis that: 1) Jember has potential ± 86568.18 hectares of paddy fields, 2) In addition to being the center of Tobacco Na Oogst / Voor Oogst Jember also known potency with horticultural commodities in paddy fields.

Data Sources

This study uses primary data (Nazir, 2013). The primary data obtained directly from the farmers who cultivate horticultural plants during the growing season in 2015 through a questionnaire that has been prepared. According Sugiyono (2009), a questionnaire is a technique of data collection is done by giving a set of questions to respondents to answer.

Sampling Methods

The population is a collection of individuals with qualities and characteristics that have been set. While the examples/sample part or a certain amount of footage taken from a population and examined in detail (Nazir, 2003). Total population is spread geographically located very difficult to get a sampling frame of all the elements contained in these populations.

This study uses a multi-stage sampling. Sampling is done by following the steps from step Plate (1978) in Singarimbun and Efendi (2011), as follows:

- The population in this study is horticultural farmers in Jember season horticultural farmers in Jember.
- From the 31 subdistricts in Jember selected 11 subdistricts were selected purposively with

consideration of the subdistricts that reflect the potential of horticulture in Jember. The selected subdistrict is Sumberjambe, Tanggul, Wuluhan, Sukorambi, Sukowono, Umbulsari, Puger, Panti, Semboro, Ajung, and Pakusari.

- From the 11 subdistricts selected, specified villages selected purposively with consideration of the village reflects the potential of horticulture at the subdistrict level.
- From the selected villages, a number of horticultural farmers were selected using snowball sampling method. Snowball sampling is a sampling technique that initially a small amount, and then enlarged. Like a snowball rolling that long to be great. In the sampling, first of all been one or two people, then of these two people are asked to choose his friends to be sampled. And so on, so that the number of samples more (Latham, 2007; Sugiyono, 2009). The samples used in this study are 544 horticulture farmers.

Data Analysis

This study using analysis of absolute advantage and Revenue-Cost Ratio (R/C Ratio). Absolute advantage is the difference between total revenue (TR) and total cost (TC) (Hernanto, 1996), which was formulated:

$$\pi = TR - TC$$

Total revenue (TR) is obtained by multiplying the production (Q) and price (P) (Suratiah, 2015), which was formulated:

$$TR = P \times Q$$

Total cost (TC) consists of the total fixed costs (TFC) and total variable cost (TVC) that is used to produce the product (Soekirno, 2014; Soekartawi, 2006), which was formulated:

$$TC = TFC + TVC$$

Soeharjo and Patong (1973) stated that in addition to the income measured by absolute values was also analyzed efficiency. One measure of efficiency is the reception for the rupiah spent (revenue-cost ratio or R / C ratio). So the analysis of R / C ratio can be used to test the advantages of a branch of farming. R / C Ratio is the ratio between the total revenue (TR) and total cost (Soekartawi, 2011), which was formulated:

$$R/C \text{ Ratio} = \frac{\text{Total Revenue}}{\text{Total Cost}}$$

Where farming viable when the value of R / C is greater than one. If the R / C farms smaller than one, then the farm is said to be not feasible to be developed.

RESULTS AND DISCUSSION

Horticultural farming costs in Jember

Agribusiness Production activities influenced by economic and technical constraints. Technical constraints associated with the limited ability of farmers to implement the technology properly and correctly. While the economic constraints associated with limited farmers to provide minimum cost for optimal allocation of inputs. Therefore, the magnitude costs of farming necessary so that farmers are able to farm properly. The following table shows the costs of farming of some kind of horticultural commodities.

Table 1: Horticultural Farming Cost in Jember

No	Horticulture	Total Cost/ha	Rank
1.	Eggplant	28.303.864	6
2.	Cabbage	27.094.069	10
3.	Long beans	28.057.135	7
4.	Bean	27.313.358	8
5.	Watermelon	30.493.696	4
6.	Melon	47.168.551	2
7.	Cucumber	27.232.057	9
8.	Tomato	30.417.588	5
9.	Small chilli	40.418.679	3
10.	Large chilli	48.514.420	1

From Table 1 can be explained that the large chilli require the need for the highest cost (Rp48,51 million / ha). Followed by melon (Rp47, 17 million / ha), chili (Rp40, 42 million / ha), watermelon (Rp30, 49 million / ha), and tomatoes (Rp30, 42 million / ha).

Based on the magnitude of these costs, the researcher only provide a description of the amount of funds required and should be available for farming, from planting to harvesting. Availability of cost is important because if it's late a little time for maintenance and upkeep, it will disrupt their agricultural productivity and production. If indeed there is a shortage of funds, it must be prepared in a way to cover it. The fund can be obtained from loans, cooperation, and others.

Horticulture Farming Advantage in Jember

Gains / profit / net revenues showed compensation for the risks to be borne by farmers. The greater the profits obtained from an agribusiness, the more interesting types of agribusiness. Each commodity studied horticulture produce different benefits. The following table shows the advantages of some kind of a studied horticulture.

Table 2: Advantages of Horticulture Farm in Jember

No	Hortikulture	Advantages/ha	R/C Ratio	Rank
1.	Eggplant	27.433.254	1,97	7
2.	Cabbage	19.573.498	1,72	9
3.	Long beans	12.013.751	1,43	10
4.	Bean	38.665.596	2,42	5
5.	Watermelon	48.103.897	2,58	4
6.	Melon	88.979.783	2,89	2
7.	Cucumber	20.849.542	1,77	8
8.	Tomato	35.908.252	2,18	6
9.	Small chilli	66.255.268	2,64	3
10.	Large chilli	136.675.250	3,82	1

From Table 2 can be explained that the large chilli produce the highest profits (Rp136,68 million / ha). Followed by melon (Rp88, 98 million / ha), chili (Rp66,26 million / ha), watermelon (Rp48,10 million / ha), and beans (Rp38,67 million / ha).

Horticultural Farm Business Priorities in Jember

Analysis of absolute advantage and R / C Ratio can be used as a basis for determining the priority of farming in Jember. Priority farming here shows the order / register horticultural what should be cultivated by farmers in Jember if they want to earn high profits, assuming (ceteris paribus) they have all the costs of farming is needed, as well as having the ability to cultivation of horticultural commodities such.

Horticulture priorities based on analysis of absolute advantage and R / C ratio is great chili, melon, small chili, watermelon, beans, tomatoes, eggplant, cucumber, cabbage, and beans. Thus, large chilli horticultural farm occupies the first priority and the second priority to occupy the melon cultivated by farmers rather than commodities other horticulture.

CONCLUSIONS AND SUGGESTION

Conclusion

From the research results can be concluded as follows:

- Large chilli requires the need for the highest cost, followed by melon, chilli, watermelon and tomatoes.
- Large chilli produces the highest returns, followed by melon, chilli, watermelon, and beans. So farms horticulture large chilli the first priority to be developed by farmers rather than commodities other horticulture.

Suggestion

Some suggestions from the results of this study are:

- In the selection of horticultural commodities, farmers should consider the total cost required, the rate of profit, and the feasibility of farming.

- It should be realized zoning for the types of specific horticultural commodity in every district to facilitate coaching and mentoring.

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