ANALYSIS OF RED WATERMELON AND YELLOW WATERMELON FARMING (Case Study: Secanggang District, Langkat Regency)

Ahmad Riandy Harahap

Agribusiness Study Program

Faculty of Agriculture, University of North Sumatra, Medan 20155, Indonesia

ahmadrharahap@gmail.com

Abstract

The purpose of this study was to determine the development of red watermelon and yellow watermelon in the last 5 years; to analyze the characteristics of red and yellow watermelon farmers; to analyze the income of red and yellow watermelons; to analyze the feasibility and to determine the effect of production factors on the acceptance of red watermelon and yellow watermelon. The data analysis method used is the income analysis method; R/C Ratio and B/C Ratio analysis methods; multiple regression analysis methods. From the results of the study, it was found that the production and area of red watermelon and yellow watermelon farming land continued to increase over the last 5 years; yellow watermelon farming income is greater than red watermelon farming income; Yellow watermelon farming is more feasible than red watermelon.

Keywords:Production, Revenue, Feasibility Analysis.

1. Introduction

Indonesia is an agricultural country, meaning that agriculture plays an important role in the overall national economy. This can be indicated from the large number of residents or workers who live and work in the agricultural sector (Mubyarto, 1989).

Indonesia is a developing country with the agricultural sector as a source of livelihood for the majority of its population. Thus, most of the population depends on the agricultural sector. Most of the land use in the territory of Indonesia is designated as agricultural land and almost 50% of the total workforce still depends on their fate to work in the agricultural sector (Husodo, 2004).

The diversity of genetic sources of tropical fruits that grow scattered in various regions in Indonesia is a priceless treasure. However, this property is still not widely used for the welfare of the community. Some types of fruit that have been used as an additional source of income have not been able to meet expectations. This commodity is still unable to face market challenges so that it has not been able to meet market needs in accordance with consumer needs (Sunarjono, 2013).

One of the efforts taken to increase farmers' income is to cultivate agricultural commodities that have high economic value and have large market potential, both domestic and foreign markets. One of the developed agricultural sectors is horticulture which includes fruits, vegetables and flowers. Fruits have enough potential to be developed considering the increasing demand. One of the fruit commodities that have prospects to be developed is watermelon. The length of time for watermelon plants to grow until the fruit is ripe, under normal land and weather conditions is 70-100 days, from the time the seeds are planted (Wihardjo, 1993).

Watermelon is one of the types of seasonal fruit crops that have an important meaning for

the socio-economic development of households and the state. The development of this commodity has bright prospects because it can support efforts to increase farmers' income, alleviate poverty, improve community nutrition, expand job opportunities, reduce imports and increase exports of oil and gas (Rukmana, 1994).

Watermelon cultivation in Indonesia is still limited to meet the domestic market. However, it is possible that we will be able to compete in the international market. The factors that become a barometer of the ups and downs of the market price of watermelons in the country are the number of fruits that are harvested simultaneously. The entry of imported watermelon seeds has a strong appeal, because these watermelons are able to seize the market parallel to other types of fruit, some of which are still imported from abroad. This fact makes the demand for watermelons increasing. Especially when the fruit imported from producing areas is relatively small, so the price soars high (Wihardjo, 1993).

One way to determine the feasibility of a business is to analyze the comparison of revenues and costs of the business, namely using R/C analysis where R/C can show the amount of revenue obtained by spending in one unit of cost. R/C stands for revenue-cost ratio, otherwise known as the ratio or ratio between revenues and costs. The greater the value of the R/C ratio of the farm, the greater the profit obtained from the business (Soekartawi, 1995)

2. Research methods

This research was conducted in Telaga Jernih Village, Secanggang District, Langkat Regency, North Sumatra Province. The research area was chosen purposively where Secanggang District is the District with the largest watermelon production in Langkat Regency, North Sumatra.

The population in this study were all yellow watermelon and red watermelon farmers in Telaga Jernih Village, Secanggang District, Langkat Regency. The sampling method used was purposive sampling, namely the method of determining the sample selected according to the research criteria. The number of samples taken were 30 red watermelon farmers and 30 yellow watermelon farmers.

For research that uses the inferential statistical analysis method, the sample size may be smaller than if we only used a descriptive statistical analysis design. In other words, descriptive research designs require a larger sample size than explanatory research designs.

The data collected in this study consisted of primary data and secondary data. Primary data was obtained from direct interviews with farmers in Telaga Jernih Village, Secanggang District through surveys and questionnaire data that the University of North Sumatra had prepared in advance. While secondary data was obtained through related agencies or institutions such as the Central Statistics Agency of Langkat, the Central Statistics Agency of North Sumatra Province, the Secanggang District Office and other agencies related to this research.

3. Results and Discussion

3.1 Differences in Farming Income of Red Watermelon and Yellow Watermelon

To see the difference in the income of red watermelon and yellow watermelon farming, we will first look at the description of the costs of each farming business. Farmer input costs are calculated in rupiah per planting season. These costs are used to produce maximum production and income. The cost of farming red watermelon and yellow watermelon is explained as follows:

Table 1. Cost of Farming Red Watermelon and Yellow Watermelon per Hectare (One Planting Season)

No.	Uraian	Jenis Semangka	
		Semangka Merah (Rp)	Semangka Kuning (Rp)
1	Biaya Tetap		
	–Penyusutan Alat	1.380.611	1.376.695
	–Sewa Lahan	1.625.000	1.625.000
	–Pajak PBB	56.667	56.667
	Total Biaya Tetap	**3.062.277**	**3.058.362,13**
2	Biaya Variabel		
	–Saprodi	3.295.422	3.058.362
	–Tenaga Kerja	4.337.252	4.093.869
	–Bensin Mesin Air	144.000	143.200
	–Sewa Mesin Air	185.464	290.642
	Total Biaya Variabel	**7.962.158**	**8.119.901**
	Total Biaya	**11.024.435**	**11.178.263**

Based on the data in Table 1, it is known that the average cost of farming red watermelons is Rp. 11,024,435/Ha, while the average cost of farming yellow watermelons is Rp. 11,178,263/Ha.

Table 2. Farming Revenues of Red Watermelon and Yellow Watermelon Per Hectare (One Planting Season).

No.	Uraian	Jenis Semangka	
		Semangka Merah	Semangka Kuning
1	Produksi (Kg)	18.290	16.711
2	Harga (Rp/Kg)	2.698	3.648
3	Penerimaan (Rp)	49.348.560	60.995.607

Based on the data in Table 2, it is known that the average income from red watermelon farming is Rp. 49,348,560/ha, while the average income for yellow watermelon farming is Rp. 60,995,607.8.

Revenue is the difference between total revenue and total production costs incurred in rupiah per year. From the results of research conducted in Telaga Jernih Village, Secanggang District, Langkat Regency, the total income of red watermelon and yellow watermelon can be seen in the following table:

Table 3. Farming Income of Red Watermelon and Yellow Watermelon per Hectare (One Planting Season).

No.	Uraian	Jenis Semangka	
		Semangka Merah	Semangka Kuning
1	Penerimaan (Rp)	49.348.560	60.995.607
2	Biaya Usahatani (Rp)	10.947.363	11.178.263
3	Pendapatan (Rp)	38.354.234	49.817.344

Based on the data in Table 3, it is known that the average income of red watermelon farming is Rp. 38,354,234/Ha, while the average income of yellow watermelon farming is Rp. 49,817,344/Ha. From these data, it is known that yellow watermelon farming has a higher income than red watermelon farming. This is due to the income of yellow watermelon farming is greater than that of red watermelon farming.

3.2 Feasibility Analysis of Red Watermelon and Yellow Watermelon Farming

One way to determine the feasibility of a business is to analyze the comparison of revenues and costs of the business, using R/C analysis. The greater the value of the R/C ratio of the farm, the greater the addition of capital or the farming is feasible to be developed in the long term. Another analysis that can be used to calculate the feasibility of farming is the B/C analysis. The results of the analysis of B/C ratio and R/C on red watermelon and yellow watermelon farming in Telaga Jernih Village, Secanggang District, Langkat Regency can be seen in the following table:

Table 4. Feasibility of Farming Red Watermelon and Yellow Watermelon per hectare.

No.	Keterangan	Semangka Merah	Semangka Kuning	Keterangan
1	B/C	3,48	4,46	Layak
2	R/C	4,48	5,46	Layak

Based on the data in Table 4, it is known that the B/C of red watermelon is 3.48>1, and the R/C value of red watermelon farming is 4.48>1, then red watermelon farming is feasible. The B/C value of yellow watermelon farming is 4.46>1 , and the R/C value of yellow watermelon farming is 5.46>1 , then yellow watermelon farming is also feasible to cultivate.

4. Conclusion

From the results of the study obtained several conclusions, including:

1. Yellow watermelon farming income on average Rp. 49,813,744 /Ha is greater than the income of red watermelon farming with an average of Rp. 38,401,197.

2. Yellow watermelon farming is more feasible to do than red watermelon farming because the B/C is 3.51 and R/C 4.51 for red watermelon and B/C 4.45 R/C 5.45 for yellow watermelon.

3. The factors of fertilizer costs and labor costs in yellow and red watermelon farming have a significant and partial effect on revenue. Meanwhile, the production cost factors

(fertilizer cost, pesticide cost, seed cost, labor cost) had a significant simultaneous effect on the acceptance of red watermelon and yellow watermelon.

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