Production cost and income analysis vegetable business “Prosperous” in the Eligibility of Andasan Ulinnorth

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ABSTRACT
Analysis of Production Costs and Income in the Makmur Sejahtera Vegetable Farming Group in North Landasan Ulin Village. Under the guidance of: Gusti Marliani, SE., ME and Haris Irawan, SE, M.Sc. Thesis for Undergraduate Development Economics Study Program, Faculty of Economics, Achmad Yani University Banjarmasin in 2022. This study aims to determine the production costs and income of the Makmur Sejahtera Vegetable Farming Group in North Landasan Ulin Village. Data collection used for direct interview techniques with respondents, namely group leaders and members of the prosperous and prosperous vegetable farming group regarding production costs. Determination of respondents is done intentionally, namely with one group leader and other members who are farming. The results showed that the total cost incurred by the Makmur Sejahtera Vegetable Farming Group was Rp.128,746,000 consisting of fixed costs and variable costs. The income obtained by the Makmur Sejahtera Vegetable Farming Group is Rp.17,029,000.

INTRODUCTION
Indonesia is a developing country with the agricultural sector as a source of livelihood for most of its people. Agriculture is the foundation of life for many people, but the more advanced industrial world has a negative impact on agriculture. There is a fundamental problem, namely the increase in the price of agricultural production facilities. While the selling price of agriculture is often not proportional to the production costs incurred, this situation occurs because of the lack of good bargaining power that occurs between people who buy and collect vegetables and farmers, which will result in the ups and downs of farmers’ incomes. Banjarbaru City is one of the cities in South Kalimantan which has one sub-district where the majority of the population is engaged in vegetable farming, namely in Liang Anggang District, North Ulin Subdistrict. Below is data on land area, types of vegetables, yields, and selling price per harvest at the Makmur Sejahtera Farming Group in North Landasan Ulin Village:

Table 1 Land Area, Types of Vegetables, Yield and Selling Price Per Harvest of Makmur Sejahtera Vegetable Farming in North Landasan Ulin Village 2022

<table>
<thead>
<tr>
<th>No</th>
<th>Land area (m²)</th>
<th>Types of Vegetables</th>
<th>Yields (kg)</th>
<th>Selling Price per harvest (Rp/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1800</td>
<td>Cayenne pepper</td>
<td>15.300</td>
<td>50.000</td>
</tr>
<tr>
<td>2</td>
<td>540</td>
<td>Mustard</td>
<td>5625</td>
<td>8.000</td>
</tr>
<tr>
<td>3</td>
<td>1100</td>
<td>Tomato</td>
<td>19.000</td>
<td>3.000</td>
</tr>
<tr>
<td>4</td>
<td>1800</td>
<td>Corn</td>
<td>22.500</td>
<td>10.000</td>
</tr>
<tr>
<td>5</td>
<td>1620</td>
<td>Long Beans</td>
<td>12.600</td>
<td>5.000</td>
</tr>
<tr>
<td>6</td>
<td>1620</td>
<td>Leek</td>
<td>13.500</td>
<td>10.000</td>
</tr>
<tr>
<td>7</td>
<td>1260</td>
<td>Big Chili</td>
<td>12.600</td>
<td>14.000</td>
</tr>
<tr>
<td>8</td>
<td>1530</td>
<td>Cucumber</td>
<td>18.000</td>
<td>2.500</td>
</tr>
<tr>
<td>9</td>
<td>1080</td>
<td>Water spinach</td>
<td>10.800</td>
<td>5.000</td>
</tr>
</tbody>
</table>

Source: Prosperous Prosperous Farming. Processed Data (2022)
The table above shows that the largest land area is 1800 m², which is planted with corn, cayenne pepper, and large chili, but these types of vegetables have a long harvest period or harvest age of about 86-96 days after planting, and types of vegetables such as mustard greens, tomatoes, corn, beans. Like long leeks, this leek has a relatively short harvest period of 25-35 days. One of the factors that can lead to a decrease in the income of the Makmur Sejahtera Vegetable Farming farmers is that land is a problem for farmers there. The land is used for housing construction, which makes the land less and less. Makmur Sejahtera Farmers also still use traditional tools to cultivate their land, which results in additional labor costs. Increasing farmers' income is a necessary condition to improving farmers' welfare. Because it is not known what factors affect the income level of vegetable farmers, this research is important to analyze the determinants of the income level of vegetable farmers in the northern Ulin village base. So, in order to make sure that the business can be run, it's important to grow vegetables.

**RESEARCH METHODS**

This research was conducted at Usahatani Makmur Sejahtera, which is located at Jalan Makmur Gang Sejahtera, North Landasan Ulin Village, Lianganggang District. Data collection was carried out for 3 months from January to March 2022. The types of data used in this study are primary data and secondary data. Primary data were collected through direct field observations and direct interviews with farmers who became respondents at the Makmur Sejahtera Vegetable Farm. Secondary data was obtained from the literature of various agencies related to research problems, such as the Central Statistics Agency, Agricultural Training Center (BPP), and other related agencies.

**Data analysis**

Data analysis is defined as the effort of data that is already available and then processed with statistics and can be used to answer the problem formulation in research with the aim of processing the data to answer the problem formulation. (Sujarweni, 2015:121)

a) Total Cost/Total Cost (TC), a technique to determine production costs using the production cost method or total cost (total cost) is the sum of fixed costs and variable costs, mathematically formulated as follows (Sadono Sukirno, 2015:211):

\[ TC = TFC + TVC \]

Where:

- TC = Total Cost
- TFC = Total Fixed (Rp)
- TVC = Total Variable Cost (Rp)

b) Total Revenue / Total Revenue (TR), In general, the calculation of total revenue (Total Revenue / TR) is the multiplication of the amount of production (Y) with the selling price (Py) and is expressed by the formula below (Rahim, 2007:165):

\[ TR = Py.Y \]

Where:

- TR = Total Revenue
- Py = Product Price
- Y = Production Quantity

c) Income, a technique to determine income using the method of income analysis. This analysis is used to determine total revenue and net income, which means gross income or total revenue minus total costs. According to Suratiyah in Yus Rahman (2016:3), income is the difference between revenue (TR) and total cost (TC) and is expressed by the formula:

\[ I = TR - TC \]

Where:

- I = Income
- TR = Total Revenue
- TC = Total Cost

d) R/C analysis, Suratiyah in Yus Rahman (2016:3), R/C is a comparison between revenue and total costs:

\[ R_C = \frac{TR}{TC} \]

Where:

- TR = The amount of revenue earned
- TC = The amount of expenses incurred

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There are three criteria in the calculation, namely:

a) If the R/C > 1 means that the farm is profitable.
b) If R/C = 1, it means that the farm is breaking even
c) If R/C < 1, it means that the farm is losing.

RESULTS AND DISCUSSION
An Analysis of the Cost and Income of Prosperous Vegetable Farming

Fixed Costs (Fixed Costs)
Fixed costs are costs that users do not run out of in one production period. Fixed costs incurred by farming Makmur Sejahtera include the cost of tools used to cultivate the land. Table 2: Prosperous and Prosperous Farming Fixed Costs

<table>
<thead>
<tr>
<th>No</th>
<th>Component</th>
<th>Total</th>
<th>Price (Rp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hoe</td>
<td>18</td>
<td>160,000</td>
</tr>
<tr>
<td>2</td>
<td>Spray Machine</td>
<td>18</td>
<td>650,000</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>14,580,000</td>
</tr>
</tbody>
</table>

Source: Primary Data. Processed (2022)

Variable Cost
Variable costs are the overall costs incurred to obtain factors of production and can change according to the number of products to be produced or costs that are easily exhausted in one production period. Variable costs incurred by prosperous farming include fertilizer costs, seed costs, pest medicine costs, and farmer's wages.

<table>
<thead>
<tr>
<th>No</th>
<th>Component</th>
<th>Unit</th>
<th>Total Price (Rp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fertilizer Cost</td>
<td>Rp/Kg</td>
<td>8,260,000</td>
</tr>
<tr>
<td>2</td>
<td>Seed Cost</td>
<td>Rp/Kg</td>
<td>31,758,000</td>
</tr>
<tr>
<td>3</td>
<td>Pest Medicine Cost</td>
<td>Rp</td>
<td>7,200,000</td>
</tr>
<tr>
<td>4</td>
<td>Fuel Cost</td>
<td>Rp/L</td>
<td>648,000</td>
</tr>
<tr>
<td>4</td>
<td>Labor costs</td>
<td>Rp/Hk</td>
<td>66,300,000</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>114,166,000</td>
</tr>
</tbody>
</table>

Source: Primary Data. Processed (2022)

Total Cost
Total costs are all production costs incurred during production or all production costs incurred total costs obtained from fixed costs and variable / variable costs.

<table>
<thead>
<tr>
<th>No</th>
<th>Keterangan</th>
<th>Total Biaya (Rp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Fixed Cost</td>
<td>14,580,000</td>
</tr>
<tr>
<td>2</td>
<td>Total Variable Cost</td>
<td>114,166,000</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>128,746,000</td>
</tr>
</tbody>
</table>

Source: Primary Data. Processed (2022)

The following can be calculated using the following calculation formula:

\[
TC = TFC + TVC
\]

\[
TC = 14,580,000 + 114,166,000 = 128,746,000
\]

The total cost incurred by Usahatani Makmur Sejahtera during one production period is Rp.128,746,000.
Revenue is the product of the price and quantity of the number of products produced by the company in a certain period of time. This shows that the size of the revenue will depend on the high and low prices prevailing at the time of selling the product.

Table 5 Selling price for one harvest

<table>
<thead>
<tr>
<th>No</th>
<th>Land area (m²)</th>
<th>Types of Vegetables</th>
<th>Yields (kg)</th>
<th>Selling Price per Harvest (Rp/kg)</th>
<th>Total Receipt (Rp/Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>236</td>
<td>Mustard</td>
<td>1500</td>
<td>8.000</td>
<td>12.000.000</td>
</tr>
<tr>
<td>2</td>
<td>281</td>
<td>Cayenne pepper</td>
<td>600</td>
<td>50.000</td>
<td>30.000.000</td>
</tr>
<tr>
<td>3</td>
<td>163</td>
<td>Tomato</td>
<td>4500</td>
<td>5.000</td>
<td>22.500.000</td>
</tr>
<tr>
<td>4</td>
<td>66</td>
<td>Corn</td>
<td>1050</td>
<td>8.000</td>
<td>8.400.000</td>
</tr>
<tr>
<td>5</td>
<td>146</td>
<td>Long beans</td>
<td>2100</td>
<td>5.000</td>
<td>10.500.000</td>
</tr>
<tr>
<td>6</td>
<td>1000</td>
<td>Leek</td>
<td>750</td>
<td>30.000</td>
<td>22.500.000</td>
</tr>
<tr>
<td>7</td>
<td>260</td>
<td>Big Chili</td>
<td>650</td>
<td>30.000</td>
<td>19.500.000</td>
</tr>
<tr>
<td>8</td>
<td>92</td>
<td>Cucumber</td>
<td>4950</td>
<td>2.500</td>
<td>12.375.000</td>
</tr>
<tr>
<td>9</td>
<td>91</td>
<td>Water spinach</td>
<td>1000</td>
<td>8.000</td>
<td>8.000.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>145.775.000</strong></td>
</tr>
</tbody>
</table>

Source: Primary Data. Processed (2022)

Here is the calculation of Revenue;

\[
TR = P \times Q
\]

\[
P = \text{Product Price (Selling Price Per Harvest (Rp/Kg))}
\]

\[
Q = \text{Number of Products (Yield (Kg))}
\]

\[
TR_{\text{Mustard}} = \text{Rp. 8.000} \times 1.500 \text{ Kg} = \text{Rp. 12.000.000/Kg}
\]

\[
TR_{\text{Cayenne pepper}} = \text{Rp. 50.000} \times 600 \text{ Kg} = \text{Rp. 30.000.000/Kg}
\]

\[
TR_{\text{Tomato}} = \text{Rp. 5.000} \times 4.500 \text{ Kg} = \text{Rp. 22.500.000/Kg}
\]

\[
TR_{\text{Corn}} = \text{Rp. 8.000} \times 1050 \text{ Kg} = \text{Rp. 8.400.000/Kg}
\]

\[
TR_{\text{Long Beans}} = \text{Rp. 5.000} \times 2100 \text{ Kg} = \text{Rp. 10.500.000/Kg}
\]

\[
TR_{\text{Leek}} = \text{Rp. 30.000} \times 750 \text{ Kg} = \text{Rp. 22.500.000/Kg}
\]

\[
TR_{\text{Big Chili}} = \text{Rp. 30.000} \times 650 \text{ Kg} = \text{Rp. 19.500.000/Kg}
\]

\[
TR_{\text{Cucumber}} = \text{Rp. 2.500} \times 4950 \text{ Kg} = \text{Rp. 12.375.000/Kg}
\]

\[
TR_{\text{Water spinach}} = \text{Rp. 8.000} \times 1000 \text{ Kg} = \text{Rp. 8.000.000}
\]

Table 5 shows Total Revenue is the Selling Price received for one production period. The cost received for one production period is Rp. 145,775,000.

Profit

Profit is the value obtained by calculating the difference between total revenue and production costs incurred during one production.

Table 6 Prosperous Prosperous Farming Benefits

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Total Difference (Rp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Receipt</td>
<td>145.775.000</td>
</tr>
<tr>
<td>2</td>
<td>Total Production Cost</td>
<td>128.746.000</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>17.029.000</strong></td>
</tr>
</tbody>
</table>

Source: Primary Data. Processed Data (2022)

The following can be calculated with the following calculations:

\[
I = TR - TC
\]

\[
I = 145.775.000 + 128.746.000
\]

\[
I = 17.029.000
\]

From the table above, it can be seen that the total income of Makmur Sejahtera Farming is Rp. 17,029,000.

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**Ratio Cost(R/C) Analysis**

Cost Ratio Analysis or comparison (Ratio between revenue and total cost)

**Table 7 Analysis of Prosperous Prosperous Farming Cost Ratio**

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Total Difference (Rp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Receipt (TR)</td>
<td>145,775,000</td>
</tr>
<tr>
<td>2</td>
<td>Total Production Cost (TC)</td>
<td>128,746,000</td>
</tr>
</tbody>
</table>


The following can be calculated with the following calculations:

\[
\frac{R}{C} = \frac{TR}{TC}
\]

\[
\frac{145.775.000}{128.746.000} = 1.132268187
\]

\[
\frac{R}{C} = 1.13
\]

The R/C value of 1.13 means that the total revenue is Rp. 145,775,000 with a total production cost of Rp. 128,746,000 resulted in a comparison of 1.13. According to Soekartawi in Rahim (2007:116) this shows that the comparison results in a value above 1 (R/C analysis > 1 means that Prosperous Prosperous Vegetable Farming is profitable to cultivate.

**CONCLUSION**

Prosperous vegetable farming based on the costs incurred and the income received can be considered still profitable as long as the R/C value > 1 but if the R/C results in a number below 0.5, it can mean that the farming is profitable but the amount of profit is inadequate from the capital invested. used for the farm. This can be seen from the results of R/C = 1.13 (R/C > 1 = Favorable and a value of 0.13 indicates that the profits obtained are still small).

**REFERENCES**


BFEE. Yogyakarta


Yogyakarta


Jakarta


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