JSSEW
Journal of Sustainability, Society, and Eco-Welfare
JSSEW 1(2): 70–78
ISSN 3025-1524

Institute for Advanced Science, Social and Sustainable Future
MORALITY BEFORE KNOWLEDGE

Income analysis of cabbage farming in Kopeng village, Getasan district, Semarang regency: An effort to improve village community economies

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Received Date: May 9, 2023 Revised Date: January 12, 2024 Accepted Date: January 31, 2024

ABSTRACT
This study aims to analyze the Business Income of Cabbage Farming in Kopeng Village, Getasan District, Semarang Regency. The basic method in this study uses descriptive quantitative data collection techniques using questionnaires, interviews and observations. The sample in this study were Cabbage Farmers in Kopeng Village, Getasan District, Semarang Regency. Based on the results of the T test using the one sample test, the results of the T count were 24.407. Then it can be obtained that T count > T table, meaning that if T hcount > T table then HO is rejected, HA is accepted. So the hypothesis in this study can be concluded that cabbage farming in Kopeng Village, Getasan District, Semarang Regency is profitable.

KEYWORDS: cabbage farming; income village community economy

1. Introduction

As it is known the broader community that Indonesia is an agricultural country which is mostly the population utilizes the sector agriculture as a livelihood they. This is caused by agriculture is one sectors that can support resources community food is so big role in quality improvement Indonesian people live. Hayati et al. (2017) stated that the sector agriculture is considered one a crucial sector of the economy potential to provide its contribution to growth and national economic development, both in terms of income and internal labour absorption public.

Indonesia is one a country that is still rely a lot on the economy in the sector agriculture. This is caused by Indonesia has a land structure good for farming with good fertility rates also, when planted with various various agricultural commodities, so the agricultural sector is the sector that can provide positive impacts and benefits for the Indonesian economy when it can be put to good use maybe (Akbar, 2017).

The agricultural sector is the primary source of livelihood forthe majority of Indonesia's population. Central Bureau of Statistics in 2017 recorded as many as 124.54 million people Work. This figure shows a higher number than the year 2016. Of the total population that work, as many as 39.68 million people work in the agricultural sector or can be represented as 31.86 per cent of the total population working (Central Bureau of Statistics, 2018). Community empowerment is a process and effort to improve skills and

Cite This Article:
Saputro, W. A. (2024). Income analysis of cabbage farming in Kopeng village, Getasan district, Semarang regency: An effort to improve village community economies. Journal of Sustainability, Society, and Eco-Welfare, 1(2), 70-78. https://doi.org/10.61511/jssew.v1i2.2024.52

power in a society that is not powerless to overcome problem faced with optimize resources and own potential.

According to Rapana and Zukfikry (2017), improving the economy has become the business and aspiration of all nations, especially Indonesia. Improvements in dealing with economic problems in Indonesia, which led to problems in the country's Development and welfare, were not achieved. In economic Development, there are three main things: Development as a process, Development as an effort to increase per capita income, and increasing per capita income must last in the long term. The main priority in social welfare is disadvantaged groups and impoverished families. In social welfare, various efforts are made to improve the quality of life, which are carried out through empowerment.

According to Damanik (2019), empowerment is a concept of transferring power through strengthening group social capital to make groups productive to achieve social welfare. Empowerment is a process in which the community takes the initiative to initiate a process of social activity to improve one's situation and condition.

Kartasamita (1996) put forward his thoughts that within the framework of empowering the community, it can be seen from three sides, namely: 1. creating a climate that allows the potential of the community developing (enabling), 2. strengthening the potential or power possessed by the community (empowering), 3. increasing the level of education and health status, as well as access to sources of economic progress, such as; capital, technology, information, employment, and markets, for that, there needs to be a unique program for people who are less powerful (protecting).

Law of the Republic of Indonesia Number 19 of 2013 states that farmer empowerment is all efforts to increase the ability of farmers to carry out better farming through education and training, counselling and assistance, Development of systems and facilities for marketing agricultural products, consolidation and guarantees of agricultural land area, convenient access to science, technology and information, as well as strengthening farmer institutions. Efforts to empower farmers are expected to be able to increase and explore potential so that it has a positive impact and benefits for farmers.

Cabbage vegetables contain fibre, vitamins, and minerals such as potassium. According to the nutritional facts described by the Indonesian food composition data, 100 grams of cabbage contains the following nutrients: Energy: 51 calories, Protein: 2.5 gr, Carbohydrates: 8 gr, Fiber: 3.4 gr, Vitamin C: 16 mg, Calcium: 100 gr, Vitamin B1: 0.4 mg, Potassium: 100 mg, Sodium: 50 mg, Vitamin B2: 0.1 mg, Niacin: 0.2 mg

Based on the background that has been described, the problems that can be formulated are:

1. Is cabbage farming in Kopeng Village, Getasan District, Semarang Regency profitable?
2. What is the income of cabbage farming in Kopeng Village, Getasan District, Semarang Regency, in one growing season?

2. Methods

Based on the frame of mind, the hypothesis in this study is as follows: It is suspected that the income of cabbage farmers in Kopeng Village, Getasan District, Semarang is profitable. Data collection methods that the authors use in this study include the following:

1. Direct interviews, namely primary data collection methods through surveys or questionnaires made by researchers.
2. Field observation, namely primary data collection by direct observation in the field to complete the data, other than those collected by questionnaires.
3. Documentation, namely methods secondary data collection obtained from the Central Bureau of Statistics (BPS) Semarang Regency, as well related agencies.

3. Results and Discussion

3.1 Hypothesis Test

To test the hypothesis that suspected of farming cabbage farmers in Getasan District, Semarang profitable to use the formula as follows:

$$\text{Thit} = \frac{\mu}{S/\sqrt{\mu}}$$

H○ : Pd ≤ 0
Ha :Pd > 0
Test criteria:
- If thit > ttable then H0 is rejected, Ha is accepted: Profitable
- If thit < ttable then H0 is accepted, Ha is rejected: Not profitable
Note: Pd: Cabbage Farming Income

3.2 Variable Cost

Table 1. Variable costs are costs used to finance factors

Number of seeds (stem)	Price (Rp)	Cost (Rp)
55.250	1.100	60.775.000
Total		60.775.000
Average		1.787.500

(Processed primary data, 2021)

Based on the table above, sample farmers in the Harum Sari Farmer Group and Table 1. The average need for cabbage seeds in Kopeng Village, Getasan District, production is flexible and can change depending on the amount of production produced.
From this study, the variables include the cost of seeds, fertilizers, pesticides, other costs and labour costs.

3.2.1 The Cost of Using Seeds

Seedlings are the most critical production factor in cabbage farming. The cost of purchasing seeds was incurred in farming in the Harum Sari Farmer Group and Mardi Santoso Farmer Group, Kopeng Village, Getasan District, Semarang Regency.

The amount of use is the full use of the 34 sample farmers in the Harum Sari Farmer Group and the Mardi Santoso Farmer Group. The full use of cabbage seeds is 55,250 stems, averaging 1,625 per farmer. The use of cabbage seeds can be detailed as follows:

The Mardi Santoso Farmer Group used 55,250 seeds with an average of 1,625 planted on land with an average area of 860.3m2 and a price per seed of Rp 1100,00. Some farmers in the Harum Sari Farmer Group and Mardi Santoso Farmer Group, Kopeng Village, Getasan District Semarang Regency is capable of producing its cabbage seeds. However, some farmers cannot produce their seeds, so they have to buy from other farmers but are still in the same farmer group or the Getasan area, Semarang.

3.2.2 Cost of Purchasing Inputs

The cost of production facilities used in cabbage farming includes buying organic fertilizer and ZA fertilizer, pesticides and other costs. The organic fertilizer used when fertilizing before and after planting is manure. The manure used in the Harum Sari Farmer Group and the Mardi Santoso Farmer Group is manure from cow dung.

3.2.2.1 Cost of Purchasing Organic Fertilizer or Manure

It is used to add nutrients to the soil so that plants can thrive. About 95% of organic fertilizers for cabbage farming in the Harum Sari Farmer Group and Mardi Santoso Farmer Group are used, and artificial fertilizers use the rest; this is done to maintain fruit quality. The purchase of fertilizer in cabbage farming can be seen in Table 2 as follows:

Table 2. Total Fertilizer purchases in the Harum Sari Farmer Group and the Mardi Santoso Farmer Group

Fertilizer Type	Total (Kg)	Prices (Rp)/kg	Cost (Rp)
Manure	17.000	500	8.500.000
Fertilizer ZA	2000	3000	6.000.000
Total Cost			14.500.000
Average			1.279.412

(Processed primary data, 2021)

Based on the table above, the manure needs of sample farmers in the Harum Sari Farmer Group and Mardi Santoso Farmer Group are 17,000 or 17 tons. On average, sample farmers use 500 kg of manure or approximately 0.5 tons per farm per year and use additional ZA fertilizer on an average of 58.82 kg per farm per year. Year. So that the costs that must be incurred per sample farmer to buy fertilizer, an average of Rp. 1,279,412,00.

3.2.2.2 Cost of Purchasing Pesticides Pesticides are Materials or Substances

Chemicals are used to kill pests in the form of plants, insects, and other animals in the farming environment. The sample farmers used plant-based pesticides to eradicate pests in the Harum Sari Farmer Group and the Mardi Santoso Farmer Group. Pests that are often in Encountered by sample farmers were mealybugs. Pest handling by sample farmers usually uses vegetable pesticides. The use of pesticides by farmers can be explained in the following table:

Table 3. Total Purchases of Pesticides by Harum Sari Farmer Group and Mardi Santoso Farmer Group

Total Types (L)	Prices (Rp)/L	Cost (Rp)
8	25.000	200.000
Average		5.900

(Processed primary data, 2021)

Based on the table above, it is obtained that the total need for pesticides used per sample farmer is 8 litres. The need for pesticides can be said to be small; this is because not all sample farmers use pesticides to eradicate pests. In this study, some sample farmers let pests attack their plants without taking preventive action.

3.2.3 Labor Costs

Labour in cultivating the land, preparing the seeds, and planting because this was done when the cabbage had yet to be planted. The use of labour can be explained in the table as follows:

Table 4. Labour costs at cabbage farming in Kopeng Village Getasan District

Types of Labor	HKO		Male labor wages (Rp)	Female labor wages (Rp)	Total cost (Rp)
	L	P			
Processing Land	58	20	100.000	100.000	7.800.000
Preparing	34	-	100.000	100.000	3.400.000
Seedling planting	61	17	100.000	100.000	7.800.000
Total					19.000.000
Average					560.000

(Processed primary data, 2021)

Based on the data from Table 18, it can be concluded that the wages of female or male workers. Land management has wages of IDR 100,000/HKO and IDR 100,000/HKO for female workers. The wage does not depend on the type of work. It only depends on the male or female. Processing this land consists of several jobs, such as hoeing and ploughing. Seed preparation is land preparation, which involves making planting holes and fertilizing before planting.

Planting is done two weeks after making the planting hole. This is done so that the soil toxins can evaporate and oxygen enters the hole. Maximum planting and organic fertilizer have decomposed perfectly. From the elaboration above, it can be concluded that the total investment costs are as follows:

Table 5. Details of the total variable costs of cabbage farming

Seeds (Rp)	Fertilizer (Rp)	Pestisida (Rp)	Cost labor (Rp)
60.775.000	14.500.000	200.000	19.000.000
Total Cost			94.475.000
Average			2.778.676

(Processed primary data, 2021)

Based on the data in Table 19, it can be concluded that the total variable cost of cabbage farming is IDR 94,475,000. The variable costs consist of seed costs of Rp.60,775,000 and fertilizer costs of Rp. 14,500,000, pesticide costs Rp. 200,000 and labour cost Rp. 19,000,000. The average variable cost per person is Rp. 2,778,676 at one time of planting with a land area of 0.860 ha.

3.2.4 Fixed Cost

Fixed costs are costs used to finance factors of production that are fixed in nature, do not change even though the production produced varies. From this study, fixed costs include land/land tax costs and equipment depreciation costs.

3.2.4.1 Cost of Land/ Land Tax

In cabbage farming in the Harum Sari Farmer Group and Mardi Santoso Farmer Group, the land is also essential because it is a medium for growing cabbage. On average, the land used by sample farmers is their land. Sample farmers pay IDR 50,000 per 1000 m2. So the expenditure of sample farmers for land taxes is as follows:

Table 6. Total equipment purchases in the Harum Sari Farmer Group and Mardi Santoso Farmer Group

Tools	Total (unit)	Cost (Rp)	Purchase (Rp)
Hoe	35	95.500	3.342.500
Sprayer	12	425.000	5.100.000
Sabit	59	25.000	1.475.000
Gembor	37	45.000	1.665.000
Total			11.582.500
Average			340.662

(Processed primary data, 2021)

Based on the table above, it can be seen that the equipment used for this cabbage farming varies. The total cost incurred for equipment was IDR 11,582,500, so that the average sample farmer spent IDR 340,662 to buy equipment for farming. The biggest cost for purchase of hoes at a price per unit of IDR 425,000.

3.2.4.2 Equipment Depreciation Costs

Depreciation or dispersion is "reduced economic value of an asset. Reduced value is usually due to wear and tear or useful life. In farming, depreciation costs need to be calculated and included in fixed costs.

Table 7. Totals fixed cost cabbage farming

Tax cost (Rp)	Amortization cost (Rp)	Total cost (Rp)	Average
1.462.500	13.622.633	15.085.133	443.680

From the data above, it can be concluded that farming expenses consist of investment costs, fixed costs and variable costs. So that the total costs that must be incurred by farmers in cabbage farming in the Harum Sari Farmer Group and Mardi Santoso Farmer Group are as follows:

Table 8. Total costs of cabbage farming

Type cost	Total (Rp)	Average
Fixed Cost	15.085.133	443.680
Variable Cost	94.475.000	2.778.356
Total Cost	109.560.133	3.222.036

(Primary data processed, 2021)

Table 9. Total income from the cabbage harvest

Production (kg)	Prices (Rp/kg)	Acceptance (Rp)	Average Acceptance (Rp)
Harvesting 1: 49.300	5000	246.500.000	7.250.000
Harvesting 2: 48.370	5000	241.850.000	7.113.300
Total			14.363.300

(Processed primary data, 2021)

3.3 Cabbage Farming Income

Cabbage is an annual plant that has a certain economic age and harvest period if it gets good care and maintenance. In addition, this cabbage is classified as a new variety of cabbage. Therefore, an analysis is needed to determine the income of cabbage farming in Kopeng Village, Getasan District, Semarang Regency. From the table above it can be seen that calculating income is by looking at the average revenue minus the total cost, with an average land area of 889 m2 in a period of 2 harvests with a period of 6 months generating income of IDR 11,141,264.

To test the hypothesis regarding farm income, the t test is used. This test is known as the one sample t test. The one sample t test is a test the difference in the mean of one sample

is useful for knowing the difference in the average value of the population used as a companion to the average of a sample.
The hypothesis to be tested is as follows:

Ho : Pd ≤ 0
Ha : Pd > 0

Note: Pd = Income from Cabbage Farming
While the test criteria are as follows:
If t-hit > t-table then H0 is rejected, Ha is accepted
If t-hit < t-table then H0 is accepted, Ha is rejected

The table in this study uses n = 34, and the 95% confidence level is 1.69726. Based on the t test using the one sample test, the t-count results are 24.407. From the results above, it is obtained that t count > t table, meaning that if t-count > t-table, then H0 is rejected, and Ha is accepted. So that the hypothesis in this study is proven, and it can be concluded that the cabbage farming carried out by the Harum Sari Farmer Group and the Mardi Santoso Farmer Group in Kopeng Village, Getasan District, Semarang Regency is profitable.

3.4 Discussion

The results of the research and analysis show that cabbage farmers in Kopeng Village, Getasan District, Semarang Regency are profitable. This is evidenced by the T test that was carried out to determine the level of income of cabbage farmers in Kopeng Village, Getasan District, Semarang Regency and the results show that cabbage farmers in Kopeng Village, Getasan District, Semarang Regency are profitable. Agriculture is the main job for the people of Kopeng Village, Getasan District, Semarang Regency. The main agriculture in Kopeng Village, Getasan District, Semarang Regency is cabbage farming. Therefore this research on cabbage income can be used as a projection of cabbage farming in Kopeng Village, Getasan District, Semarang Regency, especially for the respondents involved. Most of the people in Kopeng Village work as farmers, especially cabbage farmers. In Kopeng Village itself, there are many commodities of various vegetables. For example, I took cabbage in Kopeng Village because in Kopeng Village, cabbage has a high production value.

Some essential factors make cabbage farming profitable, which can be seen from the amount of cabbage production in 2 harvests, namely 97,670 kg. The land area is 0.860 ha. Besides that, there is a cabbage harvest of IDR 14,363,300. Then there is income, namely IDR 11,141,264 and lastly, there is a production cost of IDR 3,222.36. Therefore, this discussion shows that cabbage farming in Kopeng village, Getasan District, Semarang Regency is profitable.

4. Conclusions

The total production of Cabbage vegetables in Kopeng Village, Getasan District, Semarang Regency, in two harvests was 97,670 kg with an average land area of 0.860ha and an average cabbage price of IDR 5000/kg. The average income of cabbage farmers in 2 harvests for six months is IDR 14,363,300, while production costs are IDR 3,222,036 with an average land area of 889 m2, which can generate an income of IDR 11,141,264. Therefore, cabbage farming in Kopeng Village, Getasan District, Semarang Regency is profitable and can impact the villagers' economy. Cabbage farmers in Kopeng Village, Getasan District, Semarang Regency need to optimize their skills and knowledge in cabbage farming. They must be able to absorb innovations that benefit cabbage production to increase income in cabbage farming.

Acknowledgement

Not applicable.

Author Contribution

Conceptualization, W.A.S.; Methodology, W.A.S.; Software, W.A.S.; Validation, W.A.S.; Formal Analysis, W.A.S.; Investigations, W.A.S.; Resources, W.A.S.; Data Curation, W.A.S.; Writing – Original Draft Preparation, W.A.S.; Writing – Review & Editing, W.A.S.; Visualization, W.A.S.

Funding

This research received no external funding.

Ethical Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable.

Data Availability Statement

Not applicable.

Conflicts of Interest

The authors declare no conflict of interest.

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