

Production Management Of Sawi (Brassica Juncea L.) Farming In Waiheru Village, Ambon City

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Abstract

This research aims to determine production management of mustard greens farming. Sampling was carried out using the census method on 25 farmers. The data collected is in the form of primary and secondary data, descriptive data analysis to look at production management. The result of the research show that the production management carried out by farmers in mustard greens farming is in the form of aspect 1). Planning includes land use, use of seeds, fertilizers, pesticides, determining planting time, and sources of capital. Farming management is carried out using family labor. 2). Organization of mustard greens farming is related to the farmer's responsibility in managing business. Because the size of the business land is small, the farmer and his wife are in charge of managing it from land processing to harvest, 3). Aspects of implementation in mustard greens farming, farmers have implemented cultivation technology well, 4). Evaluation of this aspect has not been carried out properly.

Keywords: *Productivity management and importance of avt habits*

INTRODUCTION

Indonesia is one of the countries that has the largest agricultural sector as a support for the economy. The agricultural sector in Indonesia includes plantations, livestock, fisheries, forestry as well as food crops and horticulture (Indriani Septiana, 2019).

The mustard plant is a vegetable that contains quite complete nutritional substances so that when consumed it is very good for maintaining body health. The

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nutritional content of mustard greens is protein, fat, carbohydrates, Ca, P, Fe, Vitamin A, Vitamin B, and Vitamin C (Alifah, 2019).

Mustard greens production in Indonesia from 2018 to 2021 continues to increase in production numbers. However, in 2022 the number of production will decrease. as in the following table.

Table 1. Production of mustard greens in Indonesia 2018-2022

Year	Harvest area (Ha)	Production (Ton)
2018	61. 047	635. 990
2019	60. 871	652. 727
2020	63. 464	667. 473
2021	69. 626	727. 467
2022	71. 390	706. 305
Amount	326. 398	3.389.962

Source. Indonesia's central statistics agency BPS

Maluku is one of the provinces that has various types of vegetables spread throughout this thousand island province, sometimes the types and varieties differ from each other according to regional conditions. The development of mustard greens in Maluku Province cannot be separated from the increase in harvested area and production in every district/city in Maluku Province. Mustard greens production in Maluku Province continues to increase in 2018-2022. This can be seen in table 2.

Table 2. Number of mustard greens production in Maluku Province 2018-2022

Year	Harvest area (Ha)	Production (Ton)
2018	754	2.645,00
2019	767	2.705,00
2020	720	2.840,00
2021	787	3.804,00
2022	1.181	3.825,00
Amount	4. 209	15.819,00

Source :Indonesia's central statistics agency BPS



One of the city districts where people cultivate vegetable farming as a family livelihood is Ambon City. Waiheru Village is one of the villages in Ambon City where there are some people who cultivate vegetable farming as the family's main livelihood. One of the dominant vegetable commodities cultivated by the community Waiheru village is the mustard greens commodity. Farmers who have cultivated commodities for approximately 20 years. The land used for farming is rented. The average business land area is 0.036 ha with an average production of 186 kg. From a production perspective, the land area can be said to be still very small compared to national mustard production.

One effort that can be made to increase farming productivity is by carrying out good farming management. Farming management is the farmer's ability to determine, organize and coordinate the factors they control as well as possible and be able to provide agricultural production as expected by the farmer. The success of any management can be determined by the productivity of each factor and the productivity of the business. Thus, a complete introduction to the factors that are owned and the factors that can be controlled will greatly determine the success of management. According to Aldi F Yuda 2021, farming management if done correctly can increase productivity. Based on the problems above, this research was conducted

RESEARCH METHODS

This research was carried out in Waiheru Village, Ambon City, Maluku Province. This location was chosen because Waiheru Village is a village where some of the people work as mustard greens farmers. The time for conducting the research is April 2023.

The population in this study were farmers who cultivated mustard greens in Waiheru Village with a total of 25 members. The population is relatively small, so the sampling method was taken using a census method for all farmers who cultivate mustard greens.

The data collection techniques used in this research include primary data and secondary data. The analysis used to identify the first problem regarding farming production management is using a descriptive analysis method based on surveys and observations carried out in the research area.



RESULTS AND DISCUSSION**Respondent Characteristics**

The characteristics of respondents in this study include age, education, farming experience, number of family dependents and land area in Waiheru Village, Ambon City. For more details, see the table below.

Table 3. Characteristics of Respondents based on age, education, business experience, number of family dependents and land area.

Category	Number of (people)	presentation (%)
Age		
15 – 64	25	100.00
>64	0	0
Total	25	100.00
level of education		
SD	6	24.00
SMP	15	60.00
SMA	4	16.00
College	0	0
Total	25	100.00
farming experience< 10 year	9	36.00
11-20 year	16	64.00
20-30 year	0	0
>30 year	0	0
Total	25	100.00
number of family dependents 1-4	23	92.00
5-7	2	08.00
Total	25	100.00
Land area < 0,5 (narrow)	25	100.00
0,5 -2,0 (currently)	0	0
> 2.0 (wide)	0	0
Total	25	100.00

data source : Primary Data 2023, Processed



In table 3 it can be seen that the largest number of mustard greens farmers are in the 15-64 year group, this age is a productive age category where at this age the energy is still strong to run a business. This is in line with the opinion of Andiny and Kurniawan, 2017, who said that people of productive age usually have stronger physical abilities and tend to quickly accept new things and dare to take risks in business.

The most dominant education level (60%) is junior high school. According to them, education up to junior high school level is sufficient, the important thing is to be able to read and write, Sawi farming does not require high education in its management. The experience of farming mustard greens is quite long, namely 11 – 20 years, this means that experience also influences the farming business carried out and there are many lessons learned from this experience. Meanwhile, the average number of family members is 2 and is relatively small. If we look at the availability of family labor, it can be said to be limited.

The area of farming land can be said to be small because it is less than 0.5 ha. The average area of business land is 0.035 Ha, with the largest land area managed by farmers being 0.075 Ha and the smallest land area being 0.025 Ha. This means that the scale of the respondent's farming business is still relatively small. All land used by farmers is rented land.

Production Management of Mustard Vegetable Farming

(Padangaran, 2016) says Management is a process or activity of utilizing various resources available in the company by managers. According to Hernanto 1996 in Goansu 2019, farming management is the farmer's ability to determine, organize and coordinate production factors that are controlled as well as possible and are able to provide agricultural production as expected. Farm management functions carried out by mustard plant farmers in Waiheru Village include:

1. Planning

Planning is the initial activity in management, so planning needs to be done well so that other series of production activities are not hampered and can produce optimal production. The planning carried out by farmers in Waiheru Village includes procurement of seeds, sources of capital, use of labor, tools to be used, use of pesticides or fertilizers, sources of seeds, preparation of land for planting.



Table 4. Mustard greens farming planning

No	Description	Σ seed	Σ fertilizer		Σ pesticide	Σ labor
1	Land area		Manure	Urea		
	0,015	67 g	7 kg	7 kg	80 ml	2
	0,025	75 g	9 kg	9 kg	200 ml	3
	0,075	100 g	12 kg	12kg	300 ml	3

data source: Primary Data 2023, Processed

- Capital

In this research, the capital used is the farmer's own capital obtained from previously managed farming. Most farmers use this capital to finance mustard farming from land management to harvest.

2. Organizing

Organizing talks about the person who is responsible or who will carry out the farming business. In mustard vegetable farming, the person responsible is the farmer/head of the family who is also the worker and is assisted by his wife and children. In the organizing stage for mustard greens farming, starting from business planning, land processing, planting, maintenance, harvesting and marketing are all carried out by the farmer and his family.

3. Implementation

Implementation is the most crucial thing in a farming activity if you want your farming business to be successful. In the implementation, efforts will be made in accordance with the plans made. Because if not, the results will not be as expected by the farming actors.

- Land management

The land area owned by mustard greens farmers in Waiheru Village ranges from 0.015 to 0.075 ha. Land processing carried out by farmers in Waiheru Village first clears the land to be planted. Land processing is carried out by loosening and making beds for one day. The average workforce used for land processing is 1-2 people with an average of 0.016 HOK



- Seeding

The seeds used by mustard greens farmers are the result of their own breeding, by leaving some of the plants to be used as seeds. The average age of the plants for use as seeds is 70 days after planting... Before the plants are moved to the land, they are first seeded for approximately 14 days... by sowing the seeds evenly over the planting medium, then covering the seeds with a thin planting medium- thin. Spray water gently using a spray gun during the seed growth period. The mustard seedlings will be moved to the field after they are 2 weeks old, where the mustard seedlings will have 3 – 4 leaves. The average number of seeds used with an average land area of 0.035 is 10 grams

- Planting

Based on research results, the way to plant mustard greens in Waiheru Village is by planting mustard seedlings that have been sown in prepared beds. Plant spacing between plants is 15 x 20 cm. with 2 to 3 workers used for 1 or 2 days. With an average working day of 1.43 HOK.

- Maintenance

Farmers in Waiheru Village always pay attention to the maintenance process, watering, cleaning weeds, fertilizing, controlling pests and diseases. Watering is done in the morning and evening with 1 person working. The average time used for watering is 0.5 hours per day. Watering is carried out for 30 days until the plants are harvested. The first fertilization is carried out by farmers when the plants are 5-7 after planting by applying manure or urea. How to fertilize by using urea fertilizer dissolved in water. And follow-up fertilization is carried out at 2 weeks of age. With a workforce of 1 person used for 1 day. Pest and disease control is carried out if you see signs of a plant being attacked by pests and then treatment is carried out. Pests that often attack mustard greens are leaf caterpillars. The type of pesticide used is diazinon by spraying pesticide on mustard greens. Pesticides are applied by 2 mustard farmers. times during the planting process. Harvesting is done when the mustard plants are 30 days after planting

4. Monitoring or Evaluation

The following management stages are Controlling or Evaluation. At this stage, farmers have not done it, because if the production results do not match what they expected, farmers do not evaluate the cause of the low production they produce. Farmers only plant and when the time for harvest has arrived, the results they obtain are what they receive and do not see whether low or high production as expected or not.



Production, costs and selling prices of mustard greens

Production Quantity Production is an activity to increase benefits by combining production factors; land labor, capital and management. Mustard production produced by farmers varies, ranging from 100 kg to 250 kg for an average land area of 0.035 ha.

The costs incurred in managing mustard greens farming consist of fixed costs of IDR 191,565 which are allocated for land rental costs and equipment depreciation. for variable costs of Rp. 389,400 per planting season for seed, farmyard fertilizer, chemical fertilizer and pesticides. . The average selling price at the farmer level is IDR 6000/kg

Management is said to be good if what is produced is in accordance with what was planned. The research results show that the largest production with a land area of 0.07 ha is 250 kg, when compared with national production for a land area of this size, the production that must be produced is 149 kg. This means that the production carried out by farmers is more than national production. This means that the management carried out by farmers is good.

CONCLUSION

From the analysis carried out on mustard greens farming in Waiheru Village, it can be concluded that:

1. Farming production management in Waiheru Village, Ambon City is good if you look at the production produced. Management carried out includes - 1) Planning. Things to pay attention to in planning production facilities include procurement of seeds, use of seeds, fertilizers, pesticides, determining planting times and sources of capital. 2) Organizing, namely the person responsible or who will carry out the farming business, namely the head of the family and his family. 3) Implementation consisting of seeding, land processing, seeding, planting, maintenance, fertilization, pest control and harvest. 4) Supervision at the research location has not been carried out, where farmers only look at their harvest results without checking whether the harvest results are in accordance with what was planned or not.

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