Implikasi: Jurnal Manajemen Sumber Daya Manusia
Vol. 1, No. 2, December 2023, pp. 95~103
ISSN: 2988-3032, DOI: https://doi.org/10.56457/implikasi.v1i2.457

COMPARATIVE STUDY OF OYSTER MUSHROOM AND OYSTER MUSHROOM INCOME CORN COB MUSHROOM IN MATARAM CITY

[1]I Wayan Agus Suardana, [2*]Herdiana, [3]Nurlailah Mappanganro
[1,2]Program Studi Agribisnis, Fakultas Pertanian Universitas Islam Al-Azhar Mataram, Nusa Tenggara Barat, Indonesia
[3]Program Studi Agroekoteknologi Fakultas PertanianUniversitas Islam Al-Azhar Mataram, Nusa Tenggara Barat, Indonesia
*Email: herdi4n40803@gmail.com

Article Info

Article history:

Received November 3, 2023
Revised November 30, 2023
Accepted December 3, 2023

Keywords:

Production Costs, Revenue, Income

ABSTRACT

This research aims to analyze the differences in farming oyster mushrooms and corncob mushrooms, how much the comparison of income affects the income level of oyster mushroom and corncob mushroom farmers in the city of Mataram and to find out the obstacles in farming oyster mushrooms and corncob mushrooms. Determining the location in this research was carried out using purposive sampling, meaning that sampling was carried out deliberately. The research location is in Mataram City, namely in six sub-districts, namely Mataram District, Ampenan District, Sekarbela District, Selaparang District, Cakranegara District, and Sandubaya District. Determining respondents was carried out using the census method, namely taking respondents as a whole. The respondents in this research were oyster mushroom and corncob mushroom farmers spread across six sub-districts. The research results show: firstly, the average production of oyster mushrooms is 1,650 kilograms per 100 m2 per year, which is greater than the average production of corn weevil mushrooms of 830 kilograms per 100 m2. The average production cost of oyster mushroom farming is IDR. 11,533,100,- per 100 m2 per year, which is greater than the average production cost of corn weevil mushrooms, which is Rp. 10,434,641,- per 100 m2 per year. Second, the average income in oyster mushroom farming is IDR. 21,466,900,- per 100 m2 per year, greater than the income from corn weevil mushroom farming, namely Rp. 18,615,359,-per 100 m2, meaning that the income from oyster mushroom farming is greater than the income from corn cob mushroom farming for 1 year. Third, the obstacles faced in carrying out oyster mushroom farming and corn cob mushroom farming are the same as experiencing difficulties in obtaining raw materials, having little capital, limited land, and cheap labor that is difficult to obtain in urban areas.

Corresponding Author:

Herdiana
Universitas Al-Azhar, Mataram, Indonesia
Email: herdi4n40803@gmail.com

INTRODUCTION

Indonesia has a wealth of natural resources and abundant biodiversity. Apart from that, Indonesia is also known as an agricultural country. One of the reasons Indonesia is considered an agricultural country is because the agricultural sector is one of the leading sectors in the economy.

Agriculture is a business activity that includes the cultivation of food commodities, horticulture, plantations, fisheries, forestry and animal husbandry (Natalia and Madiono, 2013).

Horticultural commodities are commodities that have a relatively bright future. According to Soekartawi (2006), horticultural commodities continue to be developed so that farmers' income can be increased. Another benefit of developing horticulture, apart from increasing farmers' income, is also to meet the need for vitamins and minerals obtained from horticulture. One of the horticultural commodities that is being cultivated is oyster mushrooms. Horticultural commodity farming has an important role in development in West Nusa Tenggara. On the one hand, the production of horticultural commodities is useful for meeting the population's food needs as a source of vitamins and minerals. On the other hand, people can earn income by cultivating horticultural commodities, especially oyster mushrooms, which are just starting to grow in West Nusa Tenggara. developed and sought to become a source of permanent family economic income (NTB Central Statistics Agency, 2015). The agricultural sector has an important role in the national economy, because businesses in the agricultural sector are very promising businesses, such as the ant sugar business which is increasingly promising (Zuhda H, et al, 2023).

Mushrooms are a food ingredient that is becoming increasingly popular among people because they contain high nutrition. Mushrooms are also an alternative food for vegetarians that have high nutritional content. The high carbohydrate and protein content means that mushrooms can be developed as a source to meet food sufficiency.

Based on the background above, the formulation of the problem to be studied in this research is:

1. How do oyster mushroom and corn cob mushroom farming compare in the city of Mataram?
2. What is the comparison between the income of oyster mushrooms and corn cob mushrooms in the city of Mataram?
3. What obstacles do oyster mushroom and corn cob mushroom farmers face in the city of Mataram?

The research aims to analyze the differences between farming oyster mushrooms and corncob mushrooms and to find out the comparison of the income of oyster mushroom and corncob mushroom farmers and to find out the obstacles faced in farming oyster mushrooms and corncob mushrooms in the city of Mataram.

The expected benefits of this research are as information and consideration for farmers and interested parties in choosing which oyster mushroom or corncob mushroom farming will be developed.

METHOD

This research uses a descriptive method, namely a method that aims to solve current problems by collecting, compiling, explaining, analyzing and interpreting data and then drawing conclusions. Data collection was carried out using survey techniques, namely data collection using interview techniques and direct observation in the research area based on a list of questions or questionnaires (Sunyoto, 2013). There are two types of data sources in this research, namely primary data and secondary data. Primary data is data obtained directly from respondents using interview techniques guided by a list of questions that have been prepared previously. Meanwhile, secondary data is data obtained from agencies related to this research, or quoted from several other supporting literature.

Determining the location in this research was carried out using purposive sampling, meaning that sampling was carried out deliberately. The research location is in Mataram City, namely in 6 sub-districts. Mataram City consists of 6 sub-districts, namely Mataram District, Ampenan District, Sekarbela District, Selaparang District, Cakranegara District, and Sandubaya District which are places for cultivating oyster mushrooms and corncob mushrooms. The respondents in this research were oyster mushroom and corncob mushroom farmers spread across 6 sub-districts. At the research location, respondents were determined using the census method, namely taking respondents as a whole (Arikunto, 2010). This research uses data sources in the form of primary data and secondary data. Data collection was carried out through literature study and interviews. Literature study is carried out by collecting data and information that is relevant to the problem to be studied, namely literature and other library materials such as articles, journals, books and previous research.

Meanwhile, direct interviews were carried out in a structured manner using a questionnaire with farmers farming oyster mushrooms and corncob mushrooms.

Data collected through research are farmer characteristics (gender, age, education level, number of family dependents and area of cultivated land) and farming costs for oyster mushrooms and corn cob mushrooms in the city of Mataram. The outcome variables measured in this research are farming costs, amount of production, income and profit of mushroom farming business.

1. To find out the amount of costs incurred, it is calculated using the formula:
   TC = TVC + TFC
   Information:
   T.C = Total Costs Incurred
   TVC = Total Variable Costs Incurred
   TFC = Total Fixed Costs Which Issued

2. To find out total income, it is calculated using the formula:

   I = TR –TC
   Information:
   I : Farming Income (Rp)
   TR : Total Revenue/Production Value (Rp)
   T.C : Total Expenditures/Costs (Rp).

RESULTS AND DISCUSSION

A. Respondent Characteristics

Table 1. Characteristics of Oyster Mushroom Farmers by Age in Mataram City in 2023

No.	Age (Year)	Number of people)	Percentage (%)
1	≤30	1	6
2	31-40	7	41
3	41-50	7	41
4	51-60	2	12
Amount		17	100

Source: Processed Primary Data, 2023

Table 2. Characteristics of Corn Weevil mushroom farmers based on Age in Mataram City in 2023

No.	Age (Year)	Amount (Person)	Percentage (%)
1	≤ 30	0	0
2	31-40	4	31
3	41-50	7	54
4	51-60	2	15
Amount		13	100

Source: Processed Primary Data, 2023

Tables 1 and 2 above show that the average age of respondents is 31-60 years. This describes the productive age.

Table 3. Number of dependents of Oyster Mushroom farming families in the city of Mataram

No.	Dependents (Person)	Amount (Person)	Percentage (%)
1	0 – 2	15	88.24
2	3-5	2	11.76
	Amount	17	100

Source: Processed Primary Data, 2023

Table 4. Number of dependents of corn cob mushroom farming families in the city of Mataram in 2023

No.	Dependents (Person)	Number of people)	Percentage (%)
1	0 – 2	11	84.61
2	3-5	2	15.39
	Amount	13	100

Source: Processed Primary Data, 2023

Tables 3 and 4 show that the majority of oyster mushroom farmers and corncob mushroom farmers in Mataram City belong to small families (1-2 people).

Table 5. Education level of oyster mushroom farmers in the city of Mataram in 2023

No.	Level of education	Amount (Person)	Percentage (%)
1	No school	0	0
2	elementary school	0	0
3	junior high school	0	0
4	high school	15	88.24
5	Bachelor	2	11.76
	Amount	17	100

Source: Processed Primary Data, 2023

Table 6. Education level of corn cob mushroom farmers in the city of Mataram in 2023

No.	Level Education	Amount (Person)	Percentage (%)
1	No school	0	0
2	elementary school	0	0
3	junior high school	2	15.37
4	high school	10	76.92
5	Bachelor	1	7.69
	Amount	13	100

Source: Processed Primary Data, 2023

Tables 5 and 6 show the level of education which is dominated by high school, indicating that oyster mushroom and corncob mushroom farmers are farmers who have knowledge and skills in applying mushroom cultivation technology (professional) (Soekartawi, 2006).

Table 7. Farming experience of Oyster Mushroom farmers in the city of Mataram in 2023.

No.	Experience Farming (years)	Amount (Person)	Percentage (%)
1	1-5	15	88
2	5-10	2	12
3	>10	0	0
	Amount	17	100

Source: Processed Primary Data, 2023

Table 8. Farming experience of Corn Weevil Mushroom farmers in the city of Mataram in 2023.

No.	Experience Farming (years)	Amount (Person)	Percentage (%)
1	1-5	10	76.92
2	5-10	3	23.08
3	>10	0	0
	Amount	13	100

Source: Processed Primary Data, 2023

Tables 7 and 8 show that the respondents have experience in running their farming business. The longer a farmer's experience, the relatively better they are at managing their farming business to understand and apply new technology in the agricultural sector.

B. Cost and Income Analysis of Oyster Mushroom and Corn Weevil Farming

The production costs referred to in this research are the total costs incurred by the farming business during the production process in the farming business (Zulfiana, I. et al. 2023).

Production cost

Table 9. Average Cost of Production Facilities Per 100 m2 in Oyster Mushroom Farming in Mataram City in 2023

	Description	Unit Price (Rp)	Quantity (Pieces)	Total Value (Rp)
.	Raw Material Costs			
	Purchasing baglog ready to harvest	3,000	3000	9,000,000
	Amount			9,000,000

Source: Processed Primary Data, 2023

Table 10. Average Cost of Production Facilities Per 100 m2 in Corncob Mushroom Farming in Mataram City in 2023

	Description	**Physical Units**	**Amount**	**Value (Rp)**
.	**Raw Material Costs**			
	Corn cob	Bag	240	2,400,000
	Yeast tape	Wrap	240	2,560,000
	Bran	Kg	480	1,680,000
	Urea	Kg	200	1,200,000
	Decomposer/POC	Liter	8	560,000
	Amount			**8,400,000**

Source: Processed Primary Data, 2023

From tables 9 and 10 it shows that the average price value used is that the fixed costs for oyster mushroom farming per 100 m2 are Rp. 8,400,000,-.

Labor

Table 11. Average Labor Costs in Oyster Mushroom Farming Per 100 m2 Production in Mataram City in 2023

No.	Type of activity	Number of Workers (HKO)			Total Wages (Rp)
		TKDK	TKLK	Total	
1	Move baglog	3	-	3	600,000
2	Sprinkling	3	-	3	375,000
3	Harvest Mold	3	-	3	523,500
Total		9	-	9	1,498,500

Source: Processed Primary Data, 2023

Table 12. Average Labor Costs in Corncob Mushroom Farming Per 100 m2 in Mataram City in 2023

No.	Type of activity	Number of Workers (HKO)			Total Wages (Rp)
		TKDK	TKLK	Total	
1	Mixing	8	-	8	200,000
2	Sprinkling	8	-	8	200,000
3	Harvest Mushrooms	8	-	8	800,000
	Total	24	-	24	1,200,000

Source: Processed Primary Data, 2023

In the table above, the use of Family Labor (TKDK) for 1 year in oyster mushroom farming is IDR. 1,498,500 per m2, and the use of Family Labor (TKDK) for 1 year in corn weevil mushroom farming of Rp. 1,200,000,- per m2.

Tool Depreciation

Table 13. Average fixed costs (equipment depreciation costs) for Oyster Mushroom Farming in Mataram City in 2023

No.	Type Tool	Quantity (Pieces)	Value (Rp)
a.	Kumbung	1	303.103
b.	Basket	2	4,133
c.	Scales	1	8,221
d.	Tarp	3	62,176
e.	Water hose	1	3,700
f.	Bucket	1	10,667
	Amount	**9**	**392,000**

Source: Processed Primary Data, 2023

Table 14. Average fixed costs (equipment depreciation costs) for corn cob mushroom farming in Mataram City in 2023

No.	Type Tool	Quantity (Pieces)	Value (Rp)
a.	Kumbung	1	106,844
b.	Scales	1	8,221
c.	Tarp	3	62,176
d.	Bucket	1	10,667
e.	Basket	1	4,133
	Amount	**7**	**192,041**

Source: Processed Primary Data, 2023

Based on tables 13 and 14 above, it can be seen that the average cost of equipment depreciation for oyster mushroom cultivation is IDR. 392,000,- for an area of 100 m2 for 1 year. And the average cost of equipment depreciation for cultivating corn weevil mushrooms is IDR. 192,041,- for an area of 100 m2 for 1 year.

Total cost

Table 15. Average Total Production Costs for Oyster Mushroom Farming per 100 m2 in Mataram City in 2023

NO	Fee Type	Amount of fees (Rp)
1	Variable Costs	
	a. Purchase of 9,000 baglogs	9,000,000,-
	b. Labor	1,498,500,-
	Subtotal 1 (a)	10,498,500,-
2	Fixed cost	
	a. Land lease	396..000.-
	b. Electricity cost	246,600,-
	c. Tool depreciation	392,000,-
	Subtotal 2 (b)	1,034,600,-
	total cost (a) +(b)	11,533,100,-

Source: Processed Primary Data, 2023

Table 16 Average Production Costs of Corncob Mushroom Farming per 100 m2 in Mataram City in 2023

NO	Fee Type	Amount of fees (Rp)
1	Variable Costs	
	a. Production costs	8,400,000,-
	b. Labor	1,200,000,-
	Subtotal 1 (a)	9,600,000,-
2	Fixed cost	
	a. Land lease	396,000,-
	b. Electricity cost	246,600,-

	c. Tool depreciation	192,041,-
	Subtotal 2 (b)	834,641,-
	total cost (a) +(b)	10,434,641,-

Source: Processed Primary Data, 2023

Based on the table above, it can be seen that the average total cost of cultivating oyster mushrooms is IDR. 11,533,100,- for an area of 100 m2 for 1 year. And the average cost of equipment depreciation for cultivating corn weevil mushrooms is IDR. 10,434,641,- for an area of 100 m2 for 1 year.

Production and Reception

Table 17. Average Production and Revenue from Oyster Mushroom Farming in Mataram City in 2023

Harvest Frequency	Quantity (Kg)	Price (Rp/Kg)	Revenue (Rp)
1st Quarter	510	20,000	10,200,000
2nd Quarter	550	20,000	11,000,000
3rd Quarter	590	20,000	11,800,000
Total	1,650		33,000,000

Source: Processed Primary Data, 2023

Table 18. Average Production and Income from Corn Cob Mushroom Farming in Mataram City in 2023

Harvest Frequency	Quantity (Kg)	Price(Rp/Kg)	Revenue (Rp)
1st harvest	95	35,000	3,325,000
2nd harvest	105	35,000	3,675,000
3rd harvest	110	35,000	3,850,000
4th harvest	115	35,000	4,025,000
5th harvest	95	35,000	3,325,000
6th harvest	110	35,000	3,850,000
7th harvest	100	35,000	3,500,000
8th harvest	100	35,000	3,500,000
Total	830		29,050,000

Source: Processed Primary Data, 2023

Based on tables 17 and 18, it shows that the average production of oyster mushrooms in 1 year in Mataram City is 1,650 kg. The price for fresh oyster mushrooms at the farmer level is Rp. 20,000,-/Kg so that the average income of oyster mushroom farmers in 1 year is IDR 33,000,000,- while the average yield of corn cob mushroom production in 1 year in Mataram City is 830 Kg with a price of IDR 35,000,- /Kg so that the average total income of corn weevil farmers in 1 year is Rp. 29,050,000,- .

Income

Table 19. Average Oyster Mushroom Farming Income in Mataram City in 2023

No	Description	Amount
1	Production (Kg)	1,650
2	Price (Rp/Kg)	20,000
3	Reception	33,000,000
4	Production cost	
	a. Variable Costs	10,498,500
	b. Fixed cost	1,034,600
	Total cost	11,533,100
5	Income	21,466,900

Source: Processed Primary Data, 2023

Table 20. Average Corn Hemp Mushroom Farming Income in Mataram City in 2023

0	Description	Amount
1	Production (Kg)	830

2	Price (Rp/Kg)	35,000
3	Reception	29,050,000
4	Production cost	
	a. Variable Costs	9,600,000
	b. Fixed cost	834,641
	Total cost	10,434,641
5	Income	18,615,359

Source: Processed Primary Data, 2023

Based on tables 19 and 20, it shows the average income after receipts are deducted from the total costs incurred in oyster mushroom farming, so the average income from oyster mushroom farming is IDR. 21,466,900,- per 100 m2 per year. Meanwhile, the average income after receipts are deducted from the total costs incurred in farming corn weevil mushrooms, the average income from farming corn weevil mushrooms is IDR. 18,615,359,- per 100 m2 per year.

7). Comparison of Costs, Receipts and Income from Oyster Mushroom Farming and Corn Head Mushrooms in Mataram City in 2023

Table 21. Comparison of Costs and Income of Oyster Mushroom and Corncob Mushroom Farming in Mataram City in 2023

No.	Description	Farming Commodities		Difference
		Oyster Mushrooms (Rp)	Tamur Corn Cobs(Rp)	
1	Production cost	11,533,100	10,434,641	1,098,459
2	Production Value	33,000,000	29,050,000	3,950,000
3	Income	21,466,900	18,615,359	2,851,541

Source: Processed Primary Data, 2023

Table 21 shows the average difference between the production value of oyster mushroom farming and corn cob mushroom farming of IDR. 3,950,000 per 100 m2 per year. The average cost difference between oyster mushroom farming and corncob mushroom farming is Rp. 1,098,459 per 100 m2. The average difference in income between oyster mushroom farming and corn cob mushroom farming is IDR. 2,851,541 per 100 m2 per year. The differences in farmers' costs and income are caused by differences in average production, total production costs and production value. The higher the amount of production, the higher the income received by farmers.

Obstacles encountered.

Table 22. Obstacles faced by Oyster Mushroom farmers in the city of Mataram in 2023

No.	Constraint Type	Number of Respondents (Person)	Percentage (%)
1	Raw material	17	100
2	Capital	10	58.82
3	Land	17	100
4	Labor	6	35.29

Source: Processed Primary Data, 2023

Based on table 4.23, it is known that among the 17 oyster mushroom farmer respondents who were interviewed, the obstacles most often faced were raw materials that were difficult to obtain, such as sawdust which was obtained outside the city and limited land for cultivating mushrooms because the farming carried out was in The average yard space in the city of Mataram is narrow, namely 17 people (100%). Furthermore, there were 10 people (58.82%) farmers who had problems accessing capital sources due to the lack of collateral and 6 people (35.29%) farmers who had problems getting cheap labor.

Table 22. Obstacles faced by Corn Weevil Mushroom farmers in the city of Mataram in 2023

No.	Constraint Type	Number of Respondents (People)	Percentage (%)
1	Raw material	13	100
2	Capital	6	46.15
3	Land	13	100
4	Labor	4	30.76

Source: Processed Primary Data, 2023

Based on table 4.24, it is known that as many as 13 people (100%) of the corn cob mushroom respondent farmers who were interviewed, the obstacles most often faced were raw material constraints such as corn cobs which were available seasonally and imported from outside the city as well as land constraints which all the respondent farmers had on land. Cultivation is carried out in limited yard land. Furthermore, there are 6 people (46.15%) farmers who have problems accessing capital due to the lack of collateral and 4 people (30.76%) farmers who have problems getting daily labor, especially for harvesting labor.

CONCLUSION

Based on the results of research and discussion, the following conclusions can be drawn:

1. The average production of oyster mushrooms is 1,650 kilograms per 100 m2 per year, which is greater than the average production of corn weevil mushrooms of 830 kilograms per 100 m2. The average production cost of oyster mushroom farming is IDR. 11,533,100,- per 100 m2 per year, which is greater than the average production cost of corn weevil mushrooms, which is Rp. 10,434,641,- per 100 m2 per year.
2. The average income in oyster mushroom farming is IDR. 21,466,900,- per 100 m2 per year, greater than the income from corn weevil mushroom farming, namely Rp. 18,615,359,-per 100 m2, meaning that the income from oyster mushroom farming is greater than the income from corn cob mushroom farming for 1 year.
3. The obstacles faced in carrying out oyster mushroom farming and corn cob mushroom farming include difficulties in obtaining raw materials, limited land, capital and cheap labor which are difficult to obtain in urban areas.

REFERENCES

Arikunto, S. 2010. Prosedeur Penelitian. Jakarta: Rineka Cipta.

Badan Pusat Statistik Nusa Tenggara Barat. 2015. *Produksi Tanaman Hortikultura.*

Natalia, MS, Eddy Madiono. 2013. *Pengelolaan dan Pengembangan Usaha Hortikultura pada PT*. *Horti Bima International*. *Agora* 1 1-9.

Zuhda, H., Herdiana, H., & Novida, S. (2023). Analisis Efisiensi Pemasaran Gula Semut Di Kecamatan Lingsar Kabupaten Lombok Barat. *Teknosains: Media Informasi Sains dan Teknologi*, *17*(1), 54-59.

Sunyoto, D. 2013. Metode *Dan Instrumen Penelitian Ekonomi dan Bisnis*. Yogyakarta. CAPS.

Zulfiana, I., Muhsin, M., & Mappanganro, N. (2023). Perbandingan Pendapatan Usahatani Kangkung Varietas Nona Dengan Usahatani Kangkung Varietas Aini Di Kecamatan Narmada Kabupaten Lombok Barat. *Teknosains: Media Informasi Sains dan Teknologi*, *17*(1), 60-66.