

ANALYSIS OF PRODUCTION COSTS AND INCOME OF OYSTER MUSHROOM (*Pleurotus ostreatus*) BAGLOG

Siska Yulianita Lubis¹, Faisal Azhari Baldan Panjaitan², Nurhayati³, Shampazuraini Samsuri⁴

Program studi Agribisnis, Universitas Alwashliyah Medan,

Program Studi Agroteknologi Universitas Islam Sumatera Utara

Fakultas Perkebunan dan Agroteknologi, Universitas Teknologi MARA, 77300 Merlimau Melaka, Malaysia

Jl. Sisingamangaraja Km 5,5 N0.10 Medan, Indonesia

Email : siskayulianita85@gmail.com

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Abstract

The purpose of this study was to calculate the production costs of oyster mushroom baglogs and the income of oyster mushroom baglog businesses in Deli Serdang. This study was conducted in Deli Serdang from March to June 2023. This study used a purposive sampling method. The data for this study were taken through observation and interviews with respondents who were oyster mushroom baglog farmers. Analysis of production cost data, amount of income and income results are: production costs incurred by oyster mushroom baglog farmers amounting to IDR 5,266,109, income of IDR 9,900,000 and income of IDR 4,633,109

Keywords: *oyster mushroom baglog, production effort, income*

INTRODUCTION

In Indonesia, mushrooms began to be recognized and cultivated in the 1950s. Edible mushrooms, often known as mushrooms, are a popular source of protein. On an industrial or semi-industrial scale, there are approximately ten types of edible mushrooms that are often cultivated. In order of cultivation, the most widely cultivated are button mushrooms (*Agaricus bisporus*), shiitake mushrooms (*Lentinus edodes*), enokitake mushrooms (*Flammulina velutipes*), straw mushrooms (*Volvariella volvacea*), and oyster mushrooms (*Pleurotus* sp) (Sumarsih, 2010). Oyster mushrooms are a fairly popular type of mushroom that is widely cultivated and consumed by people in Indonesia. According to historical records, oyster mushrooms have been cultivated in China since 1000 years ago, while in Indonesia, cultivation began in 1980 in Wonosobo. The agricultural sector in Indonesia has always been a top priority. This is due to the large population employed in the sector, coupled with favorable climatic conditions and ample agricultural land potential, as well as the diversity of food crops that have been developed into economically valuable commodities, one of which is the white oyster mushroom. Oyster mushrooms have long been known as a plant-based food with high nutritional value. Some types of mushrooms have medicinal properties, which have been known in mainland China for 300 years and have spread to several other countries in Asia, Europe, and even the Americas.

In North Sumatra Province, mushroom production has not been particularly developed. Only a few regions produce mushrooms for food consumption. These areas include Tanah Karo, Binjai, Tebing Tinggi, Deli Serdang, and Asahan (BPS North Sumatra 2014). In Deli Serdang, oyster mushrooms are becoming more widely known among the public. Although they are a delicious and highly nutritious food, most people consider them a secondary need. However, marketing remains a major obstacle to the development of the white oyster mushroom business. This is due to the product's perishable nature and the presence of local competitors, which intensifies competition in product marketing. The oyster mushroom agro-industry offers significant potential because it is not dependent on seasonal conditions, does not require extensive land, and can be cultivated on a small scale. In oyster mushroom cultivation, one of the most important basic factors is the growing substrate, also known as baglog. If baglog farmers are able to meet

the needs of oyster mushroom entrepreneurs, a harmonious cooperative relationship will develop between the two parties. In addition to partnerships, some baglog entrepreneurs also cultivate mushrooms for dual-purpose profit (Fuad Balatif et al., 2023). Cultivating oyster mushrooms has significantly impacted entrepreneurs. Their income has increased. However, it is currently unknown which type of production, baglogs, or oyster mushrooms, generates the highest income (Mufriah et al., 2022). Comparative analysis of baglog and oyster mushroom income is crucial to determine which type of production is more profitable for oyster mushroom entrepreneurs. This study will also identify which type of production provides the greatest contribution, which can serve as a reference for future agribusiness development by farmers/entrepreneurs (Fuad Balatif, 2023).

RESEARCH METHODOLOGY

This research was conducted from March to June 2023, with the research location in Deli Serdang Regency, North Sumatra Province.

Method of collecting data

There are two general types of data: qualitative data, which uses words and is verbal. Qualitative data can be obtained through interviews. Quantitative data is data or information obtained in numerical form. In this numerical format, quantitative data can be processed using mathematical formulas or analyzed using statistical systems.

Data Analysis Methods

The data analysis method used by the author is quantitative descriptive analysis, where the author not only processes and presents the data but also performs quantitative analysis. This aims to describe the farming costs and income of oyster mushroom baglogs in Deli Serdang.

2.1.1 Farming cost analysis

$TC = TFC + TVC$ description:

TC : Total production costs

TFC : Total fixed costs

TVC : Total variable costs

2.1.2 Analysis of farm income

$TR = Y \cdot P_y$

Information:

TR : Total revenue

Y : Number of products produced

P_y : Product Price

2.1.3 Farm income analysis

$P_d = TR - TC$

information :

P_d : Farming income

TR : Total revenue

TC : total cost

RESULTS AND DISCUSSION**RESULTS****Production Cost Results****Table of Production Costs for Baglog and Oyster Mushroom Business Per 3000 baglogs in Deli Serdang**

No	Description	Baglog Business	Oyster Mushroom Business
1	Fixed Costs	Rp. 205,109	Rp. 1,513,333
2	Variable Costs	Rp. 5,061,000	Rp. 10,124,000
Total		Rp. 5,266,109	Rp 11,637,333

Source: Primary Data Processed 2023

Production costs for baglog and oyster mushroom businesses are the costs incurred during the operation of the business. Production costs for baglog and oyster mushroom businesses are divided into two categories: fixed costs and variable costs. Fixed costs are relatively constant costs that continue to occur throughout the production process. Fixed costs are costs incurred during the production process and are independent of the size of the output received. Variable costs are costs whose total amount changes in proportion to changes in activity. From the table above, it can be seen that the total cost incurred by Central Jamur Medan for making 3000 baglogs is IDR.5,266,109. These costs include fixed costs of Rp.205,109 and variable costs of Rp.5,061,000. The total cost of cultivating fresh oyster mushrooms in Deli Serdang for 3000 baglogs is Rp.11,637,333. These costs include fixed costs of Rp.1,513,333 and variable costs of Rp.10,124,000.

Reception**Table of Income for Baglog and Oyster Mushroom Businesses Per 3000 Baglogs in Deli Serdang**

No	Description	Baglog	No	Description	Oyster mushroom
1	Production	3000	1	Production/Kg	1200
2	Selling Price Per Bag	Rp. 3,300	2	Selling Price Per Kg	Rp. 18,000
Total Revenue		Rp. 9,900,000	Total Revenue		Rp. 21,600,000

Source: Primary Data Processed 2023

Farming revenue is the product of the product multiplied by the selling price. Revenue is also highly determined by the scale of the product and its price. For more details on revenue from baglog and oyster mushroom farming per 3,000 baglogs, see the table above. From the table above, it can be seen that the total revenue from the oyster mushroom baglog business in Deli Serdang per 3,000 baglogs is Rp. 9,900,000 with a selling price per baglog of Rp. 3,300 for an incubation room scale of 6 x 10 m. Meanwhile, the total income from fresh oyster mushroom cultivation per 3,000 baglogs is Rp. 21,600,000 with a selling price per kilogram of Rp. 18,000 for a mushroom house area of 5 x 15 m.

Income**Table of Baglog and Oyster Mushroom Business Income Per 3000 Baglogs in Deli Serdang**

No	Description	Amount		Profit Percentage	
		Baglog	Oyster mushroom	Baglog	Oyster mushroom
1	Reception	Rp. 9,900,000	Rp. 21,600,000		
2	Total cost	Rp. 5,266,109	Rp. 11,637,333	38%	46%
Total Revenue		Rp. 4,633,109	Rp. 9,962,667		

Source: Primary Data Processed 2023

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By knowing the amount of revenue and total costs incurred, we can determine the amount of income earned by the entrepreneur. Income is obtained by subtracting total revenue from total costs in a single production process. A business can be declared profitable if revenue exceeds total costs, and vice versa, if total costs exceed revenue, it is considered a loss. The amount of baglog business revenue can be seen in the table above. From the table above, the oyster mushroom baglog business income is Rp.9,900,000 and the total cost is Rp.5,266,109 per 3000 baglogs. Therefore, the income from the oyster mushroom baglog business is Rp.4,633,109 per 3000 baglog production. Meanwhile, in the fresh oyster mushroom business, the income is IDR.21,600,000 and the total cost is Rp.11,637,333. So the income from the fresh oyster mushroom business is IDR. 9,962,667 per 3000 baglogs.

DISCUSSION

Analysis Results Table of Baglog and Fresh Oyster Mushroom Business in Deli Serdang

No	Description	Business group	
		Baglog	Oyster mushroom
1	Production cost	Rp. 5,266,109	Rp 11,637,333
2	Reception	Rp 9,900,000	Rp 21,600,000
3	Income	Rp 4,633,109	Rp 9,962,667
4	R/C Ratio	1.62	1.84

Source: Primary Data Processed 2023

The production costs of baglog and oyster mushroom businesses in Deli Serdang consist of fixed and variable costs. According to Nurhusaeni et al. (2021), fixed costs are costs incurred by entrepreneurs or producers, and their amount is unrelated to production levels. Variable costs are costs incurred by entrepreneurs due to the use of variable or temporary production factors, so the amount of these costs can change in line with changes in the amount of production required (Fuad Balatif et al., 2023). The baglog business has a production cost of IDR.5,266,109, this result consists of variable costs of Rp.5,061,000 and fixed depreciation costs per week Rp.205,109. Then the oyster mushroom business has a production cost of Rp.13,067,333 with results consisting of variable costs of Rp.11,637,333 and annual depreciation costs of Rp.1,513,333. The production costs of the fresh oyster mushroom business group are higher than the baglog business due to variable costs, namely the purchase of baglog media for cultivation of 3000 baglogs, where each baglog costs Rp. 3,300 so that when added up it amounts to Rp. 9,900,000, however, the fixed costs of the fresh oyster mushroom business are relatively small because it does not require complicated tools in its cultivation. In contrast to the baglog business, whose production costs use a lot of various materials and tools in the manufacturing process.

CONCLUSION

1. The total cost incurred by the oyster mushroom baglog business actor Central Jamur Medan for 3000 baglogs is Rp.5,266,109. The total cost incurred by oyster mushroom farmers in Deli Serdang for 3,000 baglogs is Rp.11,637,333.
2. Total income from the Medan Central Mushroom baglog business for 3000 baglogs is IDR.9,900,000. The total income spent by oyster mushroom cultivation business actors Mitra Central Jamur Medan for 3000 baglogs is Rp.21,600,000. Income from the baglog business is Rp.4,633,109 per 3000 bags. Income from oyster mushroom cultivation is Rp.9,962,667 per 3000 baglogs.

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