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Calculation of Cost of Rice Production in Farmer Groups Source of Fortune in Sidomukti Village, Muara Kaman District, Kutai Kartanegara Regency

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ABSTRACT

This research aims to determine the calculation of the cost of rice production of the Source of Fortune Farmer Group in Sidomukti Village, Muara Kaman District, Kutai Kartanegara Regency. This type of research is descriptive qualitative, aims to describe, describe, explain and provide answers more clearly about the problem under study. Primary data from the results of the study were obtained from interviews and then analyzed by the full costing method. The number of respondents in this study was 19 people who were members of the Sumber Rejeki Farmer Group with their own land status. The results of this study show that the calculation of the cost of goods produced for an area of 0<x≤1 ha is Rp. 3,608,-/kg, land area 1<X≤2 ha amounting to Rp. 3,857,-/ kg and for land area x>2 ha. Rp. 4.198,-/kg. Production costs for a land area of 0<x≤1 ha average Rp. 12,244,400, an average land area of 1<X≤2 of Rp. 12,971,222, and an average land area of x>2 ha of Rp. 13. 649.429. The calculation is obtained from the process of entering raw material costs, direct labor costs, ovearhead costs. The cost of goods produced is generated from the cost of raw materials which include rice seeds, fertilizers and pesticides. Labor costs which include costs for tillage, seeding, planting, fertilizing, maintenance, harvesting and post-harvest and overhead costs include equipment rent, land and building taxes, depreciation and other costs.

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1. Introduction

In order to develop the agricultural sector in Indonesia in particular, the Indonesian government prioritizes handling higher rice production. In line with government programs in the context of agricultural development in Indonesia, especially in the food sub-sector, the government prioritizes handling higher rice

production. Food is the most basic need compared to the needs of shelter and clothing, because life would not exist without food. Rice is the staple food of the Indonesian people, one of the most popular food crops consumed by the people of Indonesia (kespel.kemkes.id).

Based on data from the Central Statistics Agency (BPS) which recorded that the rice harvest area in East Kalimantan in 2020 was likely to be 72.25 million hectares, an increase of 25,400 hectares or 3.65% from 69.97 million hectares in 2019. Kabupaten/city that produces the largest dry milled grain (GKG) is Kutai Kartanegara region. Through the Agriculture office, the Kukar Regency government has succeeded in maintaining rice production in Kutai Kartanegara even during the current pandemic. According to BPS data, the agricultural sector in Kutai Kartanegara continues to increase, the Kutai Kartanegara Agriculture and Livestock Office will encourage the development of agriculture in Kutai Kartanegara, especially for rice field farming. The largest rice producer of Kutai Kartanegara Regency is located in Muara Kaman and Tenggarong Seberang sub-districts. One of the highest rice-producing villages is in Sidomukti Village, Muara Kaman District. Sidomukti Village is an area that can still be developed again related to producing rice and this is supported by the surrounding conditions if most of the professions of the people of Sidomukti village are as farmers. So in 2009 a farmer group organization Sumber Rezeki was formed. Sumber Rezeki is a farmer group organization consisting of 32 people with a land area of 40 ha but productive land of only 32 ha.

According to (Mulyadi, 2015) The determination of the cost of goods produced is the result of calculating costs added with other costs. To determine production costs, knowledge of production costs is needed to determine whether production costs are profitable or not. Thus, to find out the amount of cost of goods produced, it is necessary to conduct an analysis of the cost of rice production to determine the cost of rice produced by farmers. Meanwhile, based on the results of the researcher's initial interview with the head of the Sumber Rezeki Farmer Group in Sidomukti Village, Muara Kaman District, Kutai Kartanegara Regency, so far the Sumber Rezeki farmer group has never calculated production costs, only following the selling price on the market.

From the description described above, researchers are interested in conducting a study entitled "Calculation of Cost of Rice Production in the Source of Fortune Farmer Group in Sidomukti Village, Muara Kaman District, Kutai Kartanegara Regency" with a problem formulation, namely how to calculate the cost of goods produced in the Source of Fortune Farmer group in Sidomukti Village, Muara Kaman District, Kutai Kartanegara Regency?

Basic Theoretical Framework

Cost of Goods Produced

According to (Mulyadi, 2015), the definition of cost of goods produced is "all costs incurred to produce a good or service during the relevant period." In other words, if "the cost of goods produced is the cost of acquiring finished goods that are ready for

sale". This means that the cost of goods produced is part of the cost price. Another opinion says the cost of goods produced is the dedication of economic resources measured in units of money that have occurred or the possibility of occurring to get income or profit (Mulyadi, 2016). While (Dunia, 2018) said that the cost of goods is "costs incurred in connection with production, namely the sum of direct material costs and direct labor. The amount of cost is measured by the reduction or incurrence of debt." (Bustami, 2015) argues that the cost of goods produced is "the set of production costs including direct raw materials, direct labor and factory overhead costs added also product inventory in the initial process and reduced product inventory in the final process". (Supriyono, 2015a) argues that defining the cost of goods produced is "the amount of money that will be paid in order to have a product or service needed by the company as a means to generate profits."

So it can be said that the cost of goods produced is all costs incurred by the company to produce products. Determination of the cost of goods produced here is important, because it will be the basis for determining the price of products, determining the profit margin that the company can achieve, as a measure of the level of efficiency of the production process, as well as an indicator that can supervise the realization of production costs (Sriwinarti & Hasanah, 2020).

Benefits of Determining Cost of Goods Produced

According to (Mulyadi, 2015) stated that information on the cost of goods produced calculated for a certain period of time is useful for management in the following:

a. Determining the Selling Price of the Product
b. Supervise Production Cost Realization
c. Calculating Profit and Loss

Components of Production Costs in Determining Cost of Goods Produced

According to (Mulyadi, 2015) Production costs are "costs incurred to process raw materials into finished products for sale." Cost determination of production costs includes three elements:

- Raw Material Cost, is the cost of raw materials used to be processed into finished products. Raw materials are the biggest factor that makes up a finished good.
- Direct Labor Costs, are remuneration provided to production workers either directly or indirectly participating in completing the production of related goods
- Factory Overhead Costs, are costs that are not included in the cost of raw materials or what is often referred to as auxiliary materials and direct labor costs.

Cost of Goods Produced

According to (Mulyadi, 2016), the method of determining the cost of goods produced is a method of incorporating cost factors into production costs. There are two methods that incorporate cost factors into production costs, namely full costing and variable costing.

Conceptional Definition

Conceptional definition is the limitation of concepts used by researchers in determining limits in research. In this study, researchers determine the cost of rice production using full costing techniques, so that the results of the calculation of rice production costs are in accordance with the cost bookkeeping hypothesis. According to (Supriyono, 2015b), "the cost of merchandise made is the estimated cost to make an item starting from manufacturing training until the item is sold". While the full costing strategy is one of the strategies used to determine the cost of creation that contains each component of costs incurred during creation into the cost of creation.

2. Research Methods

This research uses an approach with descriptive qualitative research methods. According to (Moleong, 2017), qualitative research is research that produces descriptive data in the form of written or spoken words of people and observable behavior. Research that intends to understand the phenomenon of what is understood by the research subject, such as tolerance, perception, motivation, action, holistically and by way of description in the form of words and language, in a special natural context and by utilizing various scientific methods. This opinion is also supported by (Sugiyono, 2016) who said descriptive qualitative research is used to examine naturally formed conditions that aim to describe, describe, explain, explain and answer the problem being studied by observing and studying the object of research.

The focus of research used in the study are factors that are considered to explain this research more clearly. The factors that are the focus of research in this study are Seed Preparation, Land Preparation, Seedbed, Planting, Fertilization, Pest Control, P anen, and Pasca harvest, .

3. Results And Discussion

Production in Farmer Groups Source of Sustenance

The production to be described is the result of planting rice in one harvest, in the form of dry rice produced by farmers. The production results recorded were the results of 19 farmers who were respondents in this study. The production results studied are the planting season in the first season, namely in the planting season of December-April 2021 with a growing period of approximately 100 days or 3 months. The data on the production of dry grain/rice of the Source of Fortune Farmer Group will be planned in the following table:

Table 1 Rice Production Results of Farmer Groups Source of Sustenance

No	Area of Cultivated Land (Ha)	Production Success (Sack)	Production Results (kg)

1	0<X≤1	47	3.170
2	1<X≤2	101	5.555
3	X>2	244	13.393

Based on the table above, we can see that for a cultivated land area of 0 to 1 hectare produces an average of 47 bags of dry rice or equivalent to 3,170 kg of dry grain. As for land areas between more than 1 to 2 hectares, an average of 101 bags or 5,555 kg of dry grain, while for arable land above 2 hectares can produce an average of 244 bags or equivalent to 13,393 kg of dry grain.

Stages of Rice Production of Farmer Groups Source of Sustenance

a. Land Processing

Tillage is any form of action given to the soil to maintain or improve soil functions to keep it good or even increase. The intended action is to provide treatment of the soil in accordance with what is treated, so that the function of the soil remains good for an unlimited period of time or even increases (ITB, 2017: 3). The intended action treatment is to prepare the land to be ready for planting. Farmers will spray weeds before plowing the fields. After 3-5 days after spraying, the land will be plowed, as the times progress. So the piracy of rice fields is now more advanced, namely using tractors or jonder. In this study, all farmers used tractor rental services, the length of work needed depends on the area of land cultivated. The fee paid for tractor rental is Rp. 1,500,000 per 1 hectare of land. Usually this land processing is employed by one person only.

b. Seedbed

At the seedbed stage, farmers must prepare rice seeds of the highest quality. Prepared seedlings will be soaked in advance at least one night until germination. The purpose of seed sowing is to Reductionof field conditions. Whether it's protecting it from weather or other disturbances. And done by one person only. The amount of rice seeds used by the Sumber Rezeki Farmer group is adjusted to the area of land cultivated. For a land area of 3/4 (0.75) ha requires about 20 kg of rice seeds, a land area of 1 ha requires seeds of about 25 kg, a land area of 1.5 ha requires 50 kg of seeds, a land area of 2 ha requires 60 kg of seeds and 80 kg of seeds for an area of 3 ha and 115 kg for a land area of 4 ha. The rice seeds used by the respondents for 1 ha on average require 30-35 kg, with costs incurred of Rp. 150,000-Rp. 175,000 or equivalent to Rp. 5,000,-/kg. The following can be seen below seedbed costs:

c. Planting

The planting process is carried out after the rice seedlings are ready to be moved, which is around the age of 15-20 days. Rice seedlings will be moved or prepared one day before the planting process, this is to avoid pulling out the seedlings with origin and save time so that the seedlings are ready and asat enough will be planted. The process of planting rice in the T ani Sumber Rezeki group, is alwayscarried out by workers or planting workers. In general, planting labor groups consist of 4-6 workers. Based on the number of members of the planting group, for 1 hectare of rice fields requires a cost for each planting laborer of Rp. 250,000 to Rp. 375,000.00.

d. Fertilization

Fertilization is an action or treatment that aims to add substances or food elements needed by plants in the soil. Rice farmers of Sumber Rez eki Farmer Group use 3 main fertilizers, namely TSP, Ponska and Urea. The frequency of fertilization carried out depends on the consideration of farmers, in general, the average fertilization is carried out 1-2 times, with the amount of fertilizer adjusted to the land area. The type of fertilizer used by respondents in this study was subsidized fertilizer, with an average use of 1 hectare of rice field as much as 75 kg for each type of fertilizer. The costs incurred were Rp. 521,250, - with details of the price of Urea fertilizer Rp. 2,250,-, the price of TSP fertilizer Rp. 2,400, - and the price of Ponska fertilizer Rp. 2,300,-.

e. Maintenance

Maintenance carried out by farmers in the Sumber Rezeki Farmer group includes weeding, irrigation and pest control. Weeding is done to clean weeds or plants that will interfere with rice growth. As for irrigation on agricultural land in this farmer group, it uses irrigation sourced from DAM water. Maintenance for pest control uses pest spraying methods, types of poisons / drugs used to overcome pests, namely: n-foi, Kiomek, danke and manjar. Spraying pests is carried out on average 1-2 times until harvest. The cost needed to provide 3 types of pesticides is Rp. 750,000 per hectare.

Harvesting and Post-Harvest

The rice harvest period is estimated at 3-4 months, this is in accordance with the age of rice growing. In Sidomukti Village, especially the Sumber Rejeki Farmer group cuts rice in a modern way, using a rice cutting machine. Payment for rice cutting tools can be made with a cash payment of Rp. 30,000, - or using harvested grain. After the rice harvesting process has been completed. The rice will be moved from the rice field and then dried to dry. All research respondents used rice transportation services to move their production at a cost of Rp. 10,000 for each sack. Then for the drying process, you can use the services of workers or do it yourself, if you use workers, you have to pay Rp. 12,000 for each sack.

Rice Production Cost

a.Cost of Raw Materials

In every production process, raw materials are needed to be managed to produce a product. Raw materials in rice production are selected seeds, fertilizers and pesticides. In the results of annex 4 research, it can be seen that the seeds needed in rice production for a land area of 0 to 1 hectare are 25 kg, a land area of more than 1 to 2 hectares requires 57 kg, and a land area above 2 hectares requires about 100 kg. The use of fertilizer for rice farmers in the Source of Fortune Farmer Group consists of urea, TSP, and Ponska fertilizers. TSP fertilizer costs Rp. 2,400/kg, Ponska Rp. 2,300/kg, and urea fertilizer Rp. 2,250/kg. A number of fertilizer uses will be different, it depends on the needs and fertility of the soil and land area. Next b the use of Raw Materials in accordance with the area of arable land.

Table 3 Raw Material Costs of Farmer Group Source of Windfall 19 Respondents

No	Size Land (ha)	Cost of Raw materials (Rp)
1	¾	1.197.500
2	¾	1.147.500
3	¾	1.197.500
4	¾	1.197.500
5	¾	1.197.500
6	¾	1.197.500
7	1	1.421.250
8	1	1.446.250
9	1	1.446.250
10	1	1.421.250
11	1	1.421.250
12	1,5	2.270.000
13	1,5	2.295.000

14	1,5	2.270.000
15	1,5	2.245.000
16	1,5	2.270.000
17	2	3.367.500
18	3	4.988.750
19	4	6.660.000

Data source: processed data

b. Direct Labor Costs

The number of workers and many jobs will be adjusted to the needs in the field and also the ability of respondents to provide payments. The amount of labor will affect labor costs, the magnitude of labor value. In the area of the Tani Sumber Rez eki group, workers are divided into 2, namely labor outside the family who receive payments or wages and labor in the family are workers who do not receive wages. Labor costs incurred for tillage , seeding, planting, fertilizing, maintenance, harvesting and post-harvest.

Payment of wages for land processing is carried out in bulk, which is Rp. 1,500.00 / hectare. The payment system for rice planting workers is wholesale, or payment has been set for each hectare will receive a payment of Rp. 1,500,000 / hectare,-. With a wholesale system, planting workers generally already have their own groups. The processing time for every 1 hectare of land is approximately 2-3 working days.

In general, the Sumber Rezeki Farmer group employs workers only for land preparation, planting, harvesting and post-harvest. While other work such as making seedling land, fertilizing, spraying, and maintaining is carried out personally and does not issue labor wages. Below can be seen the labor cost table:

Table 4 Labor Costs of Farmer Group Source of Fortune

No	Size Land (ha)	Labor Cost(Rp)
1	¾	4.851.500
2	¾	5.789.500
3	¾	5.059.500
4	¾	5.631.500
5	¾	5.475.500
6	¾	5.787.500

7	1	7.697.250
8	1	7.462.250
9	1	7.306.250
10	1	7.177.250
11	1	7.229.250
12	1,5	11.866.000
13	1,5	11.319.000
14	1,5	11.398.000
15	1,5	11.529.000
16	1,5	12.074.000
17	2	16.543.500
18	3	24.752.750
19	4	33.220.000

Data source: processed data

c. Overhead Costs

Overhead costs are the value of production resources apart from raw materials and direct labor. Indirect costs in rice production of the Sumber Rez eki Farmer Group, namely equipment rent, land and building taxes, depreciation and other costs. Below can be seen the overhead cost table:

Table 5 Overhead Costs of Farmer Groups Source of Fortune

No	Size Land (ha)	Overhead Costs (Rp)
1	¾	2.122.500
2	¾	2.718.000
3	¾	2.302.500
4	¾	2.581.500
5	¾	2.487.000
6	¾	2.680.500

7	1	3.619.000
8	1	3.508.000
9	1	3.377.500
10	1	3.325.000
11	1	3.364.000
12	1,5	5.484.000
13	1,5	5.145.000
14	1,5	5.175.000
15	1,5	5.307.000
16	1,5	5.577.000
17	2	7.445.000
18	3	11.094.000
19	4	14.868.100

Data source: processed data

Production and Revenue

The Source of Fortune Farmer Group in Sidomukti Village in 2021 the first planting season obtained a production of 88,052 kg with a land area of 22 hectares. The rice production of the Sumber Rejeki Farmer group is sold in the form of dry rice directly to middlemen or rice mill owners. The selling price of rice production of the Sumber Rezeki farmer group in Sidomukti Village is Rp. 5,700 per kilogram of harvested dry grain (GKP). In the first growing season the farmers start the rice production process at the same time and close together, because in the second or third season not all farmers replant. The rice production produced is mostly infullor part directly for personal consumption.

The amount of production produced will be multiplied by the selling price per kilogram, then the sales of dry grain will be reduced by all production costs so that it will find out whether the production results make a profit / loss. The results of calculations in research on the rice production results of the Sumber Re z eki Farmer Groupin 2021 first season with the status of land owned by se ndiri showed positive results . The average proceeds from the sale of dry grain received by the respondents were Rp. 17,267,336, - and received income of Rp. 6,736,064 for a land area of $0<x\leq1$. The average sales proceeds received were Rp. 31,467,833, - with opinions obtained amounting to Rp. 10,871,167 for a land area of $1<x\leq2$ hectares. Then the sales proceeds

received Rp. 69,187,800 and the income generated Rp. 21,396,000, - for a land area of X>2 hectares.

The sales proceeds received and the income generated by the Respondents of the Source of Fortune Farmer Group will be different, even though the area of cultivated land is the same. This is influenced by many factors, such as the fertility level of each land is different, the treatment carried out and many other factors. The details of sales results and opinions received by respondents can be seen in the following table:

Table 6 Ror Average Rice Production, Hasil **P** sales and Pincome Kgroup of Farmers Source Rezeki 19 Respondents

Land Status	Land	Number of Respondents	Average Production (kg)	Average Acceptance	Average Revenue
Own	0<X≤1	11	3.012	IDR 17,267,336	IDR 6,736,064
	1<X≤2	6	5.324	IDR 31,467,833	IDR 10,871,167
	X>2	2	11.760	IDR 69,187,800	IDR 21,396,000

Data source: processed data

Calculation of Cost of Goods Produced by Rice with Full Costing Method

The calculation of cost of goods produced in this study uses *the full costing* method. The full costing method is used to determine the cost of rice production by calculating the costs used, namely the cost of raw materials, labor, and overhead costs. The average cost of goods produced in this study which is calculated using the full costing method can be seen in the following table:

Table 7 Average Cost of Goods Produced by Farmer Groups in2021

Land Status	Land	Number of Respondents	Average Production per Ha(Kg)	Average Total Production Cost per Ha(Rp)	Average COGS (Rp/Kg)
Own	0<X≤1	11	3.012	12.572.470	3.608
	1<X≤2	6	5.324	12.971.222	3.857
	X>2	2	11.760	13.649.429	4.198

Data Source: Data processed

The calculation produced by pata tebel 7 can be concluded that the wider the arable land, the production costs for seeds, fertilizers, pesticides and other costs will increase. The average selling value is Rp. 3,608,-. The profit obtained for a land area of 1<x≤2 hectares is an average of Rp. 3,857,-. Then the profit for rice production with a land area of x>2 is with an average selling value of Rp. 4,198. The detailed calculation results can be seen in the table below:

Table 8 Average Selling Price of Harvested Dry Grain (GKP) with Full Costing Method in 2021

Land Status	Land	Number of Respondents	Average Production per Ha (Kg)	Average COGS (Rp/Kg)	Selling Price (Rp)
Own	0<X≤1	11	3.012	3.608	5.745
	1<X≤2	6	5.324	3.857	5.917
	X>2	2	11.760	4.198	5.900
Average			6.699	3.888	5.854

Data Source: Data processed

The average purchase price of harvested dry grain (GKP) by the government in April 2021 was Rp. 4,481,-/kg, this price was lower than the average selling price of harvested dry grain obtained by respondents of Rp. 5,816,-/kg. However, based on the calculation of the cost of goods produced using the full costing method, it is lower at Rp. 3,888, - than the government's. To see the comparison of dry grain sales (GKP) using the full costing method with government purchase prices can be seen in the following table:

Table 9 Average difference between Cost of Goods Produced and Government Purchase Price in 2021

Land Status	Land Area(Ha)	Full Costing Method (Rp)	Government Purchase Price (Rp)	Difference (Rp)
Own	0<X≤1	3.608	4.481	873
	1<X≤2	3.857	4.481	624
	X>2	4.198	4.481	283
Average		3.888	4.481	595

Data Source: Data processed

The difference in selling price in table 4.11 between the full costing method and the purchase price of harvested dry grain (GKP) of the government on a land area of 0<x≤1 is Rp. 873,-/kg. The difference in selling price using the full costing method with the government purchase price for a land area of 1<X≤2 is Rp. 624,-/kg for each harvested dry grain (GKP). Meanwhile, the difference in the selling price of rice in the full costing method on a land area of x>2 is Rp. 283,-/kg for each harvested dry grain (GKP).

4. Conclusion

The conclusion obtained from the calculation of rice production prices using the full costing method in the Sidomukti Village Source of Fortune Farmer Group shows that the results of the calculation of the cost of goods produced for an area of 0<x≤1 ha amounted to Rp. 3,608, -/kg, a land area of 1<X≤2 ha amounted to Rp. 3,857, -/ kg and for a land area of x>2 ha. Rp. 4.198,-/kg. Production costs for land area of 0<x≤1 ha average of Rp. 12,244,400, land area of 1<X≤2 average of Rp. 12,971,222, and an average land area of x>2 ha is Rp. 13,649,429. The calculation is obtained from the process of entering raw material costs, direct labor costs, and ovearhead costs.

The suggestion from the researcher is that farmers should be able to calculate the management of costs used in the rice production process so that farmers can determine the appropriate selling price..

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