

THE FEASIBILITY OF THE FARMING BUSINESS: A COMPARATIVE STUDY

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Abstract

This study aims to conduct a feasibility analysis of farming and compare the financial performance of the Sungai Kelambu Sejahtera Cooperative and the Tebas Gemilang Jaya Cooperative in Sambas Regency, West Kalimantan. The research method used is a comparative method with feasibility calculation stages including cost analysis, income, feasibility of Benefit-Cost Ratio (B/C Ratio), Revenue-Cost Ratio (R/C Ratio), and Break-Even Point (BEP). Data were collected through field observations and interviews with key informants during the 2026 planting season. The results show that both cooperatives have very strong farming feasibility. The Sungai Kelambu Sejahtera Cooperative excels significantly in operational cost efficiency, land productivity, and profit ratio, with a B/C ratio of 3.19 and an R/C ratio of 4.28. On the other hand, Tebas Gemilang Jaya Cooperative benefits from minimal fixed costs due to the absence of land rental costs, although its efficiency is slightly affected by high variable costs for pest control in rain-fed land, resulting in B/C values of 1.49 and 2.64; R/C values of 2.49 and 3.63 for dry paddy and rice. Both cooperatives have a wide margin of safety in production because their harvests far exceed the break-even point (BEP) for both production and prices. This study concludes that both cooperative business lines are highly profitable and worthy of development to support national food security.

Keywords: Agricultural Cooperatives, Comparative Study, Farming Business, Feasibility Analysis, Sambas Regency

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1. Introduction

Rice is a crucial commodity in the food security chain and drives the regional economy. Sambas is the largest rice producer in West Kalimantan, producing 211,732 tons and contributing 21.36% of the province's total production by 2025 (BPS, 2025). Tebas District, in particular, boasts a significant harvest area for rice, both in paddy fields and open fields, making it a food barn

in West Kalimantan. As a supporting entity for agricultural businesses, supporting farmers by providing production inputs, marketing their produce, and distributing aid, cooperatives must understand the viability of their businesses (Aditia et al., 2026; Idris & Nazarudin, 2025).

The Sungai Kelambu Sejahtera Cooperative and the Tebas Gemilang Jaya Cooperative are two food-oriented institutions in Sambas Regency, West Kalimantan. The Sungai Kelambu Sejahtera Cooperative focuses on strengthening the production of superior rice seeds, with the sale of dry grain as its primary product. Meanwhile, the Tebas Gemilang Jaya Cooperative manages agricultural businesses in rain-fed rice fields. This cooperative has implemented downstream product processing by selling not only Harvested Dry Grain (GKP) but also rice as its business commodity.

A farming cooperative, as a business unit, requires a comprehensive financial evaluation. Feasibility analysis using indicators such as the Benefit-Cost Ratio (B/C Ratio), Revenue-Cost Ratio (R/C Ratio), and Break-Even Point (BEP) in production volume and price is a solution for measuring business performance. Previous studies have conducted many feasibility analyses of agricultural commodities such as rice, *gabah*, and corn (Aditia et al., 2026; Aini, 2019; Akanbi et al., 2024; Dorairaj & Govender, 2023; Idris & Nazarudin, 2025; Isa & Zuhriyah, 2021; Mubarak et al., 2026; Senanayake & Premaratne, 2016; Sunarwibowo et al., 2024). However, to the best of the researcher's knowledge, these studies have not examined the comparison between two farming businesses using comparative methods. This study also includes detailed calculations of each business component, including differences in cost structure, land characteristics, productivity, and down streaming strategies, which can influence the feasibility of a farmer's cooperative. Therefore, this study goes beyond simply calculating business feasibility and provides an in-depth analysis of two distinct agricultural business models. These differences are reflected in land characteristics, product differentiation, and the implementation of irrigation versus rain-fed farming systems. This study fills this gap by conducting a comparative analysis of two farming businesses, namely the Sungai Kelambu Sejahtera Cooperative and the Tebas Gemilang Jaya Cooperative.

This research aims to conduct a farming business feasibility analysis and compare the results of studies by the Sungai Kelambu Sejahtera Cooperative and the Tebas Gemilang Jaya Cooperative. This fundamental analysis of the cooperative's farming business feasibility is expected to support the cooperative's

readiness to produce food commodities to support the realization of Indonesia's food security mission.

2. Research Method

This study conducted a feasibility study of farming based on the calculation stages outlined in the Buku Saku Brigade Pangan (2024). The study was conducted at two cooperatives: the Sungai Kelambu Sejahtera Cooperative and the Tebas Gemilang Jaya Cooperative in Sambas Regency, West Kalimantan. The study took place in Tebas District, Sambas Regency, specifically at the Sungai Kelambu Sejahtera and Tebas Gemilang Jaya Cooperatives. The study locations were selected purposively, considering that Tebas District has a large rice harvest area, both planted in paddy fields and open fields, making it a food barn in West Kalimantan. The informants in this study were farmer members, owners, and cultivators of the Sungai Kelambu Sejahtera and Tebas Gemilang Jaya Cooperatives. The data in this study are as follows:

1. Description of irrigated rice fields at the study sites.
2. Farmer identity, including name, age, education level, number of dependents, and farming experience. Based on available data, the Sungai Kelambu Sejahtera cooperative has 10 active farmer members, while the Tebas Gemilang Jaya cooperative has 9 active farmer members who manage their own rice fields.
3. Land area (ha) and production volume (kg) per hectare.
4. Production cost data.
5. Production selling price (Rp/kg)

The researcher collected all data and information, both financial and non-financial, for analysis purposes. The data collected was from 2026 to ensure the analysis reflected the actual conditions. This study also utilized secondary data in the form of journals, production costs, farmer assets, fertilizer prices, and the types of rice seeds used. Primary data were obtained through direct field observations and interviews. Interviews were conducted with 4 informants, including:

1. Uray Muriana, Chair of the Sungai Kelambu Sejahtera Cooperative
2. Sudarta, Chair of the Tebas Gemilang Jaya Cooperative
3. Junaidi, Site Manager of the ICARE West Kalimantan Program

4. Members of the two cooperatives.

This study used a descriptive comparative approach as described by (Clarke, 2007) (Creswell & Creswell, 2023). The researcher formulated the research objectives as the first step. The next step was to select a theory and calculations for feasibility analysis, namely the calculation of agricultural business feasibility (Buku Saku Brigade Pangan, 2024). This calculation of agricultural business feasibility was carried out in three stages: (Buku Saku Brigade Pangan, 2024):

1. Calculating Costs, Revenue, and Income

Total costs are the sum of all costs incurred for rice processing activities. Total production costs include fixed and variable costs. The total cost formula is as follows:

$$TC = FC + VC$$

Description:

TC = Total Cost

FC = Fixed Cost

VC = Variable Cost

Revenue is the product of the quantity of paddy produced and the selling price. Total revenue is greatly influenced by the quantity of paddy produced. This is expressed in the formula:

$$TR = Y \times Py$$

Description:

TR = Total revenue

Y = Amount of production obtained

Py = Price of Y (Rp/Kg)

The revenue formula can be expressed as follows:

$$Pd = TR - TC$$

Description:

Pd = Farming income

TR = Total revenue

TC = Total costs

2. Revenue-Cost Ratio (R/C) Analysis

Revenue-Cost Ratio (R/C) analysis compares revenue and costs to study profitability. Generally, a business will generate profit if its revenue exceeds its expenses. The following method is used to calculate the R/C ratio:

$$R/C = \frac{TR}{TC}$$

Description:

R/C = Revenue per costs

TR = Total Revenue

TC = Total Cost

According to Pebriantari et al. (2016), the business feasibility criteria in R/C analysis are:

- a. If the revenue-cost ratio (R/C) is greater than 1, then the business can continue because the revenue generated exceeds the costs incurred.
- b. If the revenue-cost ratio (R/C) is less than 1, then the business cannot continue because the revenue received is less than the costs incurred.
- c. If the revenue-cost ratio (R/C) is equal to 1, then the business is making normal profits.

3. Determining to *Break Even Point* (BEP)

According to Suratiyah (2011), BEP analysis in this study is divided into three categories: BEP in revenue (Rp), BEP in production quantity (kg), and BEP in price (Rp/kg), resulting in the following calculations:

$$\text{BEP Production} = \frac{FC}{P - AVC}$$

Description:

FC = Fixed Cost (Rp)

P = Selling Price (Rp/Kg)

AVC = Average Variable Cost (Rp)

$$\text{BEP Revenue} = \frac{FC}{1 - \frac{VC}{TR}}$$

Description:

FC = Fixed Cost

VC = Variable Cost

TR = Total Revenue

$$\text{BEP Price} = \frac{TC}{Q}$$

Description:

TC = Total Cost

Q = Quantity

The production process incurs costs to produce the product. When sold, the cooperative earns revenue. The difference between revenue and costs

generates income. The efficiency of the resulting profit is measured using the R/C and B/C ratios, while the break-even point is calculated using the BEP formula. The accumulated efficiency results and the break-even point serve as the basis for determining the business feasibility of the two cooperatives. The next step involves analyzing and interpreting the research results narratively and argumentatively, supported by relevant theory. This stage compares the feasibility analysis results of the two cooperatives involved in the study. Finally, conclusions are drawn and future research directions outlined.

3. Result and Discussion

Result

Feasibility of the Sungai Kelambu Sejahtera Cooperative Farming Business

Costs are classified into fixed and variable costs. Fixed costs are those costs that are not affected by changes in production levels. These costs include all expenses incurred by Sungai Kelambu Sejahtera Cooperative farmers during a single planting season (Table 1).

Table 1. Fixed Costs of Sungai Kelambu Sejahtera Cooperative Farmers

No.	Cost Type	Total	Cost (Rp)	Total Cost (Rp)
1.	Land rental cost	1 Ha	7,000,000	7,000,000
2.	Land and building tax	3.75 Ha	425,333	1,595,000
3.	Equipment depreciation cost			
	a. Hoe	19 Pcs	10,000	190,000
	b. Sickle	22 Pcs	11,909	262,000
Total Fix Costs				9,047,000

Fixed costs in this study include Land and Building Tax (PBB), rent, and depreciation. The PBB tax paid by members of the Sungai Kelambu Cooperative rice farming business is Rp 1,595,000 for a land area of 3.75 ha. Land rental costs of Rp 7,000,000 are paid for a 1 ha rice field. Depreciation costs represent the cost of decreasing the usefulness and quality (depreciation) of fixed assets over their useful life. The tools owned and depreciated by members of the Sungai Kelambu Sejahtera Cooperative include sickles and hoes, amounting to Rp 452,000. The calculation of variable costs is shown in Table 2.

Table 2. Variable Costs of Sungai Kelambu Sejahtera Cooperative Farmers

No.	Cost Type	Total	Cost (Rp)	Total Cost (Rp)
1.	Seed cost	120 Kg	15,000	1,800,000

2.	Labor cost	129 Person	153,023	19,740,000
3.	Fertilizer cost			
	a. Urea	114 Kg	15,000	1,710,000
	b. NPK	243 Kg	25,000	6,804,000
4.	Tractor service cost	4,75 Ha	1,410,526	6,700,000
Total Variable Costs				36,754,000

The fertilizers used by the Sungai Kelambu Sejahtera Cooperative for one planting season are urea, costing Rp 1,710,000, and NPK, costing Rp 6,804,000. The Sungai Kelambu Sejahtera Cooperative utilizes labor, particularly for land preparation, seeding, fertilization, maintenance, and harvesting, as part of the study on production costs. Researchers calculated that the total labor cost for the Sungai Kelambu Sejahtera Cooperative is Rp 19,740,000 for a land area of 4.75 ha. Furthermore, the cooperative's total tractor service costs are Rp 6,700,000.

Farming revenue is the total monetary value of all rice production in a single harvest season. Revenue is calculated by multiplying the total production (in kilograms or tons) by the selling price per unit. Table 10 shows the average revenue from rice farming at the Sungai Kelambu Sejahtera Cooperative in 2026, as part of the study on revenue.

Table 3. Revenue Data for Inpari Rice Seed Production at the Sungai Kelambu Sejahtera Cooperative per Season (1 Cycle)

Name	Revenue (Rp)			Total Cost (Rp)	Total Income (Rp)
	GKP (Kg)	Price (Rp)	Total (Rp)		
Supri	2,000	10,000	20,000,000	45,801,000	150,199,000
Sule	2,000	10,000	20,000,000		
Mardiah	1,800	10,000	18,000,000		
Kastini	2,100	10,000	21,000,000		
Suripto	2,500	10,000	25,000,000		
Sutar	1,800	10,000	18,000,000		
Sukerno	1,800	10,000	18,000,000		
Mulyoto	2,000	10,000	20,000,000		
Partono	1,800	10,000	18,000,000		
Sasmito	1,800	10,000	18,000,000		
Total			196,000,000		

From the table above, it can be seen that the total income of rice farmers' seed production at the Sungai Kelambu Sejahtera Cooperative is 19,600 Kg, with a total selling price of Rp 10,000. The average income of rice farmers combined as a whole each harvest season is Rp 196,000,000, calculated by multiplying the total

rice harvest by the selling price. The R/C ratio value, as an indicator of the efficiency of the Sungai Kelambu Sejahtera Cooperative's farming business, is:

$$\text{R/C Ratio} = \frac{\text{Total Revenue}}{\text{Total Costs}}$$

$$\text{R/C Ratio} = \frac{196,000,000}{45,801,000} = 4.28$$

The R/C value of 4.28 indicates that the Sungai Kelambu Cooperative has achieved farming efficiency in this study. This is further supported by the B/C ratio calculation, which shows that every Rp 1 increase in production results in a 3.28% increase in yield:

$$\text{B/C Ratio} = \frac{\text{Total Income}}{\text{Total Costs}}$$

$$\text{B/C Ratio} = \frac{150,199,000}{45,801,000} = 3.19$$

Break-even point (BEP) analysis is used to determine whether the farming business is profitable or experiencing losses. In this study, the following is the BEP calculation for the Sungai Kelambu Sejahtera Cooperative.

$$\text{BEP Production} = \frac{\text{Total Costs}}{\text{Selling Price per Unit}}$$

$$\text{BEP Production} = \frac{\text{Rp } 45,801,000}{10,000} = 4,580 \text{ Kg}$$

$$\text{BEP Price} = \frac{\text{Total Costs}}{\text{Total Production}}$$

$$\text{BEP Price} = \frac{\text{Rp } 45,801,000}{19,600} = \text{Rp } 2,336$$

Based on the calculations above, the break-even point is reached when farmers produce or sell 4,580 kg of Harvested Dry Grain (GKP). Compared to the average GKP production of 19,200 kg in the rice farming business at the Sungai Kelambu Sejahtera Cooperative, the actual production exceeds the BEP, making this business profitable and feasible for development. Business feasibility assessments are based on several categories. A business is considered feasible if it meets the following criteria: actual production exceeds the BEP.

The BEP price calculation shows that the break-even point is reached when farmers sell GKP at Rp 2,336. Compared to the actual GKP price of Rp 10,000, the rice farming business at the Sungai Kelambu Sejahtera Cooperative is profitable and feasible for development.

Feasibility of the Tebas Gemilang Jaya Cooperative Farming Business

Fixed costs at the Tebas Gemilang Jaya Cooperative include land and building tax (PBB), rent, and depreciation. The PBB tax for the Tebas Gemilang Jaya Cooperative's farming business is Rp 1,830,000 for a rice field area of 4.58 hectares. Depreciation of equipment, including sickles and hoes, is Rp 452,000.

Table 4. Fixed Costs for Tebas Gemilang Jaya Cooperative Farmers in 2026

No.	Cost Type	Total	Cost (Rp)	Total Cost (Rp)
1.	Land and building tax	4.58 Ha	399,563	1,830,000
2.	Equipment depreciation			
a.	Hoe	19 pcs	10,000	190,000
b.	Sickle	22 pcs	11,909	262,000
Total Fix Costs				2,282,000

Variable costs in this study are consumable costs that affect production levels, including the costs of seeds, fertilizer, pesticides, labor, packaging, and fuel (Table 5).

Table 5. Variable Costs for Farmers at the Tebas Gemilang Jaya Cooperative

No.	Cost Type	Total	Cost (Rp)	Total Cost (Rp)
1.	Seed Costs	125 Kg	15,000	1,875,000
2.	Labor Costs	129 Person	153,023	19,740,000
3.	Fertilizer Costs			
	Urea	115 Kg	15,000	1,725,000
	NPK	245 Kg	25,000	6,150,000
4.	Tractor Service Costs	4,58 Ha	1,517,467	6,950,000
5.	Pesticide Costs	6,1 Liter	143,402	874,750
Total Variable Costs				37,314,750

The average seed usage in the Tebas Gemilang Jaya Cooperative's farming operations reaches 12-15 kg/ha. The type of seed used in this farming operation is Inpari 36. This was explained by Sudarta, Chairman of the Tebas Gemilang Jaya Cooperative:

"Farmers use an average of 12 kg of Inpari 36 seed on an average land area of 0.5 hectares. The average seed used per hectare is 24 kg."

Information obtained by researchers in interviews indicates that farmers generally achieve moderate yields despite using a significant amount of seed. This result is influenced by the less-than-optimal agricultural land, which is primarily rain-fed rice fields. This leads farmers to use more seed to increase yields. Fertilizer use per farming operation on an average land area of 0.5 hectares is 114 kg of urea, 243 kg of NPK. Meanwhile, the average fertilizer use per hectare is 258.64 kg of urea and 563.7 kg of NPK. The West Kalimantan Agricultural Technology Agency (Balai Perlindungan Tanaman Perkebunan) (2017) recommends 200 kg of Phosnka fertilizer. Similarly, Aditia et al., (2026) recommends 251 kg of Phosnka fertilizer.

Losses caused by pests and diseases can lead to decreased yields and quality. Therefore, the correct use of pesticides, including the type, timing, and dosage, is expected to reduce the risk of crop failure. The Tebas Gemilang Jaya Cooperative uses pesticides for one planting season, costing Rp 874,750. In addition to the cost of pesticides, labor costs are also a determining factor in the success of the farming business. The Tebas Gemilang Jaya Cooperative utilizes labor, particularly for land preparation, seeding, fertilization, maintenance, and harvesting. Based on calculations conducted by researchers, the total labor costs at the Tebas Gemilang Jaya Cooperative were Rp 19,740,000 for a land area of 4.58 ha. Another variable cost was the cost of tractor services, which, based on calculations, total tractor service costs incurred by the cooperative amounted to Rp 6,950,000.

Table 6. Average Production Revenue at the Sungai Tebas Gemilang Jaya Cooperative per Season (1 Cycle)

Name	Revenue (Rp)						Total Cost (Rp)	Income (Rp)	
	GKP (Kg)	Beras (Kg)	GKP Price (Rp)	Rice Price (Rp)	GKP Total (Rp)	Rice Total (Rp)		GKP	Beras
Nur	800	975	10,000	15,000	8,000,000	14,625,000	37,314,750	58,903,250	104,403,250
Arpinah	880	1,320	10,000	15,000	8,800,000	19,800,000			
Yusi	750	950	10,000	15,000	7,500,000	14,250,000			
Welly	1,260	840	10,000	15,000	12,600,000	12,600,000			
M Sabirin	1,350	1,050	10,000	15,000	13,500,000	15,750,000			
Ogie	950	925	10,000	15,000	9,500,000	13,875,000			
Suriati	1,080	720	10,000	15,000	10,800,000	10,800,000			
Khasikin	800	1,200	10,000	15,000	8,000,000	18,000,000			
Yusniarsih	1,080	720	10,000	15,000	10,800,000	10,800,000			
Sobrian	900	900	10,000	15,000	9,000,000	13,500,000			
Total					98,500,000	144,000,000			

No.	Production Type	Total Production (kg/Ha)	Price (Rp/Ha)	Revenue (Rp/Ha)
1.	Rice	9,600	15,000	144,000,000
2.	Dry Harvested Grain	9,850	10,000	98,500,000
Total				242,500,000

Based on the table above, it can be seen that the average income of rice farmers' production at the Tebas Gemilang Jaya Cooperative is from 19,450 kg/ha of rice and dry grain with a total selling price of Rp 25,000. The average income of rice farmers as a whole each harvest season is Rp 242,500,000. Furthermore, the B/C ratio calculation is used to analyze the feasibility of the Tebas Gemilang Jaya Cooperative.

$$\text{B/C Ratio of Dry Paddy and Rice} = \frac{\text{Total Income}}{\text{Total Costs}}$$

$$\text{B/C Ratio of Dry Paddy} = \frac{58,903,250}{39,596,750} = 1.49$$

$$\text{B/C Ratio of Rice} = \frac{104,403,250}{39,596,750} = 2.64$$

Based on the calculation of the B/C ratio, the income and total costs per hectare for GKP products are 1.49, while the B/C results for rice production produce a value of 2.64. This means that an additional Rp 1 will produce GKP income 1.49 times greater and rice income 2.64 times greater. Meanwhile, the R/C ratio is used to determine the efficiency of a farming business. If the R/C ratio is > 1, it means the business is profitable. The R/C ratio values for the Tebas Gemilang Jaya Cooperative are as follows:

$$\text{R/C Ratio of Dry Paddy and Rice} = \frac{\text{Total Revenue}}{\text{Total Costs}}$$

$$\text{R/C Ratio of Dry Paddy} = \frac{98,500,000}{39,596,750} = 2.49$$

$$\text{R/C Ratio of Rice} = \frac{144,000,000}{39,596,750} = 3.63$$

The Break-Even Point (BEP) analysis is used to determine the break-even point and projected profit or loss for dry unhusked rice and rice from the Tebas Gemilang Jaya Cooperative. The following is the BEP calculation for these two products.

$$\text{BEP Production of Dry Paddy and Rice} = \frac{\text{Total Costs}}{\text{Selling Price per Unit}}$$

$$\text{BEP Production of Dry Paddy} = \frac{\text{Rp } 39,596,750}{\text{Rp } 10,000} = 3,960 \text{ Kg}$$

$$\text{BEP Production of Rice} = \frac{\text{Rp } 39,596,750}{\text{Rp } 15,000} = 2,640 \text{ Kg}$$

$$\text{BEP Price of Dry Paddy and Rice} = \frac{\text{Total Costs}}{\text{Total Production}}$$

$$\text{BEP Price of Dry Paddy} = \frac{\text{Rp } 39,596,750}{9,850} = \text{Rp } 4,020$$

$$\text{BEP Price of Rice} = \frac{\text{Rp } 39,596,750}{9,600} = \text{Rp } 3,861$$

From the break-even point calculation, it can be seen that equilibrium is achieved when the total production and sales of GKP are 3,960 kg while the rice is 2,640 kg. When compared to real data where the average GKP product is 9,600 kg and the rice yield is 9,850 kg, this business is classified as profitable and therefore worthy of development. Furthermore, based on the results of the BEP price calculation, equilibrium is achieved if farmers sell GKP at a price of Rp 4,020/kg and rice at Rp 4,125/kg. The real selling price of GKP is Rp 10,000 and rice is Rp 15,000. Therefore, it can be concluded that the farming business at the Tebas Gemilang Jaya Cooperative is profitable and worthy of development.

Discussion

The Sungai Kelambu Sejahtera and Tebas Gemilang Jaya Cooperatives are agricultural cooperatives whose members are farmers in Tebas District, Sambas Regency. This study's feasibility analysis concerns not individual farming businesses, but those managed by the agricultural cooperatives. There is a strong causal relationship between the land's biophysical characteristics, cost structure efficiency, productivity level, and product down streaming strategy in determining the feasibility of the two cooperatives; this relationship is decisive.

The farming costs are divided into fixed costs and variable costs. For one year or two harvests, the fixed costs incurred by the Sungai Kelambu Sejahtera Cooperative farming business are Rp 9,047,000, while the total fixed costs borne by the Tebas Gemilang Jaya Cooperative are Rp 2,282,000. The high fixed costs

of the Sungai Kelambu Sejahtera Cooperative are caused by land rental costs of Rp 7,000,000 per hectare, while the Tebas Gemilang Jaya Cooperative does not cover the land rental component but only incurs costs for paying land and building taxes and equipment depreciation. The variable costs for seeds, fertilizers, tractor services, pesticides, TKDK, and TKLK in the Sungai Kelambu Sejahtera Cooperative farming business are Rp. 36,754,000, while those of the Tebas Gemilang Jaya Cooperative are Rp. 37,314,750. The Tebas Gemilang Jaya Cooperative's variable costs are slightly higher because the cooperative incurs additional pesticide costs of Rp 874,750. This is necessary given the higher risk of pest infestation in rain-fed areas. The Sungai Kelambu Sejahtera Cooperative manages land with a regular irrigation system, so its costs are high. In contrast, the Tebas Gemilang Jaya Cooperative operates on rain-fed land and its own land, so its costs are lower. However, climate uncertainty in rain-fed land increases vulnerability to pest attacks.

The revenue of the Sungai Kelambu Sejahtera Cooperative's farmer members from the sale of dry grain harvests is Rp 150,199,000 at a uniform selling price of Rp 10,000/kg. Meanwhile, the Tebas Gemilang Jaya Cooperative's farmer members' revenue comes from dry grain and rice, which are downstream products, totaling Rp 163,306,500. Further analysis, assuming equal variable costs, shows that income from dry grain sales is higher than the total sales of dry grain and rice. The income of the farmer members per year, or two harvest seasons, is derived by subtracting the total costs incurred by the farmers from the revenues, resulting in the Sungai Kelambu Cooperative's income amounting to Rp 196,000,000. The Tebas Gemilang Jaya Cooperative generated Rp 98,500,000 in dry paddy and Rp 144,000,000 in rice. Both cooperatives generated substantial revenue after deducting costs.

The efficiency of both cooperatives' farming operations can be observed from the B/C ratio and R/C ratio. The Sungai Kelambu Sejahtera Cooperative's B/C ratio was 3.19 and its R/C ratio was 4.28, making it highly feasible for cultivation. These high values are influenced by the optimal production output of standardized seeds on its land. The Tebas Gemilang Jaya Cooperative's resulting in B/C values of 1.49 and 2.64; R/C values of 2.49 and 3.63 for dry paddy and rice, making it worthy of further development. Despite generating higher total revenue compared to the Sungai Kelambu Sejahtera Cooperative, the Tebas Gemilang Jaya Cooperative generated lower B/C and R/C ratios. This was

due to increased variable costs resulting from the use of relatively large seed (up to 24 kg/ha) and pesticide purchases.

Based on the production break-even point calculation, the Sungai Kelambu Sejahtera Cooperative has a production BEP of 4,580 kg, far below its actual harvest of 19,200 kg. The Tebas Gemilang Jaya Cooperative reached a break-even point of 3,960 kg for dry grain and 2,640 kg for rice. Meanwhile, the actual harvest of dry grain and rice was 9,600 kg and 7,200 kg, respectively. This indicates that both cooperatives have a very wide margin of safety in production. In terms of price, losses can be avoided by the Sungai Kelambu Sejahtera Cooperative if the price of unhusked rice is above Rp 2,336/kg (market price Rp 10,000/kg). Meanwhile, the Tebas Gemilang Jaya Cooperative has a minimum price limit of Rp 4,020/kg for GKP and Rp 4,125/kg for rice commodities. With a real price of Rp 10,000/Kg GKP and Rp 15,000/Kg rice, the business feasibility of both cooperatives is strong.

Regularly irrigated land at the Sungai Kelambu Sejahtera Cooperative produces 19,600 kg of unhusked rice. In contrast, rain-fed land at the Tebas Gemilang Jaya Cooperative has limited water, so farmers increased Inpari seed spreading to 24 kg/ha. This results in a total output of GKP and rice of 19,450 kg/ha. Although the production volume seems large because it covers two commodities, the efficiency per unit of input remains below that of the Sungai Kelambu Sejahtera Cooperative. The Sungai Kelambu Sejahtera Cooperative focuses on developing and strengthening the quality of superior rice seeds (Inpari). Its product is marketed as dry unhusked rice (GKP) at a uniform selling price of IDR 10,000/kg. The Tebas Gemilang Jaya Cooperative not only strengthens GKP production but also processes the product into rice priced at IDR 15,000/kg. This step is a diversification strategy to expand the product user segment and reach end consumers, namely households. Through this, the cooperative's accumulated gross income reached Rp 242,500.

4. Conclusion

The two cooperatives demonstrated very strong business feasibility. The Sungai Kelambu Sejahtera Cooperative significantly excelled in operational cost efficiency, land productivity, and profit ratio. Meanwhile, the Tebas Gemilang Jaya Cooperative benefited from minimal fixed costs, although its efficiency was slightly impacted by the high variable costs of pest control in rain-fed areas. This

study's limitations lie in the limited data collection for one year, or two harvest seasons. This study failed to analyze long-term changes in cost and revenue components, such as inflation or fluctuations in grain and rice prices, across the two cooperatives with different ecosystem conditions.

Future research is recommended to expand the scope of the study with long-term analysis to consider changes in factors influencing the research data. Researchers are also expected to add agricultural business feasibility instruments using measurement parameters such as Net Present Value (NPV), Internal Rate of Return (IRR), and Sensitivity Analysis to assess the cooperative's financial resilience to worst-case scenarios.

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