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Analysis Of the Acceptance and Feasibility Of Semi-Technical Paddy Rice Farming Business In Tanjung Agung District, Muara Enim Regency

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Abstract

This study aims to analyze the Acceptance and Feasibility of Rice Farming Business in Semi-Technical Rice Farming Typology in Tanjung Agung District, Muara Enim Regency. The type of research used in this study is a quantitative descriptive method. The data analysis used in this study is quantitative analysis. The *results of the study show that rice farmers in Tanjung Agung District, Muara Enim Regency earn income in the form of GKP with an average of Rp 13,483,038/Ha/MT and in the form of rice of Rp 29,472,432/Ha/MT. From the results of the calculation of the R/C ratio, it can be seen that the Semi-Technical Rice Typology paddy rice farming in Tanjung Agung District, Muara Enim Regency as a whole is economically feasible so that the value is more than 1 both in the form of GKP and Rice, so the Semi-Technical Paddy Typology Paddy Farm is very feasible to be continued or pursued in accordance with applicable regulations. However, the R/C ratio value of rice is higher than GKP. This is shown by the value of the R/C ratio of rice, which is 4.16, which means that every cost expenditure of Rp 100 will receive a revenue of Rp 416.*

Keywords: Acceptance, Feasibility, Rice Field Farming Business, Semi-Technical Rice Field Typology

INTRODUCTION

The food crop subsector plays an important role in agriculture, as a food provider for billions of people around the world. The development of superior commodities for food crops will continue to exist and continue to increase considering that along with the

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increase in population. The great influence of food crops, especially rice, on life is due to the fact that more than 50 percent of the world's population and 90 percent of the Indonesian population consume it as a staple food. The high rice consumption of the Indonesian population is reflected in the average per capita rice consumption of the Indonesian population in 2002-2018 which reached 101.65 Kg/capita/year, making Indonesia the country with the third largest rice consumption after China and India (Pusdatin, 2019).

Indonesia's dependence on rice is caused by the strong paradigm of society that considers rice as a superior or prestigious commodity, so that people make rice a staple food that has a higher social status (Yeta, 2019). The high public preference for rice so that there is a group of people who think that: "have not eaten if they have not eaten rice" which means that people will continue to consume rice even though they have previously consumed carbohydrates in other forms. The great influence of rice on life makes rice a political commodity whose existence and price will affect economic and political stability. This is as a result of the high consumption of rice by the Indonesian population whose availability of supply and price will affect the economy. On the other hand, according to BPS data in 2021, the number of Indonesia's population reached 270.20 million people with an average annual population growth rate of 1.25 percent during 2010-2020, and a high level of rice consumption requires considerable foodstuffs.

The implication of high national rice consumption is to secure food availability through increasing rice production to meet the demand and needs of the community. In realizing the policy of food sovereignty and increasing the production of food crops, especially rice (rice), the government has established a strategy to increase production through the implementation of the Upsus (Special Efforts) program, such as the rehabilitation of technical irrigation networks (JIT), land optimization, expansion of planting areas, and so on as agricultural development efforts. In relation to increasing production, the Directorate General of Food Crops has established a strategy to achieve food crop production through four strategies or called Chess Strategy for Achieving Food Crop Production, including: 1) Increasing productivity, 2) Expanding the area and optimizing land, 3) Reducing rice consumption and developing food diversification, and 4) Improving management (Directorate General of Food Crops, 2015).

The development of food crops through the expansion of planting areas is carried out through 1) printing new land (rice fields); 2) land optimization through increasing the Crop Index (IP); 3) optimization of other agricultural land; and 4) optimization of abandoned land. One of the efforts that can be made to increase the production of food

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crops, especially rice in rice fields, is technological innovation to increase the Crop Index (IP) both in irrigated rice fields and rainfed rice fields (BPTP South Sulawesi, 2018).

In Indonesia, there are five provinces that produce the highest rice production, namely Central Java, East Java, West Java, South Sulawesi, and South Sumatra. In South Sumatra Province, there are three districts that produce the highest rice, the first is Banyuasin Regency with 920.413 ton/ha, the two East OKU Regencies amounted to 716,876 tons/ha and the third is OIC Regency of 534,587 tons/ha (BPS Indonesia, 2020). This shows that Muara Enim Regency is not one of the largest rice food producing areas or is a food barn area

Table 1. Production Harvest Area and Average Rice Paddy Production in Muara Enim Regency in 2022-2023

District		Paddy Field			Paddy Field		
		Rendengan/Rainy Season			Gadu		
		Harvest Area/	Production/	Productivity/	Harvest Area/	Production/	Result/
			(Tons)	(Kw/Ha)	(Ha)	(Tons)	(Kw/Ha)
1	Semende Darat Laut	1 090	6 553,08	60,12	1 030	6 166,61	59,87
2	Semende Darat Ulu	15	78,89	52,59	1 843	9 583,60	52,00
3	Semende Darat Tengah	29	152,57	52,61	1 219	6 337,58	51,99
4	Tanjung Agung	3 955	23 813,06	60,21	1 136	6 734,21	59,28
5	Rambang	0	0	0	0	0	0
6	Lubai	25	106,38	42,55	0	0	0
7	Lawang Kidul	28	120,96	43,20	12	51,05	42,54
8	Muara Enim	2 045	8 910,07	43,57	1 183	4 969,78	42,01
9	Ujan Mas	1 492	6 332,5	42,44	893	3 630,05	40,65
10	Gunung Megang	694	2 995,30	43,16	295	1 257,29	42,62
11	Benakat	27	113,91	42,19	0	0	0
12	Rambang Dangku	15	60,89	40,59	0	0	0

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13	Gelumbang	0	0	0	0	0	0
14	Lembak	0	0	0	0	0	0
15	Sungai Rotan	0	0	0	0	0	0
16	Muara Belida	0	0	0	0	0	0
17	Kelekar	0	0	0	0	0	0
18	Belimbing	35	133,70	38,20	40	270,04	37,22
19	Lubai Ulu	0	0	0	0	0	0
20	Belide Darat	0	0	0	0	0	0
Sum		9 450	49 371.31	52,24	7 651	39 000,20	50,97
2022		10 947	53 525,93	48,90	1 687	8 136,53	48,23
2023		9 042	43 804,38	48,45	2 533	11 885,05	46,92
Source	:	Muara Enim Regency Food Crops, Horticulture and Livestock Department					

Based on the data above, it can be seen that the harvest area and rice productivity from year to year have been unstable, but rice production in Muara Enim Regency from 2022 to 2023 has increased. This has resulted in the availability of rice in Muara Enim Regency. The government wants to maintain rice self-sufficiency in a sustainable manner, one of the recommended scenarios is to expand the planting area through increasing the planting index (IP). The planting index (IP) shows the frequency of planting on a piece of land (Murtiningsih, 2021).

A limited coordination meeting of the United Indonesia Cabinet chaired directly by the President and Vice President of the Republic of Indonesia at the Ministry of Agriculture in early January 2007 has resulted in the declaration of a program called the P2BN (National Rice Production Increase) program. One of the strategies implemented in this P2BN program is to increase rice productivity through the application of technological innovations. The Agricultural Research and Development Agency (R&D) has produced various technological innovations that are able to increase rice productivity, including superior varieties that have been developed by farmers. In line with the development of science and technology, the Agricultural Research and Development Agency has also produced and developed an Integrated Crop Management (PTT) approach which has been able to increase rice productivity and production input efficiency (Agricultural Research and Development Agency, 2010).

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IP 200 in this swamp land, related to six (6) development of new planting patterns for farmers: a) sufficient water availability including time and duration of availability, b) soil conditions including physical, chemical and soil surface shapes, c) altitude from sea level especially in relation to air, soil and water temperatures, d) the existence of chronic and potential plant pests and diseases, e) availability and accessibility of rice types and varieties, f) accessibility and smoothness of production with infrastructure support, g) the ability of farmers' capital to develop these planting patterns, and h) their characteristics and development (Agricultural Research and Development Agency, 2010).

The increase in the planting index of 200 paddy is to increase rice planting in a period of one-year (in the sense of 12 months), from only one planting, to increase planting to two (2) times a year. The crop index is the result of a comparison between the number of areas of each type of plant in the planting pattern during the year with the area of each planted multiplied by 100 (Azmi et al., 2024). Dry land and paddy fields need to be utilized optimally by increasing IP, in addition to the intensity of cultivation and conservation of agricultural resources. Increasing IP can be achieved by shortening the production process, eliminating the vacancy time between two crops, and overlapping two crops (Murtiningsih, 2021).

An increase in the rice planting index (IP) was introduced in Muara Enim Regency in 2016. Rainfed rice fields, which have so far only grown once a year because of their rain-dependent irrigation, have increased their planting intensity to twice a year. Efforts to increase the planting index are accompanied by assistance, namely seed assistance, the provision of alsintan, facilities in the use of modern agricultural machinery such as Combine Harvesters, technological engineering (pumping and drilled wells), and participation in Rice Crop Insurance (AUTP).

An increase in the rice Planting Index (IP) began to be introduced in Tanjung Agung District, Muara Enim Regency. This location is the center of rice crop production in Muara Enim Regency. Therefore, in Tanjung Agung District, Muara Enim Regency, it is necessary to introduce new technological innovations IP 200 in rice crop management to increase productivity to achieve the rice production targets targeted by the government (South Sumatra Provincial Food Crops and Horticulture Office, 2014).

Tanjung Agung District, Muara Enim Regency has implemented techniques in the management of lebak swamp land with one of the integrated crop management technologies (PTT), namely the planting system. The technological solution is a technical pumping system, where the rice field area is built with embankments around it to prevent flooding, so that water does not flood the rice field area. In the dry season, pumping can

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be used to irrigate rice fields. Thus, the water system of Lebak rice fields can be regulated so that it can increase the crop index.

Based on the above background, the researcher is interested in conducting a study with the title "Analysis of the Acceptance and Feasibility of Rice Farming Farming Typical Semi-Technical Rice Fields in Tanjung Agung District, Muara Enim Regency".

Problem Formulation

Based on the description above, the formulation of this research problem is: How is the acceptance and feasibility of rice farming in semi-technical rice field typology in Tanjung Agung District, Muara Enim Regency?

Purpose and Usefulness of Research

1. Research Objectives

   Based on the problems formulated above, the purpose of this study is toanalyze the acceptance and feasibility of rice farming business with semi-technical rice typology in Tanjung Agung District, Muara Enim Regency.

2. Usability of Research

   The results of this study are expected to provide usefulness for:

a) For farmers in general, this information can be a consideration in making decisions to apply the crop index (IP 200) to semi-technical rice field typologi
b) This research is expected to be one of the reference materials for further research on problems related to the application of the crop index (IP 200) in semi-technical rice field typologies.

LITERATURE REVIEW

Framework of Thought

1. Rice Farming

Rice Farming Rice crops are cultivated on two types of land, namely wetlands (rice fields) and dry land. Rice cultivated on wetlands is known as paddy paddy while paddy paddy is cultivated on dry land known as paddy paddy. Rice plants require high rainfall of approximately 1500-2000 millimeters per year with an altitude between 0-1500 meters above sea level with an optimal temperature of 23 degrees Celsius (Pirngadi and Makarim, 2006). Rice will grow optimally with direct sunlight exposure without being obstructed by anything, including shady trees. The availability of water in rice paddy cultivation is absolutely essential even though rice can actually be grown in all seasons.

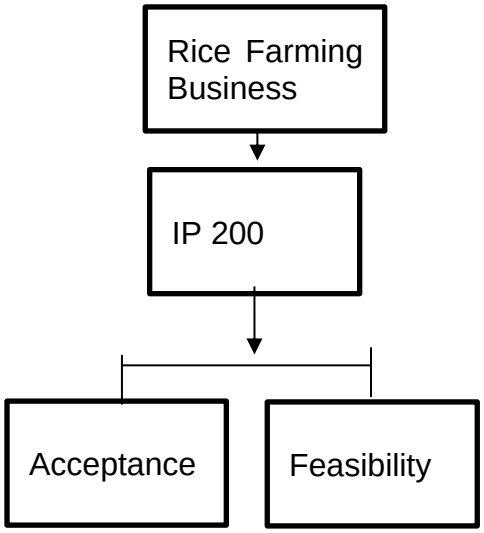
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The rice paddy planting system is usually preceded by soil tillage while farmers plant seedlings (Purwono and Purnamawati, 2007).

Research Approach Model

The research approach model is a research flow used by a researcher. This approach model contains an overview of the research to be carried out. In the analysis of factors influencing the Decision of Rice Farmers in the Implementation of the Crop Index (IP 200) in the Typology of Semi-Technical Rice Fields in Tanjung Agung District, Muara Enim Regency, the factors that affect it include farming income (X_1), education (X_2), farming experience (X_3), and the number of family dependents (X_4). The combination of these four factors is expected to affect the Decision of Rice Farmers in the Application of the Crop Index (IP 200) in Semi-Technical Rice Field Typology. The research approach model on the analysis of factors influencing Rice Farmer Decisions in the Application of Crop Index (IP 200) in Semi-Technical Rice Field Typology in Tanjung Agung District, Muara Enim Regency is shown in the form of figure 2.1. Model Research Approach below:



Information:

⟶ Affect

Figure 1. Research Approach Model

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Limitations

a. Rice farming income is the amount of benefits or results received by rice farmers which is calculated based on the production value minus all types of expenses used for production. (Rp/MT)
b. Farming revenue is the value of commodity production received by farmers. Farm revenue is influenced by several factors, such as land area, amount of production, and price of production products (Rp/MT)
c. Farming feasibility is the level of feasibility of a farming business that can be found out by comparing the costs incurred with the revenue generated. (R/C ratio)

RESEARCH IMPLEMENTATION

a. Scope of Research

This research will be carried out in Tanjung Agung District, Muara Enim Regency. The determination of the research location was carried out deliberately (*purposive sampling*) considering that Tanjung Agung District, Muara Enim Regency is the sub-district that does the most rice farming with the application of IP 200 in the typology of semi-technical rice fields. This research will be carried out in June 2024.

b. Research Methods

The research method used in this study is the survey method. Survey method according to Sugiyono (2018) is research conducted using questionnaires as a research tool conducted on large and small populations, but the data studied is data from samples taken from the population, so that a relationship between variables is found.

c. Sample Withdrawal and Data Collection Methods

The sample drawing method used in this study is the *Porpotinoned Stratified Random Sampling* with a population of farmer households as much as 558 head of the family. For more clarity on the method of drawing an example can be seen in the following table.

Table. 1. Data on Rice Farmers Who Apply the Crop Index (IP 200) in Semi-Technical Rice Field Typology in Tanjung Agung District, Muara Enim Regency.

No.	Name of Farmer Group	Number of Farmers (People)	15%
1	Embawang	209	31.35

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2	Tanjung Agung	199	29.85
3	Tanjung Karangan	150	22.5
	Sum	558	83,7

Source: Data from the Muara Enim Regency Agriculture Department, 2024

So, the number of samples in this study is 84 Sample.

The data sources in this study use primary data sources and secondary data sources. The data collection technique used in the study is using questionnaires. According to Sugiyono (2017), a questionnaire is a data collection technique that is carried out by giving a set of questions or written statements to respondents to be answered. The data collection instrument in this study uses a questionnaire, which is a list of statements prepared in writing which aims to obtain data in the form of respondents' answers regarding factors influencing Rice Farmer Decisions in the Implementation of the Crop Index (IP 200) in Semi-Technical Rice Field Typology in Tanjung Agung District, Muara Enim Regency.

d. Data Processing and Analysis Methods

In this study, what will be analysed are the factors that affect the Decision of Rice Farmers in the Implementation of the Crop Index (IP 200) in the Typology of Semi-Technical Rice Fields in Tanjung Agung District, Muara Enim Regency.

Farming income is the difference between total revenue and total costs incurred in one production or one planting season. The equation is written as follows:

$$\pi = TR - TC$$

Where:

π = Income (Rp/ Planting Season)

TR = Total Revenue (Rp/Planting Season) TC = Total Cost (Rp/Planting Season)

Costs are divided into two, namely variable costs and fixed costs. Variable costs are costing whose magnitude is influenced by production costs while fixed costs are relatively fixed costs and do not depend on the size of production produced (Soekartawi, 2011). The total cost can be calculated using the following formula:

$$TC = FC + VC$$

Where:

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TC = Total Cost (Rp/Planting Season)
FC = Fixed Cost (Rp/Planting Season)
VC = Variable Cost (Rp/Planting Season)

Receipts can be calculated using the following formula:

$$TR = Q \cdot P$$

Where:
TR = Total Revenue (Rp/Planting Season) Q = Number of Products (Kg/Planting Season)
P = Product Price (Rp)

The shrinkage of the tool is calculated using the straight-line method, (Suratiyah, 2015) with the formula:

$$P = \frac{C - NS}{UE}$$

P = Depreciation Value (Rp/Planting Season) C = Purchase Price (Rp/unit) NS = Residual Value (Rp) (20% of the purchase price) EU = Economic Life (years)

Feasibility analysis using the formula:
a = R/C
Where:
a = R/C ratio
R = Acceptance
C = Total Cost

If R/C = 1, it means that farming is not profitable or does not lose or break even, R/C < 1 means that it is not worth pursuing, R/C > 1 means that it is feasible to implement (Soekartawi, 2011).

RESULTS AND DISCUSSION

Income from Semi-Technical Rice Field Farming in the Research Area

The income analysis in this study is intended to determine the amount of income of rice paddy respondents in Tanjung Agung District, Muara Enim Regency for one planting season by calculating the difference between total revenue and total production costs used. The amount of production costs incurred has a significant impact on the amount of income that farmers receive. Income is very influential for the survival of

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farming, the greater the income obtained, the greater the ability of farming to finance all expenses and activities that will be carried out in farming (Amalia et al., 2022).

Cost of Semi-Technical Rice Field Farming in the Research Area

Cost is the entire amount of money spent in a production activity (Saragi et al., 2023). The cost in this study refers to all expenses that must be incurred by rice farmers in one growing season. These costs include fixed costs and variable costs. Fixed costs are costs that are fixed regardless of the amount of output produced or costs that are not used up in one production process (Pinto et al., 2016). Fixed costs such as taxes, depreciation costs of equipment and irrigation maintenance costs. On the other hand, variable costs are costs incurred during a single production that vary in amount based on the scale of production (Adistya & Aryani, 2023). Variable costs are in the form of seed costs, fertilizer costs, medicine costs, labor costs, post-harvest costs and sack purchase costs.

Fixed Fees

1). Taxes

Land and building taxes depend on the area of land used. The cost incurred for land and building taxes on Semi-Technical Rice Typology Rice Farming in Tanjung Agung District, Muara Enim Regency based on GKP is Rp 46,021/MT with an average of Rp 30,249/Ha/MT and in the form of rice of Rp 8,154/MT with an average of Rp 32,617/Ha/MT. Equipment Depreciation Cost Every farmer who uses equipment needs to take into account depreciation, because its operational life is limited to several years. Due to wear and tear, the goods will shrink progressively with use. Eventually, the items will gradually deteriorate until they are no longer useful.

Depreciation cost is the cost of deterioration in the benefit and quality (depreciation) of a fixed asset over its economic life (Ibrahim et al., 2021). In this study, there are tools that undergo shrinkage consisting of sickles, machetes, hoes and handsprayers. The use of respondent tools can be seen in Table 2

Table 2. Average Cost of Equipment Depreciation in Respondent Farmers in the Research Area in 2024

Tool Name	Depreciation (Rp/Ha/MT)	
	GKP	Rice
Sickle	4.808	4.952

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Machete	13.653	13.714
Hoe	13.869	12.762
Handsprayer	114.930	125.714
Sum	**147.260**	**157.142**

Source: Primary Data Processing Results in 2024

Based on the data above, it shows that the average depreciation cost of equipment incurred by respondent farmers in Tanjung Agung District, Muara Enim Regency in the form of GKP is Rp 147,260/Ha/MT, while in the form of rice is Rp 157,142/Ha/MT.

2). Irrigation Maintenance Cost

Irrigation maintenance is an effort to maintain and secure the irrigation network so that it can always function properly in order to facilitate the implementation of operations and maintain the sustainability of the irrigation network through maintenance, repair, prevention and security activities that must be carried out continuously (Nofrizal et al., 2019). The cost incurred by farmers in Tanjung Agung District, Muara Enim Regency in irrigation maintenance is Rp 25,000/MT.

Variable Costs

1). Seed Cost

The seeds used in rice farming in Tanjung Agung District, Muara Enim Regency are Inpara 32. The amount of use and cost of seeds can be seen in Table 3.

Table 3. Average Seed Costs for Respondent Farmers in the Research Area in 2024

UsageSeeds	Average	
	GKP	Rice
Total Seed Consumption (kg/ha/mt)	25	25
Total Cost (Rp/Ha/MT)	301.408	302.857

The cost incurred by farmers to buy seeds for Rp12,000/Kg is 25 Kg/Ha. From the results of the study, the total cost of seeds in Semi-Technical Rice Typology rice farming in Tanjung Agung District, Muara Enim Regency in the form of GKP amounted to Rp 301,408/Ha/MT, while in the form of rice the total cost was Rp 302,857/Ha/MT.

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2). Fertilizer Cost

Fertilizer costs are a number of costs incurred by farmers to buy various types of fertilizers used in farming activities during one growing season. The area of land planted by farmers affects the cost of using fertilizer where the amount of cost is determined by the type of fertilizer used. The fertilizers used by the respondent farmers in this study were urea, NPK, KCL and organic fertilizers. The average cost of using fertilizer can be seen in Table 4.

Table 4. Average Fertilizer Costs for Respondent Farmers in the Research Area in 2024

Types of Fertilizers	Cost of UseFertilizer (Rp/Ha/MT)		(%)	
	GKP	Rice	GKP	Rice
Urea	329.014	350.476	23	21
NPK	638.498	655.238	44	39
KCL	79.812	261.905	6	15
Organic	387.371	416.905	27	25
Sum	**1.434.695**	**1.684.524**	**100**	**100**

Source: Primary Data Processing Results in 2024

In the Semi-Technical Rice Typology Rice Field Farming in Tanjung Agung District, Muara Enim Regency, farmers need to buy urea and NPK fertilizers for Rp 160,000/Kg, KCL fertilizers at Rp 500,000/Kg, and there are two types of organic fertilizers used, namely livestock organic fertilizer Rp 20,000/Kg and organic ECO fertilizer for Rp 145,000/Kg. In Tanjung Agung District, Muara Enim Regency, NPK fertilizer contributes the highest fertilizer use cost in paddy rice farming, which is 44% or Rp 638,498/Ha/MT in the form of GKP, while in the form of rice contributes 39% or Rp 655,238/Ha/MT.

Based on research conducted in Tanjung Agung District, Muara Enim Regency, the average cost of fertilizer use is Rp 1,434,695/Ha/MT for GKP, but Rp 1,684,524/Ha/MT for rice, as shown in Table 4.3.

3). Cost of Medicines

No less important in the management of rice farming is the control of pest and disease attacks (Ak & Novitarini, 2020). Losses caused by pest and disease attacks can be in the form of reduced production volumes, decreased production quality, or both. Therefore, pest and disease attacks must be prevented and controlled. The use of appropriate drugs including targets, types, times and doses is expected to reduce the risk of crop failure. The cost of medicines referred to in this study is a sum of money spent by

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farmers to buy a number of medicines used in farming activities during one planting season.

Table 5. Average Cost of Medicines for Respondent Farmers in the Research Area in 2024

TypeDrugs	Cost of Medication Use (Rp/Ha/MT)		Percentage (%)	
	GKP	Rice	GKP	Rice
Insecticide	135.587	190.476	48	48
Fungicide	148.732	205.714	52	52
Sum	**284.319**	**396.190**	**100**	**100**

Source : Primary Data Processing Results in 2024

Based on the data above, the highest cost of using pesticides in the form of rice with a difference in GKP costs of Rp 111,871/Ha/MT. The price of insecticide in Tanjung Agung District, Muara Enim Regency for BPMC is Rp 200,000/2-liter and Dimehipo is Rp. 120,000/liter, while the fungicide Diphenoconazole is Rp 240,000/Ml. Farmers are expected to use pesticides according to the needs of farmers' land.

4). Labor Cost

The efficient use of labor has adequate skills as one of the determinants of the success of farming (Indriawan et al., 2023). In general, the use of labor in Semi-Technical Rice Field Typology rice farming activities includes land preparation, seedbeds, fertilization, weeding, OPT control and harvesting. The amount of labor used affects the amount of costs incurred in farming, so that it has an impact on the income received by farmers. Labor can come from outside as well as within the family. Based on the research carried out, the cost of labor outside the family is calculated based on the prevailing wage level in the research area. Details of the cost of using labor outside the family can be seen in Table 6.

Table 6. Average Out-of-Family Labor Costs for Respondent Farmers in the Research Area in 2024

Types of Activitie	TKLK Fees (Rp/Ha/MT)		Percentage (%)	
	GKP	Rice	GKP	Rice
Land Preparation and Nursery	1.896.714	2.000.000	44	45

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Fertilization	159.624	176.190	4	4
Weeding	143.099	160.000	3	4
OPT Control	0,00	0,00	0	0
Harvest	2.107.042	2.095.238	49	47
Sum	**4.306.479**	**4.431.428**	**100**	**100**

Source : Primary Data Processing Results in 2024

Table 6 shows that harvesting activities account for 49% of the labor work used outside the family or Rp 2,107,042/Ha/MT in the form of GKP and 47% or Rp 2,095,238/Ha/MT for rice. Meanwhile, Table 4.6 shows the cost of using labor in families in the study area.

Table 7. Average Labor Costs in Households in Respondent Farmers in the Research Area in 2024

Types of Activities	TKDK Fees (Rp/Ha/MT)		Percentage (%)	
	GKP	Rice	GKP	Rice
Land Preparation	71.362	85.714	10	12
Nursery	84.507	85.714	12	12
Fertilization	105.164	114.286	15	16
Weeding	125.070	125.714	18	17
OPT Control	207.746	214.286	30	30
Harvest	95.775	95.238	14	13
Sum	**689.624**	**720.952**	**100**	**100**

Source : Primary Data Processing Results in 2024

Based on Table 15. family workers account for 30% of OPT control activities or Rp 207,746/Ha/MT for GKP and Rp 214,286/Ha/MT in the form of rice. Farming costs consist of cash costs and calculated costs. Cash costs are expenses incurred in cash. Meanwhile, the costs that are taken into account are costs that are not part of the cash costs but are taken into account in farming. Labor costs in the family are costs that are not paid but are included in the costs that are taken into account in farming activities (Astuti et al., 2019).

5). Post-harvest Costs

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The post-harvest costs referred to in this study are all costs incurred by farmers before selling their produce. After harvesting, the rice harvest in the research area is directly sold to middlemen in the form of GKP (Harvested Dry Grain) and a grinder for rice. The average cost of post-harvest activities for Semi-Technical Rice Field Farming in the research area can be seen in Table 8

Table 8 Average Post-Harvest Costs Incurred by Respondent Farmers in the Research Area in 2024

Activities	Post-harvest Costs (Rp/Ha/MT)	
	GKP	Rice
freightage	477.972	388.095
Transportation	3.944	4.000
Grinding Drying	0,00	931.429
Sum	**481.916**	**1.323.524**

Source : Primary Data Processing Results in 2024

The data above shows that there are two production patterns in paddy rice farming in Tanjung Agung District, Muara Enim Regency. The first pattern of GKP production is the production of grain, where the results are directly sold without going through the process of drying and drying. Post-harvest activities carried out by farmers consist of transportation and transportation at a cost of Rp 481,916/Ha/MT. However, the second pattern of rice production is the production of grain, which is then processed into rice through transportation, transportation as well as milling and drying. This costs Rp 1,323,524/Ha/MT. Each of these activities has its own cost.

Based on the results of the interview, post-harvest financing to transport crops is Rp 5,000/sack, transportation costs of Rp 6,000 and milling and drying at a cost of Rp 12,000/Kg.

6). Sack Purchase Fee

The purchase of the sack in question is the amount of money incurred by the farmer to buy the sack that will be used as a place for rice production before being sold. The size and type of sack used is a 50 kg GKP sack with a price of Rp 3,500 per sack. The number of sacks used is determined based on the rice production produced. Based

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on the results of the study, the average cost of purchasing sacks in the form of GKP is Rp 334,580/Ha/MT and Rp 271,667/Ha/MT for rice.

7. Total Production Cost

Production costs are expenses that occur during the production process that produce certain goods or final products, including purchased goods and services paid for (Amili et al., 2020). In a production process, the cost element consists of fixed costs and non-fixed costs (*variable cost*). The sum of these two costs can produce a total cost in one planting season for rice farmers in Tanjung Agung District, Muara Enim Regency. For a clearer breakdown of these costs can be seen in Table 4.8.

Table 9. Average Total Costs Taken into Account by Respondent Farmers in the Research Area in 2024

	Average Cost of Farming (Rp/Ha/MT)	
	GKP	**Rice**
Fixed Fees		
1. Taxes	30.249	32.617
2. Depreciation Cost of Tools	147.260	157.142
3.Irrigation Maintenance	16.432	16.667
Total Fixed Costs	193.941	206.426
Variable Cost		
1. Seed Cost	301.408	302.857
2. Fertilizer Cost	1.434.695	1.684.524
3. Cost of Medicines	284.319	396.190
4. TKLK Fees	4.306.479	4.431.428
5. TKDK Fees	689.624	720.952
6.Post-harvest Costs	481.916	1.323.524
7.Sack Purchase Fee	334.580	271.667
Total Variable Costs	7.833.021	9.131.142
	8.026.962	**9.337.568**

Source: Primary Data Processing Results in 2024

The table above shows that post-harvest costs have the largest contribution to the overall cost of paddy rice production in Tanjung Agung District, Muara Enim Regency.

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This is shown by the first pattern of GKP production which has a total production cost of Rp 8,026,962/Ha/MT due to expenses related to transportation and transportation. While the second pattern of rice production is due to additional costs, namely the cost of grinding and milling, the total production cost incurred is Rp 9,337,569/Ha/MT. The total cost ratio of the two production patterns directly incurred by the respondent farmers is Rp 1,310,606/Ha/MT. .

Acceptance of Semi-Technical Rice Farming Typology in the Research Area

Revenue is one of the components that determines the level of income. The acceptance rate of Semi-Technical Rice Farming is highly determined by the land area and price at the time of harvest. The amount of revenue received by farmers for each rupiah used in farming production activities is influenced by the quantity of production produced and the applicable selling price, so that the greater the production produced and the appropriate price, the greater the revenue that farmers will get (Fatikhin & Sudjoni, 2020). The amount of farmers' income in Semi-Technical Rice Field Typology can be seen in Table 10.

Table 10. Average Revenue of Semi-Technical Rice Field Farming in the Research Area Per Planting Season in 2024

GKP		**Rice**	
	Average		**Average**
Production (Kg/Ha/MT)	4.780	Production (Kg/Ha/MT)	3.881
Price (Rp/Kg)	4.500	Price (Rp/Kg)	10.000
Acceptance	**21.510.000**	**Acceptance**	**38.810.000**

Source : Primary Data Processing Results in 2024

Based on the data above, the average rice production obtained by farmers in GKP is 4,780/Kg/Ha/MT with a selling price of Rp 4,600/Kg. Meanwhile, in rice, the average production is 3,881/Kg/Ha/MT with a selling price of Rp 10,000/Kg. This indicates that the revenue received by rice farmers is greater than that of GKP.

Based on Table 4.9. The acceptance of paddy rice farmers in the research area is relatively high. This is in line with the results of research by Nainggolan B.P (2021) stating

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that the receipt of GKP farmers in Senyerang District, Muara Enim Regency is Rp 14,794,500/Ha/MT. This is influenced by the average land area owned by farmers. Other aspects that also affect the use of production factors are seeds, fertilizers, medicines, labor and the use of Alsintan which is quite adequate.

After obtaining the total cost of production and revenue, the amount of income can be found by calculating the difference between revenue and total cost. The amount of income received by respondent farmers in Tanjung Agung District, Muara Enim Regency can be seen in Table 11.

Table 11. Average Income of Semi-Technical Rice Field Farming in the Research Area Per Planting Season in 2024

GKP			
Description	**Average (Rp/Ha/MT)**	**Description**	**Average (Rp/Ha/MT)**
Total Admissions	21.510.000	Total Admissions	38.810.000
Total Cost	8.026.962	Total Cost	9.337.568
Income	**13.483.038**	**Income**	**29.472.432**

Source: Primary Data Processing Results in 2024

Table 11 shows that the average income earned by farmers in rice production is higher than GKP with a ratio of Rp 15,989,394/Ha/MT. The amount of farmers' income in the research area is said to be profitable because all costs incurred, both fixed costs and variable costs, can be paid.

Feasibility of Semi-Technical Paddy Rice Farming in the Research Area

The feasibility study serves to determine whether the business can be feasible or not by determining whether the profit received is greater than the expenses. This is important to avoid losses for a business that is initiated or developed. *Revenue Cost ratio* (R/C) is one of the indicators that can be used to determine the feasibility of a business. The R/C ratio analysis is calculated by comparing revenue with total cost. The higher the R/C value, the greater the revenue in rupiah generated from each rupiah issued and the better the performance of the farming (Yakin & Rahmatin, 2023). In rice farming with Semi-Technical Rice Typology in the research area conducted in the research area, the average R/C value is as follows:

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Table 12. R/C Analysis of Rice Field Farming Production of Semi-Technical Rice Field Typology in the Research Area in 2024

	Unit	Sum	
		GKP	Rice
Total Admissions	Rp	21.510.000	38.810.000
Total Cost	Rp	8.026.962	9.337.568
R/Cratio		**2,68**	**4,16**

Source : Primary Data Processing Results in 2024

From the results of the calculation of the R/C ratio, it can be seen that the Semi-Technical Rice Typology paddy rice farming in Tanjung Agung District, Muara Enim Regency as a whole is economically feasible so that the value is more than 1 both in the form of GKP and Rice, so the Semi-Technical Paddy Typology Paddy Farm is very feasible to be continued or pursued in accordance with applicable regulations. However, the R/C ratio value of rice is higher than GKP. This is shown by the value of the R/C ratio of rice, which is 4.16, which means that every cost expenditure of Rp 100 will receive a revenue of Rp 416. In rice production, this is in line with the results of Banju Oru's research. B. H, Saragih. E. C (2023), where the main agricultural activity in Prai Paha Village is rice production which makes it the largest rice field center in Nggaha Ori Angu District with an R/C ratio of 4.13. The same thing also happened in Tanjung Agung District, the location of the researcher's research which is one of the largest rice field center sub-districts in Muara Enim Regency.

Meanwhile, in GKP production, this is in line with the results of Nainggolan B.P (2021) research, which shows that Senyerang District with an R/C ratio of 2.08 is a sub-district in Muara Enim Regency that has the largest land area and rice production.

CONCLUSIONS AND SUGGESTIONS

Conclusion

In accordance with the objectives of the research and starting point from the results of the research and discussion, it can be concluded that rice farmers in Tanjung Agung District, Muara Enim Regency earn income in the form of GKP with an average of Rp 13,483,038/Ha/MT and in the form of rice of Rp 29,472,432/Ha/MT. From the results of the calculation of the R/C ratio, it can be seen that the Semi-Technical Rice Typology

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paddy rice farming in Tanjung Agung District, Muara Enim Regency as a whole is economically feasible so that the value is more than 1 both in the form of GKP and Rice, so the Semi-Technical Paddy Typology Paddy Farm is very feasible to be continued or pursued in accordance with applicable regulations. However, the R/C ratio value of rice is higher than GKP. This is shown by the value of the R/C ratio of rice, which is 4.16, which means that every cost expenditure of Rp 100 will receive a revenue of Rp 416.

Suggestion

Based on the description above, the suggestion that can be given based on the results of this study is that the government is expected to further improve and pay attention to agricultural programs, especially in efforts to increase rice farming production. In addition, to help improve the welfare of rice farmers in Tanjung Agung District, Muara Enim Regency.

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