Jurnal Natur Indonesia
23(2), October 2025: 126-135

p-ISSN 1410-9379
e-ISSN 2503-0345

Analysis of Business Costs of Western Honey Bee (*Apis mellifera*) in Teluk Rimba Village, Koto Gasib District, Siak Regency

Analisis Biaya Usaha Lebah Madu Barat (*Apis Mellifera*) Desa Teluk Rimba Kecamatan Koto Gasib Kabupaten Siak

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ABSTRACT

In Teluk Rimba Village, Koto Gasib Subdistrict, Siak Regency, there are honey bee (*Apis mellifera*) businesses. These consist of five owners: Depra Group and Abdullah Madu Riau, established in 2020, and Young Daffa Madu, Madu Munthe Family, and Tunas Mekar, established in 2024. The beehives are located in the Industrial Plantation Forest (HTI) area of PT. Arara Abadi, Minas-Rasau Kuning District. This study focuses on cost analysis and business feasibility. No previous research has provided information on the current condition, business overview, cultivation practices, or feasibility of the honey bee ventures. This research analyzes the production costs, revenues, income, and feasibility of the *Apis mellifera* honey bee business in Teluk Rimba Village, Koto Gasib Subdistrict, Siak Regency. This research uses a mixed-method approach combining both qualitative and quantitative methods. The data analysis includes descriptive analysis, cost analysis, revenue, income, and Revenue Cost Ratio (R/C ratio) analysis. The results show that the total production cost of the *Apis mellifera* honey bee business from January to December 2024 was IDR 492,393,331. The total revenue for the same period was IDR 1,055,775,000. The net income generated was IDR 563,381,669. The R/C ratio analysis for the five honey bee businesses, Young Daffa Madu, Madu Munthe Family, Tunas Mekar, Depra Group, and Abdullah Madu Riau, shows that the total revenue divided by total production cost yielded a value of 2.14. This indicates that the honey bee business is profitable and feasible for development, as the R/C ratio value exceeds 1.

Keywords: *Apis mellifera*, Production cost value, Revenue, Income, Feasibility.

ABSTRAK

Desa Teluk Rimba Kecamatan Koto Gasib Kabupaten Siak terdapat usaha lebah madu Barat (*Apis mellifera*). Terdiri 5 orang pemilik yaitu Depra Group dan Abdullah Madu Riau didirikan tahun 2020 dan Young Daffa Madu, Madu Muthe Familly dan Tunas Mekar didirikan tahun 2024. Stup lebah madu berada di kawasan Hutan Tanaman Industri (HTI) PT. Arara Abadi, Distrik Minas-Rasau Kuning. Penelitian ini difokuskan pada analisis biaya dan kelayakan usaha, belum ada penelitian yang menunjukkan kondisi, gambaran usaha, budidaya, dan kelayakan. Penelitian ini bertujuan untuk menganalisis biaya produksi, penerimaan, pendapatan, dan kelayakan usaha lebah madu Barat (*A.mellifera*) Desa Teluk Rimba Kecamatan Koto Gasib Kabupaten Siak. Penelitian ini menggunakan metode *mix metod* pendekatan kualitatif dan kuantitatif. Analisis data yang digunakan dalam penelitian ini meliputi analisis deskriptif, biaya, penerimaan, pendapatan, dan Revenue Cost Ratio (R/C ratio). Hasil penelitian menunjukan bahwa biaya total produksi usaha lebah madu Barat (*A.mellifera*) periode Januari-Desember 2024 sebesar Rp492.393.331. Penerimaan dari usaha lebah madu Barat (*A.mellifera*) periode Januari-Desember 2024 sebesar Rp1.055.775.000. Pendapatan bersih yang diperoleh dari usaha lebah madu Barat (*A.mellifera*) periode Januari-Desember 2024 sebesar Rp563.381.669. Hasil analisis R/C ratio pada 5 usaha lebah madu Barat (*A. mellifera*) Desa Teluk Rimba, Young Daffa Madu, Madu Munthe Family, Tunas Mekar, Depra Group dan Abdullah Madu Riau menunjukkan bahwa total penerimaan dibagi dengan total biaya produksi menghasilkan nilai sebesar nilai 2,14. Usaha madu dinilai menguntungkan dan layak untuk dikembangkan karena nilai R/C ratio > 1.

Kata Kunci: *Apis mellifera*, Nilai biaya produksi, Penerimaan, Pendapatan, Kelayakan

INTRODUCTION

Received: 30 August 2025
Accepted: 30 September 2025

The utilization of forest products in Teluk Rimba Village, Koto Gasib Subdistrict, Siak Regency, is in the form of the Western Honey Bee (*Apis mellifera*) business. According to Rompas et al. (2023), *A. mellifera* is one of the main honey bee species cultivated in many countries, including Europe, Africa, the Middle East, and Indonesia. Maryana & Supena (2019) state that *A. mellifera* is known for having large colonies and similarities to wild bees such as *Apis dorsata*, and is frequently cultivated. This study focuses on cost analysis and business feasibility. To date, no research has provided an overview of the condition, business profile, cultivation methods, and feasibility of the Western Honey Bee business. The business is run by five owners: Depra Group and Abdullah Madu Riau, established in 2020; Young Daffa Madu, Madu Munthe Family, and Tunas Mekar, established in 2024. In the early stages, several business groups acted as investor parties who provided funding to support the continuity of the business. The funds were used as initial capital for the honey bee cultivation process. Over time, as capabilities and experience improved, each business owner could independently manage the cultivation without external financial support. Currently, all owners run their businesses independently.

The cultivation of Western honey bees uses wooden boxes called stups as beehives. Based on field observations, the bee hives are located in the Industrial Plantation Forest (HTI) area of PT. Arara Abadi, Minas District. In that area, *Acacia crassicarpa* serves as the main food source for the bees. According to Supriyono (2018), production cost refers to all expenses related to production functions or processing raw materials into finished products. Revenue is the total income a business earns from the sale of its output, calculated by multiplying the number of units sold by the selling price (Suryani et al., 2021). Income is the result obtained through the main occupation, while subsistence income is earnings from production factors valued in monetary terms (Nadir, 2018). Business feasibility aims to determine whether a business will generate greater profit than its production costs, thus making it feasible to develop. Various opportunities and prospects in the industry must be evaluated to assess the benefits that can be gained from a business (Arnold et al., 2020).

The objectives of this study are**:** 1) To determine the production cost, revenue, and income of the Western Honey Bee business over a one-year production period in Teluk Rimba Village, Koto Gasib Subdistrict, Siak Regency. 2) To analyze the feasibility of the Western Honey Bee business in Teluk Rimba Village, Koto Gasib Subdistrict, Siak Regency.

MATERIALS AND METHODS

Time and place of the research

This research was conducted in Teluk Rimba Village, Koto Gasib Subdistrict, Siak Regency, Riau Province. The study was carried out over one month in February 2025. The research location map showing the placement of bee hives (stup) in the Industrial Plantation Forest (HTI) area of PT. Arara Abadi, Minas-Rasau Kuning District, is presented in Figure 1.

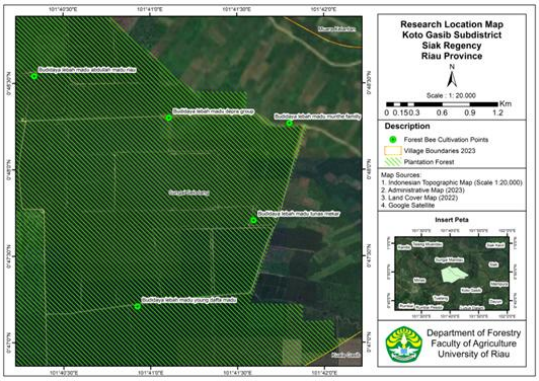

Figure 1. Research location

Materials and Methods

The materials used in this research are the cooperation agreement letter of PT. Arara Abadi, and the honey bee cultivation statement letter of PT. Arara Abadi and documents on honey production are additional materials and information to support the results of this research. The tools used in this research include interview guides, stationery, cameras, and voice recorders.

Data Collection Methods

The research employs a mixed methods approach, which combines qualitative and quantitative methods. The quantitative approach uses open-ended questionnaires to assess production costs, revenues, income, and feasibility in the Western Honey Bee business. The qualitative approach is conducted through in-depth interviews with informants, such as business owners, beekeepers, honey distributors, and the head of the REP (Representative Office) of PT. Arara Abadi. The sampling technique used in this research is purposive sampling. The implementation of this research includes observation, interviews, and literature review. Observations in this research focus on the conditions of the Western Honey Bee business, its cultivation, and business feasibility.

Data analysis

The data analysis in this research involves several important aspects, namely cost analysis, revenue, income, and business feasibility. Cost analysis calculates the total expenditure required in the honey bee cultivation process. This total cost calculation is done using the formula:

$$TC = FC + VC$$

Description:
TC = Total Cost (IDR/Year)
FC = Fixed Cost (IDR/Year)
VC = Variable Cost (IDR/Year)

To calculate the depreciation of equipment, a linear method is used:

D = C-SV: UL

Description:
D = Depreciation cost (IDR/unit/year)
C = Purchase price (IDR/unit/year)
SV = Salvage value 20% of the purchase price (IDR/unit/year)
UL = Useful life of the equipment (Years)

The analysis of revenue involves the evaluation of income derived from honey sales. Total revenue is calculated using the formula:

$$TR = Py\ x\ Y$$

Description:
TR = Total Revenue (IDR/Year)
Py = Product price (IDR/kg)
Y = amount of production (kg)

Net income is calculated by subtracting production costs from revenue. Net income is calculated using the formula:

$$I = TR - TC$$

Description:
I = Income (IDR/Year)
TR = Total Revenue (IDR/Year)
TC = Total Cost (IDR/Year)

The feasibility of the business is analyzed to determine whether this honey bee cultivation is profitable and worthy of expansion. The revenue-to-cost ratio (R/C ratio) helps assess whether the business is profitable. The Revenue Cost Ratio (R/C) is calculated using the following formula:

R/C = Total Revenue (TR): Total Cost (TC)

Description:
Revenue = income earned (IDR/Year)
Cost = Expenses incurred (IDR/Year)
TR = Total Revenue (IDR/Year)
TC = Total Cost (IDR/Year)

Three criteria are used in this analysis to assess business feasibility based on the R/C ratio. The business is

profitable and worth developing if the R/C value is greater than 1 (R/C > 1). If the R/C value equals 1 (R/C = 1), the business is at a break-even point, meaning it neither gains profit nor suffers a loss. However, if the R/C value is less than 1 (R/C < 1), the business is operating at a loss and not developing feasibly.

RESULT AND DISCUSSION

General Conditions of the Research Location

Based on the village profile data 2025, Teluk Rimba Village consists of two hamlets, namely Segintil Hamlet and Bangso Hamlet, and there are 2 RW (neighborhood associations) and 4 RT (community units). The location between Segintil Hamlet and Bangso Hamlet is separated by the Siak River, making the strategic Teluk Rimba Village accessible by both water and land transportation. The community of Teluk Rimba Village generally has livelihoods as farmers and fishermen. Teluk Rimba Village is 69.2 km², where 85% of the land is utilized as agricultural land for oil palm plantations and rubber plantations, while 15% is allocated for residential housing. Teluk Rimba Village has a population of 681 people, 341 males and 340 females, and 173 families, divided into two hamlet areas.

Characteristics of the respondents

The characteristics of informants are a general description of the individuals who provide data in the research. This information is important for researchers to understand the informants' background and describe them in this study, categorized by name, Age, Education, and Occupation. The informants for the research on Western Honey Bees can be seen in Table 1.

Table 1. Informant

No	Name	Age	Education	Occupation
1	Rahmat	38	Associate Degree in Primary School Teacher Education (D3 PGSD)	Business Owner
2	Heru Syuliansyah	26	Senior High School	Business Owner
3	Abdul Yulian	40	No Formal Education	Business Owner
4	Putra	43	Senior High School	Business Owner
5	Abdullah	40	Vocational High School (SMK)	Business Owner
6	Heru	26	Senior High School	Bee Caretaker
7	Ramadon	47	Junior High School	Bee Caretaker
8	Erianto	50	Elementary School	Bee Caretaker
9	Poniran	42	Elementary School	Bee Caretaker
10	Irwan Syahputra	28	Senior High School	Bee Caretaker
11	Yefri	50	Senior High School	Honey Distributor
12	Wahyu, S.Hut	54	Bachelor of Forestry (S1)	Head of REP PT. Arara Abadi

Based on Table 1, relative ages vary; younger individuals generally have more optimal physical conditions, allowing them to engage in beekeeping activities that require physical effort, such as moving hives, honey harvesting, and colony maintenance. Age levels help us understand the social and emotional experiences typically encountered by individuals at each stage of their life (Ngadiran, 2020). Older business owners or caregivers possess practical knowledge and extensive experience in beekeeping activities, such as understanding colony disease identification and effective harvest time management. The decline in physical condition with increasing age presents a challenge, particularly in technical aspects that require physical strength. Age is important because it can indicate the amount of life experience a person has, their level of maturity in thinking, and their perspectives on various issues (Putri & Setyowati, 2017).

Informants who do not have formal education can still succeed in business if they have skills in the field and a good social network. A combination of experience, knowledge, and ability determines success. Education can help a person understand information and make decisions more easily (Ikaditya, 2016). There are five main business owners involved in the Western Honey Bee industry, namely Rahmat, the owner of Young Daffa Honey; Heru Syuliansyah, the owner of Madu Munthe Family; Abdul Yulian, the owner of Tunas Mekar; Putra, the owner of Depra Group; and Abdullah, the owner of Abdullah Madu Riau. Five beekeepers are informants: Heru, Ramadon, Erianto, Poniran, and Irwan Syahputra, responsible for caring for the bee colonies. The head of the *Representative Office* (REP), Wahyu from PT Arara Abadi, plays a role due to the partnership between the land-concession holding company and the entrepreneurs. Additionally, the honey distributor, Yefri, plays a role in collecting honey from growers and distributing it to a wider market.

Production Cost Analysis

Production cost analysis consists of two types of costs: fixed and variable. Fixed costs remain constant, even if the production quantity differs. These expenses must be incurred regularly. Examples of fixed costs include electricity bills, rent, taxes, and depreciation of machinery (Fitri, 2022). The fixed costs of the western honey bee business can be seen in Table 2.

Table 2. Fixed costs of the western honey bee business

No	Cultivation of Western Honey	Cost components	Number	Price	Total price (IDR/Year)
1.	Young Daffa Madu	1. Depreciation of honey boxes	170	1.000.000	2.833.333
		2. Medicines	3	485.000	5.820.000
		3. Nurse's wages	1	3.000.000	36.000.000
		4. Night shift wages	1	2.000.000	24.000.000
	Total				68.653.333
2.	Madu Munthe Family	1. Depreciation of honey boxes	154	800.000	2.053.333
		2. Medicines	3	485.000	5.820.000
		3. Land rental	1	1.000.000	12.000.000
	Total				19.873.333
3.	Tunas Mekar	1. Depreciation of honey boxes	160	500.000	1.333.333
		2. Medicines	3	485.000	5.820.000
	Total				7.153.333
4.	Depra Group	1. Depreciation of honey boxes	395	800.000	5.266.666
		2. Medicines	4	605.000	7.260.000
		3. Nurse's wages	1	5.000.000	60.000.000
	Total				72.526.666
5.	Abduallah Madu Riau	1. Depreciation of honey boxes	400	1.000.000	6.666.666
		2. Medicines	6	1.670.000	20.040.000
		3. Nurse's wages	1	6.500.000	78.000.000
		4. Helper's wages	1	2.500.000	30.000.000
	Total				134.706.666

According to Table 2. The breakdown of fixed costs for producing Western Honey Bees includes harvesting wages, hive depreciation, medicines, and land rent. This is consistent with Nisa et al. (2023), which states that fixed costs include land rent, hive depreciation, and permanent/main employees. Fixed costs are a type of cost that is not affected by changes in the level of output. Fixed costs significantly influence profits, where if a company has high total fixed costs, the resulting profitability level will be lower (Marlina, 2017).

In the Western Honeybee business, land rental costs are an important fixed cost component. Munthe Family Honey, fixed costs increase due to the land rental component, placing hives on someone else's land with a monthly rental fee of IDR 1,000,000. There is a significant difference in labor costs between the five businesses. This difference arises because each has different salary standards for beekeepers, night watchers, and helpers (operational assistants). Variable costs depend on the amount of production generated. Examples of variable costs include transportation, raw materials, and labor wages (Darmawan & Rahim, 2018).

Based on Table 3. The variable costs in Western Honey Bee farming reflect expenses that only occur when there is production activity, and will increase or decrease depending on how much honey is produced. This aligns with Rusnaeni (2021), who states that variable costs are costs whose total changes according to the number of goods produced, although the cost per unit remains the same. Harvest wages are set at IDR150,000 per harvest. The harvesting process includes collecting honeycombs, extracting honey, and cleaning the combs.

The extraction machines rented by two honey businesses, Munthe Family and Tunas Mekar, do not have extraction machines; the founders rent machines for IDR200,000 per use, while Young Daffa Madu, Madu Munthe Family, Tunas Mekar, Depra Group, and Abdullah Madu Riau rent pick-up trucks for IDR300,000 for distribution or logistics needs during the harvest. A 35L jerrycan is used to hold 50 kg of honey. The jerrycan is used to store the honey harvest and is also included in variable costs, with each jerrycan costing IDR55,000. This aligns with Marnisah et al. (2024), which states that the increasing number of beehives directly impacts the increase in honey production volume. The total cost of Western Honey Bee farming can be seen in Table 4.

Table 1. Variable costs of the western honey bee business

No	Cultivation of Western honey	Cost components	Number	Price (IDR/Unit)	Total (IDR/Year)
1.	Young Daffa Madu	1. Jerrican	12	55.000	7.920.000
		2. Harvest Wage	9	150.000	16.200.000
		3. Car Rental	1	300.000	3.600.000
	Total				27.720.000
2.	Madu Munthe Family	1. Jerrican	12	55.000	7.920.000
		2. Harvest Wage	9	150.000	16.200.000
		3. Extractor Machine Rental	1	200.000	2.400.000

		4. Car Rental	1	300.000	3.600.000
	Total				30.120.000
3.	Tunas Mekar	1. Jerrican	12	55.000	7.920.000
		2. Harvest Wage	9	150.000	16.200.000
		3. Extractor Machine Rental	1	200.000	2.400.000
		4. Car Rental	1	300.000	3.600.000
	Total				30.120.000
4.	Depra Group	1. Jerrican	24	55.000	15.840.000
		2. Harvest Wage	7	150.000	19.800.000
		3. Car Rental	1	300.000	3.600.000
	Total				39.240.000
5.	Abduallah Madu Riau	1. Jerrican	48	55.000	31.680.000
		2. Harvest Wage	7	150.000	27.000.000
		3. Car Rental	1	300.000	3.600.000
	Total				62.280.000

Table 2. Total cost of the western honey bee business

No	Cultivation of Western Honey	Type of cost	Total (IDR/Year)
1.	Young Daffa Madu	Variable cost	27.720.000
		Fixed costs	68.653.333
	Total		96.373.333
2.	Madu Munthe Family	Variable cost	30.120.000
		Fixed costs	19.873.333
	Total		49.993.333
3.	Tunas Mekar	Variable cost	30.120.000
		Fixed costs	7.153.333
	Total		37.273.333
4.	Depra Group	Variable cost	39.240.000
		Fixed costs	72.526.666
	Total		111.766.666
5.	Abduallah Madu Riau	Variable cost	62.280.000
		Fixed costs	134.706.666
	Total		196.986.666
6.	Overall	Variable cost	189.480.000
		Fixed costs	302.913.331
	Total		492.393.331

Based on Table 4, the total cost is the overall cost incurred during the production process, consisting of fixed and variable costs (Atika et al., 2024). Based on the production cost analysis results, the total costs incurred by each honey business show significant variation. Young Daffa Madu, Madu Munthe Family, and Tunas Mekar have been operating since early 2024, while Depra Group and Abdullah Madu Riau have been operating since 2020. The total costs for the entire period of January to December 2024 amount to IDR492,393,331. The business scale influences the difference in total costs among these business owners, including the number of hives, maintenance, and production.

Acceptance analysis

Receipts are all forms of income, whether in the form of money or property from other parties, or results of industry that are valued based on the amount of property that applies at that time (Madji et al., 2019). The greater the income received, the greater the profit obtained. From January to December 2024, the quantity of honey production varies for each cultivation, and prices also vary with a harvesting frequency of once a month. The income analysis from Western Honey Bee can be seen in Table 5.

Table 3. Acceptance of western honey bee

No	Cultivation of Western Honey	Harvest period	Honey production (Jerrycan/kg)	Price (IDR/Kg)	Acceptance (IDR)
1.	Young Daffa Madu	Januari	18/900kg	35.000	31.500.000
		Februari	8/400kg	28.000	11.200.000
		Maret	10/500kg	28.000	14.000.000
		April	19,7/985kg	26.000	25.610.000
		Mei	19,4/ 970kg	26.000	25.220.000
		Juni	13/650kg	23.000	15.275.000
		Juli	0	0	0
		Agustus	7/350kg	23.000	8.050.000
		September	6/300kg	23.000	6.900.000
		Oktober	11/550kg	22.000	12.100.000
		November	6/300kg	22.000	6.600.000
		Desember	7,4/370kg	21.000	7.770.000
	Total				164.225.000

No	Cultivation of Western Honey	Harvest period	Honey production (Jerrycan/kg)	Price (IDR/Kg)	Acceptance (IDR)
2.	Madu Munthe's family	Januari	0	0	0
		Februari	0	0	0
		Maret	5/250kg	20.000	5.000.000
		April	4/200kg	20.000	4.000.000
		Mei	5/250kg	20.000	5.000.000
		Juni	14/700kg	22.500	15.750.000
		Juli	11/550kg	22.000	12.100.000
		Agustus	9/450kg	20.000	9.000.000
		September	10/500kg	20.000	10.000.000
		Oktober	11/550kg	20.000	11.000.000
		November	6/300kg	20.000	6.000.000
		Desember	7/350kg	20.000	7.000.000
	Total				84.850.000
3.	Tunas mekar	Januari	0	0	0
		Februari	0	0	0
		Maret	9/450kg	20.000	9.000.000
		April	9/450kg	20.000	9.000.000
		Mei	9/450kg	25.000	11.250.000
		Juni	10/500kg	20.000	10.000.000
		Juli	10/500kg	25.000	12.500.000
		Agustus	10/500kg	20.000	10.000.000
		September	10/500kg	20.000	10.000.000
		Oktober	10/500kg	20.000	10.000.000
		November	7/350kg	25.000	8.750.000
		Desember	6/300kg	25.000	7.500.000
	Total				98.000.000
4.	Depra Group	Januari	17/850kg	36.000	30.600.000
		Februari	15/750kg	28.000	21.000.000
		Maret	6/300kg	28.000	8.400.000
		April	14/700kg	26.000	18.200.000
		Mei	16/800kg	26.000	20.800.000
		Juni	18/900kg	22.000	19.800.000
		Juli	18/900kg	22.000	19.800.000
		Agustus	12/600kg	21.000	12.600.000
		September	0	0	0
		Oktober	0	0	0
		November	0	0	0
		Desember	0	0	0
	Total				151.200.000
5.	Abduallah Madu Riau	Januari	40/2.000kg	30.000	60.000.000
		Februari	40/2.000kg	30.000	60.000.000
		Maret	24/1.250kg	30.000	37.500.000
		April	35/1.750kg	30.000	52.500.000
		Mei	40/2.000kg	30.000	60.000.000
		Juni	40/2.000kg	30.000	60.000.000
		Juli	40/2.000kg	30.000	60.000.000
		Agustus	30/1.500kg	30.000	45.000.000
		September	20/1.000kg	30.000	30.000.000
		Oktober	25/1.250kg	30.000	37.000.000
		November	20/1.000kg	30.000	30.000.000
		Desember	17/850kg	30.000	25.500.000
	Total				557.500.000
6.	Overall				1.055.775.000

Based on Table 5, the Western Honey Bee business in Teluk Rimba village's income highly depends on the amount of honey produced each month. Honey harvesting occurs actively every month, although with significant variations in harvest volume. In the last 2 months, namely November and December 2024, income has decreased due to low harvest yields. Honey production shows fluctuations due to several factors. Sihombing (2020) states that climate, colony health, and food sources are the main factors affecting honey productivity.

Young Daffa Madu's harvest period in July produced zero honey due to diseases in the bee colonies that resulted in no production. Tunas Mekar and Madu Munthe Family started their cultivation in January 2024, with a harvest period in January and February, also producing zero honey, so the yield is still low. Meanwhile, the Depra group had a harvest period in September, October, November, and December. However, it did not conduct harvesting due to unfavorable weather, lack of care caused by diseases affecting the bees, decreased colonies, and limited nectar availability. The total income for the entire year reached IDR 1,055,775,000. This figure indicates the amount of revenue successfully received by the business owner over the year and reflects how well the business is performing.

Income analysis

Revenue is the value obtained from the difference between total receipts (total revenue) and total production costs (total cost), or the amount of receipts obtained minus production costs, also referred to as net revenue (Wardoyo et al., 2016). The revenue from the Western honey bee business can be seen in Table 6.

Table 4. Western honey bee business income

No	Cultivation of Western Honey	Description	Value (IDR/Year)
1.	Young Daffa Madu	Total revenue	164.225.000
		Total cost	96.653.333
	Income		67.571.667
2.	Madu Munthe Family	Total revenue	84.850.000
		Total cost	49.993.333
	Income		34.856.667
3.	Tunas Mekar	Total revenue	98.000.000
		Total cost	37.273.333
	Income		60.726.667
4.	Depra Group	Total revenue	151.200.000
		Total cost	111.766.666
	Income		39.433.334
5.	Abduallah Madu Riau	Total revenue	609.000.000
		Total cost	196.986.666
	Income		412.013.334
6	Overall	Total revenue	1.055.775.000
		Total cost	492.393.331
	Income		563.381.669

Based on Table 6, the income earned from 5 Western Honey Bee businesses during the period from January to December 2024 is presented. Each business shows differences in revenue, costs, and net income. The net income is the difference between total revenue and total costs incurred. The income earned from the 5 Western Honey businesses from January to December 2024 shows that Young Daffa Honey has a relatively large income, demonstrating effective management and good production results. Due to unpredictable weather and bee care issues, Munthe Family Honey has a relatively small income. Tunas Mekar has a relatively large income and relatively low costs, resulting in high net profits. Depra Group has a small income caused by poor weather conditions that led Depra Group not to harvest for 4 months, resulting in a decrease in production output and affecting total revenue. Abdullah Madu Riau's business has the highest revenue among all businesses. The total revenue for the period of January-December 2024 is IDR563,381,669. According to Tuturoong (2021), revenue is an important business benchmark because it shows a business's success in generating profit.

Revenue Cost Ratio Analysis

The revenue cost ratio (R/C ratio) analysis is an analysis that assesses the feasibility of a business by looking at the comparison of total business revenue and total production costs. The feasibility of the Honey Bee business can be seen in Table 7.

Table 5. Feasibility of western honey bee business.

No	Cultivation of Western Honey	Description	Value (IDR/Year)
1.	Young Daffa Madu	Total revenue	164.225.000
		Total cost	96.653.333
	Eligibility (R/C)		1,69
2.	Madu Munthe Family	Total revenue	84.850.000
		Total cost	49.993.333
	Eligibility (R/C)		1,69
3.	Tunas Mekar	Total revenue	98.000.000
		Total cost	37.273.333
	Eligibility (R/C)		2,62
4.	Depra Group	Total revenue	151.200.000
		Total cost	111.766.666
	Eligibility (R/C)		1,35
5.	Abduallah Madu Riau	Total revenue	609.000.000
		Total cost	196.986.666
	Eligibility (R/C)		3,09
6.	Overall	Total revenue	1.055.775.000
		Total cost	492.393.331
	Eligibility (R/C)		2,14

Based on Table 7, the analysis of the R/C ratio for 5 West Honey Bee businesses in Teluk Rimba Village

shows that Young Daffa Madu, Madu Munthe Family, Tunas Mekar, Depra Group, and Abdullah Madu Riau all yield an R/C ratio of >1. Each business generates revenue greater than its total production costs. In other words, the businesses are generally considered efficient and profitable. This is supported by Ansyah et al. (2023), who state that an R/C ratio greater than 1 (R/C >1) indicates that the business is profitable and worth continuing. The Revenue Cost Ratio of 2.14 shows that this business is financially promising. The net income for 1 year from the West Honey Bee business amounts to IDR563,381,669. The total revenue for the West Honey Bee business is IDR1,055,775,000. Thus, the Western Honey Bee business in Teluk Rimba Village can be concluded as a venture suitable for development, both in technical and economic aspects.

CONCLUSION

Western Honey Bee business in Teluk Rimba Village, Koto Gasib District, Siak Regency. Over a period of 1 year, production costs reached IDR 492,393,331, revenue reached IDR 1,055,775,000, and net profit amounted to IDR 563,381,669. The result of the R/C (Revenue Cost Ratio) analysis of the Western Honey Bee (*Apis mellifera*) business in Teluk Rimba Village, Koto Gasib District, Siak Regency, shows that total revenue divided by total production costs results in 2.12. This is considered profitable and feasible because the value is greater than 1.

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