

Financial Feasibility Analysis of Layer Chicken Farming at PT Mitra Sejati, Konawe Selatan Regency

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ABSTRACT

This study aimed to analyze the production cost structure, revenue, income, and financial feasibility of the commercial laying hen enterprise operated by PT Mitra Sejati in Konda District, South Konawe Regency, Southeast Sulawesi Province. The research was conducted from July to August 2025 using a quantitative descriptive approach. Data were collected through direct observation, interviews with the owner and employees, documentation of production records, and analysis of supporting secondary data. The variables analyzed included farm profile, production resources, investment costs, production costs, revenue, income, and financial feasibility using income analysis, Revenue–Cost Ratio (R/C Ratio), and Benefit–Cost Ratio (B/C Ratio). The results showed that PT Mitra Sejati experienced significant business development, increasing from 3,000 laying hens in 2023 to 8,000 birds in 2025, with 4,200 productive hens producing approximately 140 trays of eggs per day. The total investment cost reached IDR 254,800,000, while total production costs during one 18-month production cycle amounted to IDR 3,736,020,857. Total revenue obtained from egg sales, culled hens, and poultry manure reached IDR 3,979,400,000, resulting in a net income of IDR 243,379,143 or an average monthly income of IDR 13,521,064. The financial feasibility analysis indicated an R/C Ratio value of 1.07 and a B/C Ratio value of 0.07, demonstrating that the enterprise was economically feasible and generated positive returns. However, feed costs represented the largest production expenditure, accounting for approximately 70% of total costs, indicating that feed efficiency improvement remains a major strategy for increasing profitability. Overall, PT Mitra Sejati's commercial laying hen enterprise has good development prospects, supported by effective production management, diversified revenue sources, and continuous improvement in operational efficiency.

Keywords: Commercial Laying Hens, Income Analysis, Financial Feasibility, R/C Ratio, B/C Ratio, Poultry Agribusiness

INTRODUCTION

The development of the livestock subsector is a strategic component in strengthening national food security through the provision of high-quality animal protein. One of the livestock commodities that makes a significant contribution to meeting the population's protein needs is chicken eggs produced by commercial laying hens. Eggs are a relatively affordable and widely available source of animal protein with a comprehensive nutritional profile. As a result, demand for eggs has continued to increase due to population growth, rising public awareness of the importance of nutritious food consumption, and the expansion of egg-based food industries. These conditions have made the commercial laying hen industry one of the most promising agribusiness sectors, with strong potential to increase farmers' income, promote local economic development, and enhance regional food security (Azis et al., 2024; Syam et al., 2024).

The commercial laying hen industry in Indonesia has shown a consistent upward trend in recent years. In addition to being supported by relatively stable domestic market demand, this growth has also been driven by increased investment in modern poultry production systems that employ more efficient flock management practices. Nevertheless, commercial egg production continues to face several significant challenges, particularly the high cost of production, which is largely dominated by feed expenses, fluctuations in feed ingredient prices, changes in egg selling prices, and rising labor and veterinary costs. As a result, farm profitability is highly dependent on producers' ability to manage production costs efficiently. Therefore, income analysis serves as an important tool for evaluating the economic feasibility and financial performance of commercial laying hen enterprises (Abadi et al., 2024; Satmalanita et al., 2025).

In livestock economics, farm income is the primary indicator used to assess the performance of a production enterprise. Income is defined as the difference between total revenue and total production costs incurred during a production period. In addition to measuring income, business feasibility is commonly evaluated using the Revenue-Cost Ratio (R/C Ratio) and the Benefit-Cost Ratio (B/C Ratio). These indicators provide insight into the efficiency of cost utilization and the enterprise's ability to generate profits. An R/C Ratio greater than one indicates that each unit of production cost generates a higher amount of revenue, while a positive B/C Ratio indicates that the enterprise creates economic benefits and is financially feasible for further development (Sulaeman et al., 2024; Hasanah et al., 2021).

Previous studies have shown that commercial laying hen farming has strong economic prospects when managed professionally. Abadi (2024) reported that commercial laying hen farms generated substantial income and were financially feasible, with a Revenue-Cost Ratio (R/C Ratio) of 1.96, indicating a high level of financial efficiency. Similarly, Wicaksono (2016) found that commercial laying hen enterprises achieved an R/C Ratio greater than one, suggesting that the business was economically viable and worthy of continued operation and expansion. These findings indicate that efficient production cost management is a key

determinant of farm income and the long-term sustainability of commercial laying hen enterprises.

PT Mitra Sejati, located in Konda District, South Konawe Regency, Southeast Sulawesi Province, is one of the rapidly growing commercial laying hen companies in the region. The company began operations with approximately 3,000 laying hens and has expanded to a flock of about 8,000 hens, producing an average of 140 trays of eggs per day. In addition to egg production as its primary source of revenue, the company also earns supplementary income from the sale of culled hens and poultry manure. This diversification of revenue sources provides opportunities to improve overall profitability; however, it also requires more systematic cost management to ensure that all production activities are conducted efficiently.

Although PT Mitra Sejati has experienced substantial business growth, the company has not yet conducted a comprehensive financial analysis of its production costs, revenues, and profitability over a complete production cycle. Information regarding income levels, cost structure, and business feasibility is essential for supporting managerial decision-making aimed at improving production efficiency and developing future business expansion strategies. A systematic financial analysis is also important for investors and financial institutions in evaluating the long-term development prospects of commercial laying hen enterprises (Ikhwan & Penansang, 2024; Kurdi, 2019).

Based on these considerations, this study aims to analyze the production cost structure, revenue, income, and financial feasibility of the commercial laying hen enterprise operated by PT Mitra Sejati in Konda District, South Konawe Regency, using income analysis, the Revenue-Cost Ratio (R/C Ratio), and the Benefit-Cost Ratio (B/C Ratio). The findings are expected to provide a basis for improving the efficiency of commercial laying hen farming operations and to contribute scientific evidence that may assist agribusiness entrepreneurs, local governments, investors, and researchers concerned with the sustainable development of Indonesia's poultry agribusiness sector.

METHODS

This study was conducted at PT Mitra Sejati, located in Konda District, South Konawe Regency, Southeast Sulawesi Province, Indonesia. The research was carried out over a one-month period from July to August 2025. The study site was selected using purposive sampling because PT Mitra Sejati is one of the commercial laying hen enterprises with a relatively large production scale, a well-organized flock management system, and continuous production activities. In addition, the company maintains a substantial laying hen population and employs a significant number of local workers, making it a representative case for analyzing production cost structure, revenue, income, and the financial feasibility of a commercial laying hen enterprise. The respondents consisted of the business owner and employees directly involved in the farm's operational activities.

The study utilized both primary and secondary data. Primary data were collected through direct observation of production activities, documentation of operational costs, and in-

depth interviews with respondents using interview guides and structured questionnaires developed in accordance with the research objectives. Observations were conducted to obtain information on flock management practices, the use of production inputs, marketing systems, and farm management. Supporting documentation, including photographs, production records, financial reports, and company archives, was also used to strengthen the primary data. Secondary data were obtained from scientific journals, books, government agency reports, publications from the Central Statistics Agency (BPS-Statistics Indonesia), and other documents relevant to the economic analysis of commercial laying hen farming. The combination of primary and secondary data provided a comprehensive understanding of the farm enterprise under investigation.

The variables observed in this study included respondent characteristics, farm profile, production costs, revenue, income, and business feasibility. Respondent characteristics included age, educational attainment, farming experience, and the number of family dependents. The farm profile included years of operation, initial investment capital, production capacity, and marketing channels for farm products. Production costs were classified into fixed costs and variable costs. Fixed costs included depreciation of poultry houses, depreciation of equipment, salaries of permanent employees, electricity, water, and other fixed operating expenses. Variable costs included the purchase of day-old chicks (DOCs) or pullets, feed, vaccines, medications, vitamins, and other operating expenses that varied with the level of production. Farm revenue was calculated from the sales of eggs, culled hens, and poultry manure, while farm income was calculated as the difference between total revenue and total production costs during a production period.

Data were analyzed using a quantitative descriptive approach, employing income analysis, the Revenue-Cost Ratio (R/C Ratio), and the Benefit-Cost Ratio (B/C Ratio). Farm income was calculated using the formula $Pd = TR - TC$, where TR represents total revenue and TC represents total production costs. Total revenue was obtained by multiplying total production by the selling price, while total production costs were calculated as the sum of fixed and variable costs. Business feasibility was then evaluated using the R/C Ratio, calculated as TR/TC . The enterprise was considered profitable when the R/C Ratio was greater than one, at the break-even point when it equaled one, and unprofitable when it was less than one. The B/C Ratio was calculated using the formula $(TR - TC)/TC$. A B/C Ratio greater than zero indicated that the enterprise was financially feasible and worthy of further development, a value equal to zero indicated a break-even condition, and a value less than zero indicated that the enterprise was not economically feasible. The results of all analyses were presented in tables and descriptive narratives to provide a comprehensive assessment of cost efficiency, farm income, and the development prospects of the commercial laying hen enterprise operated by PT Mitra Sejati.

RESULTS AND DISCUSSION

4.1 Profile of PT Mitra Sejati

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PT Mitra Sejati is a commercial laying hen enterprise located in Konda District, South Konawe Regency, Southeast Sulawesi Province, Indonesia. The company was established in 2023 with the primary objective of meeting the increasing market demand for commercial chicken eggs. Since its establishment, the company has implemented an intensive poultry production system using battery cages supported by a well-organized production management system. Business development has been carried out gradually through increasing the laying hen population, constructing additional poultry houses, and expanding production capacity. The initial investment capital amounted to IDR 400,000,000, and the entire investment was financed through the owner's personal capital. The use of self-financing demonstrates that the company has maintained a relatively strong level of financial independence in establishing and expanding its business operations.

The development of PT Mitra Sejati has shown substantial progress within a relatively short period. At the beginning of its operations, the company owned only two battery cage houses with a population of approximately 3,000 laying hens. As market demand increased and the management's capacity to operate the business improved, the company expanded its operations and currently owns four poultry houses with a total population of approximately 8,000 laying hens, of which about 4,200 hens are in the laying phase. The expansion of production capacity has been accompanied by a significant increase in egg production, reaching an average of 140 trays of eggs per day. These developments indicate that PT Mitra Sejati has become one of the relatively large-scale commercial laying hen enterprises in South Konawe Regency.

To provide an overview of the development of PT Mitra Sejati from its establishment to the period of this study, information regarding the number of poultry houses, laying hen population, production capacity, and land area is presented in Table 1.

Table 1. Development of PT Mitra Sejati's commercial laying hen enterprise, 2023–2025

Business component	2023	2025
Number of poultry houses	2 units	4 units
Laying hen population	3,000 birds	8,000 birds
Productive laying hens	-	4,200 birds
Egg production	-	140 trays/day
Land area	-	8,000 m ²

Source: Primary data processed, 2025.

Table 1 shows that PT Mitra Sejati experienced rapid business growth during the 2023–2025 period. The number of poultry houses increased from two to four units, while the laying hen population expanded from 3,000 to 8,000 birds. This increase in production capacity reflects the company's continued investment in expanding the scale of its operations. The increase in the number of productive laying hens to approximately 4,200 birds directly contributed to higher egg production, which reached an average of 140 trays per day. Furthermore, the availability of approximately 8,000 m² of land provides sufficient space for future expansion of production facilities and business operations. Overall, these findings indicate that PT Mitra Sejati has strong business prospects and considerable potential to further improve its production efficiency and operational capacity.

4.2 Resources of PT Mitra Sejati

Resources are one of the most important production factors determining the success of a commercial laying hen enterprise. The availability of adequate resources, including both

physical resources and human resources, has a direct influence on the continuity of production activities, the efficiency of input utilization, and the enterprise's ability to generate optimal output. In commercial egg production, physical resources serve as the primary infrastructure supporting housing management, feed distribution, water supply, flock health management, egg handling, and product storage. Human resources, on the other hand, are responsible for implementing production activities, supervising daily operations, and maintaining flock productivity. Therefore, the effective management of both physical and human resources is essential for ensuring production efficiency and business sustainability.

PT Mitra Sejati possesses relatively complete production facilities to support its commercial laying hen operations. The available facilities have been developed to support an intensive production system aimed at maximizing egg production while maintaining flock health and operational efficiency. In addition to poultry houses, the company owns feed processing equipment, water supply facilities, and various operational tools used in daily farm management activities. These facilities enable the company to manage production more efficiently and reduce dependence on external service providers.

4.2.1 Physical resources

Physical resources at PT Mitra Sejati consist of poultry houses, water supply facilities, feed processing equipment, and various supporting tools used in farm operations. The availability of these facilities indicates that the company has established an adequate production infrastructure capable of supporting commercial-scale laying hen production. The types and quantities of physical resources owned by PT Mitra Sejati are presented in Table 2.

Table 2. Physical resources of PT Mitra Sejati's commercial laying hen enterprise

No.	Description	Quantity	Unit
1	Battery cage poultry houses	4	Units
2	Water storage tanks	2	Units
3	Deep well water system	1	Package
4	Corn grinding machine	1	Unit
5	Feed mixing machine	1	Unit
6	Hand carts	2	Units
7	Shovels	4	Units
8	Hoes	4	Units
9	Nipple drinkers	32	Units
10	PVC feed pipes	16	Pipes

Source: Primary data processed, 2025.

Table 2 indicates that PT Mitra Sejati possesses relatively comprehensive physical resources to support commercial egg production. The four battery cage poultry houses represent the company's most important production asset, providing adequate capacity for housing a large laying hen population. The presence of a corn grinding machine and a feed mixing machine enables the company to formulate and prepare feed independently, thereby reducing feed costs

and improving feeding efficiency. The deep well water system, water storage tanks, and nipple drinkers ensure a continuous and reliable water supply for the flock. In addition, supporting equipment such as hand carts, shovels, hoes, and PVC feed pipes facilitates daily operational activities, including feed distribution, manure management, and routine maintenance. Overall, the availability of these facilities demonstrates that PT Mitra Sejati has established a production infrastructure capable of supporting efficient and sustainable commercial laying hen operations.

4.2.2 Human resources

Human resources constitute a critical production factor influencing the performance and sustainability of a commercial laying hen enterprise. Effective labor management affects the efficiency of production activities, the productivity of the laying flock, and the quality of eggs produced. In commercial egg production, workers are responsible for feed distribution, water management, poultry house sanitation, egg collection, egg grading and sorting, feed preparation, and flock health management. Consequently, the availability of an adequate workforce and a well-defined division of responsibilities are essential for maintaining production continuity and operational efficiency.

PT Mitra Sejati employs four permanent workers who are responsible for conducting all routine farm operations under the direct supervision of the owner. Each worker performs activities related to feeding, cleaning poultry houses, collecting eggs, sorting eggs, and preparing feed. The number of employees and the wage system implemented by the company are presented in Table 3.

Table 3. Labor force and wage system at PT Mitra Sejati

Component	Value
Permanent workers	4 employees
Monthly wage per worker	IDR 2,000,000
Total monthly labor cost	IDR 8,000,000
Employment system	Permanent daily workers
Feeding frequency	Twice daily

Source: Primary data processed, 2025.

Table 3 shows that PT Mitra Sejati employs four permanent workers with a total monthly labor cost of IDR 8,000,000. The workers are responsible for feeding the hens twice daily, cleaning the poultry houses, collecting eggs, grading and sorting eggs, and preparing feed mixtures. The organized division of labor ensures that production activities are conducted regularly and according to schedule. The employment of permanent workers provides additional advantages because the employees have developed practical experience and familiarity with the production system implemented by the company. Consequently, the human resources of PT Mitra Sejati can be considered adequate to support efficient farm operations, maintain production stability, and sustain the productivity of the commercial laying hen enterprise.

4.3 Production Description of PT Mitra Sejati's Commercial Laying Hen Enterprise

Production activities represent the core of the entire commercial laying hen operation because they constitute the primary source of the company's revenue. The success of a laying hen enterprise largely depends on its ability to manage the production process efficiently, including flock management, feed administration, health control, environmental management, and post-harvest handling of eggs. An efficient production system contributes to higher laying performance, improved egg quality, reduced production losses, and the continuity of egg supply to the market. Therefore, production management is a crucial component in maintaining the sustainability and profitability of commercial egg production.

PT Mitra Sejati applies an intensive production system using battery cages for housing its laying hens. This production system is considered more efficient in terms of space utilization, labor management, feed distribution, water supply, egg collection, and disease monitoring compared with more traditional production systems. All laying hens are managed under a structured production schedule with continuous supervision of feed intake, environmental conditions, and flock health. The company maintains hens during the laying period, which generally ranges from 20 to 140 weeks of age. During this period, the hens are in their productive phase and require appropriate nutritional management, disease prevention programs, and proper housing conditions to maintain egg production and egg quality.

The main product of PT Mitra Sejati is commercial chicken eggs, while culled hens and poultry manure constitute the company's by-products. Egg production is conducted continuously throughout the production period, with an average daily output of approximately 140 trays of eggs. Egg collection is carried out twice each day, in the morning and in the afternoon, to minimize egg damage and maintain product quality. After collection, eggs are graded and sorted according to their physical condition. Cracked or damaged eggs are separated from intact eggs to ensure that only high-quality eggs are marketed to consumers. This grading process is an important quality control measure that helps maintain customer satisfaction and the company's market reputation.

To provide a comprehensive overview of PT Mitra Sejati's production capacity, information regarding the laying hen population, productive flock, egg production, and the products generated by the enterprise is presented in Table 4.

Table 4. Production capacity of PT Mitra Sejati's commercial laying hen enterprise

Production component	Value
Total laying hen population	8,000 birds
Productive laying hens (layer)	4,200 birds
Egg production	140 trays/day
Egg collection frequency	Twice daily
Main product	Chicken eggs
By-products	Culled hens and poultry manure

Source: Primary data processed, 2025.

Table 4 shows that PT Mitra Sejati has a relatively high production capacity, with a total flock of 8,000 laying hens and approximately 4,200 hens in active egg production. The average daily production of 140 trays indicates that the company has maintained a relatively stable level of productivity throughout the production period. Egg collection conducted twice daily reduces the risk of egg breakage, improves product cleanliness, and helps preserve egg quality during storage and transportation. In addition to egg production, the enterprise generates additional revenue from the sale of culled hens and poultry manure, indicating that the company utilizes both primary and secondary products as sources of income.

Feed management is one of the most important aspects of the production system implemented by PT Mitra Sejati. The laying hens are fed twice daily, in the morning and in the afternoon, according to a predetermined feeding schedule. Feed is formulated using a combination of corn, rice bran, fine bran, and concentrate, which is processed internally using the company's feed mixing machine. Internal feed formulation allows the company to adjust nutrient composition according to the requirements of laying hens while simultaneously reducing feed costs. Proper feed formulation is essential for maintaining egg production, egg weight, shell quality, and overall flock health. In addition, the company implements routine vaccination, vitamin supplementation, and disease treatment programs to maintain flock productivity and minimize production losses associated with disease outbreaks.

The production performance of PT Mitra Sejati is influenced not only by flock size but also by environmental management within the poultry houses. Temperature, ventilation, sanitation, and water availability are carefully monitored to maintain conditions conducive to egg production. Laying hens are highly sensitive to heat stress and environmental disturbances, which can negatively affect feed consumption, egg production, and egg quality. Consequently, the company places considerable emphasis on maintaining a clean and comfortable housing environment. Through systematic flock management, adequate production facilities, and continuous operational supervision, PT Mitra Sejati has been able to maintain consistent egg production and support the long-term sustainability of its commercial laying hen enterprise.

4.4 Investment Costs

Investment costs represent the initial capital expenditures incurred to establish the commercial laying hen enterprise and acquire the fixed assets required for production activities. These expenditures generally include the construction of poultry houses, water supply facilities, feed processing equipment, and various operational tools used throughout the production cycle. Unlike operating costs, which are fully consumed within a single production period, investment costs provide economic benefits over several years. Therefore, the value of these assets is allocated through depreciation based on their estimated economic life. The analysis of investment costs is important because it reflects the amount of capital committed to the enterprise and determines the depreciation expenses that contribute to fixed production costs.

PT Mitra Sejati has made a substantial investment in developing its production facilities since the establishment of the business. The investment was allocated to the construction of

battery cage poultry houses, water supply infrastructure, feed processing equipment, and supporting operational tools necessary for commercial egg production. These assets have different economic lives depending on their expected period of use and durability. Depreciation was calculated based on the economic life of each asset, with one production cycle assumed to be 18 months (1.5 years). The investment structure of PT Mitra Sejati is presented in Table 5.

Table 5. Investment costs of PT Mitra Sejati's commercial laying hen enterprise

No.	Investment component	Quantity	Unit price (IDR)	Total value (IDR)	Economic life (years)	Annual depreciation (IDR)	Depreciation per production cycle (IDR)
1	Battery cage poultry houses	4 units	45,000,000	180,000,000	10	18,000,000	27,000,000
2	Water towers	6 units	1,200,000	7,200,000	7	1,028,571	1,542,857
3	Deep well water system	1 package	8,500,000	8,500,000	15	566,667	850,000
4	Corn grinding machine	1 unit	30,000,000	30,000,000	6	5,000,000	7,500,000
5	Feed mixing machine	1 unit	23,000,000	23,000,000	6	3,833,333	5,750,000
6	Hand carts	2 units	500,000	1,000,000	3	333,333	500,000
7	Shovels	4 units	80,000	320,000	5	64,000	96,000
8	Hoes	4 units	75,000	300,000	5	60,000	90,000
9	Nipple drinkers	32 units	65,000	2,080,000	5	416,000	624,000
10	PVC feed pipes	16 pipes	150,000	2,400,000	5	480,000	720,000
	Total	-	-	254,800,000	-	29,781,905	44,672,857

Source: Primary data processed, 2025. Note: One production cycle = 18 months (1.5 years).

Table 5 shows that the total investment cost of PT Mitra Sejati amounted to IDR 254,800,000. The largest investment component was the construction of battery cage poultry houses, totaling IDR 180,000,000, which accounted for approximately 70.64% of the total investment value. This indicates that poultry housing represents the most important fixed asset

in the commercial laying hen enterprise. Investments in the corn grinding machine and the feed mixing machine amounted to IDR 30,000,000 and IDR 23,000,000, respectively, reflecting the company's commitment to improving feed preparation efficiency and reducing dependence on commercial feed products. The total depreciation expense for one production cycle reached IDR 44,672,857, making depreciation an important component of fixed production costs.

The relatively large investment in poultry housing and production equipment demonstrates that PT Mitra Sejati has established a well-developed production infrastructure to support long-term commercial egg production. Poultry houses have the longest economic life, estimated at 10 years, resulting in a relatively lower annual depreciation burden compared with their investment value. In contrast, feed processing machinery has an economic life of 6 years, leading to higher depreciation expenses per production cycle. Although supporting equipment such as nipple drinkers, PVC feed pipes, hand carts, shovels, and hoes represents a relatively small proportion of total investment, these assets play an essential role in facilitating daily production activities. Therefore, the investment structure of PT Mitra Sejati indicates that capital has been allocated strategically toward assets that directly influence production capacity, operational efficiency, and the long-term sustainability of the commercial laying hen enterprise.

4.5 Production Costs

Production costs represent all expenditures incurred by the company during the process of producing commercial chicken eggs throughout a single production cycle. These costs reflect the economic resources sacrificed to generate output in the form of eggs, culled hens, and poultry manure. In livestock enterprise analysis, production costs are one of the most important financial components because they directly affect farm income, profitability, and the overall financial performance of the enterprise. Efficient cost management enables the company to maximize returns from production activities, while high production costs may reduce profitability even when production volume remains relatively high. Therefore, a comprehensive analysis of production costs is essential for evaluating operational efficiency and determining the financial feasibility of a commercial laying hen enterprise.

The production costs of PT Mitra Sejati are classified into depreciation costs, fixed costs, and variable costs. Depreciation costs represent the allocation of investment expenditures over the economic life of fixed assets, including poultry houses and production equipment. Fixed costs are expenditures that remain relatively constant regardless of changes in production volume, whereas variable costs fluctuate according to the scale of production and the number of laying hens maintained. This classification provides a clearer understanding of the cost structure and identifies the production inputs that have the greatest influence on total production costs.

The production cost structure of PT Mitra Sejati for one production cycle of 18 months is presented in Table 6.

Table 6. Production costs of PT Mitra Sejati's commercial laying hen enterprise for one production cycle (18 months)

Cost component	Total (IDR/production cycle)
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Depreciation of poultry houses and equipment	44,672,857
Fixed costs	
Labor salaries	144,000,000
Electricity	14,400,000
Subtotal fixed costs	158,400,000
Variable costs	
Pullets	680,000,000
Feed	2,608,848,000
Vaccines	900,000
Medications	243,200,000
Subtotal variable costs	3,532,948,000
Total production costs	3,736,020,857
Average monthly production costs	207,556,714

Source: Primary data processed, 2025.

Table 6 shows that the total production cost incurred by PT Mitra Sejati during one production cycle of 18 months amounted to IDR 3,736,020,857, with an average monthly production cost of IDR 207,556,714. Variable costs constituted the largest component of total production costs, reaching IDR 3,532,948,000, which accounted for approximately 94.56% of total production costs. In contrast, fixed costs amounted to IDR 158,400,000, while depreciation expenses totaled IDR 44,672,857. The dominance of variable costs indicates that the financial performance of the enterprise is highly influenced by the cost of production inputs, particularly feed and pullets. This finding suggests that improving input efficiency is essential for increasing farm profitability.

Among all cost components, feed was by far the largest expenditure, totaling IDR 2,608,848,000, representing approximately 69.83% of total production costs. The high feed cost resulted from the consumption of approximately 427,680 kg of feed during one production cycle, with an average feed price of IDR 6,100 per kilogram. Feed is the most critical input in commercial laying hen production because it directly affects egg production, egg weight, shell quality, and the overall health of the flock. Consequently, feed management plays a decisive role in determining production efficiency and farm profitability. PT Mitra Sejati attempted to reduce feed costs by formulating and mixing feed internally using its own feed processing equipment, thereby lowering production costs compared with purchasing fully commercial feed.

The second-largest cost component was the purchase of pullets, amounting to IDR 680,000,000, which reflects the substantial biological investment required in commercial laying hen production. Expenditures on medications reached IDR 243,200,000, indicating the company's significant investment in maintaining flock health and preventing productivity losses caused by disease. In contrast, vaccine costs were relatively small at IDR 900,000, since vaccination was conducted periodically according to the farm's health management schedule. Within the fixed cost category, labor salaries represented the largest expenditure at IDR

144,000,000, while electricity costs amounted to IDR 14,400,000 and were associated with lighting, water supply systems, and the operation of production equipment.

The production cost structure indicates that the profitability of PT Mitra Sejati is highly dependent on its ability to control feed costs and pullet acquisition costs, as these two components together accounted for more than 88% of total production costs during the production cycle. This finding emphasizes the importance of efficient feed formulation, improved feed conversion efficiency, optimal flock management, and effective health control programs in enhancing the economic performance of the enterprise. Reducing feed waste, maintaining flock productivity, and improving production efficiency would substantially increase profitability and strengthen the long-term financial sustainability of PT Mitra Sejati's commercial laying hen enterprise.

4.6 Revenue of PT Mitra Sejati's Commercial Laying Hen Enterprise

Revenue represents the total monetary value received by the company from the sale of products generated during a production cycle. In livestock enterprise economics, revenue is a fundamental financial indicator because it serves as the basis for calculating farm income, profitability, and overall business performance. The level of revenue is influenced by production volume, product quality, selling prices, and the effectiveness of marketing strategies. Higher production output combined with favorable market prices generally results in greater revenue and improves the financial capacity of the enterprise. Therefore, revenue analysis provides a comprehensive assessment of the enterprise's ability to generate cash flow and sustain its production activities over the long term.

The revenue of PT Mitra Sejati is generated from three primary sources: egg sales, culled hen sales, and poultry manure sales. Egg sales constitute the company's main source of revenue because eggs are produced and marketed continuously throughout the production period. Culled hens are sold at the end of their productive cycle when their egg-laying performance declines, while poultry manure is marketed as an organic fertilizer to local farmers. The existence of multiple revenue sources provides an economic advantage because the company is not entirely dependent on egg sales. Revenue diversification also helps reduce financial risk associated with fluctuations in egg prices and contributes additional income from by-products that would otherwise have limited economic value. The revenue structure of PT Mitra Sejati during one production cycle is presented in Table 7.

Table 7. Revenue of PT Mitra Sejati's commercial laying hen enterprise for one production cycle (18 months)

Revenue source	Volume	Unit (IDR)	price	Total (IDR/production cycle)	Total (IDR/month)
Egg sales	75,600	46,500		3,515,400,000	195,300,000
	trays				
Poultry	3,600 bags	14,000		50,400,000	2,800,000

manure				
Culled hens	7,520 birds	55,000	413,600,000	22,977,778
Total revenue	-	-	3,979,400,000	221,077,778

Source: Primary data processed, 2025.

Table 7 shows that the total revenue generated by PT Mitra Sejati during one production cycle of 18 months amounted to IDR 3,979,400,000, with an average monthly revenue of IDR 221,077,778. The largest contribution came from egg sales, which generated IDR 3,515,400,000, accounting for approximately 88.34% of total revenue. Revenue from culled hens reached IDR 413,600,000, while poultry manure sales contributed IDR 50,400,000. The dominance of egg sales demonstrates that egg production remains the principal economic activity of the enterprise, while the sale of culled hens and manure provides additional income that enhances overall business performance.

Egg sales were conducted continuously throughout the production period, with an average production level of 140 trays per day, resulting in a total of approximately 75,600 trays during the 18-month production cycle. At an average selling price of IDR 46,500 per tray, egg sales generated a stable cash flow that supported the company's routine operational expenditures, including feed purchases, labor payments, utility costs, and flock health management. The continuous nature of egg sales provides an important financial advantage because revenue is received regularly rather than only at the end of the production cycle, thereby improving the company's liquidity and operational stability.

Revenue from culled hens accounted for approximately 10.39% of total revenue. Culled hens represent birds that have completed their productive laying period and are sold for meat consumption. The sale of culled hens allows the company to recover part of its biological investment in the laying flock and contributes significantly to total revenue at the end of the production cycle. Meanwhile, poultry manure sales accounted for approximately 1.27% of total revenue. Although the contribution of manure sales was relatively small, the commercialization of poultry waste demonstrates that PT Mitra Sejati has successfully converted production by-products into an additional source of income. This practice not only improves the economic efficiency of the enterprise but also supports environmentally sustainable waste management.

Overall, the revenue structure of PT Mitra Sejati indicates that the enterprise has a relatively strong financial base supported by diversified revenue sources. The combination of continuous egg sales and supplementary income from culled hens and poultry manure provides greater financial resilience against market price fluctuations and production risks. The substantial contribution of egg sales highlights the importance of maintaining flock productivity and egg quality, while the additional revenue from by-products enhances the overall profitability and long-term sustainability of the commercial laying hen enterprise.

4.7 Income of PT Mitra Sejati's Commercial Laying Hen Enterprise

Farm income is defined as the difference between total revenue and total production costs incurred during a production cycle. Income is one of the most important indicators used to

evaluate the financial performance and economic success of a commercial laying hen enterprise because it reflects the net return earned after all production expenses have been deducted from total revenue. The amount of income generated by a laying hen enterprise is influenced by several factors, including production volume, selling prices, production efficiency, feed costs, labor expenses, flock health management, and the utilization of by-products. Therefore, income analysis provides a comprehensive assessment of the enterprise's ability to generate profit and sustain long-term business operations.

The income of PT Mitra Sejati was calculated by subtracting total production costs of IDR 3,736,020,857 from total revenue of IDR 3,979,400,000 during one production cycle of 18 months. Total production costs included depreciation expenses, fixed costs, and variable costs associated with commercial egg production. The resulting income represents the net economic benefit obtained by the enterprise after accounting for all expenditures incurred during the production process. A positive income value indicates that the enterprise generated a financial surplus during the study period and was able to operate profitably. The income calculation for PT Mitra Sejati is presented in Table 8.

Table 8. Income of PT Mitra Sejati's commercial laying hen enterprise for one production cycle (18 months)

Description	Total (IDR/production cycle)	Total (IDR/month)
Total revenue (A)	3,979,400,000	221,077,778
Depreciation costs	44,672,857	2,481,825
Fixed costs	158,400,000	8,800,000
Variable costs	3,532,948,000	196,274,889
Total production costs (B)	3,736,020,857	207,556,714
Net income (A – B)	243,379,143	13,521,064

Source: Primary data processed, 2025.

Table 4.8 presents that PT Mitra Sejati obtained a net income of IDR 243,379,143 during one production cycle of 18 months, with an average monthly income of IDR 13,521,064. This result indicates that the enterprise was able to generate positive financial returns because total revenue exceeded total production costs. The income obtained represents the economic benefit received after deducting all production expenses, including depreciation costs, labor costs, feed expenses, medication, vaccination, and other operational costs. The positive income value demonstrates that PT Mitra Sejati has been able to manage its production activities effectively and maintain financial sustainability in commercial laying hen production. This finding is consistent with Mulyadi and Yawahar (2022), who reported that laying hen enterprises in Bengkulu were able to generate positive income because revenue obtained from egg production exceeded the total production costs incurred during the production period.

The income level achieved by PT Mitra Sejati was primarily influenced by the contribution of egg sales as the main source of revenue. Egg production generated continuous cash flow because eggs were harvested and marketed daily, allowing the company to maintain

operational activities throughout the production period. However, the profitability of the enterprise was also highly determined by the ability to control production costs, particularly feed costs. Feed expenditure represented the largest component of production costs, reaching approximately 70% of total costs. Similar findings were reported by Prasetyo, Harya, and Atasa (2024), who stated that feed costs represent the dominant component affecting the financial performance of laying hen enterprises because feed directly determines productivity, egg production, and production efficiency.

Although PT Mitra Sejati faced relatively high production costs, particularly feed costs, the enterprise was still able to achieve positive income due to its production scale and operational management. The ownership of 8,000 laying hens, including 4,200 productive birds, allowed the company to maintain a relatively stable egg supply. In addition, the company obtained additional income from the sale of culled hens and poultry manure, which contributed to increasing total revenue. According to Putri and Mutmainnah (2025), diversification of income sources through the utilization of livestock by-products can strengthen the economic performance of poultry enterprises because farmers are not solely dependent on primary product sales.

The average monthly income of IDR 13.52 million indicates that PT Mitra Sejati has the capacity to generate relatively stable economic returns from its laying hen operations. This income can be allocated for business expansion, improvement of production facilities, additional livestock investment, and working capital preparation for future production cycles. However, when compared with the total investment value and production costs incurred, the profit margin obtained remains relatively limited. Therefore, increasing production efficiency becomes an important strategy to improve profitability. Similar results were found by Saraswati, Kusuma, and Riyanto (2023), who explained that financial performance in laying hen enterprises is strongly influenced by production efficiency, cost control, and the ability of farmers to optimize resource utilization.

From an economic perspective, the positive income obtained by PT Mitra Sejati confirms that commercial laying hen farming remains a promising agricultural business sector. The ability of the enterprise to generate income after covering all production costs demonstrates that the business has economic feasibility. According to Tembang, Rotinsulu, and Tolosang (2024), commercial laying hen enterprises have considerable development potential when supported by proper financial management, efficient production systems, and effective marketing strategies. The sustainability of poultry businesses depends not only on production capacity but also on the ability of farm managers to maintain financial balance between revenue and expenditure.

The relatively limited profit margin obtained by PT Mitra Sejati indicates that cost efficiency remains an important aspect that needs further improvement. The high proportion of feed costs suggests that feed management should become a major priority in improving enterprise profitability. Several strategies can be implemented, including improving feed

formulation, reducing feed wastage, increasing feed conversion efficiency, and maintaining optimal laying performance. According to Prasetyo et al. (2024), efficient feed management is one of the most important factors influencing the profitability of laying hen farms because feed contributes the largest proportion of total production costs.

In addition to feed management, improving productivity and strengthening marketing strategies are also important factors in increasing business income. PT Mitra Sejati has advantages through continuous egg production and additional revenue from culled hens and poultry manure. The utilization of livestock waste as an additional economic product provides added value and reduces production losses. Research conducted by Azizah et al. (2025) showed that laying hen enterprises can improve economic performance through diversification of production outputs, including the utilization of eggs, culled chickens, and manure as additional sources of income.

Overall, the income analysis demonstrates that PT Mitra Sejati's commercial laying hen enterprise is financially viable and capable of generating economic benefits. The enterprise successfully achieved positive income because the revenue generated from egg production and other supporting products exceeded the total production costs. Nevertheless, the relatively modest profit margin indicates that future improvements are still required, particularly in feed efficiency, production optimization, and cost management. Based on previous studies, laying hen enterprises with effective resource management, efficient production systems, and diversified income sources have greater opportunities to achieve sustainable growth and competitiveness in the poultry industry.

4.8 Analysis of the Revenue–Cost Ratio (R/C Ratio) and Benefit–Cost Ratio (B/C Ratio)

Financial feasibility analysis is an important approach for evaluating whether a commercial laying hen enterprise is economically viable and capable of generating satisfactory returns from the resources invested. In agricultural and livestock economics, the Revenue–Cost Ratio (R/C Ratio) and the Benefit–Cost Ratio (B/C Ratio) are widely used to measure the efficiency of production cost utilization and the profitability of a business enterprise. The R/C Ratio measures the relationship between total revenue and total production costs, whereas the B/C Ratio measures the proportion of net income generated relative to total production costs. These indicators provide valuable information regarding the financial performance of the enterprise and its potential for future expansion. An enterprise is generally considered financially feasible when the R/C Ratio exceeds one and the B/C Ratio is greater than zero.

For PT Mitra Sejati, the R/C Ratio and B/C Ratio were calculated using total revenue and total production costs during one production cycle of 18 months. The objective of this analysis was to determine the extent to which the enterprise was able to generate revenue and profit relative to the production costs incurred. The results of these calculations provide a quantitative assessment of the enterprise's financial performance and can serve as a basis for managerial decision-making, investment planning, and future business development strategies. The results of the financial feasibility analysis are presented in Table 9.

Table 9. Revenue–Cost Ratio (R/C Ratio) and Benefit–Cost Ratio (B/C Ratio) of PT Mitra Sejati’s commercial laying hen enterprise

Description	Total (IDR/production cycle)	Total (IDR/month)
Total revenue	3,979,400,000	221,077,778
Total production costs	3,736,020,857	207,556,714
R/C Ratio	1.07	1.07
Net income	243,379,143	13,521,064
Total production costs	3,736,020,857	207,556,714
B/C Ratio	0.07	0.07

Source: Primary data processed, 2025.

The financial feasibility analysis presented in Table 9 shows that the commercial laying hen enterprise of PT Mitra Sejati obtained an R/C Ratio value of 1.07. This value indicates that every IDR 1.00 of production cost incurred was able to generate IDR 1.07 in revenue. In other words, every IDR 100,000 spent by the company generated approximately IDR 107,000 in revenue. An R/C Ratio value greater than one indicates that PT Mitra Sejati’s laying hen enterprise was in a profitable condition because the revenue generated was sufficient to cover all production costs incurred during one production cycle. This finding indicates that the enterprise has been managed efficiently and has the ability to generate economic benefits for the business owner.

This finding is consistent with the study conducted by Haeruddin et al. (2023), who analyzed the feasibility of a laying hen enterprise in Polewali Mandar Regency. Their study obtained an R/C Ratio value of 1.40, indicating that the laying hen business generated revenue higher than its production costs and was therefore considered feasible to operate. The difference in R/C Ratio values between the study by Haeruddin et al. (2023) and PT Mitra Sejati may be influenced by differences in business scale, production cost structure, flock size, input prices, and egg selling prices in each region. Nevertheless, both studies demonstrate that commercial laying hen enterprises have promising economic prospects when supported by effective production management and proper cost control.

The B/C Ratio value of 0.07 obtained by PT Mitra Sejati indicates that every IDR 1.00 of production cost generated a net profit of IDR 0.07. In practical terms, every IDR 100,000 invested in the production process generated a net profit of approximately IDR 7,000. A positive B/C Ratio indicates that the enterprise provides economic benefits and is feasible for continued development. Although the profit margin obtained was relatively low compared with the total production costs, the enterprise remained profitable because it was able to generate income after all production expenses had been considered. This result confirms that PT Mitra Sejati’s laying hen enterprise operates under economically beneficial conditions.

The result differs from the study conducted by Pamungkas (2020) on the laying hen farming enterprise UD KR Farm in Cilacap, which obtained a B/C Ratio value of 1.69. The higher B/C Ratio in that study indicates a greater level of profitability compared with PT Mitra

Sejati. This difference may be caused by variations in production systems, egg selling prices, feed efficiency, and business scale. According to Pamungkas (2020), the efficiency of production factors, particularly feed utilization, is one of the main determinants influencing profitability in laying hen enterprises. The more efficiently production inputs are utilized, the greater the profit that can be obtained by farmers.

Based on the results of this study, the largest production cost component affecting the profitability of PT Mitra Sejati was feed cost, which accounted for approximately 70% of total production costs. The high proportion of feed expenses resulted in a relatively limited profit margin despite the relatively high egg production capacity. This condition indicates that feed efficiency is a crucial factor in improving the R/C Ratio and B/C Ratio values. Several strategies can be implemented by the company, including improving feed formulation, reducing feed wastage, optimizing nutrient composition, and maintaining laying hen productivity to ensure that feed expenditure produces maximum egg output.

Research conducted by Prasetyo et al. (2024) showed that the commercial laying hen enterprise CV Bumi Pratama in Wungu District, Madiun Regency, obtained an R/C Ratio value of 1.77, indicating that the enterprise generated higher revenue compared with its production costs. This value was higher than the R/C Ratio obtained by PT Mitra Sejati, which was 1.07. The difference indicates that financial efficiency in laying hen enterprises is strongly influenced by the ability of business managers to control production costs, improve hen productivity, and obtain better selling prices for products. Therefore, improving managerial efficiency and production performance is essential to increase profitability.

In addition to production cost management, the financial performance of PT Mitra Sejati was also supported by additional sources of revenue from the sale of culled hens and poultry manure. The diversification of revenue sources provides additional economic value because the company does not rely solely on egg sales as its main source of income. Utilizing by-products as additional revenue streams can increase profitability and reduce business risks associated with fluctuations in egg prices. Therefore, effective enterprise management should not only focus on increasing egg production but also on optimizing all production outputs that have economic value.

Overall, the results of the R/C Ratio and B/C Ratio analyses indicate that PT Mitra Sejati's commercial laying hen enterprise is financially feasible and suitable for further development. The R/C Ratio value of 1.07 and B/C Ratio value of 0.07 demonstrate that the company was able to generate revenue exceeding its production costs and obtain positive economic returns. However, the relatively low profit level indicates that further efficiency improvements are still required, particularly through feed cost management, increasing laying hen productivity, and optimizing product marketing strategies. With appropriate management strategies, PT Mitra Sejati has the potential to increase profitability and maintain the long-term sustainability of its commercial laying hen enterprise

CONCLUSION AND IMPLICATIONS

The results of this study conclude that the commercial laying hen enterprise operated by PT Mitra Sejati in Konda District, South Konawe Regency, is financially feasible and has good potential for further development. The enterprise has successfully expanded its production capacity, managed 8,000 laying hens with 4,200 productive birds, and generated continuous revenue from egg sales, culled hens, and poultry manure. During one production cycle of 18 months, the company obtained a net income of IDR 243,379,143, with an R/C Ratio of 1.07 and a B/C Ratio of 0.07, indicating that the business generated positive economic returns. However, the relatively limited profit margin shows that improving production efficiency, particularly through feed cost management, productivity enhancement, and optimization of additional revenue sources, is necessary to strengthen profitability and ensure the long-term sustainability of the commercial laying hen enterprise.

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