SENTRI: Jurnal Riset Ilmiah
https://ejournal.nusantaraglobal.ac.id/index.php/sentri
Email: sentri@nusantaraglobal.ac.id
DOI: https://doi.org/10.55681/sentri.v5i1.5481

Vol. 5, No. 1, January 2026
e-ISSN: 2963-1130
pp. 953-963

Strategy for Developing Rice Agribusiness in Rato Village, Lambu District, Bima District

Masnah[1], Kharismafullah[1*], Khairunnisah[1]
[1]Livestock Agribusiness Study Program, AMA Polytechnic

*Corresponding Author Email: kharismafullah@poltekama.ac.id

Article History:
Received: December 22, 2025
Revised: January 28, 2026
Accepted: January 30, 2026

Keywords:
SWOT Analysis, Alternative Strategy, Rice

Abstract: *This research aims to determine the strengths and weaknesses (internal) as well as opportunities and threats (external) in the development of rice agribusiness as well as strategies for developing rice agribusiness in Rato Village, Lambu District, Bima Regency. Sampling was carried out using a purposive technique, namely where members were chosen deliberately for the development of rice agribusiness by tracing the sample population, namely 13 people involved. The data analysis used is to identify internal and external factors then use SWOT analysis through the IFAS and EFAS matrices, then use the IE matrix to see farmers' strengths. After that, use the SWOT matrix to get several alternative strategies. The results of the research that has been carried out show that the strategy for developing rice agribusiness in Rato Village is to develop agricultural technology, improve rice agribusiness, hone farmers' skills, use superior seeds, increase the amount of transportation and so that farmers can follow instructors' instructions regarding rice cultivation.*

How to cite: Masnah, M., Kharismafullah, K., & Khairunnisah, K. (2026). Strategy for Developing Rice Agribusiness in Rato Village, Lambu District, Bima District. *SENTRI: Jurnal Riset Ilmiah*, *5*(1), 953–963. https://doi.org/10.55681/sentri.v5i1.5481

INTRODUCTION

The Republic of Indonesia is known as an agricultural country, so development in the agricultural sector is a top priority in improving the national economy, both on a micro and macro scale (Batista et al., 2017; Rukmi et al., 2024). The agricultural sector has a strategic role as an economic driver as well as providing staple food for the majority of Indonesian people. Food is a basic need and human right, so food security is one of the main pillars in maintaining the stability and strength of a country.

The development of the agricultural sector cannot be separated from the agribusiness concept. Agribusiness is a series of activities related to the management of agricultural commodities which covers the entire chain, starting from providing production facilities, production processes, product processing (agro-industry), marketing, to institutions supporting agricultural activities (Kusumaningrum et al., 2024). The agribusiness approach is expected to be able to increase the added value of agricultural products and the welfare of farmers.

Agribusiness-based agricultural development needs to be directed to rural areas because these areas have very supportive natural resource and human resource potential (Saputra et al., 2025). Optimizing rural potential through agribusiness development is expected to increase agricultural productivity while strengthening the local economy.

Rice is a strategic food commodity because it is the staple food for more than half of the world's population. In Indonesia, rice has an important role in supporting national food security, so many agricultural development policies focus on increasing rice production (Kusumaningrum et al., 2024). Based on data from the Central Statistics Agency, Indonesian people's rice consumption in 2011 reached 139 kg per capita per year with a population of around 237 million people, so that the total national rice consumption reached around 34 million tons (Pakage et al., 2025). The need for rice continues to increase along with the rate of population growth which is faster than the growth of available food production (Adrian et al., 2025).

Bima Regency is one of the rice production centers which has an important role in supporting regional food availability. The development of harvested area, production, average yield and productivity level of rice plants in Bima Regency during the 2018 to 2021 period shows great potential for continued development. Therefore, an agribusiness-based rice farming development strategy is needed so that this potential can be utilized optimally and sustainably.

THEORETICAL BASIS

1. Beef Cattle Farming and Profitability Analysis

Beef cattle farming is an economic activity aimed at producing meat through a livestock production process involving inputs of feed, labor, capital, and management. The sustainability of a beef cattle farm is largely determined by the level of profitability and business capacity achieved by farmers. Profit and business capacity analysis is used to assess the efficiency of resource use and the business's ability to meet market demand (Adrian et al., 2025).

The profitability of a beef cattle farm is influenced by the production cost structure, livestock productivity, business scale, and livestock selling price. Farms with good technical and economic efficiency tend to be more resilient to market fluctuations and business risks (Batista et al., 2017).

2. Beef Cattle Production Systems

Beef cattle production systems can be classified as extensive, semi-intensive, and intensive. Extensive systems generally utilize natural resources with low inputs, while semi-intensive and intensive systems require more controlled management of feed, housing, and livestock health (Saputra et al., 2025).

The choice of production system directly influences productivity levels, production costs, and business profits. Feedlot systems for beef cattle have been shown to increase body weight gain and the economic value of livestock, but require higher capital and management costs (Batista et al., 2017).

3. Feed and Environmental Carrying Capacity

Feed carrying capacity is the ability of local forage and feed resources to sustainably support a livestock population. Evaluating forage carrying capacity is crucial to prevent livestock overpopulation, which can lead to environmental degradation and decreased productivity (Rukmi et al., 2024).

The availability of adequate forage is a key factor in determining the optimal capacity of a beef cattle business. An imbalance between livestock population and feed carrying capacity can reduce livestock performance and business efficiency (Rukmi et al., 2024).

4. **Beef Supply, Demand, and Trade Policy**

Beef supply and demand in Indonesia are influenced by domestic production factors, import policies, population growth, and changes in income. Beef import policies serve as an instrument for stabilizing supply and prices, but can impact the competitiveness of domestic beef cattle businesses (Kusumaningrum et al., 2024).

Changing global economic conditions and health crises, such as the COVID-19 pandemic, have been shown to impact the balance of the beef market, both in terms of production and consumption, necessitating adaptive and data-driven policies (Kusumaningrum et al., 2024).

5. **Analysis of Beef Cattle Supply and Production Trends**

Econometric analysis is used to examine factors influencing beef cattle supply, such as input prices, output prices, livestock population, and government policies. Beef cattle supply trends indicate that production responses are dynamic and influenced by regional economic conditions (Pakage et al., 2025).

Understanding supply trends is crucial for formulating livestock development policies, particularly to increase the contribution of domestic production to national beef demand (Pakage et al., 2025).

6. **Sustainability and Resilience of Livestock Farmers**

The sustainability of beef cattle farming is measured not only from an economic perspective, but also by the ability of livestock farming households to maintain their livelihoods when facing external shocks. The Sustainable Livelihoods approach emphasizes the importance of livelihood assets, such as natural, human, financial, social, and physical assets, in maintaining the resilience of livestock farming businesses (Kharismafullah et al., 2022a).

Sustainable livelihood strategies are particularly relevant in disaster-prone areas, where beef cattle farming must be able to adapt to environmental and socioeconomic risks (Kharismafullah et al., 2022b).

7. **Integration of Production, Economic, and Policy Aspects**

Developing a sustainable beef cattle business requires the integration of efficient production systems, feed carrying capacity management, business economic analysis, and policies that support the domestic market. This integrated approach is expected to increase the competitiveness of smallholder beef cattle businesses while strengthening national food security (Adrian et al., 2025; Kusumaningrum et al., 2024).

RESEARCH METHODS

The population in this study are rice farmers, where the average person there makes a living as a rice farmer, even though being a rice farmer is not their main livelihood. From this number, a sampling technique was carried out using the *Purposive* method (intentionally), so that 10 farmers were obtained as samples/respondents. Meanwhile, for extension, agricultural and marketing services, 1 informant was obtained each, bringing the total to 3 informants (Adrian et al., 2025). Thus the number of samples is 13 people.

Data Analysis Techniques

Data processing is carried out by identifying internal and external factors then using SWOT analysis through the IFAS and EFAS matrices, then using the IE matrix to see farmers' strengths.

SWOT Matrix

This analysis describes the company's internal factors (strengths, weaknesses) which can be adjusted to the company's internal factors (opportunities, threats). After analyzing using the IE matrix, the farmer's position can then be formulated alternative strategies using the SWOT matrix which will produce 4 types of strategies.

Table 1. SWOT Matriks

IPHASEFAS	STRENGTH(S)Determine 5-10 internal strength factors	WEAKNESSES (W) Determine 5-10 internal weakness factors
OPPORTUNITY (O) Determine 5-10 external opportunity factors	SOCIAL STRATEGYCreate a strategy that uses strengths to take advantage of opportunities	WOCRETE STRATEGY Create a strategy that minimizes weaknesses to take advantage of opportunities
THREATS (T) Determine 5-10 external threat factors	STRATEGY STCreate strategies that use strengths to overcome threats	WT STRATEGY Create a strategy that minimizes weaknesses to avoid threats

RESULTS AND DISCUSSION

Farmer identity is considered necessary to know part of the farmer's background. A farmer's main capital in carrying out his farming business is largely determined by the farmer's identity (Batista et al., 2017; Pakage et al., 2025; Rukmi et al., 2024; Saputra et al., 2025). Identity related to farmer's age, farmer's education level, number of family dependents, land area, farming experience. Respondent's identity related to rice farmers.

In general, age is a determining factor for success in farming, both in thinking and acting. The older the farmer, the relatively lower his ability to work, although on the other hand, older farmers have more experience than younger farmers. Older farmers are more dynamic, that is, they dare to take risks to gain experience in farming. Those who are relatively old have more mature processing planning capacity in farming, because they have more experience (Kharismafullah et al., 2022b).

Respondent age group classification 32–40 years was 23.08% (3 people), 41–49 years was 30.77% (4 people), 50–57 years was 23.08% (3 people). This shows that the respondents in this study are included in the productive age level class, so that the respondents are included in the productive group in developing rice agribusiness. The productive age in agribusiness is 41-49 years (Kharismafullah et al., 2022a). Meanwhile, the age of traders is 39 years, amounting to 7.69% (1 person), extension workers 52 years, 7.69% (1 person), and agricultural services 40 years, 7.69% (1 person).

We can explain the classification of the informant's education level, that there are 3 people who do not go to school with a percentage value of 23.07%, while there are 2 people in elementary school with a percentage value of 15.39%, there are 2 people in junior high school with a percentage value of 15.39%, high school has a percentage value of 7.69% with a percentage value of 1 person and strata 1 has a percentage value of 2 people with a percentage value of 15.39%. So we can conclude that the average rice farmer in Rato

Village has no school education. Meanwhile, there is 1 trader with a junior high school education with a percentage of 7.69%, 1 extension worker with a Strata 2 education with a percentage of 7.69% and the agricultural service with a Strata 1 education with a percentage of 7.69%.

The results of research that has been carried out show that farmers in Rato Village, Lambu District, Bima Regency. The number of family members is very influential on rice agribusiness development activities, family dependents are all family members whose living costs are borne by the respondent. The number of family members also influences farmers' production activities, because relatively large families are a source of labor. Number of dependents of rice farming families in Rato Village, Lambu District, Bima Regency.

The largest number of dependents in farming families is 5-6 people, the largest being 5 respondents with a percentage of 38.46% of the 13 respondents. Apart from that, the lowest number of family dependents is 1-2, 2 people or 15.39% of the total percentage. Meanwhile, 3-4 with a total of 3 people or 23.08%. This greatly influences the level of family welfare and developing rice agribusiness to meet their needs. Meanwhile, the number of dependents of traders is 2 people or 7.69%, of extension workers is 4 people or 7.69% and the agricultural service is 3 people or 7.69%.

Land area is the area/place used to carry out farming on a plot of land, which is measured in hectares (ha). The area of agricultural land will influence whether production is efficient or not, because it is closely related to the results obtained and production costs also have an influence. The larger the area of land and the production costs are not balanced with the costs obtained, on relatively small farms, even though they use appropriate technology and produce extensive production.

The land area of respondent farmers in Rato Village, Lambu District, Bima Regency most of the rice farmers have a land area of 0, 18-0.20 ha as many as 4 people or 40.00% while 0, 14-0.17 ha as many as 3 people or 30.00% and 0, 10-0.13 ha as many as 3 people or 30.00 %. Thus, land ownership makes it possible to develop rice agribusiness and the land owned by respondent farmers is quite large per farmer on average.

Work experience is the length of time the respondent has been doing work and they tend to learn from their experience to start or continue the work they have done because they already have an idea of what needs to be done to improve the quality of work.

It is known that the experience of rice farmers in Rato Village is 10-19 years 1 person (7.69%), 20-29 years 2 people (15.39%), 30-39 years 3 people (23.08%), 40-49 years 4 people (30.77%). Thus, rice farmers in Rato Village are generally experienced in trying to grow rice. Meanwhile, the work experience of traders is 4 years or 7.69%, Extension workers 2 years or 7.69% and Agriculture Service 10 years or 7.69%.

SWOT analysis is used to maximize strengths and opportunities, but simultaneously minimize weaknesses and threats. SWOT analysis is carried out after identifying internal factors and external factors, analyzing internal strategic factors (strengths and weaknesses) and external factors (opportunities and threats). The following details regarding the identification of internal factors and external factors can be seen in Table 2.

Table 2. Strengths and Opportunities

Internal Factors	
Strength	Weakness
The existence of human resources in rice farming. The existence of superior seeds with assistance from the government. The increase in rice production. The assistance of tractors and rice thresher machines to farmers by farmer groups. There are many directions from extension workers to farmers.	Marketing places are still limited. Some farmers have not followed directions from extension workers. There are no grain mills. There are no cooperatives that accommodate the production of rice farming.
External Factors	
Opportunity	Threat
The development of agricultural technology. The existence of local government support related to rice farming. The increasing demand for food from the community. Facilities and infrastructure that are easy to obtain. There is understanding of farmers regarding rice agribusiness.	The weather is somewhat unfavorable which causes production conditions to decline. The number of rice producers. Transportation is less favorable. There are pest attacks that attack rice plants.

After identifying internal and external factors, they can then be detailed in an analysis of internal and external factors.

Table 3. Strengths and Weaknesses

Internal Factor Matrix				
NO	Strength	Weight	Rating	Mark
1	The existence of human resources in rice farming	0,14	4	0,56
2	There is superior seed assistance from the government	0,11	3	0,33
3	Increased rice production	0,11	3	0,33
4	There is assistance from tractors and rice threshing machines to farmers by farmer groups	0,11	3	0,33
5	There are many directions from extension workers to farmers	0,07	2	0,14
Sub-Total		**0,65**	**18**	**1,69**
NO	Weakness			
1	Marketing places are still limited	0,07	2	0,14
2	There are some farmers who have not followed the directions from the extension workers	0,07	2	0,14
3	Limited grain milling	0,07	2	0,14

4	There are no cooperatives that accommodate the production of rice farming	0,03	1	0,03
Sub-Total		**0,35**	**10**	**0,45**
Total		**1,00**	**28**	**2,14**

a. Strength

1. The existence of human resources in rice farming. Based on population data, there are 1,800 people who work as farmers and the average number of people are rice farmers, so it can be said that Rato Village is one of the central rice producing areas.
2. There is superior seed assistance from the government. By using seeds directed by the instructor, namely the Inpari, Cigeulis and Ciherang varieties, it is said that these seeds are superior seeds so that when planted and harvested they will also produce quality rice.
3. Increased rice production. Judging from previous farmers' income, production has decreased due to unfavorable weather, but now farmers can produce 11-12 tons/lot of rice, seeing that the weather is now starting to support and also farmers are implementing what is directed by the extension workers so that production increases.
4. There is assistance from tractors and rice threshing machines to farmers by farmer groups. By seeing the complaints of farmers, farmer groups moved to ask for help from the government in the form of tools to make it easier for farmers in farming such as rice field processing machines and rice threshing machines which were given to farmers through farmer groups so that up to now farmers with these tools have been able to minimize labor and working time.
5. There are many directions from extension workers to farmers. Based on the results of interviews with respondents, in Mawang Subdistrict there are extension workers whose role is to control/supervise farmers, facilitate facilities for farming activities, are always ready to go to the field, listen to farmers' complaints and often provide directions to farmers regarding good and correct rice agribusiness, including the use of organic fertilizers, which have also been directed and implemented by extension workers to farmers.

b. Weakness

1. Marketing places are still limited. When farmers in Rato Village have finished grinding the grain, it is usually sold in shops and collecting traders.
2. There are some farmers who have not followed the directions from the extension workers. Judging from the age of the farmers, on average they are elderly and on average they have not finished elementary school, so according to them the knowledge applied by the extension workers is better than their experience because it is too complicated/rempong in the end the results are still the same as the system they have knowledge of.
3. Limited grain milling. The obstacle for rice farmers in Rato Village is that they have to transport their grain far away to mill it.

4. There are no cooperatives that accommodate the production of rice farming. Apart from that, Rato Village does not yet have a cooperative to accommodate rice production which could make it easier for farmers to increase their profits.

Following are details regarding external factors (opportunities and threats) in the development of rice agribusiness in increasing productivity obtained from interviews, which can be seen in Table 4.

Table 4. EFAS (Summary of External Factor Analysis)

External Factor Matrix				
NO	Opportunity	Weight	Rating	Mark
1	Development of agricultural technology	0,16	4	0,64
2	There is local government support related to rice farming	0,13	3	0,39
3	Increasing public demand for food	0,09	2	0,18
4	Facilities and infrastructure are easy to obtain	0,13	3	0,39
5	There is an understanding of farmers regarding rice agribusiness	0,09	2	0,18
Sub-Total		**0,60**	**14**	**1,78**
NO	Threat			
1	The slightly unfavorable weather caused production conditions to decline	0,13	3	0,39
2	The number of rice producers	0,09	2	0,18
3	There are pest attacks that attack rice plants	0,09	2	0,18
Sub-Total		**0,40**	**8**	**0,93**
Total		**1,00**	**22**	**2,71**

a. Opportunity

1. Development of agricultural technology. In Rato Village, previously only traditional tools were used both in cultivating the land and during harvest and post-harvest, but as time goes by land processing machines and rice threshing machines make things easier for farmers and minimize labor and working time.
2. There is local government support related to rice farming. Rice is the people's food and is a basic need for humans themselves, so from there it has closed the possibility that the local community government is very supportive of rice farming which can bring prosperity in general.
3. Increasing public demand for food. Rice is also a food ingredient to continue people's lives, thereby increasing community demand by looking at the existing reality that in the City area there is a lack of land to plant rice that can produce rice, for this reason farmers in Rato Village, in particular, are very much needed to increase or fulfill community demand related to increasing food ingredients (rice).
4. Facilities and infrastructure in the form of tractors, rice threshers, hoes, seeds, fertilizer and so on are easy to obtain. To make farming easier in Rato Village, it

is not difficult for farmers to search far and wide regarding facilities and infrastructure because some of them have been provided by the agricultural department and apart from that, farmers can shop at the nearest kiosks in Rato Village itself.

5. There is an understanding of farmers regarding rice agribusiness. Farmers in Rato Village actually understand everything from seed procurement to marketing, they just have to feel connected to the understanding they have.

c. Threat

1. Sometimes unfavorable weather conditions cause production to decline. The main obstacle for rice farmers is that the weather conditions are less favorable, so farmers find it difficult to handle when the weather gets worse because this will definitely result in rice farmers' production possibly decreasing drastically if it cannot be handled.
2. There are so many rice producers that the price of rice is cheap. Rato Village is one of the central rice producing areas because of the large number of rice farmers, as it happens that the price of rice rarely declines, whether during the harvest season or not.
3. There are pest attacks that attack rice plants. Pests are one of the threats for farmers in developing rice agribusiness because their attack can reduce production of the rice farming itself.

Tabel 5. Matriks SWOT

IFAS / EFAS	STRENGTH (S) The existence of human resources in rice farming. The existence of superior seeds with assistance from the government. The increase in rice production. The assistance of tractors and rice thresher machines to farmers by farmer groups. There are many directions from extension workers to farmers.	WEAKNESS (W) Marketing places are still limited. Some farmers have not followed directions from extension workers. Limited grain milling. There are no cooperatives that accommodate the production of rice farming.
OPPORTUNITIES (O) Development of agricultural technology. Local government support related to rice farming. Increasing public demand for food. Facilities and infrastructure are easily available. Farmers' understanding regarding rice agribusiness.	SO STRATEGYDeveloping rice quality with recommended superior seeds (S2+O3)Improving rice agribusiness by utilizing increasingly sophisticated human resources and agricultural technology (S6+S1+O1)Maintaining rice production with farmers' skills related to rice agribusiness (S3+O5)	WO STRATEGY: The existence of government support can easily establish banks and cooperatives as bodies providing capital and shelter for rice production (W1+W5+O2). Developing agricultural technology related to grain milling (W4+O1). Increasing public demand by expanding marketing areas (W2+O3).
THREAT (T) Weather conditions that are sometimes unfavorable which causes production to decrease. The number of rice producers. There are pest attacks that attack rice plants.	ST STRATEGY Developing Extension Direction (S4+S6+T4) Seeking to increase rice production (S3+T2) Using superior seeds can maintain production when the weather worsens (S2+T1)	WTM STRATEGYIncrease the number of transportation facilities for marketing rice (W2+T3)Farmers follow the directions of instructors in rice farming so that weather or pests do not become obstacles to developing rice agribusiness (W3+T1+T4)

CONCLUSION

Based on the research results, it can be concluded that SWOT analysis is able to provide an overview of the position of rice farming and produce appropriate alternative development strategies. The appropriate development strategy is to utilize internal strengths to capture external opportunities to increase the productivity and sustainability of rice farming. It is recommended that farmers and related parties can implement the strategies that have been formulated to increase the sustainability of rice farming**.**

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