

Prospects for Development of Integrated Beef Cattle and Cashew Farming in Muna Regency

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Abstract. The study aimed to find out the prospects of Development integrated farming business of beef cattle and cashew nuts. The study was carried out from March to May 2021. Respondents of the study consisted of beef cattle farmers who also grow cashew nuts. Sample of the location were determined purposively for a reason that not all sub districts are located in Muna regency, only a few out of 22 sub districts in total. Samples of sub districts and villages were selected purposively on a consideration that there were both beef cattle cattle and cashew nuts in the selected sub districts and villages. Samples of cattle breeders were determined with a random sampling, meaning that all breeders had equal opportunities to be selected. Data and the study were obtained by means of direct interviews, which were analyzed by Feasibility Tally Sheet. Based on the research results can be concluded. The research results show that integrated cattle and cashew farming has prospects for development with each rating, namely technical (7), economic (7), social (4), financial (4) and factors management (6) .

Keywords : prospects, integrated farming, beef, cashew

INTRODUCTION

The agricultural sector is still the main pillar of national development in terms of food security, providing employment opportunities, and meeting the demand for industrial raw materials (Waridin 2019) . The agricultural sector generally includes farming, fisheries, forestry, animal husbandry and plantations (Hidayah and Susanti 2022) .

One of the livestock commodities that is considered capable of boosting the community's economy is cattle, while the plantation commodity is the cashew crop which has been developed by the community for generations (Pandey, Lainawa and Warouw, 2024; Ploransia, et al 2022)

Muna Regency is one of the regions that has a wealth of natural resources from both the livestock and plantation sectors (Laode 2019) . The livestock population is 71,121 head and the plantation area is 13,980 ha (BPS Muna Regency 2022) . This number can be increased by both production and productivity through a sustainable agricultural approach.

One effort to support a sustainable agricultural system is an integrated agricultural system (Kasmin, et al 2023 ; Lagiman 2020) . This system is implemented without reducing livestock activities, plant productivity and both provide benefits or are symbiotic mutualism (Parulian, et al 2019 ; Syahril and Badli 2023) .

On the other hand, the integration system can also help increase farmers' income because apart from having livestock they also have cashew crops (Ihsan, et al 2023 ; Pudjiastuti, et al 2021 ; (Rustiawati, et al 2020) . Livestock use wild grasses and false fruit under cashew plants as feed for consumption while cashew requires fertilizer produced by cattle (Darmin, et al al, 2021; Wulansari et al .

METHOD

Time and place

This research was carried out in Muna Regency, Southeast Sulawesi Province from March to May 2021. The location was determined purposively *because* this location is a base area for the development of beef cattle and cashew cultivation. The research locations were in Tongkuno District, South Tongkuno and Parigi District.

Population and Respondents

The population in this study were all beef cattle breeders who also had cashew plantations in the research location. Meanwhile, the number of samples was determined by *purposive sampling* with a total of 30 samples per sub-district.

Types and Techniques of Data Collection

The data collected in this research are primary data and secondary data. Primary data was obtained by conducting direct observations and interviews with respondents with the help of questionnaires, namely beef cattle breeders who also own cashew plantations.

The secondary data needed in this study was obtained from the Central Statistics Agency and related agencies.

Data analysis technique

To determine the prospects for the development of integrated beef cattle and cashew farming from technical, economic, social, financial and management aspects, the *Feasibility Tally Sheet table* (Djamin, 1984) is used.

Table 1 . Feasibility Tally Sheet

Aspect Evaluation	Limiting Factors (<i>Constarint</i>)																	Rating s
	a	b	c	d	e	f	g	h	i	j	k	L	m	n	o	p	q	
Technical	X	X	X	X														0-8
Economy					X	X	X	X										0-8
Social									X	X								0-4
Financial											X	X	X					0-6
Manageme nt														X	X	X	X	0-8

Information :

a = Land availability

b = Availability of raw materials

c = Supporting tools

d = Threat to the environment

e = Business scale

f = Market potential

g = Rival company

h = Impact on area

i = Community acceptance

j = Does not conflict with the rules

k = Source of funds

l = Funding requirements

m = Profit

n = Planning

o = Organizing

p = Implementation

q = Supervision

The scoring for each limiting factor (*constraint*) is carried out based on the opinion of Djamin (1984) that if the limiting factor (*constraint*) is not met or is difficult to fulfill then it is given a score of 0 and if it is not difficult to overcome it is given a score of 1, and if it is not

an obstacle then it is given score 2. Based on this score, the total rating that can be achieved for the technical and management aspects, each of which has four limiting factors (*constraints*), is between 0 and 8, so that the integrated beef cattle and cashew farming business has development prospects for the technical aspects and management if each aspect has a total rating of between 4 and 8.

The total rating that may be achieved for economic, social and financial aspects which have three limiting factors (*constraints*) is between 0 to 6, so that beef cattle and cashew farming have development prospects for economic, social and financial aspects if each aspect has a total rating between 3 and 6.

RESULTS AND DISCUSSION

For analysis of the prospects for the development of integrated beef cattle and cashew farming at the research location, the *Feasibility Tally Sheet table* according to (Djamin, 1984) was used based on technical, economic, social, financial and management aspects. The research results show that the development of integrated beef cattle and cashew farming has prospects for cultivation from various aspects assessed.

Technical Aspect Prospects

The development of an integrated beef cattle and cashew farming business at the research location can technically be carried out both in terms of land availability, availability of raw materials and availability of supporting equipment as well as in terms of threats to the environment.

Table 2 . Technical Aspect Parameters

Technical Aspect Parameters	Evaluation	Score
Land availability	Available	2
Availability of raw materials	Less available but manageable	1
Supporting tools	Available	2
Threat to the environment	Not a threat	2
Ratings		7

Source: Primary Data After Processing

Table 2 shows that the total rating score achieved for the technical aspect is 7. This means that the integrated beef cattle and cashew farming business has development prospects for the technical aspect. The supporting parameters are the availability of land, the availability

of supporting equipment and the absence of threats to the environment, each of which has a rating score of 2. Meanwhile, the raw material availability parameter still does not support the technical aspects which have a rating score of 1.

Land availability parameters at the research location can support the development of integrated beef cattle and cashew farming. The total area of cashew land at the research location is 170 Ha. This area of land can be integrated with cattle farming as a place for planting and developing forage in it while making optimal use of cashew fruit as animal feed which is still considered waste (Arsad et al, 2021). The current average cattle ownership is 3 head/farmer and the average land ownership is 1.97 Ha/farmer, so the potential land capacity for cattle is still available for 994 heads if the land capacity assumption is used. is 10 head of cattle/hectare.

Parameters for the availability of production facilities at the research location, both producers and sellers of agricultural production facilities in the form of fertilizers and pesticides for guava plants, as well as animal feed and medicines for livestock businesses, are less available. However, the need for production facilities can still be addressed because they can be purchased from Baubau City, Raha City and Kendari City.

Parameters for the availability of supporting equipment are available in terms of quantity and time when needed. Various supporting tools needed by respondents in cattle farming and cashew farming such as hoes, baskets, buckets, machetes, brooms, sickles, knives, ropes, boat shoes, skopang, hammers, nails, hoses, pipes, faucets are easily obtained. at the research location.

The threat parameters to the environment are not an obstacle at the research location. Activities around the research location are generally other agricultural businesses such as coconut plantations, secondary crops and forest areas so that there are no activities that could trigger environmental pollution.

Prospects for Economic Aspects

The development of integrated beef cattle and cashew farming at the research location can be economically carried out both in terms of business scale, market potential and business competition as well as its impact on the region.

Table 3 . Parameter Analysis of Economic Aspects

Economic Aspect Parameters	Evaluation	Score
Scale enterprises	Small but could be improved	1

Market potential	Available	2
Rival company	Not an obstacle	2
Impact on the region	There are multiplayer effects	2
Ratings		7

Source: Primary Data After Processing

Table 3 shows the total rating score achieved for the economic aspect of 7. This means that the integrated beef cattle and cashew nut farming business has development prospects for the economic aspect. Supporting parameters are market potential and business competition factors, each of which has a rating score of 2. Meanwhile, the business scale parameter still does not support the economic aspect which has a rating score of 1.

The business scale parameters at the research location are still small if seen from the ownership of cattle and the area of cashew land currently cultivated. The research results showed that the average number of family members at the research location was 4 people. This situation illustrates that the scale of the business can still be increased with the availability of family labor. Utilization of family labor can be used in cultivating cashew plantations by planting cattle feed plants or to help utilize cow manure into fertilizer for cashew plants. The more family members are involved in farming, the scale of the business can increase so that income can also increase.

Market potential parameters are a motivating impetus for developing integrated cattle and cashew farming at the research location. The market potential for cattle can be seen from the presence of cattle buyers in the village and the large number of cattle collectors who come from outside the research location. Traders collecting cattle come from Kendari City, Raha City and Baubau City. The large market potential can also be seen from the existence of village intermediary traders, large collectors and cashew processors who are willing to buy cashew nuts at the same price as other cashew producing areas outside the research location.

Rival company parameters are not an obstacle in the research location. In particular, there are no large companies or investors who carry out cashew farming or cattle farming, so the opportunity for price monopoly to occur which could have an impact on the low competitiveness of farmers does not occur.

The impact parameters on the area of cattle and cashew farming activities can have a positive impact. The development of cattle farming and cashew farming activities will have an impact on the high demand for livestock seeds, medicines, farming and livestock equipment,

land and sea transportation services, which will result in the opening of employment opportunities and income for other communities around the location.

Prospects for Social Aspects

Development of integrated beef cattle and cashew farming at the research location from a social aspect can be carried out both in terms of community acceptance and not in conflict with regulations.

Table 4 . Analysis of Social Aspect Parameters

Social Aspect Parameters	Evaluation	Score
Community acceptance	Not an obstacle	2
Not against the rules	Not an obstacle	2
Ratings		4

Source: Primary Data After Processing

The research results show that the total rating score achieved for the social aspect is 4. This means that the integrated beef cattle and cashew farming business has development prospects from the social aspect. Parameters that support community acceptance factors and do not conflict with regulations, each of which has a rating score of 2. These two factors really support efforts to develop integrated beef cattle and cashew farming from a social aspect.

The parameters for community acceptance of the cattle and cashew farming business are well accepted by the community or are not an obstacle. The existence of these two farming businesses can open up job opportunities for the community and make use of land that has been unproductive. In this way, the cattle and cashew farming business can be a means of increasing community income, not only for the breeders and farmers who run it but also for the surrounding community.

Cattle and cashew farming activities at the research location do not conflict with government regulations. This is based on the Regional Spatial Planning Plan (Regional RTRW) of Muna Regency which determines that Kusambi District, Pasir Putih District and Pasikolaga District are the center areas for the growth of the agricultural sector. In general, the location of cashew plantations and cattle used by farmers is an agricultural and plantation area and is not a forest area which is prohibited from being used for other activities.

Financial Aspect Prospects

Development of integrated beef cattle and cashew farming at the research location from a financial aspect can be carried out according to the benefits and financial requirements.

Table 5 . Analysis of Financial Aspect Parameters

Financial Aspect Parameters	Evaluation	Score
Source of funds	Not available but workable	1
Funding requirements	Not available but workable	1
Profit	Profitable	2
Ratings		4

Source: Primary Data After Processing

The data above shows that the total rating score achieved for the financial aspect is 3. This means that the integrated beef cattle and cashew farming business has development prospects for the financial aspect. The supporting parameters are the profit factor which has a rating score of 2. Meanwhile, the funding source parameters and the funding needs factor each have a rating score of 1.

The parameters for sources of funds for cattle and cashew farming businesses, although not easily available at the research location, can be addressed. The source of capital generally comes from personal funds which are deliberately allocated both for cattle farming and cashew farming needs. Apart from that, the source of capital can come from loans from relatives or family, especially in cattle farming businesses, although this is not always in the form of cash but in the form of livestock with a return model for the results of livestock born. Sources of capital in the form of government or private financial institutions are not available at the research location.

Parameters for funding requirements for cattle and cashew farming activities at the research location are available at any time. However, in terms of funding requirements, farmers usually allocate part of their income well in advance with predetermined expenditure, for example for the costs of clearing cashew fields which are usually carried out at the end of the harvest season and before the cashew flowering season. Meanwhile, the funding requirements for purchasing livestock are usually allocated as part of the proceeds from sales of livestock that are sold.

The profit parameter is a factor that encourages respondents to maintain the cattle and cashew farming business in this research location. Profits from the cattle and cashew farming business are obtained from the fifth year onwards as presented in Table 21 which is reinforced by the results of the investment feasibility analysis as presented in Table 22.

Prospects from Management Aspects

Development of integrated beef cattle and cashew farming at the research location from a management aspect can be carried out both in terms of planning , organizing and implementing and monitoring factors.

Table 6 . Results of Management Aspect Parameter Analysis

Management Aspect Parameters	Evaluation	Score
Planning	Production according to capital capabilities	2
Organizing	The use of labor is not optimal	1
Implementation	Not all needs are met	1
Supervision	Not an obstacle	2
Ratings		6

Source: Primary Data After Processing

The data above shows that the total rating score achieved for the management aspect is 6. This means that the integrated beef cattle and cashew farming business has development prospects from the management aspect. The supporting parameters are planning and supervision, each of which has a rating score of 2, and organizing and implementation, each of which has a rating score of 1.

In terms of planning parameters, respondents had adequate planning in terms of when to clear the cashew plantation land, namely after harvest and before flowering time. Meanwhile, in the cattle farming business, planning was carried out in procuring broodstock in accordance with the objectives of the livestock business, namely for cultivation or breeding. Even though the planning carried out is still limited to this, production can still be carried out in accordance with the capabilities of the capital available and obstacles that arise, such as diseases that attack livestock, can still be overcome either by traditional methods or through the help of livestock orderlies.

Organizing parameters are still less than optimal in terms of workforce use. In reality, there are still family workers who are not involved in all stages of the planned work, although this does not hamper the production of cattle and cashew nuts. Poor organization of labor resources will certainly affect the productivity of the workforce, which can result in reduced family income.

In terms of business implementation parameters, although all equipment needs, land cleaning and cattle maintenance can be met, they have not been fulfilled in terms of fertilizing cashew land and providing cattle feed of sufficient quality and quantity in the livestock business. Cashew production still depends on yields. naturally without fertilization. Meanwhile, in the livestock business, the rearing system is still carried out semi-intensively without good reproductive management. Meanwhile, monitoring parameters are running well without problems in cashew farming and cattle farming.

CONCLUSION

The prospects for developing integrated beef cattle and cashew farming in Muna Regency based on technical, social, economic, financial and management aspects have prospects for development because they have a rating of between 4-8.

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