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Analysis of the Potential Beef Cattle Business in Sambung Makmur District, Banjar Regency, South Kalimantan

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ABSTRACT

The research aims to analyze the potential of beef cattle farming business in Sambung Makmur District, Banjar Regency, South Kalimantan. The research was conducted in Sambung Makmur District, Banjar Regency. The research sample consisted of 79 respondents. The research data analysis focused on three parameters: analysis of beef cattle population growth, analysis of livestock feed availability and regional carrying capacity, and SWOT analysis. The potential of beef cattle farming business in Sambung Makmur District, Banjar Regency, has excellent opportunities to be developed as a center for beef cattle farming. The growth of the beef cattle population shows a significant positive trend, with a large contribution to the population at the district level. The availability of livestock feed in this region exceeds the needs of the existing population, indicating that the regional carrying capacity and the potential of local natural resources strongly support sustainable business continuity. Internal strengths such as good quality human resources and active support from the local government, although there is still room to improve the efficiency of the supply chain and livestock distribution.

Keywords: *Beef cattle, Business, Sambung Makmur, Banjar*

INTRODUCTION

Beef cattle is a strategic resource in the national meat supply, possessing high economic value and playing a crucial role in meeting the population's animal protein needs. Beef cattle is a highly nutritious food commodity that is crucial for maintaining food security, especially amidst growing public awareness of the importance of consuming healthy and nutritious foods. The development of the livestock sector, particularly the beef cattle business, offers significant prospects and potential for continued growth in line with population growth and market demand (Chafid, 2022).

Demand for beef cattle in Indonesia continues to increase year after year, in line with rising per capita income and nutritious food consumption patterns. This increasing demand has not been matched by domestic production. According to data from the Central Statistics Agency (BPS, 2022), national beef cattle production in 2021 was only 487,800 tons, or 10.73% of total national meat production. Therefore, Indonesia remains highly dependent on imports, with approximately 30–40% of its beef cattle needs met internationally. This reliance on imports represents a significant opportunity to strengthen the local livestock sector.

The large beef cattle supply deficit is reflected in annual data showing a negative trend in domestic beef cattle supply. Chang

et al. (2020) noted that in 2017, the deficit reached 261,541 tons, increasing to 281,680 tons in 2019. This data serves as an important indicator that increasing local beef cattle production is an urgent strategic step to reduce dependence on imports and strengthen national food security. This can only be achieved with a holistic approach to developing the potential of regions rich in natural resources and ecosystems that support livestock farming.

South Kalimantan, Indonesia, has significant potential in agriculture and livestock. This province contributes significantly to the Gross Regional Domestic Product (GRDP), particularly from the agriculture, forestry, and fisheries sectors (BPS South Kalimantan, 2023). Ramadhan (2024) emphasized that South Kalimantan has more promising prospects for developing the livestock subsector than other provinces in Kalimantan. Banjar Regency, South Kalimantan, has agro-climatic potential and feed resources that enable the sustainable development of beef cattle farming.

Banjar Regency is a center for beef cattle farming in South Kalimantan. According to data from the Banjar Regency Statistics Agency (BPS) (2022), the beef cattle population in this region reached 19,353, with Sambung Makmur District contributing the largest population, with 4,530 head. Community involvement in livestock farming activities is significant, although it is still dominated by small-scale and traditional businesses (Eoh, 2012; De Lima, 2012).

Sambung Makmur District covers an area of 134.56 km² and is home to 11,841 people (Population Census, 2020). This area is dominated by hills, rain-fed land, and dryland, offering significant potential for livestock development. Agro-ecosystem diversity and the availability of forage are crucial foundations for supporting beef cattle farming. Limitations in technology, education, and skills among livestock farmers are obstacles to increasing livestock productivity (Saputra et al., 2016).

Optimizing this potential requires an integrated approach that includes increasing human resource capacity, providing facilities and infrastructure, utilizing appropriate technology, and strengthening the supply and distribution chain (David, 2004). Factors such as education, experience, age, and skills of livestock farmers significantly influence the effectiveness of livestock business management (Halidu et al., 2021). Marketing systems and livestock product distribution networks must also be improved to ensure production is well absorbed by the market and improve livestock farmer welfare (Emhar et al., 2014).

The high potential for beef cattle farming in Sambung Makmur District and the strategic role of this area in providing animal food. This research aims to analyze the potential for beef cattle farming in Sambung Makmur District, Banjar Regency, South Kalimantan.

MATERIALS & METHODS

The research was conducted in Sambung Makmur District, Banjar Regency. The sample consisted of 79 respondents using a judgmental sampling method, which involves drawing on relevant information available from various sources and seeking information from livestock stakeholders.

Data analysis focused on three parameters: beef cattle population growth analysis, conducted to identify trends in increasing or decreasing livestock numbers as a basic indicator of development potential. Analysis of livestock feed availability and regional carrying capacity was used to evaluate the extent to which local natural resources can support sustainable livestock farming, both in terms of feed quantity and quality. A SWOT analysis was conducted to identify strengths, weaknesses, opportunities, and threats faced in developing the beef cattle business, in order to formulate appropriate strategies based on actual conditions on the ground. Parameters were analyzed

descriptively, quantitatively and qualitatively, to provide a comprehensive overview of regional potential as a basis for planning a sustainable beef cattle business.

RESULT

Beef cattle population growth

The Growth Share calculation is used to determine the growth of each sector and to determine the contribution of a sector's results to the results of all sectors in the research area within a period of one year of production. The results of the Growth calculation of the beef cattle population show that population growth in the Sambung Makmur District area is very good, this can be seen from the Growth values which are all positive. The village with the highest Growth value is in the Pasar Baru Village area with a value of 50.47, then followed by the Sungai Lurus Village area with a Growth value of 37.29 and the Batu Tanam Village area with a Growth value of 29.54. The results of the Growth calculation of beef cattle farming in the Sambung Makmur District are presented in Table:

Table 1. Growth calculation

No	Village Name	Population 2022 (Year-1)	Population 2024 (Year)	Growth Value	Value
1	Madurejo	418	521	24,64	Positive
2	Baliangin	783	942	20,30	Positive
3	Gunung Batu	403	506	25,55	Positive
4	Batu Tanam	396	513	29,54	Positive
5	Sungai Lurus	362	497	37,29	Positive
6	Pasar Baru	313	471	50,47	Positive
7	Batang Banyu	379	412	8,70	Positive

The Share calculation results show that the distribution of the beef cattle population in Sambung Makmur District is also high, as evidenced by the positive Share values for each village. Baliangin Village had the highest Share value with a Share value of 24.3, followed by Madurejo Village with a Share value of 13.4, and Batu Tanam Village with a Share value of 13.2. The results of the Share calculation for the beef cattle population in Sambung Makmur District are presented in the table below:

Table 2. Share calculation

No	Village Name	Population in 2024 (NP1)	Population of Sambung Makmur District in 2024 (NP2)	Value *Share*	Value
1	Madurejo	521	3.862	13,4	Positive
2	Baliangin	942	3.862	24,3	Positive
3	Gunung Batu	506	3.862	13,1	Positive
4	Batu Tanam	513	3.862	13,2	Positive
5	Sungai Lurus	497	3.862	12,8	Positive
6	Pasar Baru	471	3.862	12,1	Positive
7	Batang Banyu	412	3.862	10,6	Positive

Based on the growth rate of the beef cattle population in each village from 2022 to 2024 and the commodity's contribution to beef cattle development, the beef cattle sector in Sambung Makmur District can be designated as a leading commodity. The sector classification indicates that this commodity has experienced relatively high growth (+) and a significant contribution (+). The results of the growth and share calculations for the beef cattle sector in Sambung Makmur District are categorized and presented in the following table:

Table 3. Results of the growth share calculation for the beef cattle commodity

No	Village Name	Value *Growth*	Value (-/+)	Value *Share*	Value (-/+)	Sector
1	Madurejo	24,64	+	13,4	+	Leading Commodities
2	Baliangin	20,30	+	24,3	+	Leading Commodities
3	Gunung Batu	25,55	+	13,1	+	Leading Commodities
4	Batu Tanam	29,54	+	13,2	+	Leading Commodities
5	Sungai Lurus	37,29	+	12,8	+	Leading Commodities
6	Pasar Baru	50,47	+	12,1	+	Leading Commodities
7	Batang Banyu	8,70	+	10,6	+	Leading Commodities

The criteria for superior commodities are that they must be able to become the main driver in economic development, namely superior commodities can provide a significant contribution to increasing production, income and expenditure (Triyanto et al., 2018). Sambung Makmur District ranks first as the region with the highest Share value against the Banjar Regency area with a Share value of 23.40, the next highest is the Aranio District area with a Share value of 18.67 and the Pengaron District area with a Share value of 11.32. This means that when viewed from the Share value against Banjar Regency, the Sambung Makmur District area is not only good in each village, but also has a high contribution value to Banjar Regency. The results of the analysis are an added value for Sambung Makmur District to become a superior and sustainable beef cattle development area.

Analysis of Potential Animal Feed Availability

Analysis of feed availability potential is useful for determining a region's ability to produce animal feed from both natural forage and agricultural waste. Sambung Makmur District is an agricultural-based area, with rice, corn, and peanut farming as its primary sources. Agricultural waste, as a by-product, can be further utilized as animal feed. Grass availability in Sambung Makmur District comes from several types of land, including rice paddies, drylands, pastures, and forests. Sambung Makmur District is capable of producing 12,258.33 tons of fresh forage per year. The highest potential for fresh forage comes from pastures, at 8,721.17 tons of fresh forage per year, followed by drylands at 3,104.31 tons of fresh forage per year. Grass availability in Sambung Makmur District is presented in the table below:

Table 4. Potential for feed from fresh green fodder in Sambung Makmur District

Village Name	Potential Rice Fields	Dryland Potential	Land Potential Pangonan	Forest Land Potential	Total
Madurejo	8,49	821,76	936,72	37,11	1.804,08
Gunung Batu	7,07	474,09	742,91	42,89	1.266,96
Baliangin	12,74	162,45	1.485,83	53,61	1.714,63
Sungai Lurus	7,36	457,65	1.627,95	60,21	2.153,17
Batu Tanam	13,02	493,05	1.020,70	38,76	1.565,53
Pasar Baru	7,07	379,25	1.550,43	67,63	2.004,38
Batang Banyu	34,83	316,06	1.356,63	42,06	1.749,58
Total	90,58	3.104,31	8.721,17	342,27	12.258,33

The potential for animal feed in Sambung Makmur District comes not only from grass but also from agricultural waste. The availability of animal feed from agricultural waste in Sambung Makmur District is presented in the table below:

Table 5. Feed from waste in Sambung Makmur District

Village Name	Potential Availability of Agricultural Waste (Tons of BK/Year)						Total
	Paddy	Corn	Mung beans	Peanuts	Sweet potato	Cassava	
Madurejo	503,73	6,19	1,43	9,63	5,15	37,26	563,39

Baliangin	729,54	11,61	0,00	23,11	8,59	28,98	801,83
Sungai lurus	510,67	7,74	0,00	15,40	1,71	16,96	552,08
Gunung Batu	434,25	13,15	0,00	19,26	1,71	9,10	477,47
Batu tanam	545,41	6,96	0,00	9,63	0,00	5,79	567,79
Pasar Baru	687,85	15,48	0,00	32,74	3,43	41,4	780,9
Batang Banyu	1.243,69	8,51	1,43	13,48	1,71	22,35	1.291,17
Total	4.655,14	69,64	2,86	123,25	22,3	161,44	5.034,63

Sambung Makmur District relies on agricultural waste from rice, corn, soybeans, peanuts, sweet potatoes, and cassava to produce feed. The agricultural waste contributed is quite large, amounting to 5,034.63 tons of dry matter per year. The largest contribution comes from rice. Yusriani et al. (2015) revealed that with the integrated crop-livestock model, farmers address the problem of feed availability by utilizing crop waste such as rice straw, corn straw, and legume waste. The calculation of feed availability from waste and grasses based on land use yields the total feed availability in Sambung Makmur District. Feed availability in Sambung Makmur District is presented in Table :

Table 6. Potential of animal feed

Village Name	Feed Source (Ton Bk/Year)		Total
	agricultural waste	Grass	
Madurejo	563,39	1.804,08	2.367,47
Gunung Batu	801,83	1.266,96	2.068,79
Baliangin	552,08	1.714,63	2.266,71
Sungai Lurus	477,47	2.153,17	2.630,64
Batu Tanam	567,79	1.565,53	2.133,32
Pasar Baru	780,9	2.004,38	2.785,28
Batang Banyu	1.291,17	1.749,58	3.040,75
Total	5.034,63	12.258,33	17.292,96

The total availability of animal feed in Sambung Makmur District is 17,292.96 tons of DM/year. The village with the highest feed potential is Batang Banyu Village with a feed potential of 3,040.75 tons of DM/year, followed by Pasar Baru Village with 2,785.28 tons of DM/year, Sungai Lurus Village with 2,630.64 tons of DM/year, Madurejo Village with 2,367.47 tons of DM/year, Baliangin Village with 2,266.71 tons of DM/year, Batu Tanam Village with 2,133.32 tons of DM/year and Gunung Batu Village with 2,068.79 tons of DM/year. The availability of animal feed is supported by the availability and production of agricultural crops in the form of waste and by-products, while for agricultural production, it is influenced by the area of farm harvest, labor and the number of livestock raised and the location of the farming area. The availability of green fodder in a region is a crucial factor and influences population dynamics in successful livestock development. The availability of green fodder is determined by the available land resources. Saputra et al. (2016) state that land resources that can be utilized to produce feed for beef cattle include rice paddies, dry land, pasture land, and forest land.

SWOT Analysis

The SWOT analysis strategy design was conducted by combining two factors: internal factors (Strengths and Weaknesses) with external factors (Opportunities and Threats). This then resulted in four alternative strategies: Strength-Opportunities (SO), Weakness-Opportunities (WO), Strength-Treathness (ST), and Weakness-Treathness (WT). Based on field research in the Sambung Makmur District, Banjar Regency, several aspects related to Strengths and

Weaknesses, Opportunities, and Threats can be outlined as follows:

Strengths

1. Availability of extensive land.
2. Abundant and varied natural forage sources, such as grass and legumes, are available.
3. Farmers cultivate superior grass.
4. Plantations support the development of beef cattle farming.
5. Grazing land and unused land are still quite extensive.
6. Long-term human resource support through the development of Animal Husbandry Departments at universities in South Kalimantan, which will certainly be more focused on producing intellectually skilled animal husbandry graduates for resource management in Sambung Makmur District, Banjar Regency.
7. Agricultural extension centers exist in each district, supporting the performance of regional livestock and agriculture.
8. Agricultural waste in Sambung Makmur District remains quite abundant.

Weaknesses

1. The price of concentrated feed is quite high.
2. The livestock population is spread across various regions, requiring better coordination, resources, and facilities.
3. The distribution of pasture land is uneven, resulting in some villages experiencing both undercapacity and overcapacity.
4. The adoption of livestock technology is still low.
5. Livestock farmers still rely on fresh forage and underutilize agricultural waste as feed.

Opportunities

1. Numerous government programs support livestock and agricultural development.
2. There are a significant number of oil palm plantations in Sambung Makmur District, making it highly feasible to implement integrated beef cattle rearing system.
3. Availability of field officers and expert trainers who can improve the knowledge and skills of livestock farmers.

Threats

The conversion of grasslands to plantations and residential areas has the potential to reduce the availability of grass in the Sambung Makmur District.

The beef cattle sector in Sambung Makmur District has significant potential for development, supported by greater opportunities than threats and significant strengths. Beef cattle development still faces challenges, including weaknesses and threats, requiring special attention, especially from the government and relevant agencies. Alternative strategies to consider are as follows:

1. S-O Strategy

The Strength-Opportunities (S-O) strategy utilizes existing strengths to capitalize on opportunities to increase the potential of beef cattle in Sambung Makmur District. This can be achieved through more intensive training on livestock management, such as grazing patterns and forage cultivation, animal feed processing, and the use of agricultural waste as an alternative feed ingredient.

2. W-O Strategy

The Weakness-Opportunities (W-O) strategy addresses weaknesses by capitalizing on opportunities. This can be achieved through an integrated beef cattle and plantation management system, for example, the Beef Cattle Integration System. This strategy also fosters a mindset among livestock farmers that plantation activities can coexist with livestock farming, not limited to oil palm plantations. This is due to the increasing development of plantation businesses. Yusriani et al. (2015) explained in their research that the crop-

livestock integration model allows farmers to address the issue of animal feed availability by utilizing crop waste such as rice straw, corn straw, and legume waste.

3. S-T Strategy

The Strength-Treathness (S-T) strategy utilizes strengths to avoid threats by improving land use management, optimizing land use and utilization, and beginning to utilize agricultural waste as animal feed to avoid feed shortages caused by land conversion. De Lima (2012) stated in his research that factors inhibiting feed availability include the decreasing cropping area due to increasingly limited land, which is largely occupied by housing and road infrastructure. Therefore, it is necessary to seek alternatives to meet the feed needs of ruminants.

4. W-T Strategy

The Weakness-Treathness (W-T) strategy minimizes weaknesses and avoids threats by increasing the role of the government and agricultural extension workers in livestock business development by improving human resource skills in livestock management so that farmers are able to utilize and manage their livestock, from livestock management to feed management.

CONCLUSION

The potential for beef cattle farming in Sambung Makmur District, Banjar Regency, offers excellent potential for development as a center for beef cattle farming. The growth of the beef cattle population shows a significant positive trend, contributing significantly to the regency population. The availability of livestock feed in this region exceeds the needs of the existing population, demonstrating that the region's carrying capacity and local natural resource potential strongly support the sustainability of the business. Internal strengths include high-quality human resources and active support from the local government, although there is still room to improve the efficiency of the livestock supply chain and distribution.

Declaration by Authors

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