

Analysis strategy of Sheep farm development in Bondowoso Regency

Analisis strategi pengembangan peternakan Domba di Kabupaten Bondowoso

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ABSTRACT

The sheep population in Bondowoso Regency increases every year, but this number cannot meet the demand for sheep meat. Therefore, this study was conducted to analyze the internal and external factors affecting sheep farming in Bondowoso Regency, as well as to determine the strategies that should be carried out according to experts and analyzed using the Analysis Hierarchy Process (AHP). This study used purposive sampling, where the number of respondents was 30 sheep farmers. Furthermore, questionnaires were distributed to 2 experts in the field of animal husbandry. Questionnaires from farmers were processed using SWOT analysis and questionnaires from livestock experts were processed using AHP. The results of the SWOT analysis are that 50% of respondents are in Quadrant 1, 6.67% in Quadrant 2, 16.67% in Quadrant 3, and 26.67% in Quadrant 4. The conclusion of this study was based on SWOT analysis, 50% of sheep farmers in Bondowoso Regency are in a very favorable condition. Based on AHP, the most recommended variable was code V1, "available natural resources, especially forage, and agricultural waste". Furthermore, the most recommended strategy is code S1, "Livestock businesses must be integrated from upstream to downstream industries, such as producing feed, selling using the latest market prices and livestock manure processed into organic fertilizer".

ABSTRAK

Populasi ternak domba di Kabupaten Bondowoso meningkat di setiap tahunnya, namun jumlah tersebut tidak dapat mencukupi kebutuhan daging domba. Oleh karena itu, penelitian ini dilakukan untuk menganalisis faktor internal dan eksternal yang mempengaruhi peternakan domba di Kabupaten Bondowoso, serta mengetahui strategi yang sebaiknya dilakukan menurut para ahli dan dianalisis menggunakan Analisis Hirarchy Process (AHP). Penelitian ini menggunakan purposive sampling, dimana jumlah responden sebanyak 30 peternak domba. Selanjutnya dibagikan kuesioner untuk 2 ahli bidang peternakan. Kuesioner dari peternak diolah menggunakan analisis SWOT dan kuesioner dari ahli bidang peternakan diolah menggunakan AHP. Hasil dari analisis SWOT yaitu 50% responden terletak di kuadran 1, 6,67% pada kuadran 2, 16,67% di kuadran 3 dan 26,67% di kuadran 4. Kesimpulan penelitian ini adalah berdasarkan analisis SWOT, 50% peternak domba di Kabupaten Bondowoso berada pada kondisi yang sangat menguntungkan. Berdasarkan AHP, variabel yang paling direkomendasikan adalah kode V1, "sumberdaya alam yang tersedia, terutama hijauan dan limbah pertanian". Selanjutnya strategi yang paling direkomendasikan adalah kode S1, "Usaha peternakan harus terintegrasi dari industri hulu ke hilir, seperti memproduksi pakan, penjualan menggunakan harga pasar terbaru dan kotoran ternak diolah menjadi pupuk organik".

Kata kunci:
Analisis
Peternakan Domba
Bondowoso
SWOT
AHP

INTRODUCTION

The livestock sector has considerable potential in the business sector because livestock

products support the fulfillment of animal protein needs in people's daily consumption. Therefore, business opportunities in the livestock sector are still wide open. Livestock commodities are quite



much in demand in the field of business such as poultry enlargement of laying hens, broilers, and ruminants such as fattening cattle and sheep. The sheep population in East Java Province has increased from year to year, namely from 2017 to 2019 totaling 1,362,062 heads, 1,374,742 heads, and 1,382,418 heads (Jatim, 2021).

Sheep business opportunities are considered very profitable due to easy maintenance and the potential for sheep breeding in general carried out by rural communities in general. This is because the main market for sheep is selling in large quantities on Eid al-Adha. Bondowoso regency is one of the regencies contributing to the sheep population that increases every year. The increase in population is triggered when farmers have competition from sheep imports because in 2018 Bondowoso Regency was able to export 5,000 sheep to Malaysia (Reily, 2018). This export activity can also trigger the enthusiasm to do business in the livestock sector. A potential livestock commodity to be developed in Bondowoso Regency is sheep. Data on the increase in sheep population in Bondowoso Regency from year to year is attached in Figure 1.

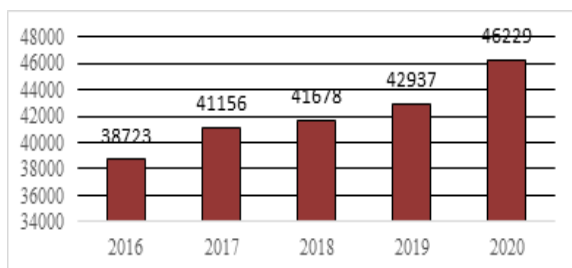


Figure 1. Sheep population in Bondowoso Regency (Dinas Peternakan dan Perikanan Kabupaten Bondowoso, 2021)

The results of the pre-field survey show that farmers have their markets either by interpreting body weight or by weighing numbers. Independent sales can be more profitable for farmers because they have cut the marketing distribution channel. This refers to research conducted by Suwarta (2016) farmers who sell independently and directly to buyers are considered more profitable than other distributors.

Therefore, the objectives of this study are (a) to analyze internal factors (strengths and weaknesses) and external factors (opportunities and threats) that affect sheep farming, (b) to identify variables and strategies recommended by

experts to develop sheep farming in Bondowoso Regency. This study used SWOT analysis and AHP (*Analysis Hierarchy Process*) to determine the strategies that farmers should adopt to develop sheep farming in Bondowoso Regency. This research will be useful for farmers (according to business scale) in determining variables and strategies that should be prioritized to develop sheep farming, which will indirectly increase farmers' profits.

MATERIALS AND METHODS

This research uses a survey method, which was a survey in the field and was qualitative descriptive research. Sampling is as much as 5% to 10% to limit the sampling error that can be tolerated (Rawung, 2020). Bondowoso Regency consists of 23 sub-Regencys and a sample of 20% was taken, namely 5 sub-Regencys. The basis for selecting sub-Regencys was based on the location of sub-Regencys in the north (Tegalampel), south (Tamanan), east (Creme), west (Wringin), and center (Tenggarang). The selection of sampling locations based on the location of the subregency aims to ensure that the samples taken were expected to represent the conditions of all sheep farmers in Bondowoso Regency. Each sub-Regency had sheep farmers with different populations, therefore in this study, farmers were divided into 3 strata, namely small, medium, and large scale. Each sub-regency would be sampled at each stratum of 2 farmers, namely small scale (1-10 heads) as many as 2 farmers, medium scale (11-20 heads) as many as 2 farmers, and large scale (>20 heads) as many as 2 farmers. Thus, there were 6 farmers sampled in each sub-regency and a total of 30 farmers sampled in Bondowoso Regency.

The data obtained in this study used several techniques, namely using questionnaires and interviews as a form to find out information related to sheep raising in Bondowoso Regency. Respondents used in this study included: Sheep farmers in Bondowoso Regency from small, medium, and large scale. Staff of the Livestock Division of the Livestock and Fisheries Service Office of Bondowoso Regency, and Lecturers of the Department of Animal Science, University of Jember, Bondowoso Campus Branch.

The sampling method used *purposive sampling*. In this analysis, respondents received

a questionnaire regarding internal and external factors. Internal factors consist of: **strengths** including (a) The seeds used are local seeds that have good environmental adaptation, (b). Natural resources, especially the availability of forage and agricultural waste, (c) Climate, temperature, and humidity, (d) Availability of supporting facilities and infrastructure (electricity, roads, and water sources), (e) Breeding experience >10 years. **Weaknesses (weakness):** (a) Low education level (elementary school), (b) Limited capital, (c) Traditional cultivation, (d) Marketing is assisted with the help of intermediary traders, (e) Livestock manure has not been utilized. External factors consist of **opportunities**, namely (a) Own business ownership status, (b) Market demand for lamb meat. **Threats** are (a) The younger generation is not interested in becoming farmers, (b) Business is not optimal due to the influence of energy and way of thinking, (c) There is no counseling, and (d) Concentrated feed has not been given as additional feed for livestock (Perwitasari, 2021)

The document study was conducted by studying secondary data obtained from various sources, namely from the Livestock and Fisheries Service Office of Bondowoso Regency, BPS (Central Bureau of Statistics), and other related documents.

The data that had been collected is analyzed SWOT (Nur'aini, 2016) to determine the internal factors that were the strengths and weaknesses of each respondent's sheep farming business. In addition, external factors were analyzed to determine the opportunities and threats faced by respondents. Furthermore, AHP (*Analysis Hierarchy Process*) decided from the factors that had been analyzed previously (Supriadi, Rustandi, Komarlina, & Ardiani, 2018).

In general, checking the validity of data was done by checking the credibility and suitability of data. There were many data credibility checking techniques that researchers could choose as needed, namely: (a) extension of the presence of researchers in the field, (b) observation persistence or deepened observation, (c) a triangulation (using several sources, methods, researchers, theories), (d) peer discussion or checking, (e) negative case analysis or review, (f) reference adequacy, and (g) member checking (Ulfatin, 2022).

Checking the validity of the data in this study

was carried out by triangulation (checking the data obtained from farmers by interviewing directly about the conditions on the farm), persistence of observation, and sufficient references. Qualitative (descriptive) SWOT analysis was carried out by compiling IFAS and EFAS in a matrix, and then descriptively formulating SO, WO, ST, and WT strategies. AHP (*Analysis Hierarchy Process*) consisted of research variables quoted from references and adjusted to field conditions and strategies formulated through the SWOT matrix, then analyzed using the *Expert Choice* application.

RESULTS AND DISCUSSION

The questionnaire distributed to sheep farmers consisted of 4 sections, namely: strengths, weaknesses, opportunities, and threats. Furthermore, there are 3 assessments used, such as weight, rating, and score. The first assessment is rating, then weight and score. The score is obtained from the multiplication between the rating value and the weight.

The values of strengths, weaknesses, opportunities, and threats are analyzed SWOT using Microsoft Excel, where SWOT analysis consists of analysis coordinates and determination of quadrant location. The analysis coordinates are divided into 2, namely internal and external. Internal (X) is obtained from the strength minus weakness value and divided by 2, while internal (Y) is obtained from the opportunity minus threat value and divided by 2. Furthermore, the internal (X) and external (Y) values are compared to determine the location of the quadrant.

The sample is declared to be in quadrant 1 if the internal (X) and external (Y) values are positive. Located in quadrant 2 if the internal (X) value is positive and the external (Y) is negative. Located in quadrant 3 if internal (X) is negative and external (Y) is positive. Located in quadrant 4 if internal (X) and external (Y) are negative.

Evaluation of sheep farming conditions in Bondowoso Regency through SWOT analysis results

The following is the percentage of the number of sheep farmers located in quadrants 1, 2, 3, and 4. Based on the research data above, most farms in Bondowoso Regency are in a favorable condition. This is because farmers have begun to apply modern husbandry systems, such as the use of

Table 1. Percentage of the number of breeders divided by the location of the SWOT quadrant

Quadrant	Number of breeders	%
1	15	50
2	2	6.67
3	5	16.67
4	8	26.67

concentrates as sheep feed (external factors: threats), resulting in better body weight gain. Of course, this has progressed from the results of previous research (Perwitasari, 2021) that concentrate feed has not been given as additional feed for livestock. In addition, sheep farmers in Bondowoso Regency have made better sales by joining the community, so they can collaborate in the sales process.

Quadrant 1 means a very favorable situation, where the company has opportunities and strengths so that it can take advantage of existing opportunities ii. The strategy that should be applied is to support aggressive growth policies commonly called *growth-oriented strategies*. Quadrant 2 means that even though it is facing various threats, it still has strengths from internal factors. The strategy that should be

done is to use strengths to implement long-term opportunities, of course, using a diversification strategy (product/market). Quadrant 3 means that the company has a very large market opportunity, but also faces several internal constraints/weaknesses. The company's strategy is to minimize the company's internal problems so that it can seize better market opportunities. Quadrant 4 means a very unfavorable situation, where the company is facing various threats and internal weaknesses (Rangkuti, 2013).

Percentage of quadrant location based on farmer strata

Based on the research results, not all large farmers are in Quadrant 1, and not all small farmers are in Quadrant 4. The following presents data on small, medium, and large-scale sheep farmers and the location of the resulting SWOT quadrant.

Table 3. Comparison of breeder strata with quadrant location

Farmer Strata	Quadrant Location and Percentage (%) Number of Respondents			
	1	2	3	4
Small	10	3.33	6.67	13.33
Medium	13.3	3.33	6.67	10
Great	26.7	0	3.33	3.33

Table 2. Strategies for farmers who are in Quadrant 1

Farmer strata	Breeder code	Education	Strategies
Great (26.67%)	P-1	Bachelor's degree	<ol style="list-style-type: none"> 1. Have and increase the area of forage land sufficient to meet the needs of livestock per period, and use concentrates by the needs of production and livestock production. 2. Conduct sales independently (offline and online) using the latest prices and collaborate with other breeders by being active in the community to increase sales. 3. Processing livestock feces to be used as fertilizer for forage, to increase productivity when harvested.
	P-2	Bachelor's degree	
	P-3	Senior High School	
	P-4	Bachelor's degree	
	P-5	Bachelor's degree	
	P-6	High School	
	P-7	High School	
	P-8	Elementary School	
Medium (13.30%)	P-9	Senior High School	<ol style="list-style-type: none"> 1. Start preparing forage and livestock waste procurement for business development readiness. 2. Active in training and counseling activities to be able to apply forage and concentrate feeding according to livestock needs based on business objectives (fattening and breeding). 3. Conduct sales independently by collaborating with fellow community members
	P-10	Junior High School	
	P-11	Bachelor's degree	
	P-12	Senior High School	
SMALL (10%)	P-13	Bachelor's degree	<ol style="list-style-type: none"> 1. Apply for and actively participate in training activities, counseling, and community meetings to increase motivation in sheep farming and learn important areas of animal husbandry. 2. Procure capital to have good cages for intensive rearing and good livestock according to the purpose of the business (fattening or breeding).
	P-14	High School	
	P-15	Bachelor's degree	

Based on the data contained in Table 3. that the largest percentage of the number of respondents is in quadrant 1. This situation indicates that the more the livestock population, the better the maintenance management will be so that the results received will be maximized. According to Syafii (2017) the greater the capital of a business, the greater the level of net profit obtained, of course, if all supporting indicators are constant / fixed. Apart from capital, what can affect the level of profitability of a business is asset management. Asset management in a business has a considerable influence on obtaining large profits as well. The greater the amount of capital spent, the greater the level of income received (Utari & Dewi, 2014). Capital and education level have a significant positive effect on production, while capital and production have a significant effect on sales revenue. Production directly affects the relationship of capital and education level to income (Putra & Aswitari, 2020).

Percentage of quadrant location based on farmer education

The 30 research respondents had varying levels of education, from elementary school to bachelor's. The level of education affects the level of income earned by respondents. This is because respondents who have higher education usually have a more advanced mindset, such as being open to knowledge in the field of animal husbandry, having the aim of developing a business, adapting to technological developments, and having relationships to increase sales such as sellers of sheep meat products, middlemen, and owners of aqiqah sheep stalls and sacrificial sheep. The following presents data on the comparison of

respondents based on education level with the location of the SWOT quadrant.

Table 4. proves that farmers who have higher education are in the SWOT 1 quadrant. The data above proves that the higher the level of education of farmers, will foster an open attitude to new knowledge and skills applied in animal husbandry will be more innovative, so that sheep are more productive to the maximum and generate higher income. According to Utari & Dewi (2014) capital, education level, and technology simultaneously have a significant effect on the income level of MSMEs. The higher the level of education, the higher the level of income received and the more modern the type of technology used, the greater the income received.

Respondents with elementary and junior high school education are in quadrant 4 at 16.67%. This is explained by Utari & Dewi (2014) that the low quality of human resources can be seen from the low level of education. This can affect the limited productivity of a business due to the lack of skills, experience, and knowledge of the business owner. In some conditions, a low level of education is the reason for one's inability to advance the business and increase productivity, for example, most MSME business owners have a high school and undergraduate education. Educational factors are very influential in the acceptance of innovation implementation. High farmer education makes farmers show a knowledgeable attitude and have better skills.

The results of the survey in the field show that farmers with primary school education raise sheep traditionally, where the feed given is only field grass, but some apply concentrates because they are included in large-scale farms. The behavior of the lowest farmer skills is in elementary school graduates, so it will be difficult in human resource development efforts such as the use of technology and information that is often applied and difficult to understand. This opinion is corroborated by Maryam & Astaty (2016) that education is one of the important factors that influence the success of a business, where education will affect the mindset, attitude, and productivity level of farmers in running their business (Makatita, Isbandi, & Dwidjatmiko, 2014).

Table 4. Swot quadrant location based on farmer education

Education	Quadrant location (%)			
	1	2	3	4
Elementary School	3.33	0	0	16.67
Junior High School	3.33	0	0	6.67
Senior High School	20	3.33	16.67	3.33
Bachelor's Degree	23.33	3.33	0	0
> Bachelor's Degree	0	0	0	0

Determination of priority strategies for sheep farm development through AHP

Analysis Hierarchy Process (AHP) using Expert Choice application, where the way it works is to compare (prioritize) between one variable with other variables that have been determined and compare between one strategy and other strategies that have been formulated using SWOT matrix. The minimum number of AHP respondents is 2 respondents, in this study the research respondents were staff of the Bondowoso Regency Livestock Service Office and a lecturer in animal husbandry at the University of Jember Bondowoso campus. The data obtained is inputted into the application and then the values will be combined to get a homogeneous value and are expected to better represent the answers of experts in the field of animal husbandry.

The following presents the research variables sorted based on the highest value of the AHP results, which indicates that the variable ranking represents the level of importance of a variable in meeting the operational needs of the farm.

Prioritization variables according to experts

Priority Variable

Based on the data in Table 5, the variable

most prioritized by the experts was "available natural resources, especially forage and agricultural waste" as feed for sheep, with a score of 110. The availability of natural resources is very important because feed is the main factor that needs to be considered. In addition, Bondowoso Regency is an agricultural and plantation sector that produces a lot of waste that is suitable for sheep feed, of course, with prior processing.

Agricultural waste is a local feed that has the potential to support the development of the livestock sector, especially in agriculture-based areas. The existence of agricultural types of foodstuffs will have an impact on the amount of waste, which can be utilized when there is a limited amount of forage. Therefore, agricultural waste is one of the solutions to reduce the need for forage for farmers who have limited land to grow forage or during the dry season (Sari & Muhtarudin, 2016).

The types of forage that are often given to sheep are dwarf elephant grass (odot), field grass, indigovera, and other types of legumes. According to Wulandari & Utami (2016) stated that one of the wastes that can be used as ruminant feed in Bondowoso Regency is sugarcane tops, where the availability is quite a lot, especially in areas close to or working on sugarcane plantations.

Table 5. Variable priority ranking according to AHP results

Rating	Code	Variable priority level order	Value
1	V1	available natural resources, especially forage, and agricultural waste	110
2	V2	market demand for lamb	85
3	V3	>10 years of farming experience	81
4	V4	availability of supporting facilities and infrastructure (electricity, roads, and water sources)	80
5	V5	effort is not optimal due to the influence of energy and way of thinking	77
6	V6	absence of counseling	66
7	V7	business ownership status is self-owned	65
8	V8	limited capital	60
9	V9	the younger generation is not interested in becoming breeders	59
10	V10	climate, temperature, and humidity	55
11	V11	marketing assisted by traders/collectors	52
12	V12	The seedlings used are local seedlings, which have good environmental adaptation.	49
13	V13	low education level (elementary school)	45
14	V14	concentrates have not been given as supplementary feed	44
15	V15	livestock manure has not been utilized	42
16	V16	cultivation is still traditional	29

According to Yunitasari, Istiyani & Lestari (2018) from 2009 to 2015 Tapen Sub-Regency was the largest sugarcane producer in Bondowoso Regency, amounting to 174,130 tons. Badan Pusat Statistik (2017) stated that in 2017 sugarcane plantations in Bondowoso Regency had an area of 4,259 hectares. In addition to sugarcane, Bondowoso Regency has corn plantations with an area of 28,490 hectares that produced a harvest of 148,688 tons, resulting in a productivity of 5.23 tons/ha. Bondowoso Regency has a rice farming area of 87,410 hectares with a yield of 537,450 tons, resulting in a productivity of 6.15 tons/Ha. These abundant natural resources indicate that the availability of forage, agricultural waste, and plantations in Bondowoso Regency is abundant.

In addition, sengon plantations in Bondowoso Regency also use an intercropping system, where elephant grass is planted around the sengon trees. Corn stalks, sugarcane tops, and rice straw can be used as forage during the dry season. This amount is sufficient to meet the feed needs of sheep, which according to Badan Pusat Statistik (2021) 2021 the sheep population in Bondowoso Regency amounted to 46,229 heads.

Second Priority Variable

The variable that ranked second was "market demand for lamb". The final stage of a business process is sales. If the sales process continues and even increases rapidly, then the product is needed by consumers and there is certainly potential to continue and develop the business. There is always a demand for sheep every year, namely for sacrificial purposes in the month of Eid al-Adha. According to Direktorat Kajian dan Pengembangan ZIS-DSKL Baznas (2022) in 2021 the projection of Qurbani in Indonesia, the number of people who sacrifice is 2.19 million people, with a total of 414,000 cattle and 1,260,000 sheep and goats. Of the three livestock commodities for sacrificial needs, the percentage of cattle production is 79-80%, goats are 11% and sheep are 9%. Meanwhile, the 2022 sacrificial potential is 1,600,000 sheep and goats with an estimated 124,500 tons of meat.

The need for sheep meat is getting higher every year, making farmers also increase the sheep population, this is indicated by the increase in population every year. This opinion is corroborated by data from Badan Pusat Statistik (2022) that the increase in sheep population in

Indonesia is 0.97% per year, while the increase in goat population is 0.23%. In 2015 the sheep population amounted to 17,020,000 heads and in 2021 it reached 17,900,000 heads. Regionally, sheep populations are clustered on the island of Java. West Java Province has the largest population at 12,250,000 heads (68.41%), Central Java at 2,330,000 heads, and East Java at 1,460,000 heads.

Third Priority Variable

The third-ranked variable that was prioritized was "farming experience >10 years". The experts' answers according to the questionnaire proved that the length of experience in farming is very important because it can have a lot of experience, both in terms of maintenance, feeding that meets the needs of livestock, helping and handling livestock giving birth and treating livestock that can be done independently. Therefore, farmers should improve the learning process by exchanging information with fellow farmers and learning from more experienced farmers.

Farmers with >10 years of farming are more proficient in the field of animal husbandry, such as the behavior of combining business branches to increase production, while new farmers prioritize mastering entrepreneurship and harvesting (Manyamsari & Mujiburrahmad, 2014). This opinion is to the opinion of Makatita et al. (2014) that the longer the time of breeding, the more knowledge is mastered so that it can determine the mindset in making decisions.

The level of farming experience that gave the best response in terms of knowledge and skills was farmers with 11-18 years of experience. This opinion proves that the longer the breeder will make the breeder's interest in developing his business. The experience level of breeders >18 years have the best knowledgeable behavior and attitude when compared to the length of breeding 3-10 years and 11-18 years in managing their business. The longer the breeding period, the more open farmers are to information conveyed by extension workers to change the traditional maintenance system. In addition, farmers will find it easier to get business solutions, because farmers learn from the experiences they have gone through while raising livestock (Kurnia, Riyanto, & Kristanti, 2019).

Prioritization strategies according to experts

Analysis of strategies using AHP to determine the priorities that should be used when dealing with variables containing strengths, weaknesses, opportunities, and threats in a farm. The following AHP summary data is presented, namely the order of priority according to experts regarding strategies in dealing with variables (strengths, weaknesses, opportunities, and threats) in Bondowoso Regency sheep farms.

The AHP results have been explained in Table 5, namely regarding the ranking of variables recommended by experts. This explains that the strategy most often recommended by experts based on field conditions represented by the research variables is the strategy with code S1, then strategies will be formulated based on the S1 code strategy by adjusting the farmer strata.

CONCLUSION

The results of this study can be concluded

that 50% of respondents are in quadrant 1 (very favorable conditions). The research variable that ranks 1 is "Available natural resources, especially forage, and agricultural waste". The most recommended strategy is "Livestock business must be integrated from upstream to downstream industries, such as producing feed, sales using the latest market prices and livestock manure processed into organic fertilizer".

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Table 6. Prioritized strategies

No. priority	Strategy code	Prioritization of strategies
1	S1	Livestock businesses must be integrated from upstream to downstream industries, such as producing feed, selling using the latest market prices, and processing livestock manure into organic fertilizer.
2	S2	Providing counseling on feed formulation according to livestock needs, maintenance management, and business analysis.
3	S3	Intensive sheep rearing system using appropriate technology
4	S4	Strengthen cooperation between farmers by increasing information, knowledge, and technology by joining and being active in the sheep breeder community.
5	S5	Improved information and skills through training and mentoring activities
6	S6	Business capital loans with easy requirements

Table 7. Strategies formulated based on farmer strata

Farmer strata	Strategies based on priority strategies rank 1 (s1 code).
Great	<ol style="list-style-type: none"> Owns forage land and has connections to procure agricultural waste as animal feed. Provide forage and concentrate feed in the amount required by the sheep. Sell livestock independently at the latest market price. And can process livestock manure into organic fertilizer, which can have added value to the farm.
Medium	<ol style="list-style-type: none"> Join a farming community or attend extension events to learn the basics of feeding sheep adequately, both in terms of nutrition and quantity. Start using concentrates as animal feed. Conduct sales independently by utilizing social media as a means of promotion
Small	<ol style="list-style-type: none"> Collecting livestock manure, then drying it and selling it or using it yourself for forage fertilizer, for better production Conduct sales independently by utilizing social media as a means of promotion

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