



An Analysis of the Development and Income of Sahiwal Cross Cattle Business during the Covid 19 Pandemic in Konda District South Konawe Regency

AUTHORS INFO

Abdul Rizal

Universitas Musamus, Merauke
89abdulrizal@gmail.com
+6285241745382

Musram Abadi

Universitas Halu Oleo, Kendari
musram.abadi8@gmail.com
+6285242129197

Surahmanto

Universitas Halu Oleo, Kendari
laodeatho@yahoo.co.id
+62852 8084 5761

La Harudin

STIPER Kendari
harudinmsi01@gmail.com
+6281242091386

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Abstract

The study aimed to provide information on strategy development and income level of the Sahiwal Cross cattle business. The research method used was a survey. The researcher applied a stratified random sampling technique to determine the research sample. The location of the research was determined by considering the largest number of cattle and area representativeness. The respondents of this research consisted of all Sahiwal Cross cattlemen in Konda District. Research data were analyzed by applying SWOT Analysis. SWOT Analysis was used to describe the development strategy, and the income level analysis was used to describe the amount of income of Sahiwal Cross cattlemen. The result showed that Sahiwal Cross cattle breeding development was categorized as quadrant 1 equals to aggressive where the strategies used consisted of utilizing technology for marketing process, utilizing local human and natural resources maximally, maximizing the infrastructure development that can support cattle breeding development, improving cattle breeding management well, increasing Sahiwal Cross population, maximizing the investment availability to improve cattle productivity, guiding traditional cattle system to modern, increasing cattlemen's knowledge optimally, utilizing agricultural waste to be alternative fodder, minimizing or reducing cattle thievery impact, improving institutional system, decreasing middlemen role so that the cattle prices are directly decided by the breeders, anticipating the fodder availability during dry season, creating policies on cattle breeding, developing facilities and infrastructures supporting cattle breeding, maximizing institutional system and improving cattle breeding management system. The average revenue of Sahiwal Cross cattlemen annually was IDR. 20,588,143 for each cow sold.

Keywords: development strategy, revenue analysis, Sahiwal Cross

A. Introduction

The cattle population in Southeast Sulawesi in 2020 was 419.000 (Medcom. id Sultra, 2020). This number is spread across 17 regencies, placing South Konawe Regency as the area with the largest population of cattle, namely 67,746 (Southeast Sulawesi Statistics Bureau, 2019). This condition illustrates that the cattle breeding business is the potential to develop a commercial business. The cattle variants developed are Bali Variant, Madura Variant, Limousine Variant, PO Variant, and Sahiwal Cross Variant (Karimuna et. al., 2020).

Sahiwal Cross variants are cows producing dairy and beef originating in India. The existence of this cow in Southeast Sulawesi was initiated by the activities of the SESTAD Project funded by Bank of Asia/ADB (Asia Development Bank), where the implementation of the project started in 1982 and ended in 1990. The project was based at Wawolemo Village, Pondidaha District, Konawe Regency, to support the community in cattle breeding. The development of the cows was considered potential because of their heavyweight, size, and high market value. People in South Konawe Regency cattle this kind of cow even though it is not genetically original.

The first population of Sahiwal Cross imported in Southeast Sulawesi was 200 female cows and 20 male cows, spread over Konda District, Landono, Lainea, and Panggaluku District. Along the journey, the population of this cow variant has drastically decreased to 30 cows (Harudin et al., 2018). To increase the population and the genetic quality, Sahiwal Cross cows must be interbred with the local cows. The interviews with the breeders indicated that the genetic purity of these cows. It decreased due to their interbreeding with local cows to restore some of its original characteristics, hybridization among various cow variants was carried out.

One of the villages still developing Sahiwal Cross cattle in the South Konawe Regency is Alebo Village, located in Konda District. The number of cattle in this village is 24 cows consisting of 3 male cows and 21 female cows (Harudin et al. 2018). The villagers still breed cattle this variant because they consider the potential aspect of its heavyweight and large size and its high market value that can help them economically, increase their revenue, and save. The market value of the Sahiwal Cross cow ranged from IDR 18,000,000 to IDR 25,000,000 before the Covid-19 Pandemic.

During the pandemic, there were significant changes in cattle development and the cattlemen's revenue. Based on those problems, the researcher considered that it is necessary to research the analysis of the development and business revenue of Sahiwal Cross Cattle during the Covid 19 pandemic in Konda District, South Konawe Regency.

B. Methodology

The research method used was the survey method. The technique used to take samples was stratified random sampling. The location of the research was determined by considering the largest number of cattle and area representativeness. The research respondents were chosen from the 9 Sahiwal Cross cattle businessmen in the Konda district. Therefore the entire population was used as a sample of the research.

The data were collected by applying several techniques of data collections, namely (a) Observation, that is, data collection carried out through direct observation on research object in the research field (b) Interviews, conducted directly with the research respondents, in this case, are cattle breeders, interviews were carried out supported by the use a structured questionnaire containing a list of questions suited to the needs of the research both for SWOT analysis and business revenue analysis, and (c) Documentation, which is a collection of data through taking photographs, data, books, monographs, research reports, journals or newsletters, etc.

Data analysis used was SWOT analysis by identifying internal factors (strengths and weaknesses) and external factors (opportunities and threats). In this analysis, each observed variable was weighed and rated. The scoring standard was obtained from the experts or experienced cattle business people, while the rating was gained from consumers' responses. The score and rating obtained were converted to the formula $S-W / 2$ and $O-T / 2$ to obtain the Cartesian coordinate value. Furthermore, the position of the cattle companies can be identified in four quadrants; Turn Around (improvement strategy), Aggressive (continuously maximizing), Defensive (survive), and Verified (replacing) (Rangkuti, 2006). Meanwhile, the revenue analysis used in this study was as follows:

$$Pd = TR - TC \text{ (Soekartawi, 2006)}$$

Description:

Pd = revenue earned by Sahiwal Cross cattlemen (IDR).

TR = Total revenue or the number of sales multiplied by the selling price (IDR).

TC = Total cost or all costs spent in the *Sahiwal Cross* cattle business (IDR).

C. Result and Discussion

1. Development Strategy of the Sahiwal Cross Cattle

Determination was used to the Sahiwal Cross cattle development strategy, and the first step was to identify internal factors (strengths and weaknesses) and external factors (opportunities and threats). Each factor was weighed and rated obtained from interviews and questionnaires given to respondents.

Table 1. Internal Analysis of Sahiwal Cross Cattle Development

No	Statements	Weight	Rating	Score
A Strength				
1	Human resources availability	2	3	6
2	Land availability	1	2	2
3	High experience of breeders	2	3	6
4	The high market value of cows	4	5	20
5	Easy cattle breeding system	1	3	3
Total		10		37
B Weakness				
1	Lack of fodder in the dry season	1	3	3
2	Limited investment	3	3	9
3	Low knowledge of breeders	2	2	4
4	The use of agricultural waste is not optimal	2	2	4
5	Traditional breeding patterns	2	2	4
Total		10		24

Source: Data after processing, 2020

Based on identifying the internal factors using the IFAS matrix, the total score for strength was 37, and the total score for weakness was 24. Therefore, the total score of IFAS (strength-weakness) was 13.

Table 2. Sahiwal Cross Cattle Development External Analysis

No	Statements	Weight	Rating	Score
A Opportunity				
1	Unachieved Cow self-sufficiency program	2	2	4
2	High market demand	4	4	16
3	Government's support	1	2	2
4	Adequate facilities and infrastructure	2	2	4
5	Population growth	1	2	2
Total		10		28
B Threat				
1	The existence of cow thievery	2	2	4
2	Cattle development competition	2	2	4
3	Weak breeding institutional system	1	2	2
4	The role of intermediaries in determining cow prices	1	2	2
5	Uncertain seasons	1	2	2
Total		10		14

Source: Data after processing, 2020

The results of the identification of opportunity and threat factors were included in the EFAS matrix. Based on the results of external factors identification using the EFAS matrix, the opportunity score was 28, and the total threat score was 14. Then, the total value of EFAS (opportunities-threats) was 14. After finding out the number of IFAS and EFAS, then the results were converted into the formula in order to obtain the quadrant position; the formula was as follows:

Known : (X, Y)
 Asked : S-W/2 O-T/2
 Solved : 37-24/2 28-14/2
 13/2 14/2
 6.5 7 So the X value was 6.5, and the Y value was 7 (Rangkuti, 2006)

After the calculations to obtain IFAS and EFAS scores, the next step is to formulate alternative strategies into the SWOT analysis diagram. The purpose of this analysis is to determine the position of the cattle breeding business strategy. The result showed that the X value was 6.5, and the Y value was 7. Then, the values were inputted into the graphic to determine the quadrant position.

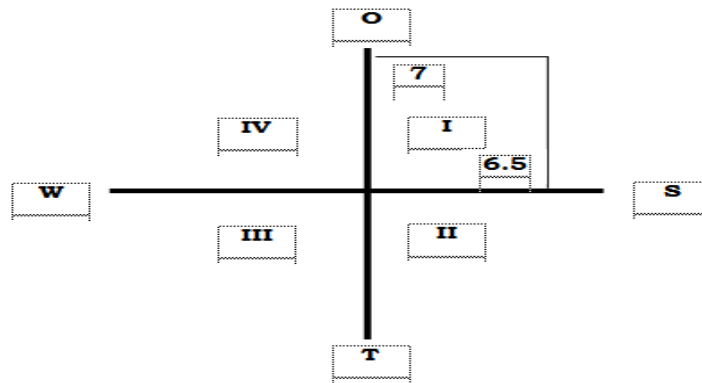


Figure 1. Location of the Sahiwal Cross Cattle Development Quadrant

Sahiwal Cross cattle development was categorized Quadrant 1, which is aggressive or enhancing well performance. It means that opportunities are decided by strength. It is necessary to formulate planning strategies to overcome these conditions presented in the matrix Table 3.

Table 3. SWOT Matrix

	<u>STRENGTH (S)</u>	<u>WEAKNESS (W)</u>
Internal Factor	1. Human resources availability 2. Land availability 3. High experience of breeders 4. Cows' market value 5. Easy cattle breeding system	1. Lack of fodder in the dry season 2. Limited investment 3. poor knowledge of breeders 4. ineffective utilization of agricultural waste 5. traditional breeding pattern
	<u>STRATEGIES-O</u>	<u>STRATEGIES W-O</u>
External Factor	1. Utilizing technology to support the marketing process 2. utilizing human and natural resources 3. maximizing the development of infrastructure supporting breeding development 4. Improving the management of cattle breeding properly 5. Increasing the population of Sahiwal cross cattle	1. Maximizing the investment availability to increase cattle-breeding production and productivity 2. Guiding traditional cattle patterns to modern 3. Improving breeders' knowledge optimally 4. Utilizing agricultural waste as an alternative cattle fodder
	<u>STRATEGIES S-T</u>	<u>STRATEGIES W-T</u>
THREAT (T)	1. Minimizing or reducing the impact of livestock theft 2. Improving the institutional system 3. Reducing the role of go-betweens so that breeders make the price 4. Strive for fodder availability in the dry season	1. Issuing a local policy on cattle breeding 2. Improving facilities and infrastructure to support the cattle development 3. Maximizing the institutional system 4. Improving the system of cattle breeding

Source: Data after processing, 2020

Sahiwal Cross's cattle business is categorized as Quadrant 1 (aggressive), continuously developing cattle business. This condition shows that the cattle business has strengths that can be leveraged to achieve opportunities. An increase in population and cow sales can increase the revenue and well-being of the cattlemen. The quadrant one position is very profitable because this business has the strength and opportunity to develop a cattle business.

2. Analysis of Sahiwal Cross Cattle Business Revenue

Sahiwal Cross's cattle business is earned by selling both cattle and cow dung and hides. Cattle business in Konda District, Alebo Village, is gained from the revenue of the breeders from the sale of cattle and the final value that is still owned within a year. The revenue of the Sahiwal Cross cattle business can be seen in Table 4.

Table 4. Total Business Revenue from Sahiwal Cross Cattle in One Year

Revenue Components	Quantity (IDR)
Year-end Animal Value	41.000.000
Sale of manure	720.000
Cows sold	38.500.000
Total	80.220.000

Source: Data after processing, 2020

Sahiwal Cross cattle business annual revenue for each cow is IDR 80,220,000. This revenue was obtained from the number of cattle converted into cow prices and the value obtained from the sale of cows and manure. The average number of cows bred by cattlemen was two cows. The revenue depends on the number of cows bred at the end of the year, including calves, heifers, and cows (Indrayani & Andri, 2018).

The average revenue obtained from the sale of cattle was IDR 19,250,000 per cow, with an average of 2 cows sold annually. Cattle prices were determined based on the cows' age and weight (Hasyifuddin, 2018). The older the cattle's age and weight, the higher the price it has. The information gained from the breeders indicated that the sale of cattle was not impacted by Covid 19 global pandemic. It was because most cattle buyers do not directly slaughter their cattle as the Slaughterhouse does. They keep the cows to be bred again.

Revenue from the cow manure sale obtained from the sale price of manure per bag was IDR 30,000 with the average sale of 2 bags monthly during the Covid 19 period so that the total sales of manure in 1 year were IDR 720,000. This sale has increased from the previous year, which only one bag of manure monthly. The increasing sale of manure was due to the increasing home activities during the pandemic, like planting and growing flowers and vegetables in their yard using cow manure as the fertilizer. However, each breeder earned additional revenue from cow sales and manure sales due to each breeder's different number of cows.

Table 5. The total cost of Sahiwal Cross cattle Business

Total Production Costs	Cost Amount (IDR)
Fixed costs	
Shrinkage cowshed	1,142,857
Equipment depreciation	189,000
Total Fixed Costs	1,331,857
Variable Costs	
Early Costs	38,500,000
Labors' salary	11,520,000
Fodder	4,680,000
Medicines	3,600,000
Total Variable Costs	58,300,000
Total Production Costs	59,631,857
Income	
Revenue	80.220.000
Total costs	59,631,857
Total	20,588,143

Source: Data after processing, 2020

The production costs used in this research were fixed costs and variable costs. Fixed costs consisted of the barn and equipment depreciation, while variable costs consisted of the cost to

purchase cattle at the beginning of the year, labor costs, feed costs, and medicines' costs. The shrinkage of stables and equipment depends on the size of the pen and the number of cows bred. The interview results showed that the farmer did not specify the cost components used for the needs of the cages but mentioned the total cost of the cages used.

The variable costs used are the early purchase costs, fodder costs, labor, and medical costs. The workers mentioned in this study mostly came from the family itself.

The labor cost was gained from 40 hours working weekly, multiplied by four months and 12 months in one year. Normally, the workers are not paid, but the working hour is assumed to be IDR 6,000 per hour. Meanwhile, the cost of the fodder used varies according to the number of cattle bred. The more cows are bred, the more fodder and medicines are used (Sandi et. al., 2018).

The average revenue of the Sahiwal Cross cattle business for one year was IDR 20,588,143 per cow. This number is different among farmers. It was a different business scale, both for the number of cattle bred and the use of cowshed, fodder, and medicine.

D. Conclusion

Sahiwal Cross cattle development was categorized as Quadrant 1 (aggressive). That is, increasing business development through strength to seize opportunities with strategies to be carried out, such as using technology to help the marketing process, maximizing human and natural resources. They maximized infrastructure development programs to support cattle development, optimize good business management, and increase the cattle population. The revenue of cattle breeders from developing the Sahiwal Cross cattle business in one year was IDR 20,588,143 per cow.

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