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CHARACTERISTICS OF BEEF CATTLE FARMERS AT SOUTHERN WEST JAVA

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Abstract: The study aimed to identify characteristics of beef cattle farmers along the street corridor of Southern West Java. The study used a survey method in which purposive sampling technique was applied to collect data from 13 sub-districts of five districts along the street corridor of Southern West Java. Result of the study showed that eight categories of cattle farmers with their respective characteristics, namely: 1) the age of farmers, in the productive category (91%); 2) the level of education, mostly at the level of elementary school education (62%); 3) farming experience, most experience for 11-20 years (30%); 4) the nature of livestock business, is a side business (70.8%); 5) number of family dependents, with the highest number of three family dependents (32%); 6) livestock ownership, is their-self owned (67%); 7) cattle origin, with own purchases namely 46%, and 8) business scale, with many livestock owned by 1-3 beef or 50%.

Keywords: beef cattle farmers; characteristics; Southern West Java

1. INTRODUCTION

South West Java has excellent potential to develop beef cattle business. The community empowerment program through beef cattle business aims to improve life skills, income, and expand employment, especially for people along the 200 km road in South West Java. To achieve this goal, data on the potential carrying capacity of the region is needed which includes infrastructure for production facilities, trading systems, livestock institutions, potential carrying capacity and capacity of the area for the population of ruminants, the capacity of human resources and farmers' resources. With the availability of such data, the ruminant business development program will be more focus and integrate with other agricultural business. Thus, the development and management of the Southern West Java region can be carried out in an integrated manner as mandated in the West Java Provincial Regulation No. 28 of 2010 concerning the Development of the Southern West Java Region in 2020-2029.

However, because beef cattle farmers are the main actors in the development of the beef cattle business, they have a crucial role in increasing the population and the success of the beef cattle business. Thus, the completeness of the data on the characteristics of farmers is very important as a reference in the development policy of beef cattle business. This is in line with the opinion of (Siahaan & Rahim, 2016) that the position of farmers as the main subject or agent of livestock

business is very important in increasing the livestock population in Indonesia because smallholder livestock businesses manage 99% of livestock businesses in Indonesia. Therefore, research on the characteristics of beef cattle farmers along the Southern West Java Road Corridor is a step that must be done so that the Southern West Java Regional Development Program can be implemented with integrated planning and the business process can run continuously. Continuous business processes can increase the capacity of life skills, income levels, expansion of employment, and the wheels of the regional economy can run in a controlled and integrated manner. Ultimately, it leads to improve civil society performance indicators, including voluntary, self-sufficient and independent and can improve Human Development Index (HDI) of West Java Province, which includes the education index, health index, and purchasing power capability index. The purpose of this study was to identify the characteristics of beef cattle farmers along the southern West Java road corridor.

2. METHODS

The study was conducted in five districts, namely the Districts of Sukabumi, Cianjur, Garut, Tasikmalaya, and Pangandaran. Data was collected from a survey of 113 farmers through a purposive sampling technique (Rahim, 128 Bit Hash of Variable Length in Short Message Service Security, 2017) in 13 sub-districts of five districts along the South West Java road corridor. Data collection techniques, both primary and secondary, were carried out in four ways: (1) direct observation or observation, (2) in-depth and structured interviews using questionnaires, (3) focus group discussions (FGD) and (4) literature studies (Rahim & Ikhwan, Study of Three Pass Protocol on Data Security, 2016). The sample in this study was 30% of farmer households in each sub-district, which had been determined by purposive sampling method. The informants taken are farmers, elements of technical implementing units from each Agriculture / Livestock Service Office from each research area, BP4K and BP3K. Data were analyzed descriptively and quantitatively using Microsoft Excel 2016.

3. RESULTS AND DISCUSSION

Below are the results of the analysis based on eight categories that have been grouped against the characteristic categories of beef cattle farmers:

3.1. Age of Farmer

The age of farmers who were successfully collected based on the results of data collection can be seen in Table 1 below:

Table 1. Age of farmer

Category of farmer's age	Range of age	Frequency/Percentage (%)
Productive	15-54	77/68
	15-64	26/23
Nonproductive	65 more	10/9
Total of farmers	(113)	100%

In table 1, the largest number of farmers in the productive category is in the age range of 15-

54 (68%) while the non-productive ones are 9%. These results indicate that theoretically, this means that every 100 farmers in the productive age group bear the burden of 10 non-productive age farmers in running their beef cattle breeding business. The age distribution of farmers such as this accompanied by low dependency levels indicates farmer regeneration which can guarantee the sustainability of beef cattle breeding business along the southern road corridor of West Java.

3.2. Farmer Education Level

Table 2. Farmer education level

Education level	Frequency/Percentage (%)
Elementary school	70/62
Junior high school	23/20
Senior high school	16/14
Undergraduate	4/4
Total of farmers	113 (100%)

Table 2 shows that the highest level of education of farmers is at the elementary school level (62%) (Pawade, Lahigude, & Reja, 2015). While the least level is undergraduate (4%). The level of education will greatly affect the sustainability of beef cattle farmers. The high level of primary school education greatly impacts the level of acceptance in applying appropriate technology, the level of awareness of investment in livestock production facilities, and the productivity of beef cattle farming. In addition, a low level of education can also affect the size or scale of the beef cattle business to be carried out. Conversely, farmers with a higher level of education will more easily understand, adapt, and adapt to the progress and development of livestock science and technology.

3.3. Farming Experience

Table 3. Farming experience

Category	The range of experience (years)	Percentage (%)
Breeding	11-20	34/30
Breeding 1	Less than 5	33/29
Breeding 2	6-10	28/25
Farming	40 more	1816
Total of farmers		

Table 3 shows that the most farming experience is farmers with 11-20 years experience (30%). While the least is farming (16%). According to (Dadkhah, Jazi, Ana-Maria, & Barati, 2014), the longer they breed, the more knowledge increases and in line with the improvement of skills. This data indicates that there is a natural regeneration of farmers from generation to generation to ensure the sustainability of livestock business in the South West Java road corridor.

3.4.Nature of Livestock Business

Tabel 4. Nature of livestock business

Category	Frequency/Percentage (%)
Side business	80/ (70.8)
Main business	33 /(29.2)
Total of farmers	113/100%

In table 4 shows that the nature of farming as the most side business is 80 people or 70.8%. This means that farmers still have activities other than livestock so that income is not only obtained from breeding results.

The high percentage of farmers who place their beef cattle business as a side business is also reported by (Venkatesh & Sekhar, 2015). Although farmers acknowledge that their business is a side business, they also recognize that side businesses contribute greatly to meeting urgent needs such as the cost of sending children to school, celebrations, and as savings to celebrate Eid al-Adha. Because breeders still place the beef cattle business as a side business, attention to the cattle business is not as big as the attention if the cattle business is used as the main business. However, taking into account the various characteristics of farmers, land ownership, and existing land conditions, not all side businesses must move to become the main business. This is supported by the recognition of most farmers who place their beef cattle business as an extensive and semi-intensive maintenance side business which states that often the income from the side business is greater than the main business.

3.5.Number of Family Dependents

Table 5. Number of family dependents

The number of dependents	Percentage (%)
No dependents	4/4
One dependent	14/12
Two dependents	25/22
Three dependents	36/32
Four dependents	17/15
More than 4 dependents	17/15
Total of farmer	113 (100%)

Then, Table 5 shows that the number of farmers who bear the largest number of families is in the category three number of family dependents, which is 32%. The more dependents of the family, the more expenditure that must be incurred by the farmer so that it influences the development of the cattle business according to (Tuli & Sahu, 2013) which states that the number of family members will affect farmers in business development. According to (Pathak, Pawar, & Patil, 2015) the number of dependents is a factor of the lack of motivation of farmers for the development of cattle business. In this study, it was revealed that farmers who have a large number of family dependents who motivate farmers to increase their business scale by forming a farmer group or joining existing farmer groups.

3.6.Livestock Ownership

Table 6. Livestock ownership

Status	Frequency/Percentage
Self-owned	76/67
Belong to group	14/12
Farmer's own and livestock	9/8
Owned by the group	7/6
Livestock	5/5
Rowdy livestock kept by group	2/2
Total of farmers	113/100%

Meanwhile, in Table 6 shows that livestock ownership is mostly owned by farmers themselves, as many as 76 people or 67%. Most farmers prefer to have their own livestock rather than joining groups. The reasons are also varied, including not depending on others, the time devoted to raising cattle can be self-regulated, time is not taken for group meetings, involving family members to raise livestock, and do not know the benefits of joining a group. The high proportion of farmers who raise their own livestock have not joined or formed a farmer group has an impact on the difficulty of controlling the implementation of government policies in the field of animal husbandries, such as the introduction of new technologies in reproductive aspects, feed processing technology, and livestock waste processing technology. Therefore, it is necessary to make efforts for farmers to join livestock groups or form new farmer groups accompanied by livestock extension agents..

3.7.Cattle origin

Table 7. Cattle origin

Status of origin	Frequency/Percentage
Own purchases	52/46
Aid	36/32
Own purchase and assistance	14/12
Self-purchase and noise	7/6
Other sources (inheritance/gift)	4/4
Total of farmers	113/100%

In Table 7 shows that the status of livestock is the most owned by own ownership as many as 52 farmers or 46%, while ownership due to inheritance or giving is the least ownership of 4 people or 4%.

This data indicates that most farmers have high motivation to raise livestock and believe that their livestock business can provide benefits to the farmer's family, so they try to buy livestock for their livestock business.

Regarding the implementation of policies to increase the productivity of its businesses, these conditions can be utilized through three aspects. First, to increase the scale of business can be done with the help of livestock in the situation that they have to go through a group of farmers. In this way, livestock populations can increase, business scale increases, the number of farmer groups increases, and government control become easier. Second, efforts to improve livestock

productivity can be done with the help of livestock production facilities (sapronak) which include among others: housing, feed seeds and feed processing equipment and livestock waste. Third, efforts to increase the capacity of farmers in managing their livestock can be done through counseling related to beef cattle farming, such as livestock reproduction, feed processing technology, and animal husbandry management.

3.8.Business Scale of Beef Cattle Farmers

Table 8. The business scale of beef cattle farmers

The number of beef	Frequency/Percentage
1-3	57/50
4-6	35/31
Less than 3	21/19
Total of farmers	113/100%

Table 8 shows that as many as 57 or 50% of farmers run their businesses most on a scale of 1-3 cows, while less than three cows are 21 farmers or 19%. The high level of livestock ownership in this scale was also reported by (Dalal & Jadhav, 2015) who said that ownership of beef cattle in the 1-5 scale business scale reached 80%. Data from this study indicate that the higher the scale of business, the fewer the number of farmers who run the cattle business on the scale of the business. This condition is closely related to the capacity of farmers in managing their livestock, the availability of grasslands and other types of forage, land ownership, and ownership of assets of production facilities, and other assets that support the success of the beef cattle business.

4. CONCLUSION

The conclusion of this research concluded in eight categories of cattle farmers with their respective characteristics, namely: 1) the age of farmers, in the productive category (91%); 2) the level of education, mostly at the level of elementary school education (62%); 3) farming experience, most experience for 11-20 years (30%); 4) the nature of livestock business, is a side business (70.8%); 5) number of family dependents, with the highest number of three family dependents (32%); 6) livestock ownership, is their-self owned (67%); 7) cattle origin, with own purchases namely 46%, and 8) business scale, with many livestock owned by 1-3 beefs or 50%.

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3.4.Nature of Livestock BusinessTabel 4. Nature of livestock businessCategoryFre...

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Table 6. Livestock ownershipStatusFrequency/PercentageSelf-owned76/67Belong...

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Nonproductive65 more10/9Total of farmers(113) 100%In table 1, the largest numb...

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