Analysis of the benefits of cattle recording cards in beef cattle breeding from the perspective of farmers

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Analysis of the benefits of cattle recording cards in beef cattle breeding from the perspective of farmers

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Abstract. This study attempted to analyze the used of cattle recording cards from the perspective of farmers in beef cattle breeding. The research was conducted in Pajukukang subdistrict, Bantaeng regency, South Sulawesi province. The sample of farmers as respondents were determined at random and the number of samples was calculated using the Slovin formula. The primary data was obtained by questionnaires, focus group discussions (FGDs) and direct observation on the farm. Data analysis was performed through a descriptive approach comprising frequency and percentage. The results showed that the utilization of cattle recording cards in beef cattle breeding in the District of Pajukukang, Bantaeng regency were categorized as high, but there were still farmers who have not implemented the card. For this reason, the role and intensity of extension workers were needed in increasing the knowledge and willingness of farmers to implement the cattle cards in beef cattle breeding business. Thus, expected to increase productivity, and ultimately increase the population, income and welfare of beef cattle farmers.

1. Introduction

Beef cattle are the largest supplier of red meat with a high protein content that is needed by the community [1]. The current condition of local beef cattle is very diverse and mostly (99%) are managed and developed with a pattern of smallholder farming (cow-calf operation) on a small business scale and integrated with other activities, so that the function of beef cattle is very complex in supporting the lives of farmers. Several problems that are still faced in the next in an effort to increase the production of beef cattle including (1) supply of meat products that do not meet the needs of the community, (2) increase in income and income distribution for farmers, (3) increase productivity, efficiency, and ruminant product competitiveness, in this case, cattle, and (4) labor and business opportunities [2,3].

Overcoming the problems faced, [2] suggested that livestock development was pursued through three main pillars of development strategies, i.e. (1) supplying seedstocks that are widely distributed so that they are easily obtained and affordable by rural farmers, (2) providing livestock production facilities, and (3) the application of animal husbandry and feed processing technology that utilizes local food resources so that they can be absorbed easily by farmers in the rural areas.

In traditional farming, the farmers did not manage cattle production in a systematic way. This led to the difficulty of recording cattle body weight, pregnancy, and parturition. And it is important to recognize the cattle that can be exact measurable [5]. If the farmers had a good recording, they will be able to overcome the problems in improving management, population and productivity will increase. So many benefits from a recording card, but have not yet become a concern in the beef cattle breeding

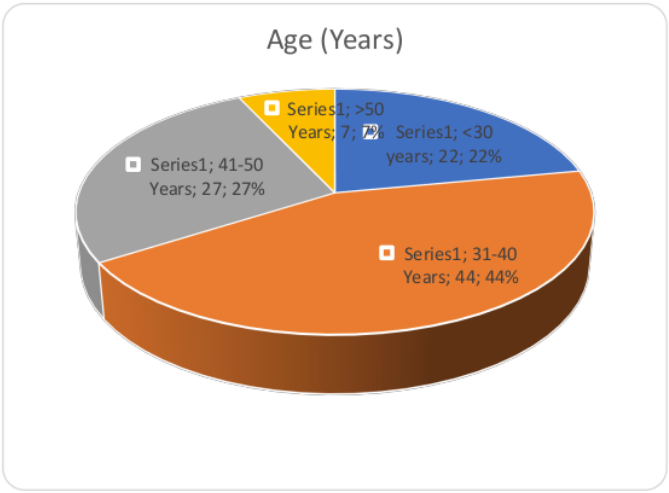
business, especially the smallholder farmers. Therefore this research was aimed to study the utilization of cattle recording cards by the beef cattle farmers.

2. Methods

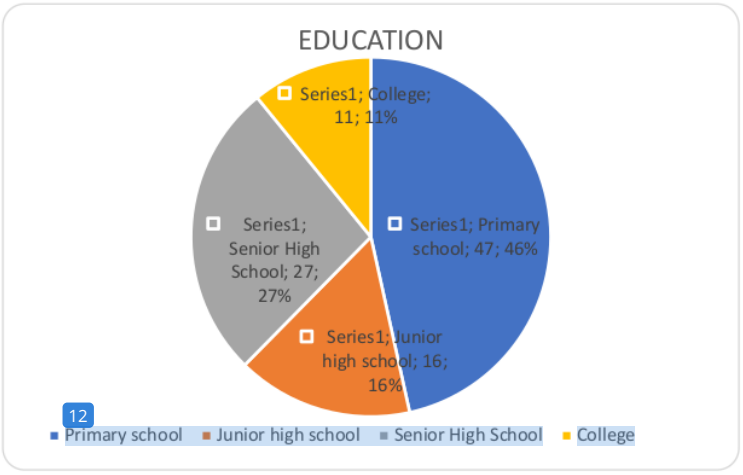
The research was carried out in Bantaeng district, South Sulawesi province. The sample of farmers as respondents were determined at random. The number of samples, a total of 45 respondents, was calculated using the Slovin formula. The primary data was obtained by questionnaires and focus group discussions (FGDs). In the FGDs, discussions were held with the farmers to identify various problems in the use of cattle recording cards in cattle breeding, as well as a direct observation on the farm. Respondent characteristics are grouped by age, level of education, and breeding experience. The parameters of the benefit of cattle recording cards were measured from a few variables, i.e. in cattle selling, health services, reproduction services, sales, and service of technical officers. Each variable was measured by scoring, the lowest level gets a score of one and the highest level gets a score of three. Data analysis was performed through a descriptive approach comprising frequency and percentage.

3. Results and discussion

Bantaeng regency is located in a coastal area that extends west to east of the city, one of which has the potential for fisheries. The land area starts from the edge of Flores sea to the mountains around Mount Lompobattang with altitudes of 0-25 m to more than 1,000 m above the sea level. Administratively, Bantaeng regency consists of 8 districts which are divided into 21 subdistricts and 46 villages. The geographic location of Bantaeng regency is strategic with three nature shapes, i.e. mountain hills, valleys, and coastal areas. There are two seasons each year, the west season between October to March and the east season between April to September. The climate is very favorable for the agriculture and livestock sectors. For the livestock sector, Bantaeng regency is a center for the development of cattle commodities, with a population of around 25,531. The general condition of farmer respondents related to age, education, and breeding experience, was presented in figure 1.



(a)



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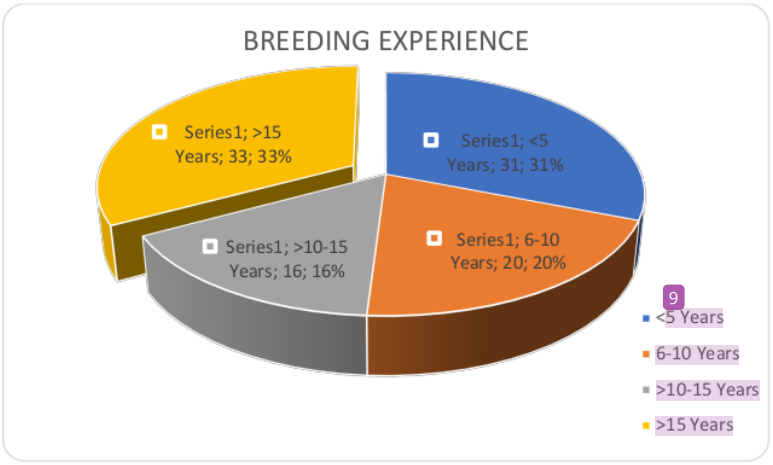

(c)

Figure 1. Characteristics of respondents at age (a), education (b), and breeding experience (c).

Figure 1 showed that the majority of farmers, 44%, were within the expected range of 31-50 years old, while 27% of respondents were in the range of 41-50 years old. This indicated that the cattle breeding workers were in the productive age category. Age factors usually associated with work productivity, a person classified as in the productive age tends to has high productivity. Chamdi [6] argued, the younger farmer's age (productive age is 20-45 years) usually the curiosity about something was higher and the interest to adopt technology was also high.

The education level of respondents was still low, 47% graduating from elementary school and only 5% completed higher education. Farmer education level is an indicator of population quality and is a crucial variable in the development of human resources. An adequate level of education will facilitate the transfer of innovation and livestock technology, as suggested by Abdullah [7] that those

with higher education are relatively faster in implementing the adoption of innovations. Otherwise, those with low education were rather difficult and took a relatively long time to make changes.

The results of the questionnaire showed that respondents generally knew the benefits of the cattle recording card as proof of cattle ownership, which was issued by the Regional Head or appointed official, further used in the regulation of livestock to record the necessary information about livestock and their ownership status. The results of interviews with several respondents stated that the recording process with the cards made of paper has disadvantages such as being easily lost, torn, wet, burned, and dirty. The information recorded in the cattle card were including identification of cattle, genealogical records, reproduction records, medical records, and growth records [8,9]. The characteristics of the use of cattle recording cards in the small-scale beef cattle breeding in the district of Pajukukang, Bantaeng regency were presented in figure 2.

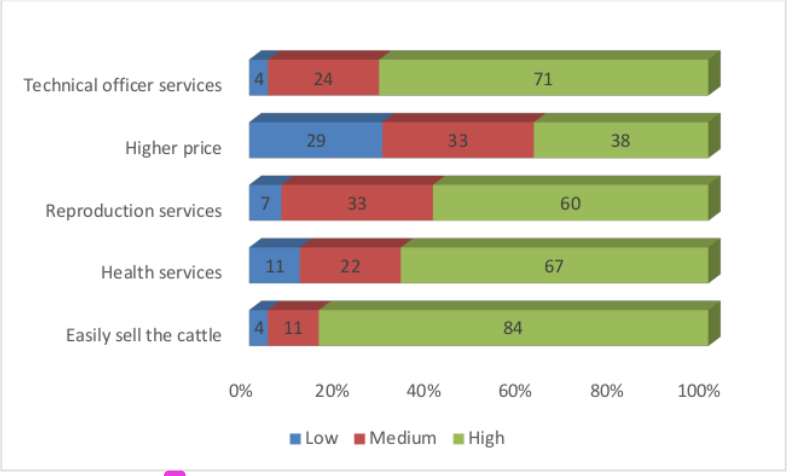

Figure 2. Characteristic of the benefits of cattle breeding card in the beef cattle breeding.

Figure 2 showed that from some variables in the use of recording cards in beef cattle breeding, the respondents already knew the benefits of the card but there were still farmers who had not implemented the recording card. As many as 84% of respondents in the Pajukukang Subdistrict of Bantaeng Regency stated that by having a recording card, it is easier for farmers to sell their cattle. Eka [9] suggested that by having a cattle recording card, the ownership is legally valid. Besides that, with legal proof of livestock ownership, if thievery happened, it can be anticipated by supporting data cards. The card also functioned as a document of buying and selling and in shipping between regions, so the sale of livestock will be easier to do. As many as 67% and 60% of respondents agreed with the benefits of cattle recording cards in the ease of obtaining animal health and reproduction services. Furthermore, as many as 71% of respondents agreed with the benefits of a cattle recording card on the quick respond of technical officers in serving farmers, such as providing good service by giving explanations about cattle recording cards, asking farmers for any complaints or problems, providing services quickly and responsively, officers always come on time, serving farmers all the time, and giving much attention to the farmers' needs. According to the opinion of [10] that the main benefit of this cattle recording card is providing information about the livestock both individually and as a whole. Usually, the data is simple, but complete, thorough and easy to understand, and no less important is the cattle numbering make it easy to identify the cattle owner. Eka [9] argued that having a recording card facilitates livestock health services, any health information carried out by health workers will be written on the card, so the recording card also functioned as a medical record. This is

very useful to know the record of disease cases and treatment provided, as well as for tracking food safety and disease prevention. If any products from animals were contaminated with disease and could be transmitted to humans, would be easier to trace the origin of these animals. Thus, disease control can be done quickly before spreading further.

The application of a cattle recording card in the beef cattle breeding is very important because the ability of human memory is very limited to remember all the activities and decisions that have been made. In addition, other benefits are an increase in livestock productivity which has an impact on increasing population and ultimately can increase the income and welfare of smallholder beef cattle farmers.

4. Conclusion

The utilization of cattle recording cards in beef cattle breeding in the District of Pajukukang, Bantaeng Regency are categorized as high, but there were still farmers who have not implemented the card. For this reason, the role and intensity of extension workers were needed in increasing the knowledge and willingness of farmers to apply the cattle cards in beef cattle breeding business. Thus, expected to increase productivity, and ultimately increase the population, income and welfare of beef cattle farmers.

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