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The farmer ² competency that doing partnership systems (Teseng) in beef cattle business at Bone regency, South Sulawesi province, Indonesia

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Abstract. One form of support for developing a beef cattle business in Bone regency is a partnership system (Teseng). This Teseng system is a partnership system by providing capital in the form of beef cattle to be maintained and developed by farmers who have competence in the management of beef cattle business. This study aims to determine the competency of farmers who carry out the Teseng system in beef cattle business. The research sample of 150 farmers was done in a simple random sampling. Data collection was carried out through interviews and focus group discussions. Data were analyzed using descriptive statistics. The results showed that the competency of farmers knowledge in the management of beef cattle business which included the selection of seeds, housing, feeding, health management, reproductive systems, and marketing of livestock carrying out the Teseng system in beef cattle business in Bone Regency is in the good category. And the managerial competence of farmers in the management of beef cattle business which includes competency in planning and evaluating livestock business is in the good category.

³ 1. Introduction

Livestock as one of the agricultural sub-sectors plays an important role in providing food, especially in fulfilling animal protein for the community. Beef cattle are a potential commodity in the livestock sub-sector. This can be seen from the high demand for beef, so beef remains one of the strategic foods from livestock products.

Most beef cattle business in Indonesia is still a business of people's livestock which is traditional ² maintained along with food crops. Maintenance can be divided into two parts, namely maintenance as breeding and maintenance ² cattle will be fattened. People's livestock businesses are generally low in technology adoption rates, difficult and limited market access, low managerial capabilities of farmers, and limited capital. Similarly in Bone Reg ² cy, beef cattle farms in general are still smallholder farms.

In an effort to protect people's farms, the government encouraged farmers to collaborate through ² partnerships with capital owners. The business partnership pattern carried out by farmers in Bone ² regency is known as the Teseng system. Teseng system is a concept of profit sharing that is very easy because in addition to easy implementation also does not require complex requirements.



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The management of beef cattle farms with the Teseng system, a farmer must have technical competence and managerial competence. Human resource-based development aims to have farmers have better abilities, especially in mastering science and technology. The increase in mastery of science and technology is expected to provide additional information for farmers to innovate and develop businesses that are carried out, so as to improve the performance of the business they run. According to [1–3] which states that there is a positive influence between the competencies possessed by a business actor and the performance of an agricultural business. These competencies are referred to as entrepreneurial competencies owned by farmers. Entrepreneurship competency is an ability in terms of technical and managerial management owned by farmers in carrying out their business. This capability will have a positive effect on improving a business performance because it can provide a stimulus for farmers to run their business properly. The stimulus can affect the ability of farmers to complete various work performed and characterize a person's ability to behave, think, and act in a business situation. This research was conducted with the aim to determine the competency of farmers who carried out the Teseng system in beef cattle business.

2. Materials and methods

This research was conducted from April to June 2019 in Bone regency using descriptive research types. Of the 27 districts in Bone Regency, 3 districts have the largest number of beef cattle, namely Libureng district (35.983 tail), Kahu district (33.267 tail), and Patimpeng district (20.336 tail) [4]. The research samples were selected from the three sub-districts with 50 farmers who carried out the Teseng system so that the total sample was 150 farmers. The sampling technique was done in a simple random manner. Data collection was conducted through interviews and FGD which were analyzed using descriptive statistics [5]. Variables research data collected consisted of:

2.1. Farmers technical competency

The technical competencies includes: (1) seed selection; (2) housing; (3) feeding; (4) health management; (5) reproduction system; and (6) marketing the results of beef cattle. Analysis of farmers competency data used the Liker scale by using a score of 1-3 with category 1 = not good; 2 = medium; and 3 = good. Variables of farmers technical competencies measured by class ranges are as follows:

$$\begin{aligned} \text{Highest score} &= \text{Highest weight} \times \text{number of respondents} \times \text{number of questions} \\ &= (3) \times (150) \times (6) \\ &= 2700 \end{aligned}$$

$$\begin{aligned} \text{Lowest score} &= \text{Lowest weight} \times \text{number of respondents} \times \text{number of questions} \\ &= (1) \times (150) \times (6) \\ &= 900 \end{aligned}$$

$$\begin{aligned} \text{Class range} &= \frac{\text{Highest score} - \text{Lowest score}}{\text{Number of Classes}} = \frac{2700 - 900}{3} = 600 \end{aligned}$$

From these values can be made the following categories:

Good	= 2100 – 2700
Medium	= 1500 – 2100
Not good	= 900 – 1500

2.2. Farmers managerial competencies

The managerial competencies include: (1) planning of beef cattle business; and (2) evaluation of beef cattle business. Variable managerial competence is measured by the grade span farmers are as follows:

$$\text{Highest score} = \text{Highest weight} \times \text{number of respondents} \times \text{number of questions} = 900$$

$$(3) \times (150) \times (2)$$

$$\text{Lowest score} = \text{Lowest weight} \times \text{number of respondents} \times \text{number of questions} = 300$$

$$(1) \times (150) \times (2)$$

$$\text{Class range} = \frac{\text{Highest score} - \text{Lowest score}}{\text{Number of Classes}} = \frac{900 - 300}{3} = 200$$

From these values can be made the following categories:

Good = 700 – 900

Medium = 500 – 700

Not good = 300 – 500

3. Results and discussion

The research conducted entitled the competency of breeders who conduct a partnership system (Teseng) in beef cattle business in Bone Regency consists of variables of technical competence and managerial competence of farmers. The results of the study are described as follows:

3.1. Variable of farmer technical competency

Variable technical competency of farmers which includes the selection of seeds, housing, feeding, handling health, reproduction system, and marketing of beef cattle products. The description of the results of the research on the farmers technical competency variables can be seen in table 1.

Table 1 shows that the total score of the assessment of farmers technical competencies which included the selection of beef cattle seeds, housing systems, feeding, health management, reproduction system, and beef cattle marketing the Teseng system in beef cattle business was 2184. The results of this study mean that it is in the good category (2100 – 2700). The results of this study indicate that the technical competence of farmers is in good condition in the management of beef cattle business in the Teseng system in Bone Regency. Technical competence is needed in managing and developing beef cattle business which ultimately benefits farmers. Farmers must develop their competencies in managing beef cattle business effectively and efficiently both through counseling and non-formal education such as training, internships, and technical guidance.

According to [6], that strengthening the entrepreneurial capacity of farmer farmers is carried out through education which of course will be a key word for increasing human resource capacity in rural areas. Formal education takes precedence on the younger generation, while non-formal education is more directed at agricultural sector actors who currently do not allow to take formal education pathways, for example due to age. There are many ways that can be done in providing education through non-formal channels, for example through training, counseling, and assistance to the community. These forms of non-formal education are part of the process of empowering and strengthening the capacity of rural communities. This process cannot be carried out suddenly and partially, but it must go through a well-structured and planned mechanism. For this reason, the role of village community institutions is very important as a place for the process of empowering village communities.

3.2. Variables of farmers managerial competency

Variable managerial competency which includes planning and evaluation of beef cattle business. The description of the results of the study on the variable managerial competency of farmers can be seen in table 2.

Table 1. Technical competency assessment of farmers who implement partnership systems (Teseng) in beef cattle business in Bone regency.

Number	Variable of farmer technical competency	Score	Frequency (person)	Percentage (%)	Weight (score × frequency)
1.	Selection of beef cattle seedlings				
	Good	3	89	59.3	267
	Medium	2	37	24.7	74
	Not good	1	24	16	24
	Total		150	100	365
2.	Housing System				
	Good	3	76	50.7	228
	Medium	2	46	30.7	92
	Not good	1	28	18.6	28
	Total		150	100	348
3.	Feeding				
	Good	3	75	50	225
	Medium	2	55	36.7	110
	Not good	1	20	13.3	20
	Total		150	100	355
4.	Health Management				
	Good	3	87	58	261
	Medium	2	38	25.3	76
	Not good	1	25	16.7	25
	Total		150	100	362
5.	Reproduction system				
	Good	3	83	55.3	249
	Medium	2	49	32.7	98
	Not good	1	18	12	18
	Total		150	100	365
6.	Beef cattle marketing				
	Good	3	92	61.3	276
	Medium	2	55	36.7	110
	Not good	1	3	2	3
	Total		150	100	389
Total Score					2.184

Table 2 shows that the total score of assessments on breed managerial competencies which include beef cattle business planning and evaluation of beef cattle business conducting the Teseng system in beef cattle business is 757. The results of this study mean that it is in the good category (700–900). The results of this study indicate that managerial competence of farmers is in good condition in the management of beef cattle business in the Teseng system in Bone regency. A managerial competency must be possessed by a farmer in order to be able to improve the performance of beef cattle business through the Teseng system.

According to [2], that managerial ability can influence the effectiveness of entrepreneurial activities carried out by farmers, so as to improve the performance of the business being run. In livestock business, the factors that influence these competencies can be divided into two main factors, namely technical competence and managerial competence including those who divided the two types of competencies into aspects of the discussion in their research [1,7,8]. Technical competencies are explained based on the capabilities possessed by farmers related to the management of livestock

businesses that are carried out such as the ability to produce, maintain, clean cages, as well as capabilities related to other technical aspects. While managerial competencies can be explained based on the ability of farmers to carry out their livestock business management which includes planning, organizing, leadership, and evaluating the course of the production process.

Table 2. Managerial competency assessment of farmers conducting partnership systems (Teseng) in beef cattle business in Bone regency.

Number	Variable of farmer managerial competency	Score	Frequency (person)	Percentage (%)	Weight (score × frequency)
1.	Business Planning				
	Good	3	95	63.3	285
	Medium	2	43	28.7	86
	Not good	1	12	8	12
	Total		150	100	383
2.	Business Evaluation				
	Good	3	89	59.3	267
	Medium	2	46	30.7	92
	Not good	1	15	10	15
	Total		150	100	374
Total Score					757

Based on this description, both technical competence and managerial competence have an influence on the performance of the business being carried out. Increasing competency in the livestock sector can certainly be done by providing informal training and counseling [1,2] improvement of individual orientation in carrying out its livestock business [3], so that the breeders have a better ability on managerial competence. In the end this increasingly good competition will have a positive effect on the livestock business performance that is carried out.

4. Conclusion

From the results and discussion, it can be concluded: (1) Farmers technical competency which includes the selection of seeds, housing, feeding, health management, reproductive systems, and marketing of livestock carrying out the Teseng system in beef cattle business in Bone Regency is in the good category; (2) Farmers managerial competencies which include beef cattle business planning and evaluation of beef cattle business that carry out the Teseng system in beef cattle business in Bone Regency are in the good category.

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