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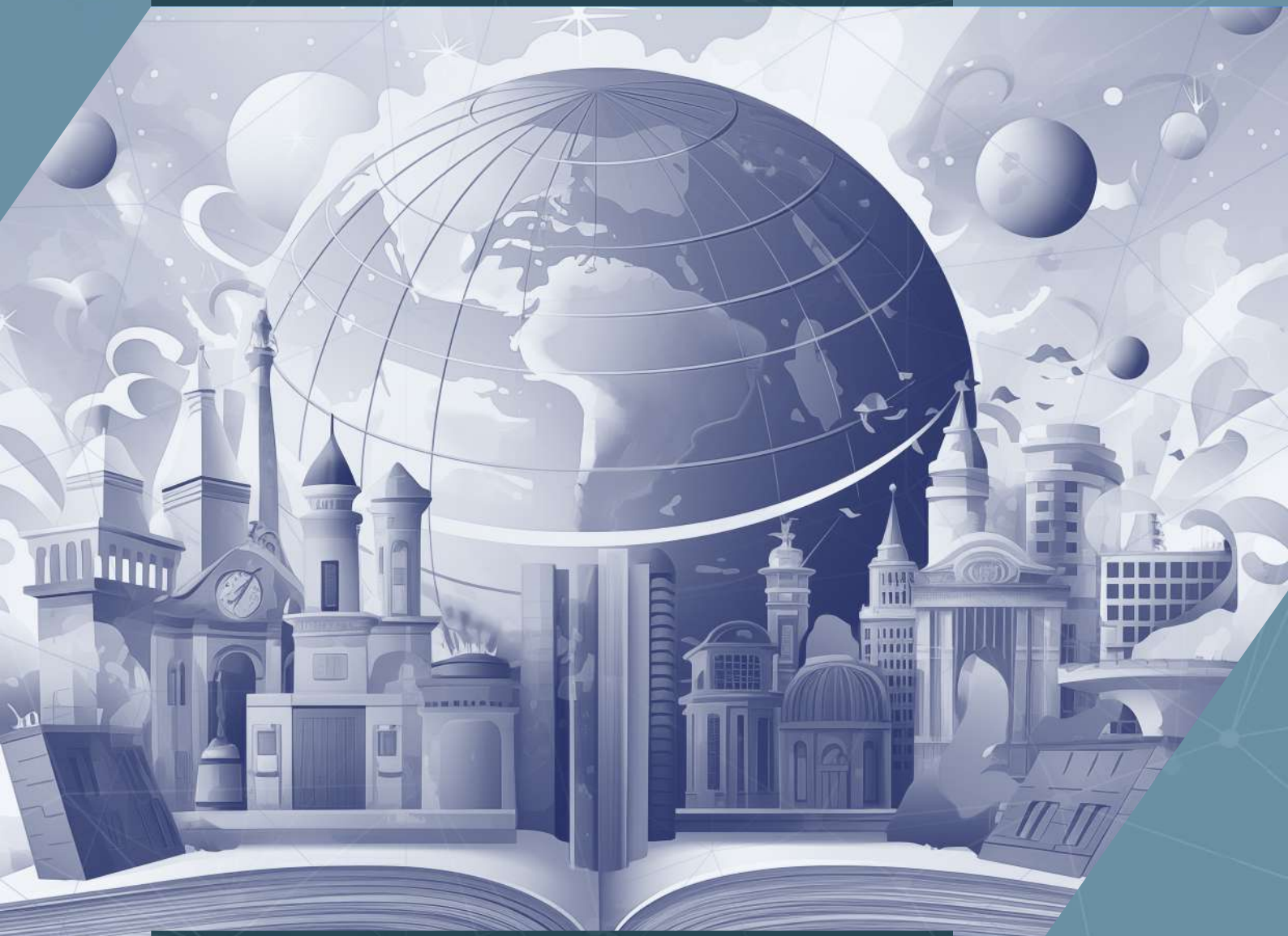

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Satisfaction Level of Cattle Breeders Through The Artificial Insemination Officers Services In Gorontalo District, Indonesia

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Abstract. This study aimed to identify the characteristics of cattle breeders who receive Artificial Insemination (AI) services and analyze the level of satisfaction of acceptor breeders with the services of inseminator officers in Gorontalo Regency. The research method used is a survey method. The research sample was determined intentionally with the consideration that active breeders who adopt AI. Data were collected through direct observation in the field, interviews, and questionnaires using the Likert Scale. The research variables include five dimensions, such as: tangible, reliability, responsiveness, assurance, and attention. The data collected were processed using the Customer Satisfaction Index (CSI). The results showed that the majority of cattle breeders who became acceptors or 79.54% were in the age range of 31-60 years, 76.14% had secondary education and below, 82.96% had implemented AI between 3-9 years or an average of 6 years. The Weighted Total (WT) value of all attributes was 3.55 with a Customer Satisfaction Index (CSI) value of 71.03%. The CSI value is in the range of 66% - 80.99% which shows that the level of breeder satisfaction with AI services is in the satisfied category.

Keywords. Satisfaction level, breeder, cattle, artificial insemination

Introduction

Gorontalo Regency was an area with the largest cattle population in Gorontalo Province that actively implements the AI program. There has been a significant increasement in the implementation of AI over the past five years, however, its success did not only depend on technical aspects. The quality of service provided by officers was also a key factor in evaluating the performance of the AI program. Improving the quality of service is very important in maintaining the satisfaction of AI acceptor breeders. Breeder satisfaction is very important to maintain breeder loyalty to AI services, as well as the main indicator of the success of the AI program in the long term. Based on this, research on the level of breeder satisfaction with officer services is very relevant to be conducted in Gorontalo Regency. The purpose of this study was to identify the characteristics of acceptor breeders in AI services and to analyze the level of breeder satisfaction with inseminator officer services in Gorontalo Regency.

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Research Method

1. This research was conducted in Gorontalo Regency. The location was determined intentionally based on the potential of Gorontalo Regency. The research was conducted for three months, from January to March 2024.
2. The research was conducted using a survey method, which is a quantitative research method that can be used in large populations with sample data as the data analyzed. This method was used to obtain information data on a large population using a relatively smaller sample. The data in this study were collected using a questionnaire.
3. The population in this study were all acceptor cattle breeders who used the AI program service. Sampling was carried out in stages starting from the region to the breeders. The sample area was determined intentionally, there were the Artificial Insemination Management Unit (SPIB) II area consisting of six sub-districts. The sample sub-districts were determined intentionally as much as 50% of the total sub-districts, namely: Pulubala, Tabongo, and Batudaa. The sample villages were determined intentionally, there were three villages each with the highest, medium, and lowest acceptor breeder criteria.
4. Research variables were elements or factors that can be measured, observed, or manipulated in a study to understand the relationship or influence between these elements. The variables measured in this study include five dimensions, such as: tangible, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 2014).
5. Data which obtained from acceptor breeders through the distribution of questionnaires consisting of two parts, such as the level of importance (expectation) and the level of performance (reality) of the attributes being measured. Measurement of the level of importance and level of performance attributes was carried out using a Likert Scale of 1 - 5 (Sugiyono, 2022).
6. Data on the characteristics of acceptor breeders were including age, gender, educational qualifications, occupation, livestock farming experience, and livestock ownership are processed using the SPSS program. Breeder satisfaction data was measured using the Customer Satisfaction Index (CSI) with the formula (Rangkuti, 2003):

$$\text{CSI} = \frac{\text{WT}}{\text{HS}}\ x\ 100\%$$

Where: CSI = Customer Satisfaction Index; WT = Weight Total; HS = Highest Scale

Table 1. CSI Result Criteria Calculation

No	CSI Value (%)	Satisfaction Criteria
1	0 – 34,99	Not Satisfied
2	35 – 50,99	Less Satisfied
3	51 – 65,99	Quite Satisfied
4	66 – 80,99	Satisfied
5	81 – 100	Very Satisfied

Source: Rangkuti, 2003

Result And Discussion

The characteristics of cattle breeders who became AI acceptors who observed in this study were: age, education level, and experience in adopting and implementing AI. The age of the acceptor breeders at the time of the study is presented in Table 2.

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Table 2. Percentage of Acceptor Breeders Based on Age

No	Age (Years)	Amount of Acceptor Breeders (Person)	Percentage (%)
1	21 – 30	7	7,95
2	31 – 40	18	20,45
3	41 – 50	31	35,23
4	51 – 60	21	23,86
5	61 – 70	11	12,50
	Total	88	100,00

Source: Proceed Data, 2024

Table 2 shows that the age of AI acceptor breeders varies between 21-70 years. The most acceptor breeders or 79.54% are in the age range of 31-60 years and the least are in the age range of 21-30 years. This shows that the average age of acceptor breeders is in the productive age range. According to Rouf and Munawaroh (2016), the age of breeders who are still productive, the ability to accept and adopt technological innovations is faster.

The percentage of acceptor breeders based on education level can be seen in Table 3 below:

Table 3. Percentage of Acceptor Breeders Based on Education Level.

No	Education Level	Amount of Acceptor Breeders (Person)	Percentage (%)
1	Elementary School	44	50,00
3	Junior High School	23	26,14
4	Senior High School	20	22,73
5	Bachelor Degree	1	1,14
	Total	88	100,00

Source: Proceed Data, 2024

Based on Table 3, it is known that the average education level of acceptor breeders is relatively low, which was elementary school. The majority of breeders have secondary education or below with a percentage of 76.14%. The low level of education of breeders is due to limited access to education in rural areas. Long destination to schools, high education costs, lack of encouragement and interest from rural children, and lack of adequate educational infrastructure make formal education difficult for them to access. This is in line with the statement of Herawati and Anwarudin (2023) that the low level of education of breeders is due to the low understanding of the importance of education and the high level of poverty at that time. An adequate level of education will have an impact on the management capabilities of the livestock business being run.

The experience of acceptor breeders in implementing AI can be seen in Table 4 below:

Table 4. Percentage of Acceptor Breeders' Experience in Implementing AI

No	AI Experience (Years)	Amount of Acceptor Breeders (Person)	Percentage (%)
1	< 3	5	5,68
2	3 – 6	39	44,32
3	6 – 9	34	38,64
4	> 9	10	11,36

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Total	88	100,00

Source: Proceed Data, 2024

Table 4 illustrates the level of AI implementation among breeders from those who are just starting to those who have been using it for a long time. 5.68% of new acceptor breeders have implemented AI for less than 3 years and 82.96% have implemented AI for around 3-9 years or an average of 6 years. This indicates that breeders have been using AI for a fairly long time. According to Fitrini, et al. (2012), breeders who have more experience tend to be more skilled and may produce better results.

The level of breeder satisfaction with AI services refers to the extent to which breeders feel satisfied or dissatisfied with the services provided by AI service officers (inseminators) in the service area of each officer. The level of breeder satisfaction can be seen in Table 5.

Table 5. Level of Breeder Satisfaction with Overall AI Service Attributes

Attribute	Interest Level Average	Performance Level Average	*Weighted Factor* (WF)	*Weighted Score* (WS)
Tangible				
1	3,48	2,82	2,32	0,07
2	4,53	3,24	3,03	0,10
3	4,43	3,25	2,96	0,10
4	4,40	3,67	2,94	0,11
5	3,83	3,35	2,56	0,09
6	4,59	3,83	3,06	0,12
7	4,61	3,65	3,08	0,11
Reliability				
8	4,30	3,70	2,87	0,11
9	4,17	3,78	2,78	0,11
10	4,13	3,78	2,75	0,10
11	4,42	3,85	2,95	0,11
12	4,66	3,84	3,11	0,12
13	4,15	3,65	2,77	0,10
14	4,64	3,43	3,09	0,11
15	4,66	3,20	3,11	0,10
Responsiveness				
16	4,33	3,78	2,89	0,11
17	4,35	3,67	2,91	0,11
18	3,93	3,38	2,62	0,09
19	3,94	3,43	2,63	0,09
20	4,09	3,76	2,73	0,10
21	4,48	3,73	2,99	0,11
22	4,11	3,44	2,75	0,09
Assurance				
23	4,32	3,63	2,88	0,10
24	4,34	3,10	2,90	0,09
25	4,30	3,58	2,87	0,10

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26	4,58	3,38	3,06	0,10
27	4,47	3,44	2,98	0,10
28	4,33	3,18	2,89	0,09
29	3,99	3,33	2,66	0,09
Empathy				
30	4,39	3,65	2,93	0,11
31	4,20	3,76	2,81	0,11
32	4,36	3,75	2,91	0,11
33	4,20	3,72	2,81	0,10
34	4,10	3,97	2,74	0,11
35	4,01	3,43	2,68	0,09
Total	149,82	124,16		
Weighted Total (WT)				3,55
Customer Satisfaction Index (CSI)				71,03

Source: Proceed Data, 2024

Based on Table 5, it is known that the Weighted Total (WT) value of all attributes is 3.55 with a Customer Satisfaction Index (CSI) value of 71.03%. This CSI value is in the range of 66% - 80.99% which indicates that the level of breeder satisfaction with AI services is in the satisfied category (Rangkuti, 2005). Most breeders feel that the AI services they receive have met or even exceeded their expectations. Factors such as the quality of inseminator services, reliability, timeliness, and professionalism of AI officers play an important role in shaping satisfaction (Sa'adah et al., 2019). These results also show that efforts to improve AI services in Gorontalo Regency have yielded positive results. Breeders who feel satisfied tend to be more loyal and willing to continue using AI services, and can become promotional agents through recommendations from person to person. Although the overall satisfaction level is 71.03% (satisfied), it is still necessary to continue to monitor and improve services in order to ensure the sustainability of breeder satisfaction in the future. The satisfaction index can be a useful tool to measure the effectiveness of services and identify areas of improvement that can be done to improve service quality and maintain high levels of satisfaction from breeders (Musanto, 2004). Efforts to maintain and improve the quality of AI services must be a priority to ensure that breeder satisfaction remains high and sustainable.

Conclusion

Based on the results of the analysis that has been carried out, several conclusions were obtained, such as: Characteristics of cattle breeders who are AI acceptors in Gorontalo Regency are that the majority of acceptor breeders or 79.54% are in the age range of 31-60 years, 76.14% have lower secondary education, 82.96% have implemented AI between 3 - 9 years or an average of 6 years. The level of breeder satisfaction with AI services in Gorontalo Regency with a Customer Satisfaction Index (CSI) value of 71.03% or in the range of 66% - 80.99% which indicates that the level of breeder satisfaction with AI services is in the satisfied category.

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