Service per Conception on Sheep in Langkat District

ABSTRACT

Aims: To find out the Service per Conception of sheep in the Artificial Insemination program in Langkat Regency.
Study design: Descriptive analysis
Place and Duration of Study: Langkat Regency, Indonesia. between July 2022 and October 2022.
Methodology: Artificially inseminated sheep are 50 lambs using frozen semen. Data were obtained through interviews using questionnaires with sheep farmers. Data were analyzed descriptively.
Results: The results showed that the average Service per Conception observation value for sheep in Langkat Regency was 1.30 ± 0.20.
Conclusion: Service per Conception of sheep in Langkat Regency is still normal. But the management of maintenance and handling of Artificial Insemination needs to be improved.

Keywords: Artificial Insemination, Service Per Conception, Sheep

1. INTRODUCTION

Observation of reproductive efficiency is essential to measure the success of a sheep breeding business [1]. The effort is Artificial Insemination carried out by breeders in Langkat Regency. So far, the Artificial Insemination program's success has been measured by calculating services per conception [2].

Langkat Regency is where many people do sheep farming to increase their income. Breeders consider the livestock business only as a sideline; labor comes from family members. Support the implementation of livestock development. Especially sheep to maximize the productivity of sheep livestock, objective data and information are needed, actual and meet information standards [3]. It is necessary to evaluate the reproductive properties of sheep, to know the reproductive potential of sheep in Langkat Regency.

Langkat Regency is where many people do sheep farming to increase their income. Breeders consider the livestock business only as a sideline; labor comes from family members. Especially sheep to maximize the productivity of sheep livestock, objective data and information are needed, actual and meet information standards [4]. This observation is necessary to obtain accurate and in-depth data on the reproducibility and reproductive efficiency of sheep.

2. MATERIAL AND METHODS

2.1. Research Materials

The material used in this study was 50 sheep resulting from artificial insemination relating to all data and field studies obtained.

2.2. Research Procedure

The research was designed by making observations to study the difficulties that arise. The results of observations are into scenarios that support and create a flow of problems. The second stage is the data analysis stage. The third stage is data interpretation by interpreting the results of the predicted values of each variable and comparing them with the theory and results of previous studies. Interpretation can prove a theory, challenge a theory and develop a new theory as a reference for research results. The next stage is drawing conclusions, which conclude the results achieved and recommends them to related parties.

2.3. Observed Parameters

The observed research parameter is Service per Conception. Service per Conception is the number of mature or inseminations until pregnancy. The lower the Service per Conception, the higher the fertility of the female livestock.

2.4. Place and time of research

This research will be carried out from July 2022 to October 2022 in Langkat Regency because this area has excellent potential for developing sheep farming businesses in Indonesia.

2.5. Type and Scope of Research

This type of research is descriptive quantitative research, namely, researchers who describe the variable conditions obtained by sheep farming business actors. The scope of this research is in Langkat Regency, Indonesia. The method used in this study was direct interviews with farmers regarding the recording of the sheep they kept using a questionnaire that had beforehand. The research location takes purposively, considering that it is one of the areas with great potential in efforts to develop a sheep farming business.

2.6. Population and Sample

The population in this study were sheep in Langkat Regency. This study's sampling was carried out by census or as a whole. The census method, also known as the complete enumeration method, investigate or interviews all individuals as respondents.

2.7. Methods and Data Analysis

Research conducted descriptive. The tabulated data was using the excel program, and the research data was analyzed using the t-test. Analysis of data using Genstat software.

3. RESULTS AND DISCUSSION

Service per Conception (S/C) calculates the number of matings needed by female livestock until pregnancy or conception [5]. Service per conception or S/C (number of marriages per pregnancy) is a factor that affects reproductive efficiency, and the best is once. The lower the S/C value, the higher the livestock fertility rate, and conversely, the higher the S/C value, the lower the fertility rate [6]. The results showed that the mean S/C of sheep in Langkat Regency was 1.30 ± 0.20.

Reports of Artificial Insemination pregnancy rates in goats and sheep are still very diverse but generally still low. The results of artificial insemination with frozen semen in goats are between 30-60% [7] and 26-61% in sheep [8]. The pregnancy conception rate in this study could have been higher if AI had twice. The IB conception rate once was 38.89%, while the IB twice showed a conception rate of 55.56% [9].

Artificial insemination in goats is challenging, especially in penetrating the cervix. Artificial insemination can only be done in rings one and two, some even at the mouth of the cervix, so spermatozoa must have a higher strength to pass through the cervix and reach the egg [10]. The results of this study were lower when compared to intrauterine AI, which was 70-82% [11]. Transport of spermatozoa is better in Artificial intrauterine because there are fewer obstacles for spermatozoa to reach the fertilization site. However, this method is unsuitable for field application because it is less practical and requires better skills and equipment [12].

A good number per marriage is 1.5 – 1.7 [13]. The lower the service per conception value, the higher the livestock fertility rate. Conversely, the higher the service per conception value, the lower the fertility rate [14]. The standard S/C value ranges from 1.6 to 2.0. The lower the S/C value, the higher the fertility value of female cattle [15]. The value of service per conception in DEG broodstock reared in a semi-intensive manner ranges from 1-2 times with an average figure of 1.4 ± 0.51 times or 0.2 times higher than DEG broodstock intensively [16]. The rearing system does not affect the matings needed until pregnancy, indicating that mating time is essential in determining conception success in every livestock mating [17].

4. CONCLUSION

Service per Conception on sheep in Langkat Regency is standard, with a 1.30 ± 0.20. Management of maintenance and handling of Artificial Insemination needs to be improved to get a better value.

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