



Reproductive Performance of The Female Peranakan Ettawa in Tandebura Village

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Abstract

This research aims to know the performance of the reproduction of a female Peranakan Ettawa that is held in Tandebura village. This research was conducted in October to November 2018 in Tandebura subdistrict Watubangga District Kolaka Regency. Population Data of goat's cattle Ettawa (PE) is obtained from direct observation and Resort Livestock Village The Tandebura. Subsequent data is treated descriptively using the CR and NRR formulas followed by correlation analysis. The observed variables are the Conception Rate (CR) and the Non-Return Rate (NRR). The results of the study showed the success of natural wedding in Tandebura sub-district Watubangga Kolaka District is a good value of CR (76.05%) and the NRR (83.09%). The amount of the collapse of CR-NRR + 1, can be concluded that the success of the natural Wedding Goat breeds Ettawa (PE) females with the number of goat cattle PE as much as 71 tails in the category of right according to the CR and NRR standards and have a solid coloration.

Keywords: Reproductive performance, reproductive efficiency, village Tandebura

A. Introduction

Goats are observed by the rural population of Indonesia (Mulyono, 2003) because its maintenance is easier to do compared with large ruminants. Goats quickly breed, and the growth of their children is also relatively fast. The Etawa goat originated in the Jamnapari region of India. This goat is most popular in Southeast Asia, including the type of Biuse that is the producer of milk and meat producers. Its healthy posture, long hanging ears, convex face shape, thigh fur is very dense; the male weight reaches 90 kg, females weight 60 kg. Milk production

reaches 235 kg/lactation. In Indonesia for quality improvement, the local goat is mated with the Etawa goat to produce goat PE (Peranakan Etawa).

PE Goat is double-functioning livestock that can produce meat and milk, but its utilization for meat producers still felt less. It is due to the productivity level of PE goat, always low in Indonesia. Therefore, the effort to increase productivity needs to be done.

Etawa Peranakan Goat is dual-use livestock, which is a producer of milk and as a producer of meat (Williamson & Payne, 1993). PE Goat is the most famous goat nation and is widely preserved in India and southeast Asia (Devendra & Burns, 1994). The characteristics of PE goat is the color of black and white or red and white brown stripes, curved nose, the lower jaw is more prominent, both males and females have horns; Long ears hang down, have long legs and feathers (Sastroamidjojo & Soeradji, 1978).

Goat Cattle PE is one quite promising effort. First, it does not require extensive land. Secondly, goats have a high level of adaptation to the environment so that they are easy to maintain. Thirdly, for breeding, goats do not take a long time. Fourth, goat meat is a high nutritional source of animal protein (Rara, Wenny, Suyadi, & Nasich, 2011). For dairy goats, the removal should be done early, without disrupting the growth of the child, so that the excess parent production can be utilized by farmers to increase the income or nutritional needs of families (Atabani, 2013). Sarwono (1999), when the governance of the breeding of goats that are being bunting or breastfeeding and the child is good, the weight of the goat can reach 10-14 kg/tail when watted at the age of 90-120 days. Williamson & Payne (1993) said for the grill; there was a likelihood of delaying the bribe to give the goat a chance to gain maximum profit from his mother's milk.

The potential for the development of PE goat cattle in Watubangga is quite good because many farmers choose to keep this kind of goat. Watubangga District Kolaka District has a population of PE dairy goats that is quite a lot of about 400 tails for the parent. The village has a farmer group of PE dairy farmers, but the livestock reproduction Performances are less concerned. It is seen from many breeders who do not have a reproduction record of the parent of the full PE goat, but unisex has it, and the low number of births in the Goat farmer group.

The need for breeders in Goat Farmer Group Tandebura Village has a complete parent reproductive record meant to know a master reproductive performance which is useful as a data source of information for farmers and based on the results. The information can then be done selection program. The knowledge of ranchers around the reproductive performance of the PE goat's mother in Tandebura village is essential to know. Knowing the performance of the reproduction of the PE goat mother in the area can help the community to evaluate the maintenance management of PE goat so that livestock productivity can be continuously improved.

B. Methodology

1. The Material

The material used is recording the reproduction of Peranakan Ettawa goat-owned cattle in the village Tandebura District Watubangga Kolaka District with the provision of samples taken from the recording breeder that has been cattle at least two years and goats Who have been children at least two times.

2. Research Procedures

The research was carried out by capturing and recording all the data of the female cattle breeding with the intensive system of goats. The research procedure is done in two stages. First took two weeks of observation of the Peranakan female Ettawa by noting the recording of its reproduction consisting of a married date, and a breeder's name. Second, by doing the data of the next one month to get information about the Peranakan goat Ettawa females after being married.

3. Parameters of Research

Parameters of this study were (1) Conception Rate (CR), Partodihardjo (1992) states that the CR is ideal for 70% but generally amounted to 40%. Achjadi (2007) that good CR value reaches 60%-70%, while that can be maximized for the size of Indonesia with the consideration of natural conditions, management and distribution of livestock spread are considered good if the value of CR reaches 40%-50%. (2) Non Return Rate value (NRR), Toelihere (1981) and Feradis (2014) assessments with the NRR are not necessarily correct because females who do

not re-show the likelihood of jizz, are sold, disappear, calm, birthing, Corpus Luteum persistence (CLP) and do not bunting. Malik, Tasripin, & Salman, (2016) that Good NRR value is 79.53%.

4. Data Analysis

The data analysis used in this study is a descriptive analysis. As for how to calculate

a) Conception Rate (CR)

The conception rate is the best measure in the assessment of the insemination result of the percentage of the female goat that is bunting on the first insemination. The conception figures are determined based on the results diagnose ovulation through rectal (rectal exploration) examination by veterinarians within 40 to 60 days after the Insemination (Feradis, 2014).

$$CR = \frac{\text{Number of females conception at first IB}}{\text{Number of all females in IB}} \times 100\%$$

b) Non-Return Rate (NR)

A Non-Return Rate (NR) is a percentage of an animal that does not return or if there is no further insemination request within 28 to 35 or 60 to 90 days. Where Non-Return formulas are used.

$$NRR = \frac{\text{Number of females in the IB} - \text{Number of females returning in IB}}{\text{The total number of females in the IB}} \times 100\%$$

Correlation is a data collection action to determine whether there are a relationship and level of relationship between two or more variables. This research is done when we want to know about the presence, and muscular weakness of the associated variable relationships in an object or subject studied and in which the relationship (positive/negative), and how far the relationship exists Between two or more variables.

$$r = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{\{n\sum x^2 - (\sum x)^2\} \{n\sum y^2 - (\sum y)^2\}}}$$

Description:

r = Correlation coefficient

N = number of Nations

X = variable 1

Y = variable 2

C. Result and Discussion

Reproductive efficiency is the measure of a PE goat's ability to bunting and produces decent breeds. Table of reproduction efficiency PE female goat in the village Tandebura Watubangga District can be seen in table 1.

Table 1. Efesiensi reproduction of PE goats in Kelurahan Tandebura

Breed of Goat	Number of goats (tails)	Number of marries (natural)	CR (%)	NRR (%)
Peranakan Ettawa	71	83	83.09	90.14

Sources: results of data analysis

Based on the results of the study, there were 71 Peranakan goats Ettawa (PE) which were married naturally by the Peranakan goat farmer Ettawa (PE) in Tandebura Sub-district Watubangga. The number of natural marries that is done is 83 times, where 59 goats experience ovulation, and 64 goats do not experience a passionate return after a natural marriage.

1. Conception Rate (CR)

Conception Rate (CR) is the percentage of female PE goats that are bunting in the first natural marriage. Based on the results of the study obtained on table 4, the CR value of the natural union of female PE goats in Tandebura village is 83.09%, this value is a good value. It is by Achjadi (2007) which states the good CR value for goat PE is 60-70%. The higher the value of

CR then the better the efficiency of its reproduction and the low high CR is influenced by parent fertility, and males.

2. Non-Return Rate (NRR)

The Non-Return Rate (NRR) is the percentage of goats in an Ettawa (PE) that does not return within 30-60 days after the marriage. Based on the results of the study that can be seen in table 2, the value of NRR goat breeds Ettawa (PE), which is married naturally in Tandebura village of 90.14%. This value is a good NRR value by Malik, Tasripin, & Salman, (2016) Good NRR value is 79.53%, the higher the NRR than, the better the efficiency of the female livestock.

3. Correlation

Correlation is the data analysis used to determine whether there is a relationship between two variables and the direction of the relationship. The correlation value between variables can be seen in table 2.

Table 2. The value of the correlation

Correlation between variables	coefficients correlation	description
CR-NRR	1	very strong

In table 2, shows that the value of the collation of CR-NRR is + 1 which means that it is the perfect positive coefficient where the higher the value of CR then the higher the NRR value (proportional). For more clarity, the direction of the CR-NRR coloration relationship can be seen in Figure 1.

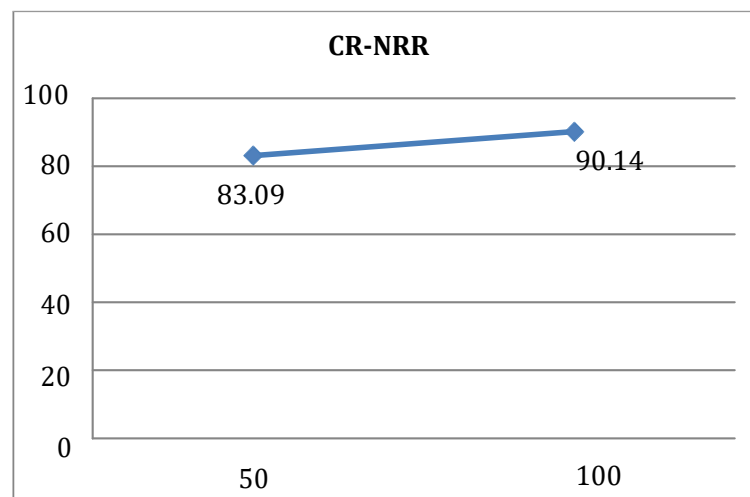


Figure 1. The direction of CR-NRR correlation relationship

The direction of the coloration is also according to the opinion of Atabany (2013) where +1 means a perfect positive correlation where the higher X value is the higher the value of Y (relative to the straight). The relationship between the CR-NRR is with the opinion of Achjadi (2007) that the amount of CR has a connection with the NRR, if there is a high CR, then the value of NRR will be high. Achjadi (2007) the optimal S/C value in goats ranged from 1.1 to 1.3. The smaller the S/C value, the higher the fertility rate of the female animals in the group; optimal value of CR in goats 50-80%.

D. Conclusion

The success of the natural marries of Peranakan goat Ettawa (PE) in Tandebura Sub-district Watubangga Kolaka District with the number of breeds of Peranakan Ettawa (PE) Females are naturally categorized as well according to the CR and NRR standards. CR and NRR have a positive correlation with the direction of a positive relationship or directly proportional.

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