

THE ASSESMENT OF FARMER ON GOAT ESTRUS PERFORMANCE OF LOCAL BREED AND ETTAWA CROSSBREED CULTIVATED IN MANADO CITY AREA

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Abstract

The goats of local breed (LB) and 'ettawa crossbred' (ECB) are generally reared in Manado by farmer to contribute meat production in the local market. The assessment ability in oestrus performance is important to improve breeding livestock. This study aims to determine the assessment ability of farmer in assess the estrus in their reared in the Manado area. The results of the study showed that there was no significant difference between assessment ability to the farmer of local breed (LB) and 'ettawa crossbred' (ECB) ($P>0.05$).

Key words: oestrus performance, goats, farmer

INTRODUCTION

Local breed goats (LB) and ettawa crossbred goats (ECB) are the two most common types of goats raised by farmers in Indonesia, as found in the area of Manado city. The population in this area in 2004 was 1,625 heads and in 2014 it was 1,552 heads only (BPS-Manado, 2016). In general, goats are raised extensively and on a small scale by the community. Moreover, these livestock become a source meat in the market around Manado for consumers, but one of the obstacles for these traditional breeders in developing their farms is the lack of practical knowledge regarding the livestock reproductive system which is related to evaluating the estrous performance of goats for appropriate actions in mating their livestock. Hormonal mechanism system plays an important role in estrus (Fonseca et al., 2008). It has an impact on increasing the quantity and quality of goat's production in the Manado area. The environment has a direct effect on goat's production (Toar et al., 2017). Through survey activities help to obtain the

latest information. This information could help to find the right problem solving, especially related to efforts to develop local goats and crossbred ettawa.

Naturally reproduction in goats is dependent on various factors including: length of the breeding season, latitude, climate, breed, physiological stage, presence of the male, breeding system and specifically photoperiod (Fatet et al., 2011). Various treatments have been tested on the reproductive system of goats: El-Sherbiny et al. (2022) used suplement dietary curcumin to improve reproductive hormone.

MATERIAL AND METHOD

This research was conducted using a survey technic. Location: in Manado area with 18 respondents. The respondents were nine Ettawa crossbred (ECB) goat breeders and nine local breed (LB) others, in this survey the respondents included those who had kept goats for at least six months within no more than 1 year. The survey was conducted in the field by using question and answer method, followed by selection and

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tabulation of the data. Three aspects of data collected were: the first was the ability to characterize the first estrus appearance and the associated age. The data collection on the age of first estrus was divided into four age groups, namely A = up to 6 months; B = 7 months; C = 8 months; D \geq 9 months. Secondly was the ability to assess the appearance of changes in the vulva during estrus. The data in this part were divided

into 5 level of assesment ability using Likert scale, and third was the behavior of the mother goat during estrus which data collection used the Likert scale too.

RESULTS AND DISCUSSIONS

The research data found through the survey performed around the city of Manado as shown in the following figures:

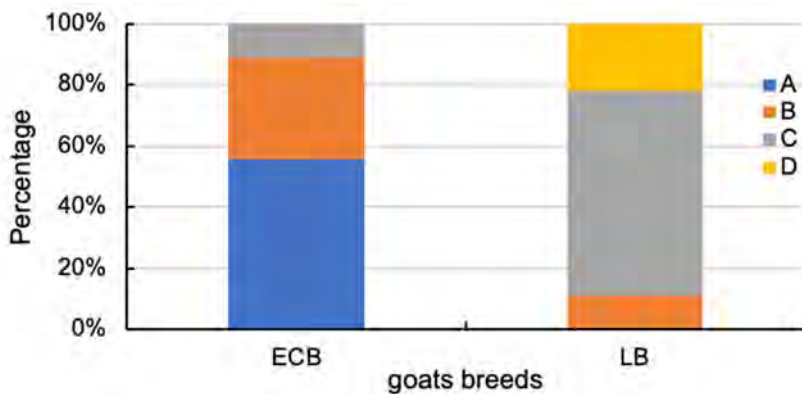


Fig. 1 Farmer's response regarding the age (month=mo) of first oestrus appearance (A= up to 6, B= 7, C= 8, D= more than 9)

Figure 1 The majority of ECB goat breeders (55.3%) responded that the first symptoms of estrus began to appear when the goats were around six months old, followed by a response stating that estrus in their goats appeared at around seven months of age (33.3%).

Only 11.9% of respondents noticed that the early estrus of ECB goats began to appear at the age of eight months. No response was found that said early estrus in ECB appeared at the age of 9 months and above.

According to BPP-Kupang (2020) the general characteristic of oestrus of goats are: Looks restless and uneasy; often makes sounds; often wags tail; If the tail is held it will be lifted upwards; Appetite is drastically reduced (if the goat is pastured it will easily stop eating); Approaching the

male goat; In dairy goats milk production decreases; the female goats cock felt warm to the touch; Increased libido behavior; seen from the frequent rubbing of the buttocks or climbing other animals; Always restless; Bleating (noisy) continuously.

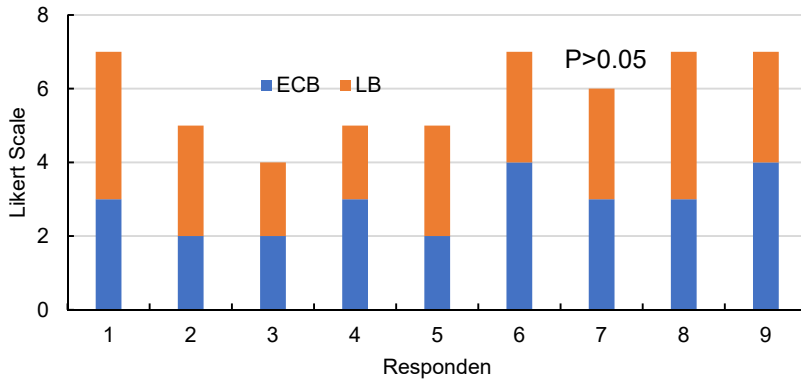


Fig. 2 The farmer's ability to assess estrus through the appearance of vulva performance

Through a detection level of ability in assessing the performance of the goat's vulva when estrus appears is as shown in figure 2.

A comparison test between groups of respondents who cultivate goats in surveyed area showed that there was a significant difference in the ability perception of LB breeders compared to respondents from the

other groups ($P < 0.05$). For ECB breeder respondents the average value was 2.89 and the variance figure was 0.61, while for LB breeder respondents: the average value was 3.0 with a variance of 0.5.

The farmer could indicate the estrus through vulva performance: has edema, reddish, and frequent mucus discharge (BPP-Kupang, 2020).

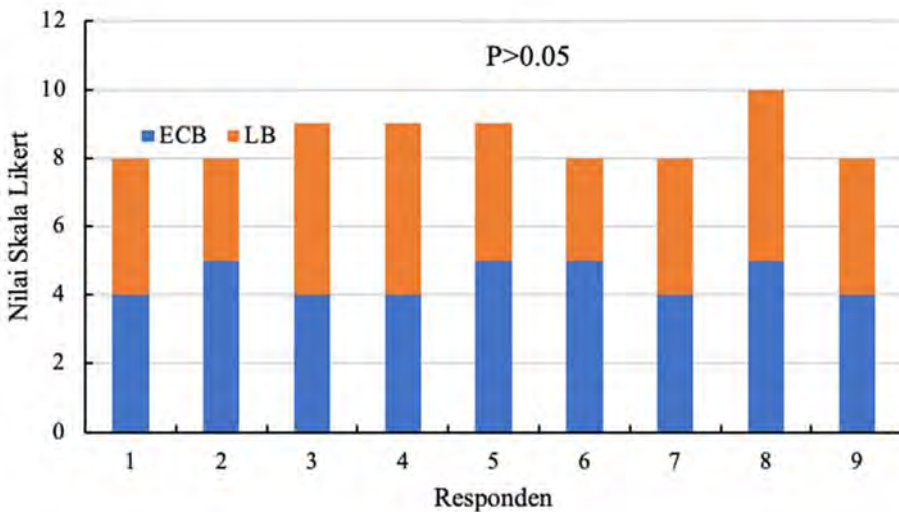


Fig. 3 The farmer's ability to assess behaviour of goat femal in oetrus period

The value of the respondent's skill level in assessing behavior of goats during estrus is shown in Figure 3. There was no

significant difference ($P > 0.05$) between the responses of EBC farmers and LB farmers regarding the level of how to assess cattle

behavior during estrus. The estrus cycle During the estrous period, it can be seen that female goat lets the male come closer to copulate Shackleton et al., 1984). To get a good mating result, the male aspect must also be considered, especially regarding body condition score as reported by El-Sherbiny et al., (2023).

CONCLUSIONS

1. The results at the locations surveyed showed that skills of farmer in assessing reproductive performance of goats varied due to different educational backgrounds and experiences.

2. Goat production contributes to the livestock meat for local consumers in Manado city but needs support the development of the goat population.

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