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Study on Production of Male Peranakan Ettawa Goat Carcasses with Different Natural Feeding

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Abstract

Study on the production of male Peranakan Ettawa goat carcasses with different natural feeding. The purpose of this research is to find out the output of the Peranakan Ettawa male carcasses with mixed natural food. In this study used the Peranakan goat Ettawa males as many as six tails. The research data is analyzed by various print analyses using the complete random plan (RAL), and the measured parameters include cutting weight, carcass weight, and percentage of the carcass. The rate of cutting weight gained during the research of P1 (100% mulberry) amounted to 10537.50 grams, P2 (50% mulberry, and 50% Gamal) amounting to 10795.00 grams and P3 (100% Gamal) amounting to 12945.00 grams. The weight of carcasses gained during the research of P1 (100% mulberry) amounted to 4270.00 grams, P2 (50% mulberry, and 50% Gamal) for 4342.50 grams and P3 (100% Gamal) for 5380.00 grams. The rate of the percentage of carcasses gained during the research of P1 (100% mulberry) of 40.88%, P2 (50% mulberry, and 50% Gamal) amounted to 40.10%, and P3 (100% Gamal) amounted to 41.78%. Based on the analysis of the prints, the results were derived that the production of an Ettawa Peranakan goat with a different natural feed gave an unreal effect ($p > 0.05$) to the cut weight, weight of carcasses and the percentage of carcasses.

Keywords: Peranakan Ettawa goats, gamal leaves, mulberry leaves, carcasses

A. Introduction

Goat Livestock is one type of livestock that has good development prospects in supplying the needs of meat. The Peranakan of Ettawa was one of the local goats in Indonesia with a reasonably high population and widespread. One of the sources of meat that is already known by the people of Southeast Sulawesi is Peranakan goat Ettawa.

Goat productivity can be measured through the increase in body weight and the percentage of carcasses produced (Hafid et al., 2012). The interest and growth of livestock carcasses are influenced by several factors such as age, nation, and one of them is gender.

Gender is one of the most influential factors in livestock production performance. This is due to the influence of body tissues that also affects the growth and percentage of livestock carcasses and sexes, causing differences in growth rate (Hafid et al., 2012). At the same age, bulls usually grow faster than female cattle. It leads to the live weight of the bulls heavier than the living mass of females. This biological phenomenon also occurs in goat cattle.

The natural feed is a feed that comes from nature. But in its development, natural feed not only comes from life, but this food source can also come from cultivation. The average natural feed has a reasonably high protein content such as Gamal leaves and mulberry leaves. The leaves of Gamal are cultivated by one of the farmers in the Toari sub-district. Murbei is one of the high-potential crops for the quality of livestock feed.

Maintenance is intensive maintenance where the goat is maintained and fed with optimal nutritional value to increase the weight so that the weight of carcasses also increases and the health of the Goat Maximum.

Goat Carcass is a body part of a healthy goat that has been slaughtered, has been kneaded, ejected, separated between the head and legs ranging from the lower tarsus, reproductive organs, nudging, tails, and excess fats, another GA acquired carcasses consisting of meat (muscles), bones, and fats and connective tissues (Hafid et al., 2012).

Based on the explanation above, it will be researched to get the productivity of livestock carcasses of Peranakan Ettawa males by giving different natural feeds in the Ranomentaa sub-district of Kolaka district. The purpose of this research is to find out the production of the Peranakan Ettawa male carcasses with mixed natural feeding. The benefit of this research, is expected to be a reference material for farmers, to see how the production of livestock carcass of Peranakan Ettawa males with different natural feed in the district Toari Kolaka District and can provide information about the potential of Peranakan Ettawa goat as a producer of meat and efforts to increase its productivity.

B. Methodology

1. The Material

The material used in this study is a Peranakan goat Ettawa males as many as six tails with a range of ages of 4 months – 6 months, natural feed (Gamal leaves, and mulberry leaves), water, and medicine.

2. Research Procedures

Before the livestock research was first maintained for approximately one month with intensive maintenance system because goat cattle come from people's farms that previous maintenance is done traditionally and The given feed differs from the feed given at the time of the study, and after that, a new treatment is done.

Feeding is done three times a day, which is in the morning at 08.00 WITA, at noon at 13.00 WITA and afternoon at 16.00 WITA. With three treatment is one administration of 100% mulberry leaf, treatment two mixed feed in the form of 50% of the Gamal leaves, and 50% of mulberry leaves and the treatment of 3 administration of 100% of Gamal leaves with double-repeated treatment, drinking water is given adlibitum.

3. Parameters of Research

The parameters measured in this study are:

1. Cut weight.
2. Carcasses weight.
3. Percentage of carcasses.

4. Data Analysis

The research data was analyzed by various print analyses using the complete random plan (RAL), with the mathematical model (Steel & Torrie, 1991). As follows:

$$Yij = \mu + Pi + \epsilon ij$$

Description:

i = 1, 2, 3, ..., p

j = 1, 2, ..., u

Yij = Observation of the i-treatment and J-Deuteronomy

M = General average

Pi = The influence of the i-treatment

Єij = To-i error and to-J recurrence

To figure out the treatment effect, it is of the measured change, the data obtained is analyzed with variable and analyzed statistically if the treatment shows real influence, then it is recommended with the Tukey test (BNT) (Steel & Torrie, 1991).

C. Result and Discussion

Based on the analysis of the prints, then obtained the conclusion that the production of the male-ethnic Peranakan Ettawa with different natural feed does not have a noticeable effect (p>0.05) to the weight of cut, carcass weight and percentage of carcasses. It can be seen in Table 2.

Table 1. Weight rate, carcass weight, and percentage of carcasses in PE goat with a natural feed of Murbei and Gamal.

Variable	Natural Feed			Significant
	P1	P2	P3	
Cut Weight (gr)	10537,50	10795,00	12945,00	NS
Carcasses Weight (gr)	4270,00	4342,50	5380,00	NS
Percentage of carcasses section (%)	40,88	40,10	41,78	NS

1. Cutting weight

The average weight of the pieces is shown in table 2. The rate of cutting weight gained during the research of P1 (100% mulberry) amounted to 10537.50 grams, P2 (50% mulberry, and 50% Gamal) amounting to 10795.00 grams and P3 (100% Gamal) amounting to 12945.00 grams. The highest cutting weight of the P3 treatment is the 100% Gamal and the lowest average in the P1 treatment of 100% mulberry. It indicates that the addition of different types of natural feed to the level of 100% does not affect the increase in the weight of the breeds of Peranakan animal Ettawa males.

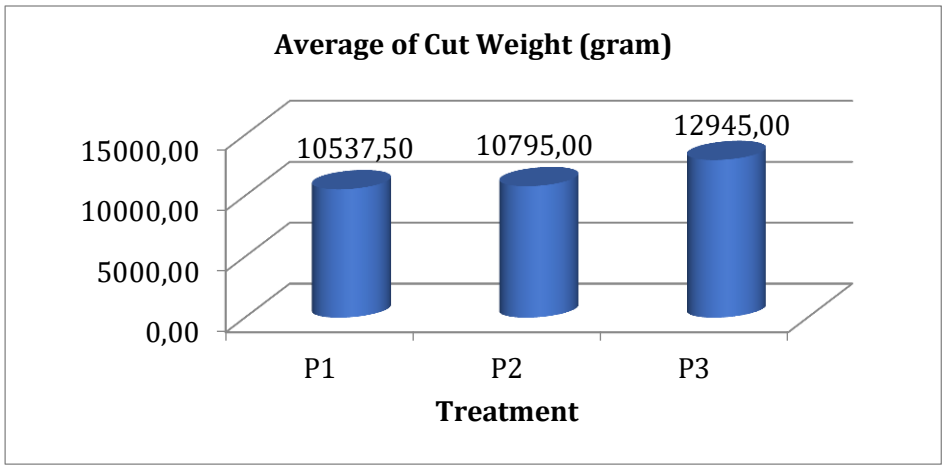

Figure. 1. Cut Weight Histogram

One factor that affects the weight of the cut is feed consumption. The absence of real influence (p > 0.05) among the three treatments is suspected because the feed gave the same

quality. It is reinforced by the statement of Adiwinarti et al. (1999) and Lestari et Al. (2001) that the same amount of feed nutrient consumption will produce the same cut weight.

The weight of the cut is also influenced by goat growth during maintenance. One that affects growth is the consumption of dry materials. The remarkable increase also results in a good cut weight, the other way around. These results are by Agnihorti ET's statement, et al. (2006) That livestock with the provision of only green feed without the complete feed addition, no effect on the weight of the cut.

Consumption and digestibility of feed treatment do not affect the increase of daily body weight (DBW) so that the cut weight obtained is also relatively the same. Tobing et al. (2004), the more feed consumed and undigested substances, the higher the Daily weigh addition so that it affects the weight of cut received.

2. Carcasses weight

The Peranakan flocks of Ettawa with different natural feed did not give a noticeable effect ($p > 0.05$) to the influence of carcasses in treatment. The importance of carcasses gained during the research of P1 (100% mulberry) amounted to 4,270.00 grams, P2 (50% mulberry, and 50% Gamal) for 4,342.50 grams and P3 (100% Gamal) for 5,380.00 grams. The highest rate of heavy carcasses in P3 treatment is that the feed is 100% Gamal, and the lowest average at P1 treatment is 100%, Mulberry.

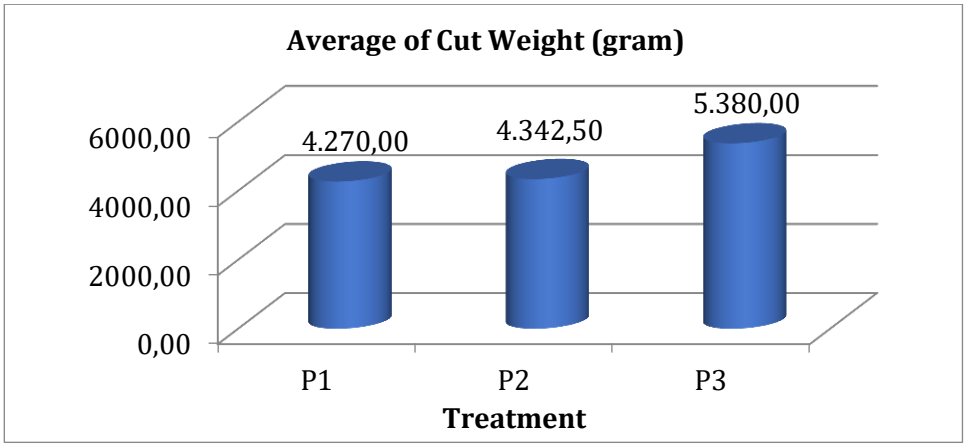

Figure 2. Histogram of Carcasses Heavy-rate

There is no difference in the natural feeding of the treatment group due to the weight of the piece that does not affect the treatment. This allegation is following the opinions of Berg and Butterfield (1976) in Ngadiyono (2014) that one of the factors affecting carcass weight is the cut weight. The higher the importance of the cut, the higher the importance of the carcass obtained (Tobing et al., 2004).

Soeparno (2009) that the variation of carcasses or the composition of carcasses is mostly dominated by body weight. Added by Tobing et al. (2004), each weight gain is always followed by a massive increase in carcasses, which can mean that the increase in cutting weight is related to the growth and development of the body part or carcass. Daily weigh addition will increase when the feed is given to meet the nutrients needs of cattle. This Daily weigh addition also affects the weight of the carcass produced.

3. Percentage of carcasses section

The rate of the percentage of carcasses gained during the research of P1 (100% mulberry) of 40.88%, P2 (50% mulberry, and 50% Gamal) amounted to 40.10%, and P3 (100% Gamal) amounted to 41.78%. The rate of the highest percentage of carcasses in P3 treatment is by feeding 100% Gamal and the lowest average in P2 treatment, i.e., 100% mulberry. The small percentage of carcasses in the P2 treatment compared to the treatment of P1 and P3 is suspected as a result of the different levels of feed degradation caused by the crude fiber content and lignin on the Gamal and Mulberry forage. Perry et. Al. (2003) In Setiawan et. Al. (2015) explained that feedstuffs containing high crude fiber would lower the digestibility value of other food substances because to digest the coarse texture is required a lot of energy so that it can affect the percentage of carcasses.

The percentage of the carcass section of the study showed no noticeable results (p > 0.05) between each group of treatment. It is due to the weight of carcasses, and weight cuts on all three treatments are also different, not real. The weight of carcasses heavily influences the percentage of carcasses, and this is because the rate of carcasses was derived from a comparison of the importance of cut carcasses (Wood et al., 2008) in Ngadiyono (2014). The research of Agnihorti et al. (2006), in Ngadiyono et al. (2014), was shown, got a percentage of carcasses amounting to 43-46% in goats given the complete feed, but in this study was only given treatment using forage feed without full addition Feed. This fact shows with local-based green pasture although having different protein levels and feed energy has no significant effect on cutting weight, and the percentage of carcasses can still be maximized with additional feed To meet the needs of livestock and increase the quality of carcasses

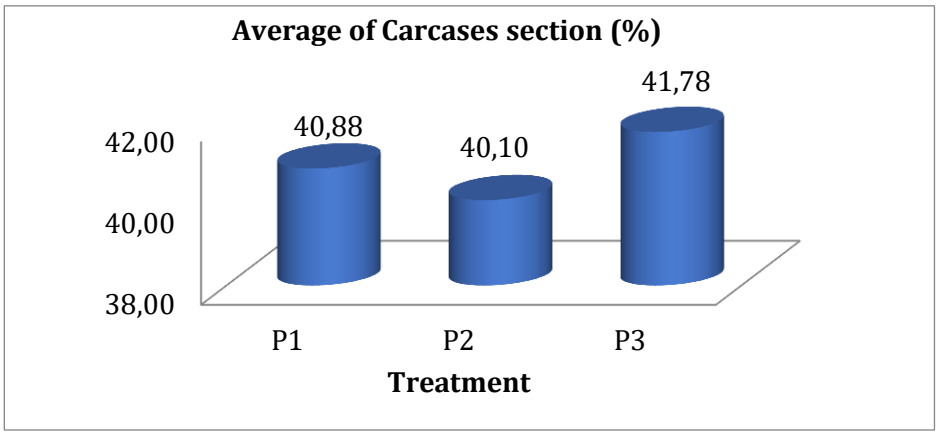

Figure. 3. The average rate of carcasses

D. Conclusion

From the results of this study can be concluded that the treatment in each group of livestock gives a real influence (p>0.05) to the weight of cut, the importance of carcasses, and the percentage of cattle carcasses of Peranakan Ettawa males.

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