



Effect of Natural Feed Mulberry and Gliricidia against Percentage Non Carcass and Carcasses Males Goat Ettawa Crossbreed

AUTHORS INFO

Suparman
Universitas Sembilanbelas November Kolaka
suparman77ptk@gmail.com
+6282345330077

Harapin Hafid
Fakultas Peternakan UHO

La Ode Baa
Fakultas Peternakan UHO

ARTICLE INFO

ISSN: 2548-3803
Vol. 1, No. 2, December 2016
URL: <http://usnsj.com/index.php/CJAH/article/view/CJAH009>

© 2016 CJAH All rights reserved

Abstract

This study aims to assess the effect of natural feed mulberry and gliricidia against carcass percentage and non-carcass male goats Ettawa crossbreed. This study was conducted for 4 months starting in January to April 2016, located in the Village RanomentaaToari District of Kolaka. This study used 12 male goats Crossbreed Ettawa age ranges of 4-6 months that were placed in 12 individual cages. The materials used are natural feed (Gliricidia leaves and mulberry leaves), water, salt, and medicine. The equipment used is the individual cages, where food, drinking, machetes, scales, basins, cutter, knife, plastic bags, rope and a cutting table. The design used in this study is completely randomized design (CRD) 3 treatments with 4 replications. Treatment 1 (T1) (100% mulberry leaf), T2 (50% of mulberry leaves, 50% Gliricidia leaves) and T3 (100% Gliricidia leaves). The parameters were observed in the study were: weight gain (WG), slaughter weight, carcass weight and percentage, and the percentage of non-carcass weight. The results showed that the average W. Gited Nations T3 (26.98 g/day) was significantly different ($P < 0.05$) with T2 (22.83 g/day) and T1 (22.42 g/day), but T2 and T1 are not significantly different. In line with the average slaughter weight is from highest to lowest T3 (13.29 kg), T2 (11.21 Kg) and T1 (10.37 Kg). Followed by the average carcass weight were significant ($P < 0.05$) as a result of treatment. The average carcass weight T1 (4.17 Kg), T2 (4.24 Kg) and T3 ((5.38 kg). Whereas in the average carcass percentage effect is not significant ($P > 0.05$) as a result of treatment with a range of 38.43 -39.43%. Similarly, the weight of non Kakas and non carcass percentage of the average range of 50.73 to 55.09%. Based on the results research, it can be concluded that the natural feeding mulberry and gliricidia real effect on body weight gain, slaughter weight and carcass weight but had no effect on carcass percentage, non carcass weight and carcass percentage.

Keywords: natural feed, carcass non carcass, male goat hybrid Etawa

A. Introduction

A goat is one kind of livestock that have fairly good development prospects in the supply of meat. One type of goats is suitable for development of the goats Crossbreed Ettawa. Goats Crossbreed Ettawa is one of the local goat population in Indonesia is quite high and widespread, the current population of goats Crossbreed Ettawa is highest in Southeast Sulawesi Kolaka District, amoWGting to 15 123 individuals (Department of Agriculture, Horticulture and Animal Husbandry, 2015).

Gender factor affects the performance of livestock production caused by their effect on the tissues of the body at once affecting growth and carcass percentage of livestock and gender causes difference in the rate of growth on gender, hereinafter the same age male animals usually grow faster than female animals, besides the nutrient content of feed also affect the weight or percentage of carcass and non carcass. Mulyono (2000) suggested that the forage contains nutrients that can determine the growth, reproduction and animal health. Good fresh green feed is when the composition is arranged between the low protein and high in protein. Livestock productivity reflected by the rapid growth and can be measured by the percentage of body weight gain and carcass produced (Hafid, 2002).

Livestock weight gain is influenced by the type of livestock (breeds), gender (sex), age (age), environmental factors (environment) and management (management) (Hafid et al., 2003). The cultivation of hybrid goats Ettawa is one commodity in Kolaka especially in Sub Toari, because people have a lot to feel the benefits of raising goats crossbreed Ettawa effort as an attempt to increase the income of livestock farmers' income. Based on the potential of natural resources such Toari the District, where there are also many natural foods available such as *Gliricidia* leaves and mulberry leaves so that doing business Ettawa crossbreed goat farm can be directed to the intensive rearing. On the basis of these ideas, the study aims to assess the effect of natural feed mulberry and *Gliricidia* the carcass percentage and non-carcass Ettawa male crossbreed goats.

B. Methodology

1. Materials

This study was conducted for 4 months starting in January to April 2016, located in the Village Ranomentaa District of Toari Kolaka. This study used 12 male goats crossbreed Ettawa age ranges of 4-6 months that were placed in 12 individual cages. The materials used are natural feed (*Gliricidia* leaves and mulberry leaves), water, salt, and medicine. The equipment used in this study is the enclosure of metabolic (individual cages), the feeding, drinking, machetes, digital scales, weight scales, spades, buckets, basins, meter tape, cutter, hacksaw, knife, machete, plastic bags, raffia and cutting table.

2. Method

This research was conducted with the two stages, the first stage and the second stage cutting maintenance. Before carrying out maintenance advance preparation including familiarized animals used for approximately 1 week in a row, because the goats come from farms that maintenance people and different feed given to those given at the time of the study. Natural feeding is done 3 times a day i.e. morning hours of 08.00 pm, during the 13:00 pm and the afternoon at 16.00 pm, while the drinking water and given adlibitum. Weight weighing performed every 2 weeks for 3 months to see the body weight of goats. How to calculate the weight gain, namely:

$$\text{Weight gain} = \frac{\text{Final Body Weight} - \text{Initial Body Weight}}{t}$$

Cutting procedure on this research can be seen in Figure 5 as follows:

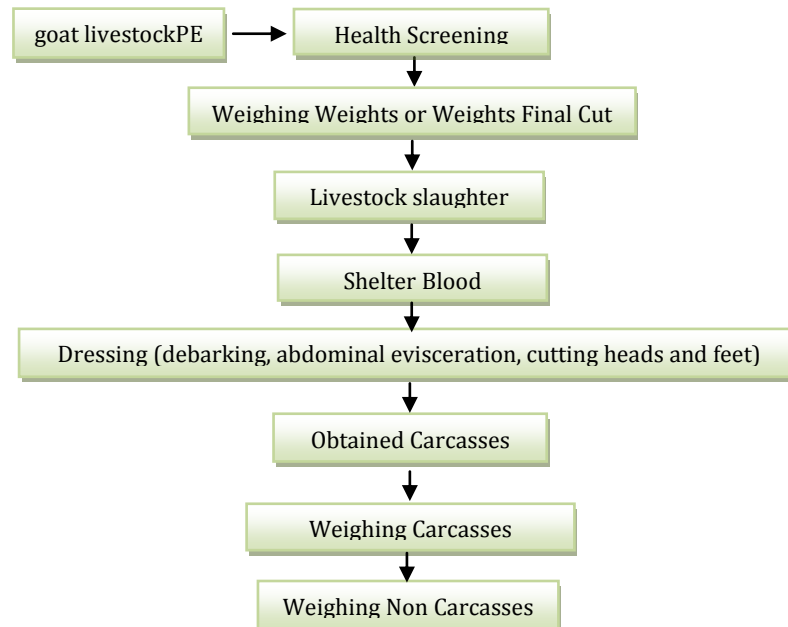


Figure 1. Flowchart Cutting

3. Research design

The design used in this study is completely randomized design (CRD) 3 treatments with 4 replications. Treatment 1 (T1) (100% mulberry leaf), T2 (50% of mulberry leaves, 50% Gliricidia leaves) and T3 (100% Gliricidia leaves). The parameters were observed in the study were: body weight, weight and percentage of carcass weight and the percentage of non-carcass

C. Result and Discussion

Based on research that has been conducted on goats Crossbreed Ettawa (CE) male given natural feed mulberry and Gliricidia showed significant ($P < 0.05$) weight gain, daily slaughter weight and carcass weight but had no effect ($P > 0.05$) on carcass percentage, Non Carcass Weight and Percentage Non Carcass (Table 1).

Table 1. Average Added Weight Loss, Weight Cut, Carcass Weight, Percentage Carcass, Non Carcass Weight and Percentage Non Carcass Goat Feeding PE Males with Natural Mulberry and Gliricidia

Parameter	Treatment			Sig.	Ket.
	T 1	T 2	T 3		
WG (g / day)	22.83 ^b	22.42 ^b	26.98 ^a	0,021	*
Slaughter weight (kg)	10.37 ^b	11.21 ^b	13.29 ^a	0,041	*
Carcass Weights (Kg)	4.17 ^b	4.24 ^b	5.38 ^a	0.028	*
Carcass percentage (%)	39.07	38.43	39.43	0.958	tn
Non Carcass Weights (Kg)	5.76	6.20	7.50	0.079	tn
Non Carcass Percentage (%)	50.73	55.09	54.39	.810	tn

Description: Different superscript on the same line indicate significant difference ($P < 0.05$), * = Influential significantly ($P < 0.05$), tn = not significant ($P > 0.05$)

Based on the analysis of variance showed that the WGited Nations a significant effect ($P < 0.05$) as a result of treatment (Table 1). On average the WGited Nations showed that T3 (26.98 g / day) was significantly different ($P < 0.05$) with T2 (22.83 g / day) and T1 (22.42 g / day), but T2 and T1 not significantly different. WG differences are caused by the consumption levels BK different, but it also can be influenced by the quality and quantity of feed. This is in accordance with the opinion of Parakkasi (1999), that one of the factors that influence weight gain is feed, the higher the amoWGt of feed consumed, the higher the growth rate of livestock. Added by (Nurasih, 2005) that the body weight gain is strongly influenced by the quality and quantity of feed, this question is a cattle weight gain votes in proportion to the ration consumed.

Average daily waight gain (WG) ranged from 22.42 to 26.98 g / day lower than research Purbowati et al. (2006), that the appearance of PE goat by feeding forage gliricidia, written by other green feed produce weight gain 188.10 g / head / day. The WG is low may be caused by

the availability of nutrients that can be converted into meat. Perry et. al. (2003) explains that the feed ingredients that contain high fiber will reduce the value of digestibility of nutrients other as to digest crude fiber required a lot of energy.

The average slaughter weight gained during research, namely T1 (100% mulberry) 10.37 Kg, T2 (50% and 50% mulberry *Gliricidia*) amounted to 11.21 Kg, and T3 (100% *Gliricidia*) amounted to 13.29 Kg. The mean weight of the highest cut on the T3 treatment by feeding 100% *gliricidia* and averaging the lowest in treatment T1 administering 100% mulberry. This indicates that the addition of different types of natural food to the extent of 100% real impact on the increase in slaughter weight Ettawa male goats Crossbreed.

One of the factors that affect the weight piece is feed intake. The existence of significant effect ($P < 0.05$) among the three treatments, presumably because the feed has a different quality. Slaughter weight also influenced by the growth of the goat during maintenance. One that affects growth is the dry matter intake. Good growth also resulted in weight cut is good too, and vice versa. These results are consistent with the statement Agnihorti et al. (2006) that the animal by administering only green fodder without addition of complete feed, it will affect the weight cut.

Goats Ettawa Crossbreed with different natural feeding significant effect ($P < 0.05$) on carcass weight in each treatment. The average carcass weight gained during the research T1 (100% mulberry) of 4.17 Kg, T2 (50% and 50% mulberry *Gliricidia*) of 4.24 Kg and T3 (100% *Gliricidia*) of 5.38 Kg. The average of the highest carcass weight at the T3 treatment by feeding 100% *Gliricidia* and averaging the lowest in treatment T1 administering 100% mulberry. The difference of feeding natural to treatment group, which can cause an influence on the increase in slaughter weight where the weight potoong is one of the factors that influence differences in carcass weight. This allegation in accordance with the opinion of Rianto et al., (2006) that one of the factors that influence carcass weight is the weight cut, the higher the weight cut, the higher the carcass weight gained

Soeparno (2009) states that the variation of carcass weight and carcass composition is largely dominated by the weight of the body. Added by Nusi (2011), any increase in slaughter weight is always followed by an increase in carcass weight, which means that the increase in slaughter weight associated with the growth and development of body parts or carcasses.

The average of the percentage of carcasses obtained during the research T1 (100% mulberry) amoWGted to 39.07%, T2 (50% and 50% mulberry *Gliricidia*) by 38.43% and T3 (100% *Gliricidia*) amoWGted to 39.43%. The average percentage of carcasses in this study is lower than research Agnihorti et al. (2006), which earned an average carcass percentage of 43-46% in goats given complete feed, but in this study only treated using green feed without the addition of concentrate. This fact shows the provision of green fodder based locally despite having levels of protein and energy feed different major influence on slaughter weight, and no effect on the percentage of carcasses so that they can be maximized with additional feed more economically so as to meet the needs of livestock and improve carcass quality. Based on the analysis of variance the three treatments were not significantly different ($P > 0.05$) allegedly as a result of anti-nutrients foWGd in *Gliricidia* leaves and mulberry leaves that inhibit and degradation feed digestibility in the rumen. Perry et. al. (2003) explains that the feed ingredients that contain high fiber digestibility will lower the value of other food substances due to digest crude fiber required a lot of energy so that it can affect the percentage of carcasses.

Feeding naturally different in Ettawa male crossbreed goats, showed no effect ($P > 0.05$) to the non-carcass weight for each treatment. Non carcass weights were obtained in line with the weight cut is generated, i.e. the higher slaughter weight, then the non-carcass weight produced is also likely to increase. As for the average non carcass weight can be obtained with weight distribution of non carcass (skin, head, feet, liver, spleen, IWGgs, trachea, heart, testis, omental fat, tail and innards).

Factors affecting non carcass weight at Ettawa male goat hybrid is a different feed consumption feed dry matter. This is reinforced by the statement (Berg and Butterfield, 2005) that the factors that can affect the production of non-carcass an animal is growth and nutrition.

Based on Table 1. Shows the percentage of non-carcass weights and the male PE goat that fed natural mulberry and *Gliricidia* are not significant ($P > 0.05$) with an average range of 50.73 to 55.09%. The results are consistent with the results of research Hudallah et al. (2007) that the non carcass percentage ranged from 53.05 to 55.58%. Added by Adiwiniarti et al. (1999) which states that non carcass percentage is 57% of the overall percentage.

D. Conclusion

Based on these results it can be concluded that the natural feeding mulberry and *Gliricidia* real effect on body weight gain, slaughter weight and carcass weight but had no effect on carcass percentage, non carcass weight and carcass percentage.

E. References

- Agnihorti, M.K., V. Rajumar & T.K. Duta. (2006). Effect of feeding complete rations with variable protein and energy levels prepared using by-products of pulses and oilseeds on carcass characteristic, meat and meat ball quality of goats. *Asian-Aust. J. Anim. Sci.* 19 : 1437 – 1449
- Adiwinarti R, Lestari C.M.S, Purbowati E., Riyanto E. & Prawoto J.A. (1999). Karakteristik karkas dan non karkas domba yang diberi pakan tambahan limbah industry kecap dengan aras yang berbeda. *Jurnal pengembangan peternakan tropis.* 24 (4) : 137-145.
- Berg, R. T. & R. M. Butterfield. (1976). *New Concepts of Cattle Growth*. Sydney: Sydney University Press.
- Dinas Pertanian, Holtikultura dan Peternakan Kolaka, (2015). *Data Populasi Ternak Kambing Kabupaten Kolaka*. Kolaka: Dinas Pertanian, Holtikultura dan Peternakan Kolaka.
- Hafid, H. (2002). Pengaruh umur kronologis terhadap proporsi organ dalam ternak kambing. *Kendari: Majalah Ilmiah Agriplus. Fak. Pertanian Universitas Halu Oleo, Edisi No. 34 Tahun XII Mei 2002.*
- Hafid, H., Nuraini & A. Syam, (2003). Studi tentang Karakteristik Karkas Kambing Lokal yang Berasal dari Pola Pemeliharaan Tradisional. *Jurnal Penelitian Mimbar Akademik. Kendari: Jurnal Lembaga Penelitian Universitas Halu Olea.*
- Mulyono, S. (2000). *Teknik Pembibitan Kambing dan Domba Edisi 2*. Jakarta: PT. Penebar Swadaya,
- Hudallah C.M.S, Lestari E. & Purbowati. (2007). Persentase Karkas dan Non- Karkas Domba Lokal Jantan dengan Metode Pemberian Pakan yang Berbeda. Di dalam Darmono dkk, penyunting. *Akselerasi Agribisnis Peternakan Nasional melalui Pengembangan dan Penrapan IPTEKS. Prosiding Seminar Nasional Teknologi Peternakan dan Veteriner ; hlm 487-494.*
- Nurasih, E. (2005). *Kecernaan Zat Makanan dan Efisiensi Pakan pada Kambing Peranakan Ettawa yang Mendapat Ransum dengan Sumber Serat Berbeda. Skripsi*. Bogor: Fakultas Peternakan, Institut Pertanian Bogor.
- Nusi, M. (2011). *Penggunaan tongkol jagung dalam complete feed dan undergraded protein terhadap konsumsi nutrien, pertambahan bobot badan, kualitas dan kualitas daging sapi peranakan ongole. Tesis*. Yogyakarta: Program Pascasarjana. Fakultas Peternakan Universitas Gajah Mada.
- Parakkasi, A. (1999). *Ilmu Makanan dan Ternak Ruminansia*. Jakarta: UI Press.
- Perry, T. W., A. E. Cullison & R. S. Lowrey. (2003). *Feed & Feeding. 6nd Ed. Pearson Edication*, New Jersey: Inc. Upper Saddle River.
- Purbowati, E., C.I. Sutrisno, E. Baliarti, S.P.S. Budhi & W. Lestariana. (2006). Komposisi kimia otot Longissimus dorsi dan Biceps femoris domba lokal jantan yang dipelihara di pedesaan pada bobot potong yang berbeda. *J. Animal Production*
- Rianto, E., E. Lindasari & E. Purbowati. (2006). Proporsi daging, tulang dan lemak karkas Domba Ekor Tipis jantan yang mendapat pakan tambahan dedak padi dengan aras yang berbeda. *J. Livestok Prod.* 8(1) : 28 – 33.
- Soeparno. (2009). *Ilmu dan Teknologi Daging. Cetakan V*. Yogyakarta: Gajah Mada University Perss.