International Journal of Sciences: Basic and Applied Research (IJSBAR)

ISSN 2307-4531
(Print & Online)

http://gssrr.org/index.php?journal=JournalOfBasicAndApplied

Characteristic of Carcass, and Non Carcass of Kacang Goat Intensive Fattening

Muhammad Hatta[a*], Sudirman Baco[b], Syamsuddin Garantjang[c], Effendi Abustam[d]

[a,b,c]*Department of Animal Production, Faculty of Animal Science, Hasanuddin University*
Jalan Perintis Kemerdekaan Km. 10, Makassar 90245, Indonesia
[a,b,c]*Department of Animal Production Hasanuddin University Makassar Indonesia*
[d]*Department of Animal Product Technology Hasanuddin University Makassar Indonesia*
[a]*Email: dira_hatta@yahoo.com*
[b]*Email: sudirmanbaco@gmail.ac.id*
[c]*Email: effendiabu@hotmail.com*
[d]*Email: sgarantjang@gmail.com*

Abstract

This research aims to examine the characteristics of carcass and non-carcass, in intensive fattened females and male goats. The research was conducted at beef animal Laboratory and Nutrition and Feeding Laboratory of Hasanuddin University of Makassar. This study used 16 Kacang goat, 8 males and 8 females aged under 1 year (Io). Slaughter weight data is obtained by weighing the animal before it is slaughtered. Furthermore, it is done by carving and weighing all parts of carcass and non carcass and offal. Data were analyzed using *t-test* . and descriptive. The results of the research on goat showed that, the percentage total weight of non carcass goat male higher than with female goat but the carcass weight is relatively the same.

Key word: Kacang Goat; gender; intensive; carcass; non-carcass; feed complit.

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* Corresponding author.

1. Introduction

Kacang Goat have small adult body size and short, horned, small and erect ears, short neck and rear upper body [11] . The superiority of goats is not selective and able to utilize low quality feed, high adaptability and able to produce well in critical land with weight gain per day 50 - 150 g /head /day. This type of goat animal is a meat-producing that has a percentage of carcasses ranging from 43-44% [10,7]. Kacang Goat also have better stirrings than PE goat [13].

An intensive maintenance pattern with complete feed is expected to increase its growth and is followed by a high percentage of carcass and a high proportion of meat and quality. Therefore, a study was conducted to assess the characteristics of carcass, and non carcass of Kacang Goat both male and female are fattened intensively.

The purpose of this study was to examine, the percentage of carcass, and non carcass in intensive females and fattened goats.

2. Research Materials and Methods

2.1. Animal and Experimental Design

The research was conducted at beef animal Laboratory on Goat Testing Unit and Nutrition and Feeding Laboratory of Hasanuddin University of Makassar.

The research material used in this research is as much as 16 Kacang Goat, 9 months old (8 male and 8 female). Animal is kept in individual cages with slat /wood slats. This study used a Completely Randomized Design with two treatments and eight replications. Eight males as treatment P 1 and eight females as P2 treatment.

Animal feed ingredients (concentrate materials) used are local materials from agricultural and industrial waste products such as rice brand, corn, coconut cake, molases, mineral mix, urea, salt, and fish flour . Forage materials used are Javanese leaf (*Linnea coromandelica),* gamal leaf (*Gliricidia maculata*) and lamtoro (*Leucena leucocepala*) dry.

The tool used is knife, machetes, saws and *scalpel* for cutting and polishing.

Electric digital counterpart to weigh goat that has a capacity of 500 kgs with the smallest scale of 0,00 kg, is used to measure the weight of animal and scale 1 g smallest digital scale for weighing the portions of carcass and non carcass.

2.2. Maintenance Management

Maintenance in phase I is a habitual for 3 weeks to provide opportunities for animal to adapt to the environment and feed given. During the habituation of aimals reearch is given oral medication or injections such as worm medicines, vitamin B complex, terramicin, injectamin and other drugs. Concentrate feed was given as much as

3% of goat body weight while forage was given 35% of total feed.

Maintenance stage II, animals kept and fattened in individual cages by providing concentrated feed and dry forage . The concentrate / food reinforcement composition (Table 1). Concentrate feed is given in the morning and administered twice daily. Hay (dry forage) is given 2 - 3 times daily in *ad-libitum* starting at noon. Maintenance or fattening is done for 2 months. Furthermore, the slaughtering of beef to obtain data of carcass and non carcass weight. During maintenance, animals health is always controlled through good cage sanitation, administration of medicines and vitamins.

Table 1: Material Composition of Research Concentrate

No.	Materi Material feed	Composition (%)
1.	Rice brand	20,0
2.	Corn	20,0
3.	Coconut cake	7,0
4.	Molases	2,50
5.	Mineral mix	2,00
6.	Urea	2.50
7.	Salt	2.00
8.	Fish flour	9.00
9	Forage (hay)	35.00

2.3. Parameter of Research

The parameters measured and studied were carcass and non-carcass weight. Weighing the goat's final weight done to determine the weight of pieces.

2.4. Slaughter and Slaughter Procedures

Animals is fasted a day (12 hours) before cutting, but drinking water is still given in *ad libitum* to minimize the weight variation due to the contents of the digestive tract and facilitate the cutting. Cattle slaughter is done halally by cutting the neck to the *jugular veins* , *esophagus* , and *trachea* disconnected for perfect blood loss. Then the tip of the *esophagus is* tied so that the rumen fluid does not come out which can contaminate the carcass when the animal is hung. Animals is suspended on the *tendo-achiles* on both hind legs, furthermore troubled. the head is released from the body in the *occipito-atlantois* joint . The forelegs and the hind legs are released at the *carpo-metacarpal* joint and the *tarso-metatasal* joint . Fresh carcass is obtained after all internal organs are removed, namely the liver, spleen, heart, lungs, *trachea* , gastrointestinal, gall, and pancreas except the kidneys. Carcass weight is obtained from the weight difference cut with heavy blood, head, legs, skin, internal organs (other than kidneys), and reproduction apparatus and tail. The percentage of carcass and offal

was obtained by dividing each carcass weight and the total non-carcass/offal divided by the live weight multiplied by 100. The percentage weight of the non-carcass parts was obtained by dividing the weight of the non-carcass part with the slaughter weight multiplied by 100.

2.5. Data analysis

The data obtained were analyzed by covarian parametric analysis method with nominal quantitative data. Data processing using computer program package SPSS Versi 16 for Windows [1] .

3.1. Results

Table 2: Percentage of Carcasses, and Non Carcasses of Kacang Goat Male and Females.

Parameter	Carcass (%)	Non Carcass (%)
Male	41.1 ± 0.89	64.6 ± 2.37a
Female	38.5 ± 3.10	53.3 ± 4.24 [b]
Average	39.8	58.95

Table 3: Non Carcass Percentage (Blood Weight , Head, Skin, Legs, and Reproduction).

No	Variable	Gender	
		Male	Female
1	Blood	03.45 ± 0.79	3.69 ± 0.07
2	Head	8.53 ± 0.39	8.12 ± 0.63
3	Skin	7.74 ± 0.89	7.43 ± 0.44
4	Feet	3.62 ± 0.46	3.28 ± 0.54
5	Reproductive organs	1.17 ± 0.16	0.96 ± 0.20

Table 4: Percentage of Offal Weight (Kidney, Liver, Linfa , Heart and Breathing)

No	Variable	Gender	
		Male	Female
1	Kidney	0.35 ± 0.01	0.37 ± 0.05
2	Heart	1.90 ± 0.49	1.82 ± 0.20
3	Linfa	0.13 ± 0.05	0.17 ± 0.04
4	Heart	0.65 ± 0.44	0.73 ± 0.13
5	Respiratory	1.36 ± 0.39	1.28 ± 0.25
6	Digestion	30.21 ± 3.45	32.29 ± 3.03

Table 2. Demonstrate that percentage of carcass of Kacang goats that are kept intensive at high protein content can produce high enough percentage of carcasses that is 41.1 ± 0.89 for males and 38.5 ± 3.10 for females, and offal 64.6 ± 2.37 in males and 53.3 ± 4.24 in females.

Based on Table 3. It is known that the results of research on intentionally grown Kacang goats with high protein feeding, have the characteristics of non-carcass percentage of blood, head, skin, feet and reproduction in males and females as follows: 3.45 ± 0.79 and 3.69 ± 1.07; 8.53 ± 0.39 and 8.12 ± 0.63; 7.74 ± 0.89 and 7.43 ± 0.44; 3.62 ± 0.46 and 3.28 ± 0.54; 1.17 ± 0.16 and 0.96 ± 0.20

Table 4. Demonstrate that the weight percentage of kidneys, liver, lymph, heart, respiratory and digestive apparatus of male and female goat are as follows: 0.35 ± 0.01 and 0.37 ± 0.05; 1.90 ± 0.49 and 1.82 ± 0.20; 0.13 ± 0.05 and 0.17 ± 0.04; 0.65 ± 0.44 and 0.73 ± 0.13; 1.36 ± 0.39 and 1.28 ± 0.25; and 30.21 ± 3.45 and 32.29 ± 3.03

3.2. Discussion

Anova test results show that sex is not significant its effect on carcass percentage (Table 2). This may be caused by animals are still young and both sexes have not achieved optimum growth so there has been no difference in growth rate including fat accumulation, bone and muscle growth. The percentage of original Kacang goat carcass and its crosses are 44.48-44.98 and 42.28-43.15 [12] . Furthermore it is said that the percentage of carcass is inversely proportional to the weight of live goats. The higher the weight of life tend to be lower percentage of carcass. Percentage of carcass Kacang goats are at 43.8% [10] .

Figure 1: Carcass of Kacang goats

Particular percentage of carcass is probably caused by the age of cattle that are still relatively young so that the final weight is not maximal and no effect on the percentage of carcass weight. Another factor that can affect the production of an animal carcass is race, age, gender, growth rate, the slaughter weight and nutrition [4] and [15] . While the cattle of this study age is still under 1 year, slaughter weight, nation and nutritional relatively

the same so also non-carcass weight. This may be because males have growth hormone from their testes, androgens that are capable of spurring the growth of males are not yet functioning optimally. Gender causes different growth rates , males usually grow faster than in female beef at the same age [9].

Table 2. shows that sex does not significantly affect the percentage of non-carcass of Kacang goats especially on blood, head, skin, feet, and reproduction . This may be due to the bean body shape of both male and female have the same posture from front to back straight and round like Kacang goats. The ultimate weight of the study animal when cut is relatively the same . Blood follows the weight pattern the more weight the beef the more heavy the blood as well as the reproduction apparatus, head, skin, lower legs. The percentage of meat, fat, bone, connective tissue, and *meat bone ratio* (MBR) did not differ significantly at a given age [13].

Table 4. showed that in male goats and females intensively grown with high protein feeds did not statistically have a significant effect on the percentage weight of offal parts such as kidneys, liver, lymph, heart, respiratory and digestive devices. This may be caused by the weight of male and female cattle are also not significantly different so that the animals parts are also relatively the same . In addition , the animal is also still relatively young so that the development of body parts are still running linearly along the growth of these weight slaughter. As with body dimensions, the weight of offal and offal is not significantly different. The performance of a weight slaughter is the result of the influence of hereditary factors and the cumulative effect of environmental factors experienced by the animal concerned [6]. Furthermore, it is stated that the genetic factor of animal determines the ability possessed by a livestock while the environmental factor provides an opportunity for the animal to display its ability. It is also asserted that an animal will not perform well if it is not supported by a good environment in which the live weight or be maintained, otherwise a good environment does not guarantee good performance if the animal does not have good genetic quality.

3. Conclusion

Percentage of total non carcass the Kacang goat male is higher than the female Kacang goat but the carcass weights are relatively the same.

Acknowledgments

The author be thankful of the Republic Indonesia for the awarding of scholarships of Education and Research and University of Hasanuddin for supporting financial this research.

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