

Growth Performance of Local Sheep Fed with Mung Bean Sprouts Waste

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Introduction

There are two distinct types of local sheep in Indonesia, thin-tailed and fat tailed, with some strain differentiation within each, particularly the thin-tailed group (Sodiq and Tawfik, 2004). Jonggol and garut sheep are thin-tailed, with growth performance better than other breeds within group (Sumantri *et al.*, 2007; Sodiq and Tawfik, 2004). Growth performance is also influenced by nutrient content of feed. Mung bean sprouts waste is unconventional feedstuff which has been tested on local sheep. The waste contained 49.4% crude fibre and 13-14% crude protein (Rahayu *et al.*, 2011). The aim of this experiment was to evaluate the performance of growing local (jonggol and garut) male lambs fed with pellet ration containing 30% mung bean sprouts waste.

Materials and Methods

Eight local growing male lambs consisting of four UP3-jonggol and four garut (7-8 months of age and average body weight \pm 15 kg), were used in this experiment for three months. The complete ration was pellet containing 30% of mung bean sprouts waste with 87.7% dry matter (DM), 16.7% crude protein, 24.5% fiber, 3.7% extract ether and 72.2% total digestible nutrient (TDN). The animals were reared in individual cages with water and feed *ad libitum*. Feed consumption was measured daily and body weight gain monthly. Parameters measured were average daily gain (ADG), daily feed consumption (FC) and feed conversion ratio (DFC/ADG). Data were analyzed by using t-test between the two breeds.

Results and Discussion

Average daily gain (ADG), daily feed consumption and feed conversion ratio were not significantly different between breeds (Table 1). Sumantri *et al.*, (2007) reported that UP3-jonggol sheep was produced from crossbred jonggol sheep and garut sheep, therefore both sheep breeds had a similar growth performance. The ADG (jonggol : 127.0 g/d and garut : 153.3 g/d) fed with 30% mung bean sprouts waste were higher than javanese thin-tailed sheep (107.9 g/d) (Herianti and Prawirodigdo, 2010), garut sheep (117.7 g/d) (Handiwirawan *et al.*, 2004) and other local sheep (95.0 g/d) (Duldjaman, 2004). Meanwhile, feed conversion ratios of jonggol (6.9) and garut (6.7) fed with 30% mung bean sprouts waste were better than javanese thin-tailed (7.2) (Herianti and Prawirodigdo, 2010).

Table 1. Growth performance of local sheep fed with Mung bean sprouts waste.

Parameters	Jonggol sheep (JS)	Garut sheep (GS)
ADG (g/day)	127.0 ± 21.3	153.3 ± 23.6
Feed consumption (g/day)	859.3 ± 65.4	997.0 ± 151.0
Feed conversion ratio	6.9 ± 1.0	6.7 ± 1.9

Note: ADG (average daily body weight gain), Feed conversion ratio (Feed consumption/ADG).

Growth performance of jonggol sheep (JS) and garut sheep (GS) changed during the three months experiment (Figure 1). At the beginning, ADG of garut sheep was higher than jonggol sheep, but gradually decreased, and at the end of the experiment, both garut and jonggol sheep showed similar ADG (a). Meanwhile, the daily feed consumption of garut sheep was higher than jonggol sheep (b). The feed conversion ratio of jonggol sheep tended to be higher than that of garut sheep at the beginning, but the ratio for garut sheep increased at the 2nd month and then decreased at the 3rd month, and finally both breeds showed similar feed conversion ratio (c).

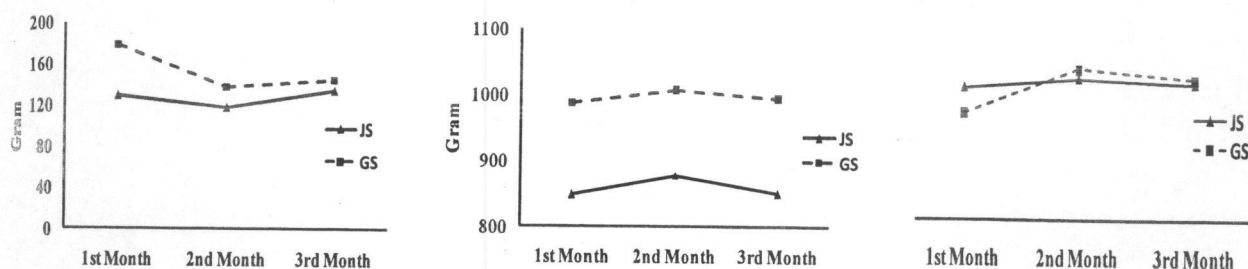


Figure 1. The average daily gain (a), daily feed consumption (b) and feed conversion ratio (c) of local sheep (jonggol and garut) during three months experiment.

It is concluded that there were no significant differences in growth performance between jonggol and garut breeds fed 30% of mung bean sprouts waste.

References

- Duldjaman M., 2004. Penggunaan ampas tahu untuk meningkatkan gizi pakan domba lokal. *Med. Pet.* 27 : 107-110.
- Handiwirawan E., H.Hasinah, I-G.A.P. Mahendri, A. Priyanti and I. Inounu, 2004. The Productivity of Garut Lambs in Two Different Agroecosystem. Pros. Seminar Nasional Teknologi Peternakan dan Veteriner 2004. Pp. 335-340.
- Herianti I. and S. Prawirodigdo, 2010. Introduction of Formula for Improving Diet Quality in the Sheep Fattening Farm at Pringsurat Village of Temanggung District. Pros. Seminar Nasional Teknologi Peternakan dan Veteriner 2010. Pp.593-598.
- Rahayu S, D.A. Astuti, B. Satoto, R. Priyanto, L.Khotijah, T. Suryati and M. Baihaqi, 2011. Local sheep production fed *Indigfera* sp and mung bean sprouts waste. *Research Report*. November 2011. IPB-Directorate General High Edu. of Indonesia.
- Sodiq A. and E.S. Tawfik, 2004. Productivity and breeding strategies of sheep in Indonesia : A review. *J. of Agric & Rur. Development in tropics & subtropics* 105:71-82.
- Sumantri C., A. Einstiana, J.F. Salamena and I. Inounu, 2007. Keragaan dan hubungan phylogenetic antar domba lokal di Indonesia melalui pendekatan analisis morfologi. *J. Ilmu Ternak and Vet.* 12:42-54.