

The comparison of Bali and Hissar cattle fattened with leucaena

Syamsul H. Dilaga, Hermansyah, Oscar Yanuario, Sofyan, and Yusuf A. Sutaryono

Faculty of Animal Science- University of Mataram, Jl. Majapahit No. 62, Mataram, Maratam 83125, Indonesia. Email: shdilaga@gmail.com

Introduction

- Bali cattle (*Bos javanicus*) and Hissar cattle (*Bos indicus*) are commonly raised by farmers in Sumbawa in traditional free grazing system.
- Cattle fattening business has now started to be conducted in more intensive approach by the farmers.
- Various research and development programs introduced *Leucaena leucocephala* cv. tarramba as feed source for cattle fattening in Sumbawa, so the availability of this leucaena increased significantly.
- Although leucaena has been commonly used to feed Bali cattle and Hissar cattle, there is no information on the economic analysis of feeding leucaena for these two cattle breeds.



Plates 2 and 3.

Carrying leucaena (**above**) and fattening of Hissar cattle with leucaena (**below**).



More findings

- Local butchers prefer to slaughter Bali cattle than Hissar cattle due to the smaller size and hence no need to refrigate unsold meat.
- Bali cattle also preferable for "Idul Adha" sacrifice because they are more affordable than Hissar cattle.



Plate 4. Bali cattle fattening with Leucaena

Objective

To evaluate comparative profitability of feeding 100% leucaena for fattening of Bali cattle (small frame size) and Hissar cattle (medium frame size)



Plate 1. Leucaena trees on dry land

Methods

- A case study was conducted in 2 farming units with 5 cattles each at Penyaring Village Sumbawa District from February to July 2018
- Average liveweight of male Bali cattle was 107.8 ± 3.11 kg and male Hissar cattle 192.0 ± 6.84 kg.
- Cattle were fed with 100% fresh leucaena leaves
- Parameters measured were:
 - 1) Feed consumption
 - 2) Growth rate
 - 3) Profit in IDR/100 kg LW/month

Results

Bali and Hissar bull Fattening Comparison

Parameters	Bali bulls	Hissar bulls
1. Initial LW, kg	107,8±3,11	192±6,8
2. Purchase price, IDR/head	4,312,000±124,579	7,680,000±273,496
3. Length of fattening, day's	180	120
4. Leucaena consumption, kg fresh/head/day	15,8±0,91	23,42±0,28
5. Fresh leucaena price during fattening, IDR	1,405,200±16,649	1,422,000±81,747
6. Final LW, kg	205,1±15,59	275,2±5,29
7. Average Daily Gain, kg	0,54±0,07	0,69±0,09
8. Selling price, IDR/head	11,080,000±848,970	14,890,000±292,404
9. Profit, IDR/head/mo	891,000±809,200	1.451,200±125,660
10. Profit, IDR/100kg LW/mo	436,000	526,175

- Feeding 100% leucaena promotes high growth rate for both Bali cattle and Hissar cattle.
- The fattening of cattle with medium frame size (Hissar cattle) produced higher growth compared smaller frame size cattle (Bali cattle). This result support previous work reported by Dahlanuddin *et al.*, (2018).
- However, Bali cattle were easier to sell because the price was more affordable compared to the price of Hissar cattle
- The growth rate per 100kg liveweight/month, were also higher in Hissar cattle compared to Bali cattle

Conclusions

- The Average Daily Gain of Hissar cattle was slightly higher compared to Bali cattle
- The result can not be used to conclude that one breed is better than the other, but they provide options for farmers to select cattle breed when leucaena is sufficiently available.

References

Dahlanuddin, Tanda S. Panjaitan, Sofyan, Denis P. Poppy, and Simon P. Quigley. 2018. Bali x Hissar cattle fed *Leucaena leucocephala* supplemented with maize grain grew faster than Bali cattle. Proc. of the 10th International Symposium on the nutrition of herbivores. Clermont Ferrand France, 2-6 September 2018.

The International Leucaena Conference (ILC) 2018
The University of Queensland, St. Lucia Campus
Brisbane, Australia 1-3 November 2018

