



# Growth performance and carcass characteristics of finishing Boer goats

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Feeding may be the highest expense of any meat goat operation. Goats raised for meat need high quality feed in most situations and require an optimum balance of many different nutrients to achieve maximum profit potential. Because of their unique physiology, meat goats do not fatten like cattle or sheep, and rates of weight gain are smaller.

The objective of our study was to assess the efficiency of feeding a compound feed containing fodder beans to Boer kid meat productivity.

**Introduction.** Profitable meat goat production can only be achieved by optimizing the use of high quality forage and browse and the strategic use of expensive concentrate feeds. Protein is the most expensive nutrient in feeding and therefore often limiting maximum productivity. As soybean is quite expensive protein sources, alternative protein sources like field bean seeds have been successfully used in diets for ruminants.

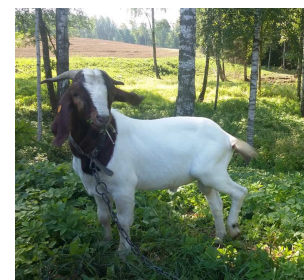
Table 1. The research scheme

| Groups    | Number of kids | Fattening period | Concentrated feed                                   |
|-----------|----------------|------------------|---|
| 1st trial | 4              | 60 days          | Melted fodder beans (50%), barley (25%), oats (25%) |
| 2nd trial | 4              | 60 days          | Pelleted commercial feed                            |

## Results

### Live weight and daily live weight gain of goat kids

| Indices   | 1 <sup>st</sup> trial | 2 <sup>nd</sup> trial |
|---|-----------------------|-----------------------|
| Birth live weight, kg                           | 3.7                   | 3.9                   |
| Live weight at age of 50 days, kg               | 13.0                  | 13.3                  |
| Daily live weight gain till age of 50 days, g   | 186                   | 186                   |
| Age at the end of fattening, days               | 153                   | 152                   |
| Live weight at the end of fattening, kg         | 31.1                  | 35.5                  |
| Daily live weight gain till end of fattening, g | 179                   | 208                   |
| Daily live weight gain in fattening period, g   | 165                   | 235                   |



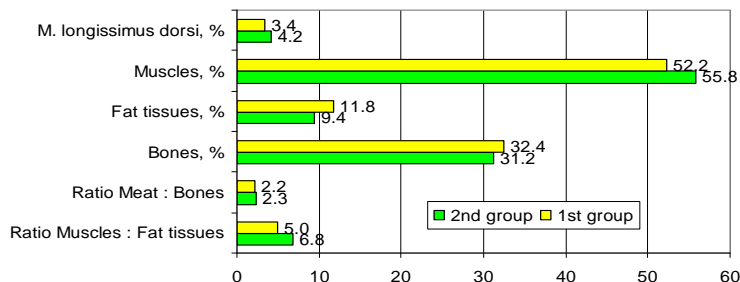
The results showed lower dressing percentage by 13.0 % for the 2nd group kids, but the differences were not significant. There were differences in the thickness of the adipose tissue, in the thickness of the muscle tissue and in the size of the ribeye muscle area, but no significant differences were found.

### Means ( $\pm$ S.E.) of carcass measurements

| Group                 | Dressing, %     | Carcass length, cm | Hip circumference, cm | Body fat thickness, mm | Ribeye area, cm <sup>2</sup> |
|-----------------------|-----------------|--------------------|-----------------------|------------------------|------------------------------|
| 1 <sup>st</sup> trial | 49.5 $\pm$ 6.61 | 68.0 $\pm$ 2.33    | 54.0 $\pm$ 1.92       | 1.9 $\pm$ 0.21         | 12.3 $\pm$ 1.09              |
| 2 <sup>nd</sup> trial | 43.1 $\pm$ 4.20 | 70.0 $\pm$ 1.52    | 55.0 $\pm$ 0.41       | 2.4 $\pm$ 0.16         | 13.1 $\pm$ 0.97              |



### Carcass tissue parts and the ratio



## Conclusions

- Daily live weight gain was by 42.4% higher for the kids of the 2nd group that consumed commercially produced concentrated feed ( $P < 0.05$ ).
- Feeding of grain mix resulted in a lower growth rate in the 1st group kids (31.1 kg and 35.5 kg pre-slaughter live weight, respectively), but kids of the 1st group have a higher dressing rate (49.5% and 43.5%, respectively).
- There is no significant difference in carcass weight (14.36 kg and 14.50 kg, respectively).
- Carcasses in the 1st group had a higher fat content.
- In terms of muscle-to-fat ratio, the carcasses of kids in both groups were significantly different ( $P < 0.05$ ), with 5.0 kg of muscle tissue per 1 kg of fats in the 1st group and 6.8 kg muscles in the 2nd group.
- Total feed costs per animal per day and per 1 kg of live weight gain were higher in the 2nd group, as commercially produced concentrated feed has a significantly higher price than grain mix feed.

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