

## Effects of various levels of wheat bran on weight gain of Baluchi sheep breed of Iran

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**Introduction** Using agricultural by products could result in decreasing feeding costs of animal husbandry enterprise. Wheat bran, as an important by product from milling industry, could be utilized as feed ingredient in animal nutrition due to high content of protein as well as minerals particularly P and B complex vitamins (Bartink and Jakubczyk, 1989). A huge amount of wheat bran is annually produced in developing countries. Application of the wheat bran is restricted in poultry diet due to its high fibre percentage (Abll *et al.*, 1992). Major use of wheat bran has been in ruminant nutrition because of high fibre digestibility (Gravel *et al.*, 1978). The main objective of the present research was to determine the effects of various levels of wheat bran on fattening performance of Baluchi sheep breed of Iran.

**Materials and methods** The experiment was undertaken using fifteen male Baluchi lambs in a completely randomized statistical design to evaluate the use of different levels of wheat bran on fattening performance. Average initial body weight of the lambs was 21.96 Kg (SD=1.92 Kg). Three treatments were applied in the experiment with five replicates for each treatment. The Experimental treatments were: 1.10% wheat bran (control), 20% wheat bran and 30% wheat bran (DM% in diet). Wheat bran was used instead of corn and barley ingredients in treatments two and three. The metabolisable energy and protein content of the diets were approximately 2.5 MJ/kg and 14%, respectively. The experiment was carried out for a period of 90 days. During this time, feeding trial fresh feed was offered to the animals in excess of their consumption twice a day as TMR. Weighing was carried out after a 16-hour fasting once fortnightly. Feed intake was daily measured during the experimental period. The data were analysed using SAS programme.

**Results** The results obtained from the present research indicated that no significant differences were found among different treatment for average final weight, daily weight gain, dry matter intake and feed conversion ratio (Table 1).

**Table 1** Statistical comparison of the fattening performance among different treatments

Performance characteristics	Levels of wheat bran (%)			SEM
	10	20	30	
Final weight (kg)	39.71	37.44	36.55	1.38
Daily weight gain(g)	197.24	171.96	162.09	15.46
Dry matter intake(g/day)	1142.9	1099.92	1077.26	55.11
Feed conversion ratio	5.86	6.60	6.78	0.33

**Conclusions** From nutritional point of view, no significant differences among the treatments may be attributed to high digestibility of wheat bran leading the same provided energy as compared to control diet. As a consequence, we can not firmly say whether wheat bran could be utilized up to 30% DM of a diet, which in turn resulting in a decrease cost of animals feedlot. Further studies with more experimental animals are needed.

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### References

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