

EFFECT OF RESTRICTED MOLASSES ON FEED INTAKE, FEED CONVERSION AND WEIGHT GAINS OF YOUNG BULLS: Peralta A and Hughes-Jones M; CEDIPCA, CEAGANA, Aptd 1256/8, Santo Domingo, Dominican Republic

Molasses had no effect on total feed intake ($P = .90$), weight gains or feed conversion efficiency ($P = .62$) in young bulls fed a chopped whole sugar cane/leucaena diet. (Key words: molasses, sugar cane, Leucaena leucocephala, cattle growth, feed intake).

Sugars are known to have a depressing effect on digestibility of fibre in the rumen (Sutton 1979; Hungate 1966). In an attempt to assess the effect of a restricted amount of molasses on feed conversion efficiency and liveweight gains, eight young Zebu bulls of 137 ± 11 kg were randomly divided between two treatments which were (a) chopped whole sugar cane ad libitum and Leucaena leucocephala ad libitum and (b) which was diet (a) plus a restricted amount of molasses. Intakes and liveweight gains were measured over 13 weeks.

Results: The results of one animal on the molasses treatment were not used because his performance was atypical and it was impossible to fit a good regression to fortnightly weights (gain .02 kg/d r^2 .11).

The results are presented in the Table.

Table:

Effect of molasses addition to a chopped whole sugar cane and leucaena forage diet on intake and growth characteristics

Treatment	Daily intake (Kg/100 kg bodyweight) \pm SE				Mean regressed gain, kg/d	Feed conversion efficiency ¹
	Sugar cane 1.3% urea	Leucaena	Molasses	Total		
Basal diet ²	1.45 \pm .05	.74 \pm .10	--	2.18 \pm .09	.268	12.5 \pm 2.4
Basal diet + restricted molasses	.46 \pm .19	.76 \pm .06	.93 \pm .06	2.16 \pm .34	.271	11.6 \pm 1.8
Level of probability	.0002	.74	--	.90	--	.62

¹ kg liveweight gain/kg feed DM consumed

² Basal diet, whole chopped sugar cane ad libitum and chopped leucaena forage ad libitum

The intake of leucaena was unaffected by the addition of molasses to the diet but molasses consumption replaced cane intake to such an extent that total intake was no higher on the supplemented diet. Daily gains were low and similar between treatments.

The total intakes suggest that molasses addition does not affect overall intake on a poor quality forage diet, when non-protein nitrogen is not limiting.

Free access to both chopped whole sugar cane and chopped leucaena forage resulted in a leucaena intake of about half that of cane, on a dry basis.

References

- Hungate R E 1966 The rumen and its microbes Academic Press New York and London
Sutton J D 1979 Rumen function and the utilisation of readily fermentable carbohydrates by dairy cows Tropical Animal Production 4:1-12

Received November 2 1981

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