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Short Communication

BODY MEASUREMENTS OF KIDS FED ON MONENSIN SUPPLEMENTED COMPLETE RATIONS*

The concept of intensive system of rearing of goats has recently evoked much interest among farmers of Kerala. An important feature of this increased intensification has been the use of complete feeds containing a lower amount of crude fibre than the standard (Owen, 1979) accepted. Supplementing such feeds with ionophore antibiotics like monensin (Havey and Hoehn, 1967) improves body weight gain, body measurements and feed conversion efficiency (Patil and Honmonde, 1994). The present investigation was carried out to study the influence of monensin supplementation on body measurements of kids fed on complete rations containing different levels of fibre.

Thirty Malabari kids of three to four months of age (7.8 ± 0.34 kg) were divided randomly into three equal groups (I, II and III) in a one factor randomized complete block design and were fed on complete rations A, B and C (containing 8, 12 and 16% crude fibre respectively) for a period of 90 days. The rations were isonitrogenous (15% CP), isocaloric (65% TDN) and were supplemented with monensin at the rate of 20 mg/kg. Records of daily feed intake were maintained. Individual records of weekly body weights and body measurements such as body length (from the point of shoulder to pin bone), chest girth (behind the point of elbow) and height (at withers) of all the experimental animals were also maintained. The data were analysed statistically (Snedecor and Cochran, 1980).

The results of the present study reveal that the cumulative increase in length (cm) did not differ significantly ($P > 0.05$) between the three treatment groups (Table).

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Table. Body weight and body measurement characteristics of kids during growth

Particulars	Group I	Group II	Group III
Body weight (kg)			
Initial	7.8 ± 0.26	7.8 ± 0.40	7.8 ± 0.34
Final	17.4 ± 0.80	16.3 ± 0.86	13.8 ± 0.92
Cumulative increase	9.6^{a} ± 0.57	8.5^{a} ± 0.71	6.0^{b} ± 0.74
Body length (cm)			
Initial	36.9 ± 0.81	38.6 ± 0.70	38.0 ± 0.58
Final	53.9 ± 1.03	54.0 ± 1.05	51.5 ± 1.18
Cumulative increase	17.0^{NS} ± 1.26	15.4^{NS} ± 0.84	13.5^{NS} ± 0.89
Chest girth (cm)			
Initial	44.9 ± 0.98	45.8 ± 0.73	45.1 ± 0.84
Final	58.1 ± 1.09	56.2 ± 1.02	53.2 ± 1.04
Cumulative increase	13.2^{a} ± 0.60	10.4^{a} ± 0.88	8.1^{b} ± 0.61
Height at withers (cm)			
Initial	45.0 ± 0.47	46.2 ± 1.00	45.4 ± 1.01
Final	59.4 ± 0.79	58.0 ± 0.96	54.8 ± 0.84
Cumulative increase	14.4^{a} ± 0.87	11.8^{b} ± 0.79	9.4^{c} ± 0.73

a, b, c Values with different superscripts in a row differ significantly ($P < 0.01$)
NS - Non significant ($P < 0.05$)

However, the cumulative increase in girth (cm) was significantly higher ($P < 0.01$) in animals in groups I and II when compared to that of animals in group III (Table). A significant difference ($P < 0.01$) could be noted in cumulative increase in height (cm) between the three groups, with group I coming on top followed by groups II and III in the descending order (Table). The above findings on increase in girth and height correspond well with the data on body weight (Table). The cumulative weight gain (kg) of animals in groups I and II, fed with lesser amount of fibre in the diet, was significantly higher ($P < 0.01$) than that of animals in group III. This is in concordance with the earlier reports of Danner *et al.* (1980), Ostilie *et al.* (1981), Galyean and Owens (1988) and Zinn *et al.* (1994) that the effect of monensin supplementation is more in rations containing lower levels of crude fibre. The significant difference observed between the groups, in increase in girth and height, may be due to the difference in body weight of the animals. The results of the present study indicate that girth and height is a better measure of growth than body length in kids maintained on complete rations supplemented with monensin under intensive system of management.

An investigation was carried out to assess the influence of monensin supplementation on body measurements of Malabari kids fed on three complete rations containing different levels of crude fibrre (8, 12 and 16% respectively). The cumulative increase in length did not differ significantly ($P > 0.05$) between the three groups. The significantly higher ($P < 0.01$) increase in girth and height observed in animals of groups I and II in comparison to that of animals in group III may be due to the difference in body weight of the animals. The above findings indicate that girth and height is a better measure of growth than body length in kids maintained on complete rations supplemented with monensin under intensive system of management.

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