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Effect of Cobalt Supplementation on Performance of growing Calves

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Abstract

The experiment was conducted to study the effect of critical supplementation of wheat straw with cobalt on fibre utilization and nutrient utilization in growing cross-bred male calves. Twenty-one crossbred (HF X Local) male growing calves of 3-4 months age were fed with wheat straw based diet consisting without (Co0) and with 1 (Co1) and 6 (Co6) ppm cobalt as cobaltous chloride. There was no significant difference in intake of wheat straw, concentrate and DMI between the three groups and the ratio between concentrate and wheat straw was maintained at 40:60 irrespective of dietary level of cobalt. Similarly, average cumulative body weight, net gain in body weight or feed efficiency did not differ significantly between treatments. No significant effect was observed on the digestibility of dry matter, organic matter, crude protein, ether extract and fibre constituents like NDF, ADF, hemicellulose or cellulose by supplementation of 1 and 6 ppm Co to the diet of growing calves. Balance of nutrients such as Nitrogen, Calcium and Phosphorus was similar and positive in all the treatment groups. TDN and DCP values of the experimental diets remained almost similar irrespective of dietary level of cobalt.

Keywords: Cobalt, fibre utilization, calves, Supplementation, Performance.