ABSTRACT

TITLE : EFFECT OF GRADED DIETARY LEVELS OF CABBAGE WASTE ON THE PERFORMANCE OF BROILER RABBITS

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A study was conducted to assess the nutritive and feeding value of cabbage waste in rabbits replacing Desmanthus virgatus. The nutrient composition (per cent) in the Desmanthus virgatus and cabbage waste were dry matter - 31.16 and 11.52, crude protein - 20.28 and 12.55, ether extract - 7.39 and 6.04, crude fibre - 20.92 and 26.53, total ash - 6.72 and 16.54 and nitrogen free extract - 44.69 and 38.34, neutral detergent fibre – 31.57 and 24.26, hemicellulose 10.56 and 3.34, calcium – 1.35 and 0.28, phosphorus – 2.45 and 0.43, respectively.

The total glucosinolate content in cabbage waste was 365.09 and 324 mg /100 g in fresh and soaked for 8 hours samples. The pesticides residues within the permissible level were found in cabbage waste. The total bacterial
count in fresh and dried samples of desmanthus and cabbage waste are 167 and 32, 252 and 87, respectively.

A digestion trial was conducted using 12 rabbits. Digestibility of cabbage waste and desmanthus was studied. The digestibility of dry matter, organic matter, crude protein, and nitrogen free extract for cabbage waste were higher than the desmanthus and presence of higher amount of total ash decreases the DCP (8.30 vs 12.83 %) and TDN (73.44 vs 76.16) value.

At graded levels of replacement of cabbage waste for desmanthus at 25 or 50 per cent had low weight gain than control and 75 and 100 % were lower than the 50 % replacement group. Feed intake was higher and feed efficiency was poor in cabbage waste fed groups.

Soaking of cabbage waste increased the dry matter intake (65.61 vs 68.18 gd⁻¹) and poor feed efficiency (5.80 vs 5.60) was observed in soaked cabbage waste fed groups. The glucosinolate content was reduced by 11.6 per cent on soaking.

Iodine supplementation did not improve the weight gain, FCR and intake (g d⁻¹ or g kg⁻¹W⁰.⁷⁵) of protein, DCP nor reduced the TDN. Blood glucose level and cholesterol also not influenced. The T₄ level (µg dl⁻¹) which was less in 50 and 100 per cent group (0.84 and 0.56) was improved (1.30 and 1.76) on iodine supplementation as that of control (1.27). The reproductive performance of cabbage waste and iodine supplemented group and their offspring reproductive performance were not affected. The feeding of cabbage waste and iodine supplementation did not influence the thyroid weight of the rabbits.
Considering the growth performance and cost per kg live weight gain, cabbage waste can be fed up to 50 % for growers and the adult animals can be maintained on 100 per cent cabbage waste without affecting reproductive performance.