

Effect of Enzyme Supplementation of Canola Based Diets on Broiler Performance

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Canola price in the international market was 13 per cent lower than that of soybean in 1992-1993. The cost of poultry feed can therefore be reduced if canola meal can substitute for soybean meal in the formulation. But the presence of antinutritional factors (including non-starch polysaccharides (NSP) 17.9%) in canola meal has restricted its level of inclusion in poultry feed to about 15 % of the diet (Solminski and Campbell 1991).

NSP present in canola meal increases the viscosity of the digesta, leading to reduced rate of passage which enhances the activity of gut microflora and causes metabolic disorders. NSP and/or other antinutritional factors in canola meal may be able to be neutralised by supplementation with exogenous enzymes. The present study aimed to find the effect of enzyme supplementation of high canola based diets on broiler performance.

320 one day old broiler chickens were fed sorghum-soy or sorghum-canola based diets, the latter with or without Avizyme 1300* or Avizyme 1300/1200* enzyme, for a period of six weeks in four tier battery brooders.

The body weights of male chickens fed a high canola diet were less than those fed the soybean diet, but with enzyme supplementation their body weights

were not significantly different from those fed the soybean diet. The six weeks mean body weight of males fed the Avizyme 1300 supplemented canola diet was significantly higher than that of males fed the unsupplemented diet, but there was no significant difference in female mean body weight between any of the treatments.

The feed consumption of broilers of both sexes fed the basal diets was not significantly affected by enzyme supplementation, but the feed conversion ratios of both males and females fed the canola diet were significantly improved by adding Avizyme 1300 or Avizyme 1300/1200.

References

- Nwokolo, E and Sim, J. (1989). Barley and full fat canola seed in broiler diets. *Poultry Science*. 68: 10, 1374- 1380.
- Solminski, A.B. and Campbell, D.L. (1990). Non-starch polysaccharides of canola meal: Quantification, digestibility in poultry and potential benefit of dietary enzyme supplementation. *Journal of the Science of Food and Agriculture*: 53, 175-184.