

EFFECT OF REPLACING SOY A BEAN MEAL WITH COTT ONSEED MEAL IN BROILER RA TIONS

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The price of soya bean meal (SBM) has been sharply escalating over the years and no cheap substitute to replace SBM in animal feeds is forthcoming. A study was conducted to investigate the possibility of replacing SBM with cotton seed meal (CSM) with 37% crude protein in commercial broiler rations. Four comparable diets with varying levels of CSM (0, 5, 10 and 15%) were formulated in two phase feeding program, starter (0-21 days) and finisher (22-42 days). Two hundred and forty Hubbard F 15 day-old broiler chicks were randomly assigned into four dietary treatments with six replicates of ten birds each. Body weights and feed intakes were measured and body weight gains and feed conversion ratios (FCR) were calculated for a period of 42 days. At the end of the experiment carcass yield was calculated. The data were analyzed using One Way Analysis of Variance (ANOVA) in SAS and means were separated by Tukey's Studentized Range Test (TSRT). The weight gain of birds fed 15% CSM was significantly lower than the birds fed 0 or 5% CSM ($p < 0.05$) in both starter and finisher periods. Feed intakes were significantly lower in 15% CSM diet than 0 and 5% CSM diet in starter period but not evident in finisher. However, FCR did not change with the treatments during starter and finisher period. Moreover, carcass yields of birds fed different diets were also not significantly different ($p > 0.05$). The results revealed that higher levels of CSM used in the experiment may retard the growth and CSM can be incorporated up to 10% of the diet safely with no adverse effects. High fibre content has been the limitation in high inclusion levels of CSM and 10% inclusion in the diet would be significant in commercial perspective especially when the SBM price is high.

Key words: Broiler chicks, Cotton seed meal, Soya bean meal