

Growth performance of broilers fed on sprouted-roasted guar bean (*Cyamopsis tetragonoloba*) based diets

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Abstract

In a completely randomized block design with 96 Cobb-500 broilers, a study was conducted to evaluate the potential of dietary inclusion of sprouted then roasted guar bean in broiler diets. The 96 male day-old broiler chicks, blocked by pen into equal weight groups of six chicks replicated four times per treatment, were randomly allocated to treatment diets containing graded levels of sprouted then roasted guar bean meal (GBM) at 0, 50, 100 and 150 g kg⁻¹ inclusion level. The guar bean was sprouted and roasted to reduce guar gum effect. Total feed intake decreased significantly as the guar bean meal content increased in the starter phase ($P < 0.05$), but no significant differences in intake of the finisher phase ($P > 0.05$) were observed. Diets containing 0 and 50 g kg⁻¹ GBM recorded significantly higher total feed intake compared to the diet containing 150 g kg⁻¹ GBM. Although average weight gain was not significantly different in birds fed 0 and 50 g kg⁻¹ GBM diets, it was significantly higher than in birds fed on 100 and 150 g kg⁻¹ GBM diets. Feed conversion ratio was not significantly different among treatment groups ($P > 0.05$) but showed a general decreasing trend with increasing guar bean meal inclusion level, the effect being more pronounced during the starter phase. In conclusion, the optimum inclusion level of sprouted then roasted guar bean meal in broiler diets is 50 g kg⁻¹.