



Tropentag, September 19-21, 2012, Göttingen -
Kassel/Witzenhausen

“Resilience of agricultural systems against crises”

Effect of Dietary Levels of Decorticated Cowpea (*Vigna unguiculata*) Supplemented with Molasses on Broiler Chicks Performance

KHADIGA ABDELATTI, MUAMER MUSA

University of Khartoum, Dept. of Animal Nutrition, Sudan

Abstract

This study was conducted to determine the effect of different levels of dietary decorticated cowpea (*Vigna unguiculata*) seeds supplemented with molasses on broiler performance. A total of 240 unsexed one-day old broiler chicks (Ross 308) were used. The birds were randomly divided into six equal groups, with 8 replicates each (5 birds per replicate) in a completely randomised design with factorial arrangement. Six experimental diets (each starter and finisher) were formulated to be approximately isocaloric and isonitrogenous to meet the nutrient requirements for broiler chicks. Three levels (0%, 10%, and 20%) of cowpea with two levels of molasses 0%, 3% were used. The feed and water were provided *ad libitum*. Feed intake and body weight were recorded weekly. The experiment lasted for 6 weeks.

The results showed that the inclusion of decorticated cowpea seed at 10% or 20% without molasses significantly ($p < 0.05$) improved final body weight and total weight gain at finishing period, whereas the addition of molasses at 3% significantly decreased final body weight and total feed intake. The inclusion of 10% cowpea in the diets significantly improved feed conversion ratio and protein efficiency ratio, compared with control. Inclusion of 10% and 20% decorticated cowpea in the diets without molasses were significantly ($p < 0.05$) better than the other treatments.

Broiler chicks can tolerate inclusion of 20% cowpea seeds with positive effects on growth performance. Inclusion of high level of molasses in cowpea seed diets has negative effect on broiler chicks' performance. It is recommended to further study the economic value of using cowpea in broiler diets.

Keywords: Broilers, cowpea, molasses