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“Development on the margin”

## Sweet Potato (*Ipomea batata*) Meal and its Utilisation by Pullet Chicks: Effect on Performance and Serum Chemistry

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### Abstract

The major problem of poultry industry has been traced to feed cost and availability, solution to this globally lies in increased production of conventional ingredients and utilisation of alternative sources of ingredients. The present study was conducted to investigate the effects of feeding sweet potato meal (SPM) partially or completely replacing wheat bran on the performance digestibility and blood constituents of the pullet chicks. The sweet potato tubers were harvested peeled chipped and dried before milling to have SPM. Three diets were formulated SPM was used to replace wheat bran at 0, 50 100 % levels. Diet I had 18.40 % wheat bran 0 % SPM and served as control while diets II-III had the wheat bran portion replaced at 50 and 100 % level with SPM. Crude protein of compounded ration ranged from 20.76–21.18 % while metabolisable energy varied from 2818.28–3023.16 kcal kg<sup>-1</sup> assigned to the dietary treatments thirty per group in three replicates and the experiment lasted for ten weeks.

Results revealed that average daily feed intake ranged from 41.09–42.65 g day<sup>-1</sup> those on control were significantly  $p < 0.05$  higher than others. The nutrient digestibility feed efficiency of the pullet chicks had the same statistical pattern with feed intake. Blood analysis of the pullet chicks revealed increase in blood glucose while the cholesterol level decreased with increased SPM. Mortality recorded cut across the diets was highest in diet III, report of post mortem revealed laceration of some internal organs. This perhaps explain the blood stained faeces passed by some of these deceased chicks before their death. In the main SPM could replace wheat bran up to 50 % without adversely affecting the performance of the pullet chicks.

**Keywords:** Performance pullet chicks, sweet potato meal