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Blood and Crayfish Meals as Alternative Animal Protein Sources in the Diet of Weaner Pigs

FREDERICK UGBESIA IGENE, MICHAEL A OKORUWA, SYLVANUS O. OBOH

Ambrose Alli University, Dept. of Animal Science, Nigeria

Abstract

Fish meal (FM) is a valuable protein concentrate in monogastric animal feeding. Most of the fish meals used in Nigeria are imported, while the few available local products are of low quality. Adulteration, scarcity and high prices have constituted a major problem to the use of imported fish meals in the country. This study investigates blood meal (BM) and crayfish meal (CM) as possible alternatives to fish meal on growth indices and economics of producing weaner pigs. Eighty weaner pigs were randomly distributed to five dietary treatments consisting of four replicates each. Each replicate had 4 weaner pigs with average initial weight of 10 kg. Treatment 1 was the control diet with FM as the only animal protein source. Treatments 2 and 3 contained 50 and 100 % respective BM replacement for fish meal, while treatments 4 and 5 had fish meal replaced by CM at 50 and 100 % levels. All diets were iso-nitrogenous and iso-caloric and were offered for 8 weeks. Parameters were collected on average weekly feed intake, weight gain and feed conversion ratio. Economics of production parameters calculated were cost of feed/kg, cost of feed/kg weight gain/pig, total production cost/pig, income/pig, profit/pig and percentage return on investment. Results obtained revealed that growth parameters were not significantly ($p > 0.05$) affected by dietary treatments. Feed intake ranged from 11.2 in the 100 % BM diet to 13.51 in the 50 % CM diet. Weekly weight gain ranged from 2.88 in the 50 % BM to 3.28 % in 100 % FM and 50 % CFM. Feed conversion ratio was best (4.22) in the 100 % BM. On economics of production, diet 2 with 50 % BM was the most profitable diet with N3,150.30 obtained as profit per pig representing 74.6 % return on investment. This was followed by 100 % BM (58.12 %), 100 % FM (41.57 %), 50 % CFM (12.22 %) and 100 % CFM (5.27 %) respectively. It can be concluded that blood meal serves as a useful alternative as shown in this study to be often scarce and costly quality fish meal in weaner pigs diets.

Keywords: Blood meal, crayfish meal, fish meal, Weaner pigs