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The Utilization of Acid Ensiled Fish Waste and Sugar Refinery By-Product in Diets for Growing-Finishing Pigs

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Summary

Twenty females (Landrace x Large White) with a mean (± SD) initial BW of 35.2 (± 0.6) kg and an average age of 13 weeks were used in the study. Based on results of a preliminary experiment, diets were formulated to contain 200 g acid ensiled fish waste (AFW) kg^{-1}.DM. Both Jett and sugarcane final molasses (SFM) were used in combination as an energy source in the diets. Dietary inclusion levels of Jett/SFM g.kg^{-1} DM for treatments were: 100/100, 200/0, 259/259, and 517/0 labeled, T1, T2, T3 and T4, respectively. A commercial pig grower feed was used as the control (labeled T0) representing the standard cereal based diet fed. The five treatments were replicated four times. These treatments were randomly allocated to the twenty pens in a complete randomized design.

There were significant differences (P< 0.046) among treatments for final bodyweight, dry matter intake (DMI), average daily gain (ADG) and feed conversion ratio (FCR). Average daily gain for pigs on treatments T1, T2, T3 and T4 where Jett and SFM supplied the major proportion of the dietary energy ranged from 472 to 526 g.d^{-1}. These values represented 78.5 and 87.5%, respectively of the ADG (601 g.d^{-1}) achieved by the animals maintained on the control (T0). Treatment T3 with a combination of 260 g SFM and 260 g Jett. kg^{-1} DM had the lowest (P< 0.05) faecal DM and ADG performance. Ration with the highest dietary Jett inclusion level treatment, T4 had the best FCR (2.6) giving a 25.7% improvement over the control (3.5). There was no significant difference in P_2 back fat (P> 0.858), hot carcass weight (P> 0.065), dressing % (P> 0.118) and loin eye area (P> 0.883) among treatments. No significant differences (P> 0.454) was observed among treatments for haemoglobin, MCHC, and white blood cell count. Glucose (P< 0.023), ALT (P< 0.028), total protein (P< 0.049) and blood urea (P< 0.048) showed significant treatments effects. The values obtained for ALT, AST and Alkaline phosphate indicated that there was normal functioning of the spleen, kidney, and liver for all treatments. It was concluded that AFW with SFM and Jett when fed to pigs can give acceptable animal performance in the tropics, and thereby reducing the level of imported soybean meal and corn in the ration.

Résumé

0,001) significative (r = 56,6 %). Une [illegible]

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