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Growth Performance, Blood Parameters and Return on Investment of Growing Weaner Pigs of Nigerian Indigenous Pig (NIP), Exotic (Large White × Landrace) and Hybrid (F1 Crossbred of NIP × Exotic) Origins under Intensive Management System

AKINYELE OLUWATOMISIN KINGSLEY ADESEHINWA, OLUFUNKE OLUWAKEMI OLUWOLE, JELILI OLAIDE SAKA, TEMILADE OLASEINDE

Obafemi Awolowo University, Institute of Agricultural Research & Training, Nigeria

Abstract

Thirty-six (36) weaner pigs were randomly selected and assigned to three treatment groups based on their origin (Exotic (Large white × Landrace), Nigerian Indigenous Pig (NIP) and Hybrid (F1 crossbred of NIP × Exotic) origins) in a completely randomised design, with average initial body weight of 10.25 ± 2.03 kg and each group comprising 12 pigs. They were used to evaluate the growth performance, economy of feed conversion, haematology, serum chemistry and return on investment of weaner pigs of NIP, F1 crossbred (NIP × Exotic) and exotic (Landrace × Large white) origins. The results showed that feed intake by the Exotic and Hybrid pigs were comparably higher than for the NIP. The weight gain of the pigs had a direct relationship with the feed intake and its cost. Hence, the NIP had a lower gain compared to the Exotic and Hybrid pigs which had comparable ($p > 0.05$) gains. The feed:gain ratio, cost of feed per gain and measured haematological indices were comparable for all the pigs across the three groups ($p > 0.05$). All serum metabolites were also comparable ($p > 0.05$) across the groups but for the serum glucose, where the serum glucose for the NIP was significantly ($p < 0.05$) higher than for the exotic and Hybrid (E × L). Net benefit was highest for the exotic breed (N1, 877.84) than for Hybrid (N1, 352.84) and NIP (N976.30). The marginal rate of return of 43.81% and 104.90% suggests that farmers stand to gain an additional net benefit of N43.81 and N104.90 for every N100 incurred as cost when they change from NIP to Hybrid and exotic breeds respectively. Conclusively, the Hybrid pigs had comparable growth performance, economy of feed conversion, serum and haematological results with the exotic breed of pigs. While the results of the return on investment showed that even when rearing of exotic breeds of pigs was more cost effective than the hybrid, it was still an option to be considered for investment over the NIP by pig farmers.

Keywords: Blood chemistry, growth performance, hybrid pig, Nigerian indigenous pig, pig enterprise, return on investment

Contact Address: Akinyele Oluwatomisin Kingsley Adesehinwa, Obafemi Awolowo University, Institute of Agricultural Research & Training, Livestock Improvement Programme, Moor Plantation, Ibadan, Nigeria, e-mail: aokadesehinwa@yahoo.com