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Feed restriction for finishing barrows with Moura genetic background

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This study was conducted with the aim of evaluating the effects of feed restriction applied on 32 finishing barrows selected from the succession of Embrapa female lineage Moura (MO25) mated with synthetic sire MS115 X Duroc on performance and carcass traits. The barrows with 50 kg live weight and 100 days old were held in individual crates for a pre-experimental period of 28 days. During this period average feed consumption (F), weight gain (G) and F:G ratio were respectively, 2.950 ± 0.0328 g, 0.990 ± 0.0117 g and 2.986 ± 0.0353 . Four treatments were established (T1: ad libitum, T2, T3 and T4, respectively, 5%, 10% and 15% feed restriction) in randomized block design and submitted during 42 days. Eight replicates per treatment were evaluated. At experiment beginning the pig average initial live weight was 80.43 ± 0.33 kg and 128.4 ± 0.6 days old. Feed formulation approach was to provide, for each treatment, that the pig had the choice to ingest a plenty of nutrients (similar that of ad libitum) but with programmed reduction of energy consumption. In consequence treatment diets were formulated stepwise (5, 10 or 15%) more dense in nutrients as feed restriction increases except for energy content of the diets (Metabolizable Energy held constant at $3260 \text{ Kcal.kg}^{-1}$). Two feeding phases were established lasting 21 days each one. The following parameters were affected by feed restriction: Daily feed consumption ($p < 0.0001$), $y \text{ (g)} = -37.633 X + 3752.7$ ($R^2 = 0.9998$), Daily weight gain ($p = 0.0023$), $y \text{ (g)} = -7.8 X + 1058.6$ ($R^2 = 0.9695$), Slaughter weight ($p = 0.0012$), $y \text{ (kg)} = -0.3443 X + 123.34$ ($R^2 = 0.9789$), Hot carcass weight ($p = 0.0002$), $y \text{ (kg)} = -0.2696 X + 90.10$ ($R^2 = 0.9885$) and Bacon depth on the first rib ($p = 0.0643$), $y \text{ (mm)} = -0.2736 X + 37.749$ ($R^2 = 0.8206$). And the following were not affected: Feed to gain ratio ($p = 0.3202$) with average value of 3.480 ± 0.0648 , Carcass yield ($p = 0.6387$) with mean value of 72.99 ± 0.21 %, Lean meat yield ($p = 0.9123$) with average value of 55.23 ± 0.34 %, Loin depth ($p = 0.5794$) with average value of 67.05 ± 0.53 mm and Backfat depth ($p = 0.5794$) with mean of 19.74 ± 0.39 mm both parameters measured at P2 position with Aloka SSD 500. Taken in consideration the evaluated parameters and the applied feed restriction methodology there were no observable advantage in apply feed restriction.

Keywords: Alternative swine genetics, metabolizable energy, feed management