



Pig performance of alternative and conventional genotypes

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This study aimed to evaluate pig performance of alternative and commercial genotypes from birth to slaughter. The experiment was carried out at Embrapa Swine and Poultry, Concórdia-SC, Brazil, with the litters born from 37 first, and 7 third parity sows (first farrowing lot) and 32 second and 7 fourth parity sows (second farrowing lot), from January 2007 to February 2009. For the evaluation were used pigs from 12 Moura (MO) sows inseminated with MO sires, 13 MO sows inseminated with Embrapa MS115 (MS) sires, 14 50% Large White and 50% Moura (LWMO) sows inseminated with MS sires, 15 50% Landrace, 25% Large White and 25% Moura (LDLWMO) sows inseminated with MS sires, 16 50% Landrace and 50% Large White (LDLW) sows inseminated with MS sires, and 13 commercial genotype (CG) sows inseminated with MS sires. LWMO sows were third and fourth parity, all others were first and second parity sows. The pigs were raised in Brazilian commercial conventional swine production systems (farrowing, nursery, growing and finishing phases) identified and separated by genotype and sex. The pig and the feed were weighted at the end of each phase. At end of farrowing phase pigs were weaned on weekly groups at average 25 days age, and at 60 days of age the pigs were transferred to the growing phase keeping six litter mates (the three males and three females closest to the litter weight average) in the same pen up to the end of finishing phase. They were fed 3300 kcal swine ME feed, *ad libitum*, in automatic feeders with pre-starter 1 from the 10th day of life until weaning (21 days in the first and 28 days in the second farrowing lot); pre-starter 2 from weaning until 35 days of age; pre-starter 3 from 35 to 42 days of age; and starter from 43 to 63 days of age; growing 1 with 17.0% Crude Protein-CP and 1.15% Swine Digestible Lysine-SDL in the first 28 day-growing period; growing 2 with 17.0%CP and 1.03% SDL in the second 28 day-growing period; finishing 1 with 16.0% CP and .95% SDL in the first 28 day-finishing period; and finishing 2 with 16.6% CP and .81% SDL. A completely randomized design with factorial structure whose model contained the effects of farrowing lot, sex and genotype as well as the two factor interactions was used. There were recorded and submitted to anova (proc mixed) and contrasts the weight of the pig at birth, at weaning and at the end of each phase as well as the feed intake and weight gains. Feed intake was used as co-variable in the weight gain analyses. The used contrasts for sow genotype were: C1: MO - 1/4(GC + LDLW + LWMO + LDLWMO); C2: GC - 1/2(LDLW + LDLWMO); C3: LDLW - 1/2(LWMO + LDLWMO); C4: LDLWMO - LWMO; and for sire genotype was: C5: MS x MO – MO x MO. There were significant effect of farrowing lot, sex, genotype and of the interaction between some of the effects. From the results, the averages of total weight gain corrected for feed intake by genotype were 81.7 (MS x MO); 88.7 (MS x GC); 90.8 (MS x LDLW); 90.7 (MS x LDLWMO); 83.1 (MS x LWMO) and 75.2 kg (MO x MO), indicating that for the same feed intake the weight gain was different among genotypes, and that LDLWMO sows may be used as parent in conventional and alternative swine production systems without impairing pig performance, and that LWMO sows may be used in alternative production systems.

Keywords: weight, weight gain, feed efficiency, female parent, sex.