

Evaluation of the growth parameters of six commercial crossbred pig genotypes

2. Under ideal temperature conditions in chambers

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Abstract

To test whether animals grown under ideal temperature conditions would have different growth parameters to animals grown in more conventional housing, 60 Large White x Landrace male pigs from three genotypes were housed in six temperature-controlled chambers. The results were compared with data from a similar trial, with the same three genotypes, conducted in an open-sided house. Estimates of mature size (as measured by mature protein weight (P_m)), rate of maturing (B) and levels of inherent fatness (LPR_m) were obtained from serial slaughtering four pigs per genotype at 30, 40, 70, 80 and 90 kg live weight. The results indicate that for commercial crossbred male pigs there were no significant differences in the growth parameters between genotypes grown under ideal temperature conditions (Controlled), nor were there any differences between similar genotypes grown in Controlled vs. commercial conditions (Uncontrolled). The rate of maturing was also similar for all three genotypes and for all components. Mean estimates of P_m , B and LPR_m determined from both Controlled and Uncontrolled conditions can be combined to give values of 40.4 ± 1.62 kg, 0.0114 ± 0.0005 per day, and 1.67 ± 0.153 kg/kg, respectively. Furthermore, controlling temperature had minimal effect on the allometric relationships between protein and the remaining body components for different genotypes. The determination of growth parameters for commercial crossbred pig genotypes can, therefore, be accomplished when the animals are grown individually in an open-sided house.

Keywords: Pigs, protein growth, temperature, Gompertz parameters

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