Effects of dietary energy density on the performance characteristics of finisher pigs

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ABSTRACT

An investigation in effects of energy density on grower and finisher pigs was related to aspects of growth and development of pigs, nutrient requirements, and voluntary feed intake. One hundred fifty six 17 weeks of female (74.6 ± 6.9 kg LW; 10.45 ± 1.75 mm backfat thickness) and one hundred forty six 17 weeks of entire male (75.3 ± 7.9 kg LW; 10.02 ± 1.54 mm backfat thickness) grower pigs were used for 21 days of this study before slaughtering at commercial abattoir. Pigs were randomly allocated to dietary treatments on the basis of sex and live weight. Two dietary treatments were imposed (i) Low energy (13 MJDE/kg) and (ii) high energy (15 MJDE/kg). The treatments were imposed on the study which was replicated 6 times. For a sex factor, females had 0.59 mm greater backfat thickness than males, slower growth rate at liveweight from 60 to 100 kg, and higher feed consumption. For energy density factor, pigs fed the high energy diet had 2.83 kg greater live weight and 1.2 mm more backfat thickness than those fed the control diet. Even through there was no effect of treatment diets on voluntary food intake during first two weeks of the trial, the significant treatment difference ($P<0.05$) in the measurement started occurring in week 3; high energy density diet was consumed approximately 12 % less than normal energy density diet. These results indicated that increasing dietary energy density results in an increase in live weight, backfat thickness, and dressing rate of finisher pigs, and a reduction in voluntary feed intake. Moreover, gilts are fatter and lighter live weight than boars whereas they tend to consume more feed than boars during the finishing period.