

EFFECTS OF TEMPERATURE AND LEVEL OF FEEDING DURING REARING ON CARCASS AND REPRODUCTIVE TRAITS IN PIGS

M.H. FAHMY

Canada Agriculture, Research Station, Lennoxville, Que., (Canada)

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ABSTRACT

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A total of 315 crossbred females (gilts) ranging in weight from 14 to 68 kg was split between pole-type and a closed piggery (cold and moderate environments, respectively). One third of the pigs in each piggery was fed a growing ration ad libitum, the remaining pigs were restrictively fed 80% of the amount consumed by the first group. Data on ultrasonic backfat probe, estimated market index, and age were taken on the pigs at 90 kg live weight. Results indicated that the effect of environmental temperature was very small on backfat thickness and carcass index, but was significant on age. The pigs fed ad libitum had 10.2% thicker backfat, were 4 points inferior in index, but were 13 days younger at 90 kg ($P < 0.01$) than those restrictively fed. When the gilts exhibited their first oestrus after 90 kg live weight, half of the pigs restrictively fed were flushed by feeding them ad libitum for one oestrus cycle. All gilts were bred at the second oestrus. The gilts raised in a cold environment were 4 kg lighter, farrowed litters 0.2 larger and 0.5 kg heavier than those raised in the moderate environment. Gilts restrictively fed, then flushed gained 3 kg on flushing and farrowed litters averaging 10.7 pigs, 0.2 and 0.8 pigs larger than those of the gilts fed ad libitum and not flushed respectively. Significant differences between crosses were observed in all the traits studied except gestation length and litter size. There was little effect on the different traits of the initial weight at which the gilts were exposed to the treatment.

INTRODUCTION

Since Canadian winters are long and cold with temperatures often below freezing for sustained periods of time, the recent trend in pig housing is towards constructing completely insulated piggeries with separate areas for the various operations of the swine enterprise (farrowing, growing, mating and finishing). The construction costs of such piggeries are very high and there is question as to whether or not they are economical. Many farmers therefore prefer to raise pigs in simply constructed non-insulated piggeries where pigs are exposed to the low temperatures of winter and relatively high temperatures of summer.