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Muscling Selection in Swine
and Its Effect on Carcass Traits

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Summary

Pigs farrowed in May, 1972, were the first born in the select and control lines. Performances of animals in the two lines were essentially the same. However, ham firmness and color differed significantly ($P < 0.01$) between lines, with those in the select line firmer and darker than those from the control line.

Procedures

Pigs in the base population of purebred Durocs were farrowed in 1971. Twenty boar pigs were randomly selected in July, 1971, when the remaining males were castrated. The select line was formed by using the most desirable 20 gilts and four boars based on an index that gave maximum loin eye area and minimum backfat thickness (estimated by the An/Scan, adjusted to 220 pounds) equal emphasis. The control line was formed by using four randomly chosen boars (from the group of 20 randomly selected as weanling pigs) to breed 20 randomly chosen gilts.

Gilts in the two lines farrowed in May, 1972. Ten boar pigs were randomly chosen at weaning from each line. The four with the most desirable indexes in the select line were mated to the 20 highest indexing gilts in the select line; 18 of the 20 gilts farrowed in May-June, 1973. Four of the 10 boars in the control line were randomly chosen and mated to 20 randomly selected gilts in the control line; 15 of the 20 gilts farrowed in May-June, 1973.

When possible, three barrows from each litter are slaughtered in the departmental meat laboratory. Slaughter weight is 220 pounds. Carcass data were collected from 51 barrows in 1971 and from 39 in 1972.