EVALUATION OF CROSSBRED SOWS FOR THE PRODUCTION OF PIGS FOR SLAUGHTER

M. H. FAHMY†, W. B. HOLTMANN‡ AND T. M. MacINTYRE§
Canada Agriculture and Laval University

SUMMARY

Data from 726 male and 765 female pigs (364 litters) from 28 three-breed crosses obtained from mating Poland China boars to gilts and sows from different two-breed-crosses were analysed. The 28 two-breed-crosses were obtained from mating Yorkshire (Y), Landrace (Ld), Lacombe (Lc), Hampshire (H), Duroc (D), Berkshire (B) and Large Black (LB) sows to Ld, Lc, H, D, B, LB and Tamworth (T) boars in an incomplete diallel mating design. The traits studied were age at slaughter (72 kg carcass weight), carcass backfat measurement and an index combining both traits. The youngest pigs to reach slaughter weight were those from LB × D sows (191:3 days) while the oldest were from T × D sows (211:6 days). The pigs with the least depth of backfat were those involving the Hampshire breed (mean 7:28 cm) while those involving the Large Black had the thickest backfat (mean 7:81 cm). In descending order, the five highest ranking crosses based on the index were those from H × Ld, H × Lc, LB × D, Lc × Ld and H × Y sows.

INTRODUCTION

Richard and Smith (1972) examined various systems of improving production by crossbreeding. They concluded that the optimum crossing system is likely to involve the use of a specialized male line on crossbred females. There is little experimental evidence in the literature on the relative performance of different two-breed-cross sows for the production of pigs for slaughter.

A crossbreeding study was initiated in 1968 to rank 28 combinations of two-breed-crosses of eight breeds with respect to sow productivity (Holtmann, Fahmy, Baker, MacIntyre and Barr, 1971). To reduce as much as possible the implications introduced by breed of sire, boars of a ninth breed unrelated to any of the crosses were used on all the 28 groups. The resulting three-breed-cross piglets were fed to slaughter weight and their growth rate and backfat measurements were available to rank the crosses on the basis of the market value of their progeny.

MATERIAL AND METHODS

The 762 male and 765 female pigs used in the present study represented 28 three-breed-cross combinations obtained by crossing Poland China boars with sows of 28 two-breed-crosses at each of two stations, namely Lennoxville

† Canada Agriculture, Research Station, Lennoxville, Quebec.
‡ Department of Animal Science, Laval University, Sainte-Foy, Quebec.
§ Canada Agriculture, Research Station, Napan, Nova Scotia.