

The effect of Piétrain sire on the performance of the progeny of two commercial dam breeds: an intervention study

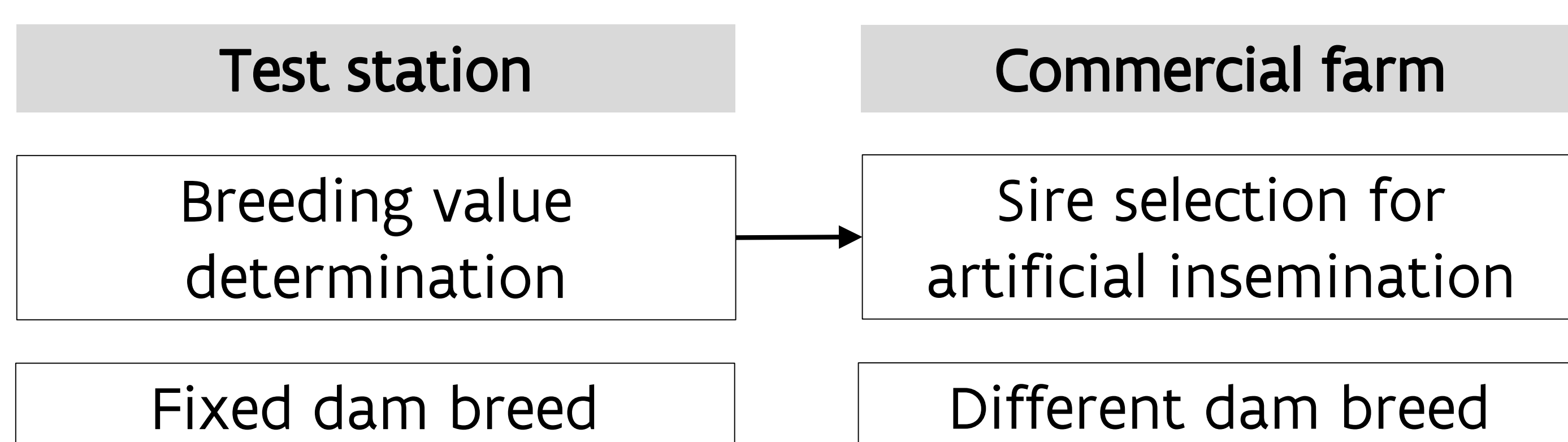
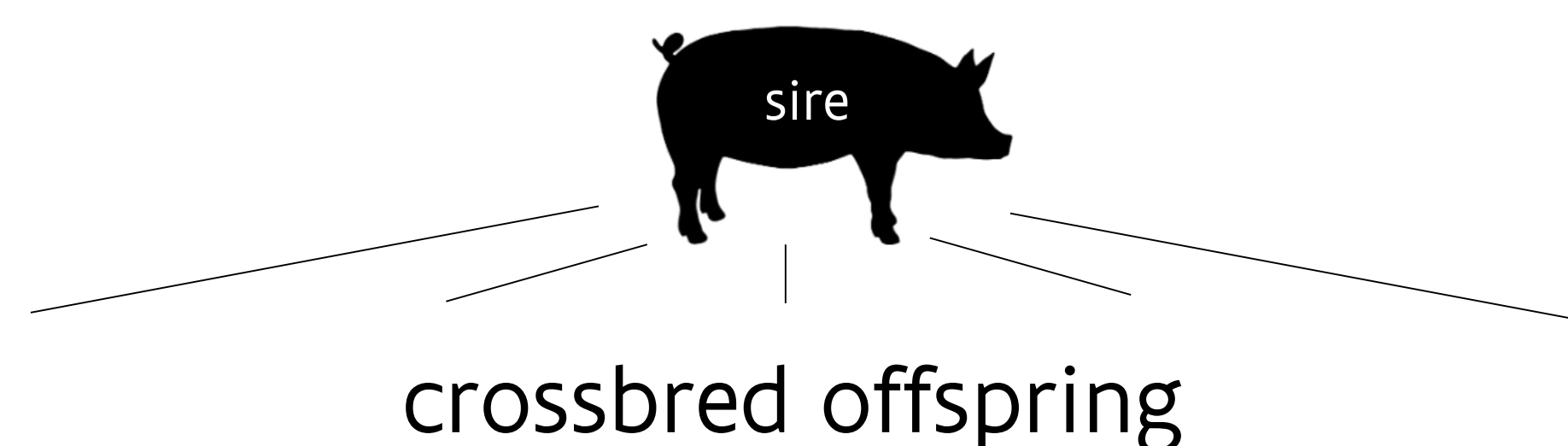
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INTRODUCTION AND AIM

Genetic evaluation of Piétrain sires in Flanders



DO BREEDING VALUES OBTAINED IN ONE DAM BREED REMAIN VALID IN OTHER DAM BREEDS?

MATERIAL AND METHODS

Animals

- 5 sires with contrasting breeding values for performance (P) and carcass quality (Q)

Table 1 Estimated breeding values for daily gain (DG), feed conversion ratio (FCR) and carcass quality (CQ) of selected Piétrain sires with corresponding code for growth performance (based on DG and FCR) and carcass quality, varying from poor (-), average (0), moderate (+) to good (++)

| Sire | Code | DG (g/day) | FCR (g/kg) | CQ (points) | Accuracy | Index ¹ |
|----------------|--------------------------------|------------|------------|-------------|----------|--------------------|
| 1 | P ₀ Q ₀ | 37 | 0 | 1.1 | 0.858 | 105.4 |
| 2 | P ₋ Q ₊₊ | -42 | 81 | 28.8 | 0.856 | 116.6 |
| 3 | P ₊₊ Q ₋ | 117 | -178 | -10.5 | 0.840 | 123.8 |
| 4 | P ₊ Q ₊₊ | 16 | -55 | 18 | 0.848 | 125.5 |
| 5 | P ₊₊ Q ₊ | 73 | -103 | 1.9 | 0.863 | 121.7 |
| 6 ² | P ₊₊ Q ₊ | 85 | -165 | 0.6 | 0.848 | 128.8 |

¹According to the Flemish pig book (VVS, 2014)

²In the second round, sire 5 was replaced by sire 6

- 2 commercial dam breeds (Danbred and Topigs 20)
- $n = 354$ progeny (2 rounds)
- 6 full sibs (3 gilts + 3 barrows) per pen, 12 pens per sire

Measurements

Evaluation of growth performance, carcass and meat quality parameters of fattening pigs (20 – 114 kg).

CONCLUSIONS

MAIN EFFECTS OF SIRE AND DAM BREED ARE MOST IMPORTANT

NO SIGNIFICANT SIRE × DAM BREED INTERACTIONS

ESTIMATED BREEDING VALUES ARE A VALUABLE TOOL FOR A MORE SUSTAINABLE PIG HUSBANDRY

RESULTS

Both the sire and the dam breed affected growth, carcass and meat quality traits.

Breeding values remain representative: offspring of sires behaved similarly in both dam breeds.

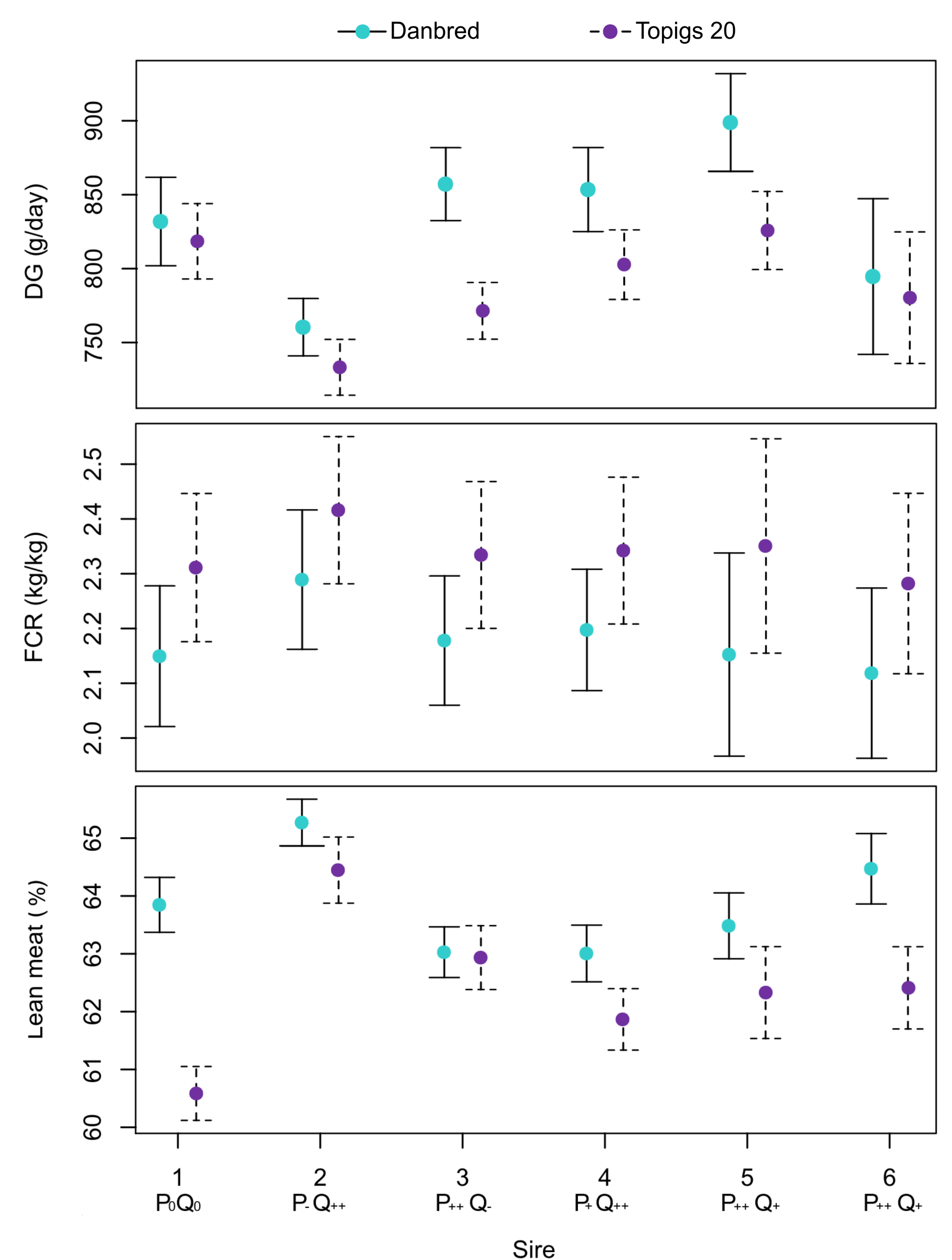


Figure 1 Average daily gain (DG), feed conversion ratio (FCR) and lean meat percentage for the different sire by dam breed crossings. Bars represent standard errors (SE).



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