



Effect of Gender and Crowding on Variation in Days to Market

Dana R. Cooper *M.Sc.*, John F. Patience *Ph.D.*, Harold W. Gonyou *Ph.D.* and Ruurd T. Zijlstra *Ph.D.*

Summary

Marketing strategies are affected by variation in days to market within groups of pigs. This study determined effects of gender and crowding on variation in body weight (BW) gain and days to market. Pigs were marketed individually at an identical market weight resulting in uniform carcass characteristics. Crowding did not increase variation; however, pigs marketed first were the heaviest pigs when traced back to farrowing. Thus, raising the growth curve of all pigs may be more practical than reducing variation. The latter appears very difficult on most farms.

Introduction

Managing variation in the production chain is receiving increasing attention. The economic impact of variation when marketing groups of pigs is enormous, yet few research programs focus on this issue. Uniformity of pigs reaching market weight may be affected by variation in growth caused by gender or crowding during the entire grower-finisher phase.

Experimental Procedures

At weaning, 493 pigs were assigned randomly within gender to a pen containing either 16 pigs/pen (0.35 m²/pig; Control) or 21 pigs/pen (0.26 m²/pig; Crowded). In the grow-finish room, pigs were allowed 0.88 m²/pig (Control) or 0.67 m²/pig (Crowded). Pigs were weighed at birth, days 21, 56, 77, 112, and 140 of age, and at market (~ 115 kg).

Results and Discussion

Crowding did not affect BW until day 77 when Control pigs were 1.6 kg heavier than Crowded pigs (Table 1). Gender did not affect BW until day 56 when barrows were 2.7 kg heavier than gilts. Coefficient of

variation (CV) for BW at day 140 or days to market was not affected by gender or crowding. Together, results indicate that crowding reduced mean BW gain, but not variation around the mean. Marketing individual pigs at a specific BW resulted in similar carcasses between Control and Crowded pigs (Table 1). Overall, for an extra kg BW at weaning, 1.9 kg extra was gained at day 56 (8 wk), 2.4 kg extra at day 77 (10 wk), and 4.2 kg extra at day 140 (20 wk; Figure 1), indicating the importance of increasing weaning weight.

Implications

Marketing strategies should be developed based on variation within groups of pigs. Holding gilts longer than barrows may improve market value of a group. Less crowding reduced days to market (115 kg) by four days. Barrows reached market weight six days earlier than gilts.

Acknowledgements

Strategic funding provided by Sask Pork, Alberta Pork, Manitoba Pork and Saskatchewan Agriculture and Food Development Fund.

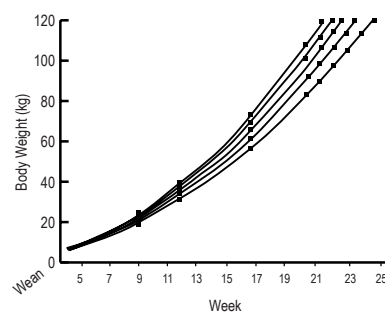


Figure 1. Growth curves of pigs marketed at 21, 22, 23, 24, and 25 weeks of age.

Table 1. Effect of gender and crowding on performance variables

Item	Barrows		Gilts	
	Control	Crowded	Control	Crowded
BW, kg				
day 0	1.5	1.5	1.4	1.4
day 21	5.4	5.3	5.3	5.3
day 56	19.9	18.7	19.7	19.5
day 77 ^b	30.6	28.9	30.7	29.2
day 112 ^{ab}	61.0	60.4	59.1	56.9
day 140 ^{ab}	96.4	93.1	90.9	89.2
CV	8.0	8.9	10.8	9.3
Days to market ^a	156.9	160.1	161.0	165.1
CV	5.1	5.0	12.5	4.8
Carcass characteristics				
Dressing %	90.4	89.9	91.0	90.6
Fat, mm ^a	23.7	21.8	18.0	18.7
Lean, mm ^a	52.3	52.5	58.0	56.8
Index ^a	107.4	108.3	113.4	112.9

^aGender effect

^bCrowding effect