

## Carcass Shrink and Pig Transportation

Beside the obvious transportation losses due to injuries and accidents, the possibility of carcass shrink exist. The following is a summary of research findings on weight loss associated with increased transportation and time from farm until slaughter.

- Transportation appears to increase carcass weight losses. For example, pigs transported for 6 hours before slaughter compared to those transported for 1 hour or less, had a 2.1% higher carcass weight loss.<sup>1</sup>
- Pigs generally experience a live weight loss upon leaving the farm until they reach slaughter. This rate is estimated to be 0.12% to 0.20% per hour since their last meal<sup>2</sup>.
- Some of the live weight loss is feed in the intestinal track, but a substantial loss of carcass (dressed weight) loss also occurs. The estimated carcass weight loss is 0.06% to 0.14% per hour since the pig's last meal.<sup>2</sup>
- The proportion of carcass weight loss to total weight loss can vary with holding conditions. A Canadian report suggests that up to 80% of the weight loss could be carcass shrink<sup>3</sup>
- An overnight feed restriction is associated with a 0.8 to 0.9% carcass shrink<sup>4</sup>
- The carcass weight loss may be associated with water intake<sup>1,3</sup>.

As a consequence, tables exist for predicting shrink based on transit, one Canadian example is below:

### Effects of Distance or Time in Transit on Market Hog Shrink<sup>5</sup>

[it is unclear if this table is live-weight or dressed weight shrink]

Distance to Market		% Shrink	Hours in Transit	% Shrink
km	miles			
56 or less	35 or less	0.74	1.25 or less	0.69
58-105	36-65	1.37	1.26 to 3.3	1.32
106-153	66-95	1.45	3.4 to 6.8	1.45
Over 153	Over 95	1.71	6.9 and Over	1.95

**Table 1 Estimated shrink associated with increasing transit time and distance**  
[http://www.gov.on.ca/OMAFRA/english/livestock/swine/facts/info\\_qs\\_hogstomarket.htm](http://www.gov.on.ca/OMAFRA/english/livestock/swine/facts/info_qs_hogstomarket.htm)

There is some carcass shrink associated with the increase in transportation time and distance, particularly if there is water restriction or hot weather. Estimates of shrink could be made based on above data, or direct comparisons of the carcass weights. Some factors, namely, reduced holding time and increased water access may reduce carcass shrink.

## References

---

- <sup>1</sup> Warriss PD, Dudley CP, Brown SN. Reduction in Carcass Yield in Transported Pigs. *J Sci. Food Agri.* (1983) 34, 351-356
- <sup>2</sup> Warriss PD, Antemortem factors influencing the yield and quality of meat from farm animals. In SD Morgan-Jones, ed. *Quality and Grading of Carcasses of Meat animals* CRC Press New York. 1995
- <sup>3</sup> Jones SDM, Rompala RE, Haworth CR, Effects of Fasting and Water Restriction on Carcass Shrink and Pork Quality. *Can J Anim Sci* (1985) 65:613-618.
- <sup>4</sup> Murray A, Robertson W, Nattress F, Fortin A. Effect of pre-slaughter overnight feed withdrawal on pig carcass and muscle quality. *Can J Anim Sci* 2001 81:89-97
- <sup>5</sup> [http://www.gov.on.ca/OMAFRA/english/livestock/swine/facts/info\\_qs\\_hogstomarket.htm](http://www.gov.on.ca/OMAFRA/english/livestock/swine/facts/info_qs_hogstomarket.htm)