

Research: Piglet birth weight and litter uniformity

A PhD study from Dr Anne Wientjes, Wageningen University, showed that litter uniformity is compromised by severe sow body condition loss during lactation and improved in sows with a prolonged weaning-to-pregnancy interval (WPI).



These effects are likely related with (insufficient) restoration of follicle development. Piglet birth weight and litter uniformity were studied in sows of different parities and crossbred lines in relation to the WPI and sow body condition changes (in body weight and backfat thickness) during lactation and gestation in sows with a short WPI (less than seven days).

At the IPG research farm, individual piglet birth weights and sow body condition (body weight and backfat thickness at farrowing and weaning) were measured of 949 Topigs 20 and 889 Topigs 40 sows with > 4 total born piglets, inseminated between 2003 and 2011.

Total number born was higher in sows with a WPI of 8 to 21 days (+ 1.2 piglets) and more than 21 days (+ 0.7 piglets) compared with sows with a WPI of less than seven days. Mean piglet birth weight was not affected by WPI.

Birth weight SD (- 23 g) and CV (- 1.7%) were lower in sows with a WPI higher than 21 days, compared with sows with a WPI lower than seven days. Effects of WPI were independent of sow parity. Effects of body condition changes in sows with a WPI lower than seven days were studied separately in Topigs 20 sows inseminated between 2006 and 2011 and in Topigs 40 sows inseminated between 2003 and 2008.

Sow body condition loss during lactation was not related with subsequent total number born or mean piglet birth weight. Only in Topigs 20 sows, more bodyweight loss during lactation was related with higher subsequent birth weight SD, and more backfat loss during lactation was related with higher subsequent birth weight SD and CV,

independent of sow parity.

Sow bodyweight increase during gestation was negatively related with total number born. Sow bodyweight increase during gestation was positively related with birth weight SD.

Sow body condition increase during gestation was not related with mean piglet birth weight.

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