

Impact of sow backfat thickness around weaning on nutritional status and litter performance*J. Alvarez-Rodriguez¹, G. Sayez¹, A. Sanz² and D. Babot¹**¹Universitat de Lleida, Av Rovira Roure 191, 25198 Lleida, Spain, ²CITA de Aragón Av Montañana 930, 50059 Zaragoza Spain; asanz@aragon.es*

This study assessed retrospectively the effects of sow backfat thickness (BFT) at weaning (<13 vs ≥13 mm), BFT change during the weaning to oestrus interval (WOI, 6 days) (-1 vs +1 mm) and parity (2nd, 3rd-5th, 6th-7th), and their single interactions, on energy metabolites (blood glucose and lactate) at -5, 0 and +5 days (d) relative to oestrus; plasma progesterone (P4) at 5 d post-mating; and litter birth weight, uniformity and vigour at <24 h old (n=54 sows, 796 piglets, 674 alive). During WOI, sows were fed 3 kg/d of a lactation diet (13.1 MJ ME/kg, 0.91% Lys). After mating, they were gradually fed 1 to 3 kg/d of a gestation diet (9.1 MJ ME/kg, 0.60% Lys). Glucemia was greater at oestrus than in the rest of period (4.5 vs 3.7±0.1 mmol/l, P<0.05) but did not differ among groups (P>0.05). Blood lactate decreased from d -5 to oestrus (41.8 vs 27.9±1.3 mmol/l, P<0.05) and remained steady at d +5. The oldest sows (6th-7th parity) showed greater blood lactate when they loosed BFT during the WOI than when gained (35.9 vs 29.9 mmol/l, P<0.05), but it did not differ in the rest of parities (P>0.05). The proportion of sows showing low blood P4 (<20 ng/ml) at +5 d post-mating was greater in sows gaining BFT during WOI (50.0 vs 7.1%, P<0.01). There were no differences among groups in total born, stillborn or mummified piglets (P>0.05). Litter birth weight was greater in sows with BFT≥13 mm at previous weaning coupled with positive BFT change during WOI than in those losing BFT before mating (21.2 vs 18.0 kg±1.1 kg, P<0.05). The 2nd parity sows showed best litter uniformity than older sows (23.2 vs 30.7±1.7% coefficient of variation of litter birth weight). Piglet latency to right itself was lower when sows had <13 mm BFT at weaning and gained BFT during WOI than in the rest of groups (5.1 vs 6.4±0.5 seconds, P<0.05). In conclusion, BFT level and its dynamics before mating may have carry-over effects on litter early performance.