

Litter size and parity affect sow performance

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Sow litter sizes are increasing likely leading to more pigs weaned/sow. Whether pigs born from very large litters are as productive as pigs born from smaller litters is a main question. In this study we tested, under commercial conditions, whether litter size and parity affect piglet farrowing room productivity. Pigs were divided into 3 litter size (small=5-12, medium=13-15 and large=16+ total born incl. mummies) and 2 sow parity (2 & 3, and 4+) categories. Cross fostering between treatments was conducted to provide 12 pigs/sow. Pigs born alive and stillborn increased ($P<0.001$) with litter size as did the percent of pigs weighing < 850 g at birth (Table 1). Birth weight born alive decreased with litter size such that each extra pig born decreased mean birth weight by 0.05 kg. Pre-wean mortality (9 to 17%) and pigs weaned/litter increased with litter size category. Parity 2&3 sows weaned more ($P<0.05$) pigs than Parity 4+ sows (11.3 vs 10.6 pigs), tended ($P<0.06$) to produce more pigs born alive (12.7 vs 12.3), & had a lower pre-wean mortality (11 vs. 14%).

Table 1. Effect of litter size (LS) and parity (Par) on sow productivity

Parity	2 & 3			4+			Probability	
	5-12	13-15	16+	5-12	13-15	16+	LS	Par
No. litters	43	48	45	56	56	39		
Pigs / litter:								
Born alive	10.1	12.8	15.3	9.2	12.7	15.0	0.001	0.06
Stillborn	0.29	0.86	1.22	0.47	0.98	1.76	0.001	NS
Weaned	9.2	11.4	13.2	8.4	11.0	12.4	0.001	0.01
% alive < 850 g	2.1	3.1	5.9	2.0	4.8	5.8		
Av. birth wt, kg	1.79	1.58	1.52	1.83	1.59	1.49	0.001	NS

NS = non-significant; LS = total born incl. mummies; Par = parity category

Implications: Even though pre-wean mortality was higher in the larger litters they weaned more pigs, providing potential for more pounds of pork produced / sow. Piglets from large litters were lighter and a higher percent were < 850 g at birth, the significance of which on finisher performance is to be determined.