

# Impact of first parity litter size on sow stayability and lifetime production

- a retrospective observational study on data from Swedish piglet producing herds

Preliminary result in this study indicates that sows giving birth to a moderate sized first litter have an increased stayability and an increased lifetime piglet production compared to sows with a small or large first litter.

These results are important in both economical and animal welfare discussions about piglet production. This field data will be further analyzed and also compared to data from a research farm.

**Tab. 1.** Sow stayability after first parity litter according to total number of born piglets.

Category (1 <sup>st</sup> parity litter size)	N	No. sows removed after 1 <sup>st</sup> parity	No. sows removed after 2 <sup>nd</sup> parity
1 (0-7)	2,939	22.0%	78.0%
2 (8-10)	7,415	17.1%	82.9%
3 (11-12)	10,747	17.4%	82.6%
4 (13)	6,081	17.1%	82.9%
5 (14-16)	12,767	19.0%	81.0%
6 (16-28)	3,206	22.6%	77.4%
<b>Total</b>	<b>43,155</b>	<b>18.5%</b>	<b>81.5%</b>
Pearson chi2(5) = 87.6		Pr = 0.000	

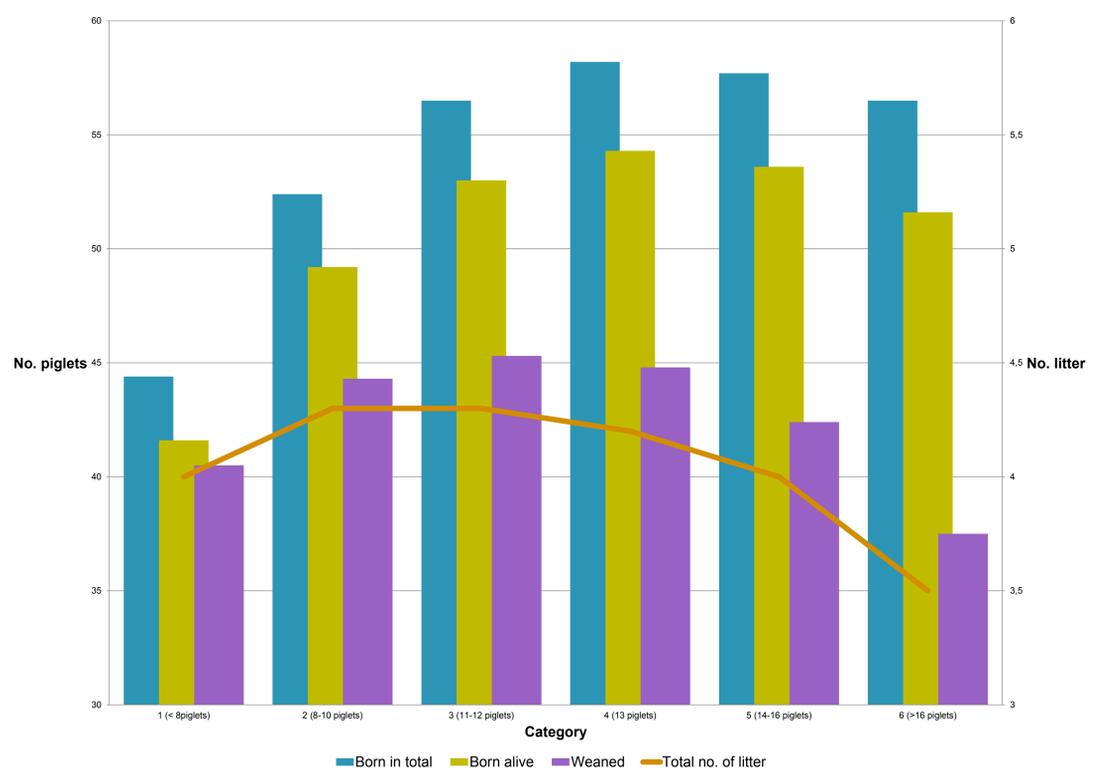
Sows that produced at least one litter and were removed between 2003 and 2012 from 28 different herds were grouped into six categories. The categories were based on percentiles in the normal distribution of total number of piglets born in the sows' first litters.

Sows in category 2 to 4 (8 to 13 piglets) were the ones having the highest stayability and the best lifetime production (Fig. 2).

Univariable logistic regression for stayability from first parity to second parity for sows in category 1 and 6 compared with category 4 had an OR of 0.7.



**Fig. 1.** Sows that give birth to a moderate sized first litter have a bigger chance to have a second litter, stays longer in production and have a higher total production of piglets than sows with a small or large first litter. (Photo: A. Larsen)



**Fig. 2.** Lifetime production and removal parity by category of litter size in first parity.