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**Evaluation of the effects of selection on sow
efficiency and robustness**

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Introduction

- Selection may unfortunately be accompanied by detrimental effects
- An increase in piglet mortality was shown in French LW



focus

- To measure sow efficiency
- Estimate the effects of selection on the robustness indicators



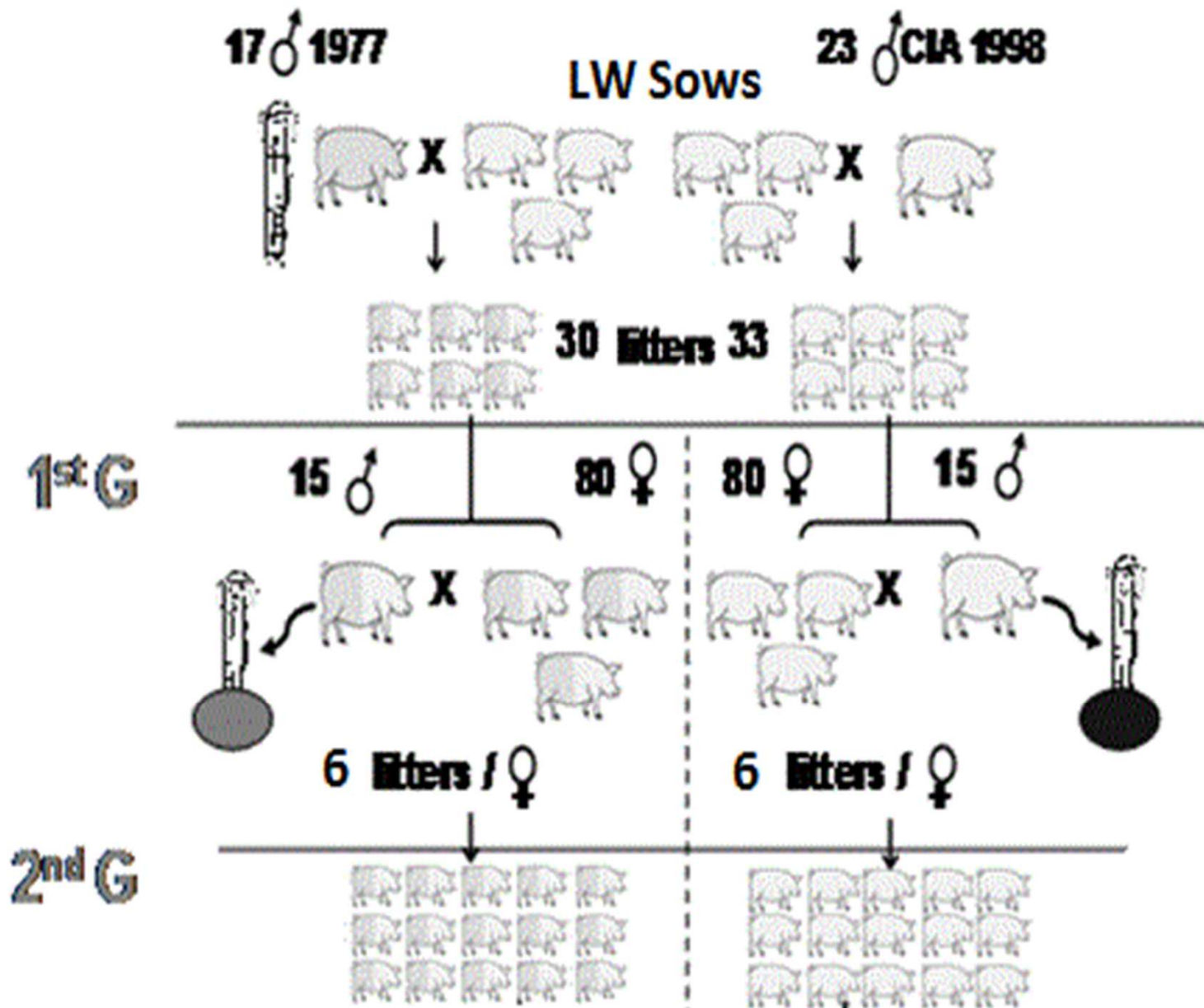
Sow efficiency

- Litter size and litter weight
- Ratio of TNB and LWB during lifespan and productive life

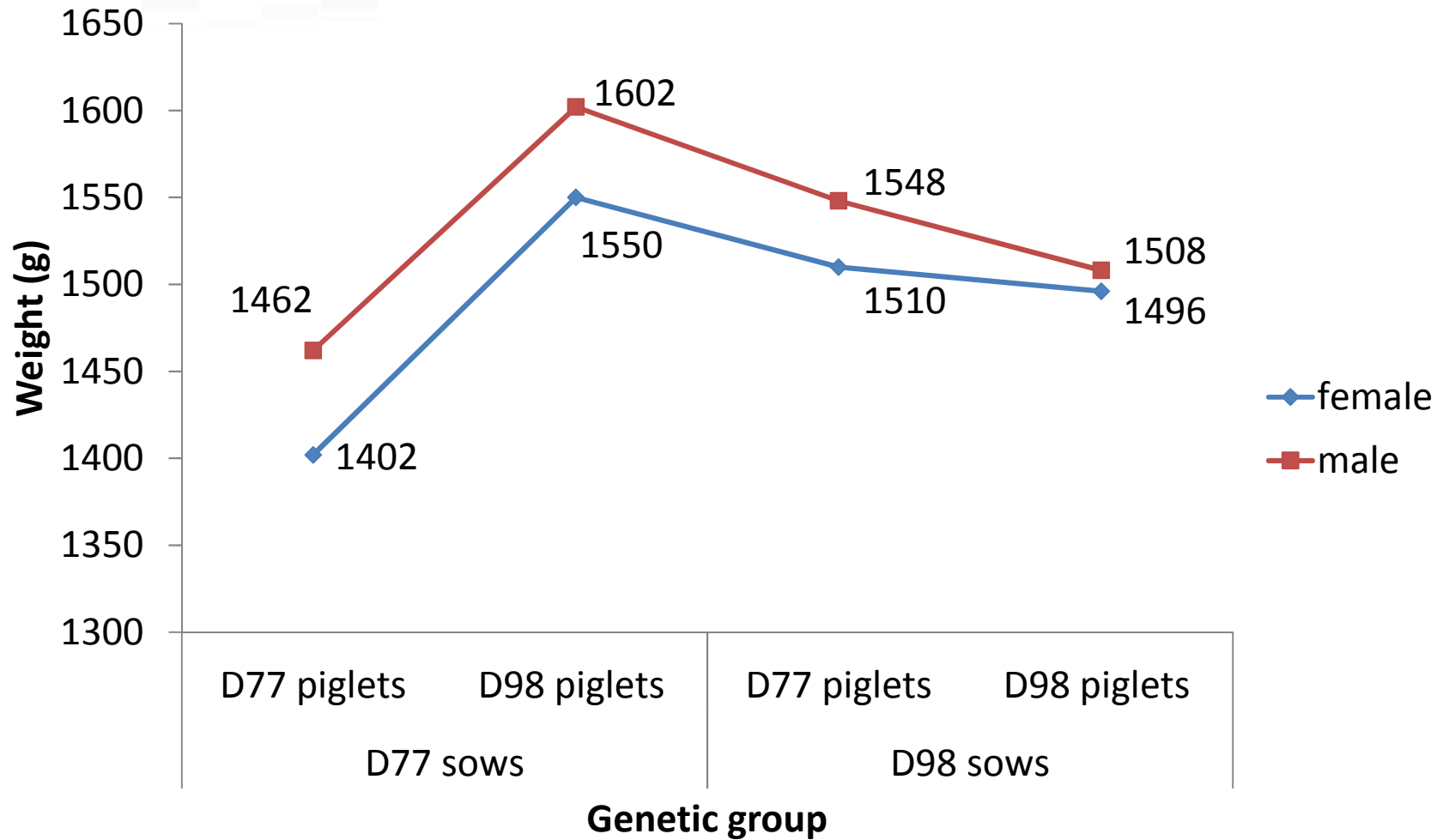


Potential indicator

- Sows longevity
- Litter survival
- Variability of sow performance across parities



Piglet birth weight





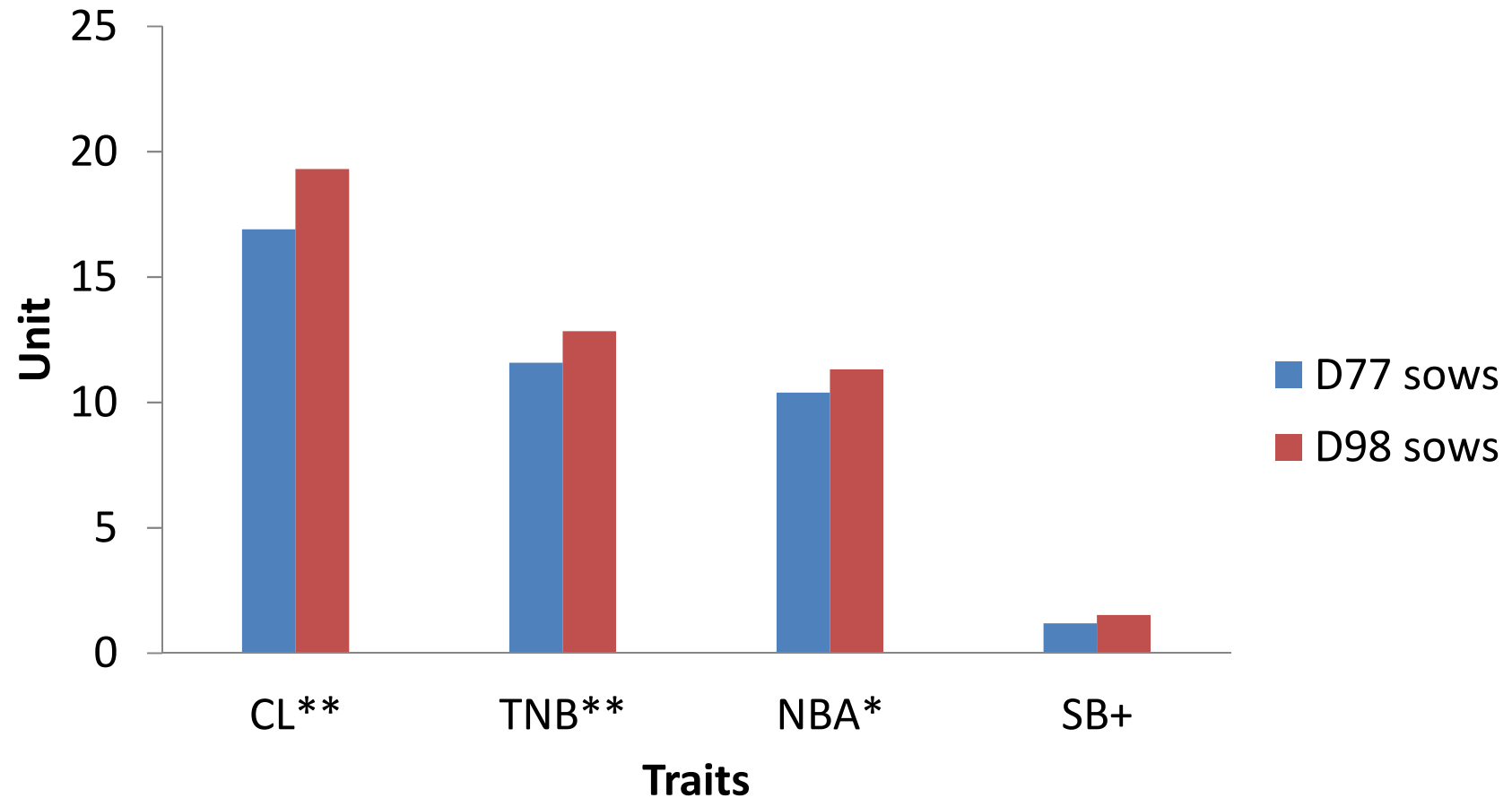
Statistical analyses

- Traits were analysed using mixed linear models with the SAS Mixed procedure.
- Homogeneity of residual variances across genetic groups (D77 vs D98) was also tested

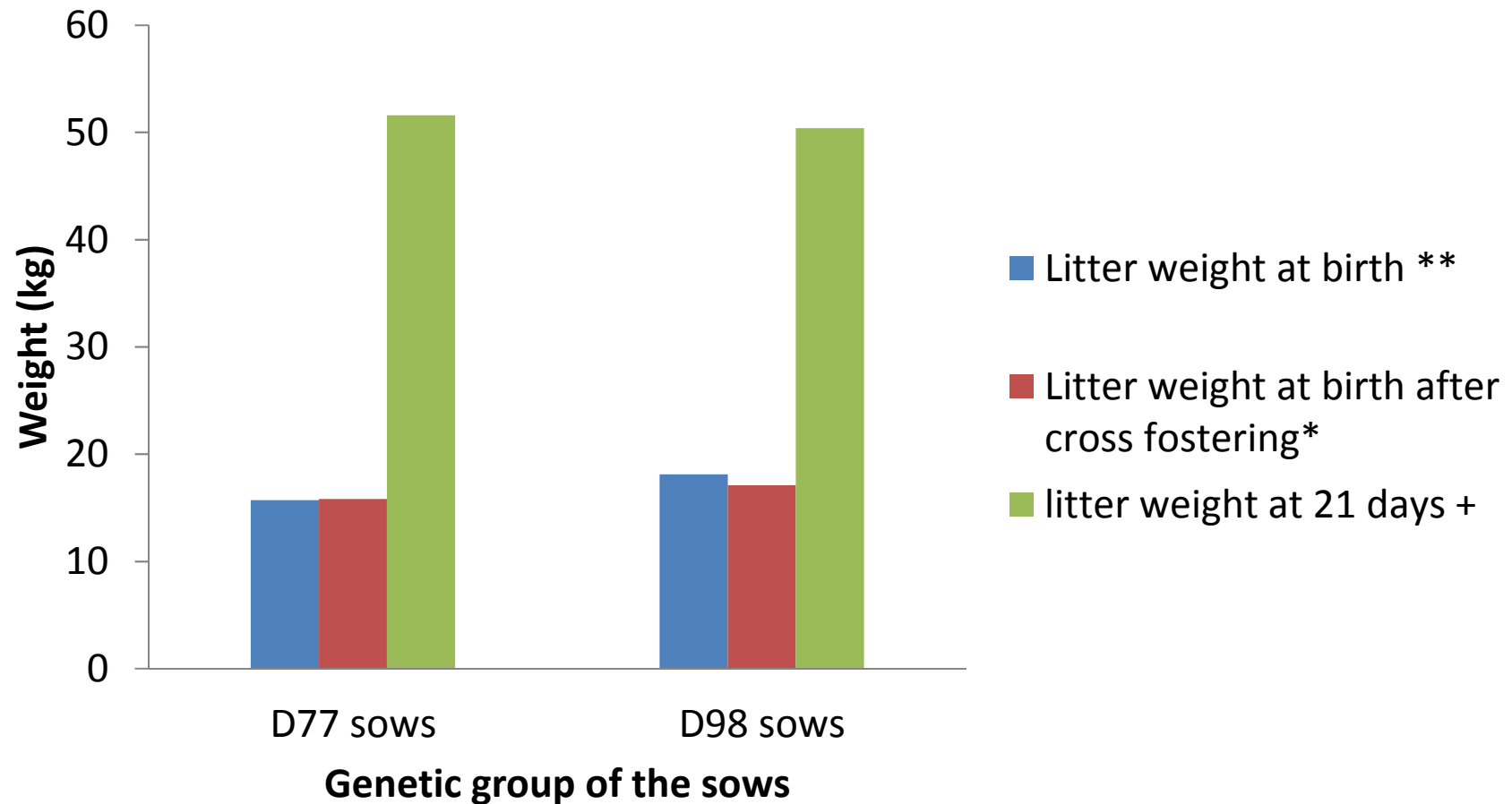
Corpus lutea (CL) and litter size

TNB = total number born; NBA = number born alive;

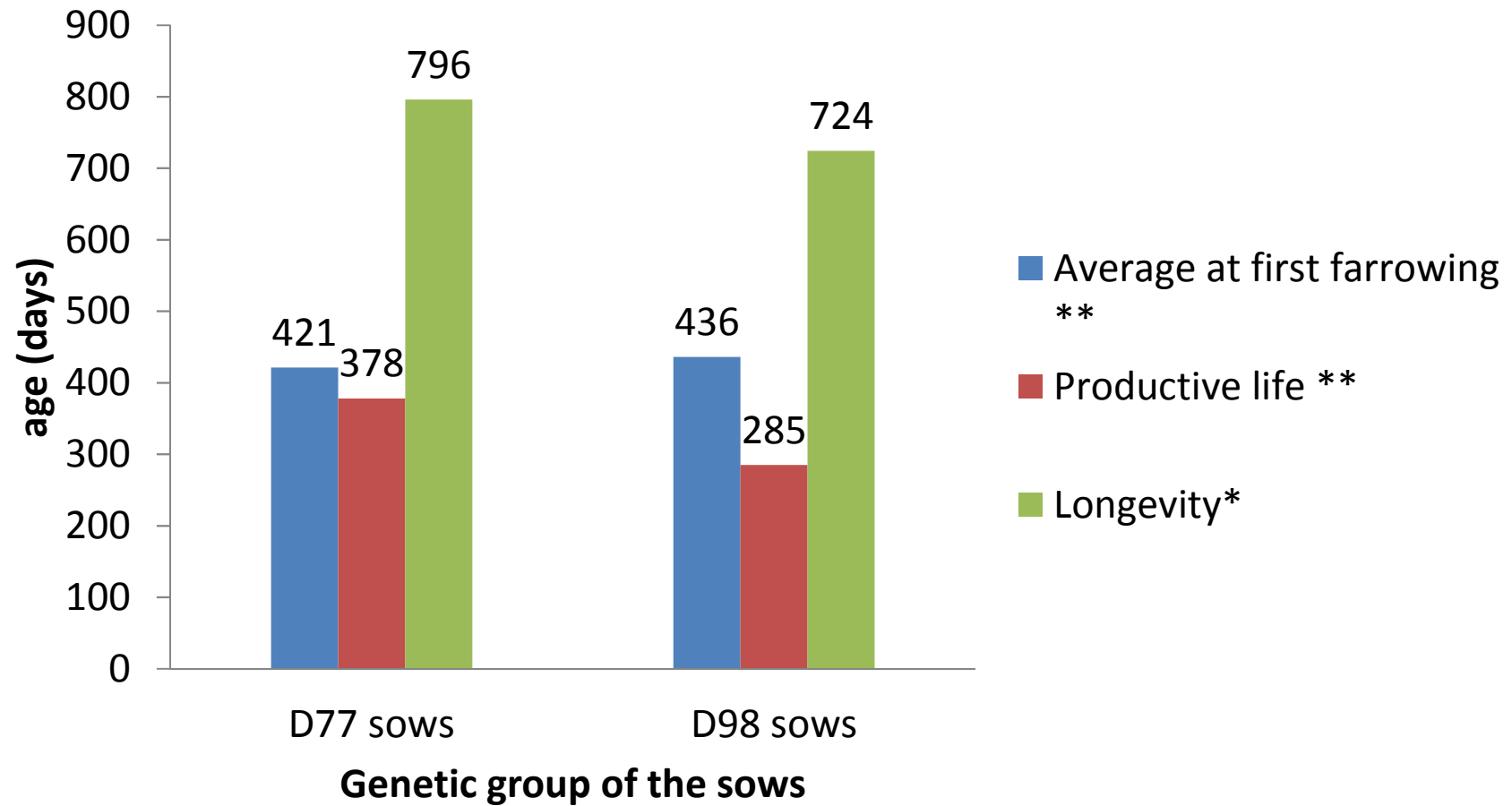
SB : number of stillborn piglets



Litter weight performance



Longevity performance

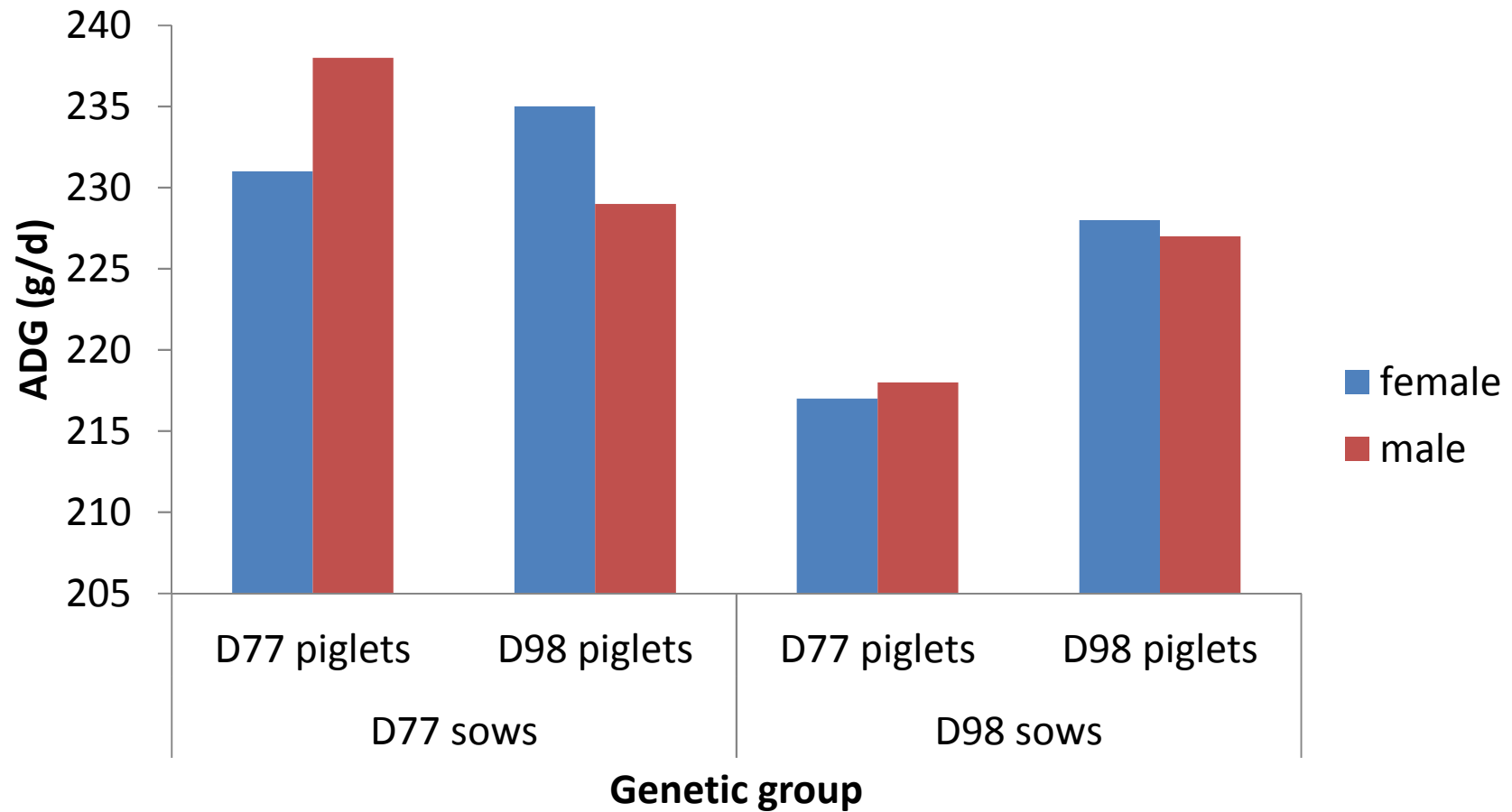




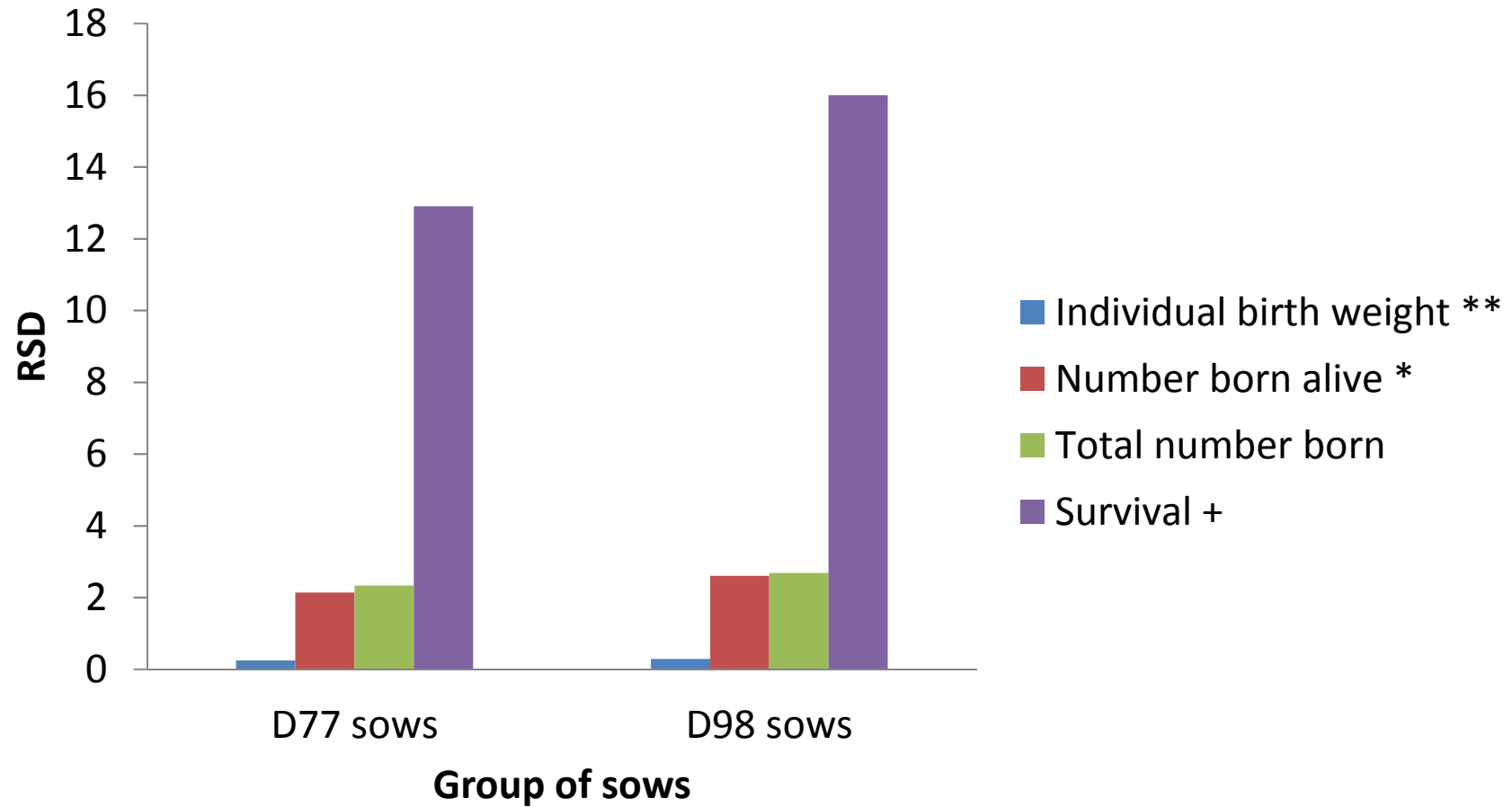
Sow lifespan efficiency

Parameter		D77 sows	D98 sows	P - value
Longevity	piglets/year	17.1+1.05	19.5+0.98	0.09
Longevity	Kg/year	22.4+1.47	24.2+1.34	0.37
Productive life	Piglets/day	0.16+0.03	0.26+0.02	0.02
Productive life	Kg/day	0.18+0.03	0.28+0.02	0.02

Piglet ADG until 21 days of age



Residual standard deviation





Conclusion

- Sows produced more piglets after 21 years of selection
- Sow milk production during 21 days was lower in D8 sows
- Longevity and productive life were shorter in the modern SOWS
- Variability of the performance was increased in modern sows and piglets



Thanks for your attention

