Evolution and variability of the piglets weight during the lactation period

M.Fornós Inglès, J.F. Pérez and D. Solà-Oriol

INTRODUCTION

❖Variability of the piglets weight is an issue that can affect the response of the animals after weaning. If we identify factors increasing variability, we will be able to design strategies to improve the homogeneity of the piglets weights and their production in the nurseries.

OBJECTIVES:

- Analyze the weight evolution of the piglets and the variability of litter weight's during a lactation period of 28 days
- Study which factors influence in weights variability in the lactation period

MATERIALS AND METHODS

A total of 132 litters and 1376 piglets were used.
Piglets were weighed on days 0,7,14, 21 and 28 of their life and the variables per sow/litter analyzed were:

- Farrowing crates (old or new)
- Farrowing number (1st, 2nd, 3rd,4th,5th,6th and 7th)
- Season (spring/summer)
- Sow's diet (0.9-1.05 lysine)

Cross-fostering was done before 24-48 h of life, and litters were matched by weight and number of piglets

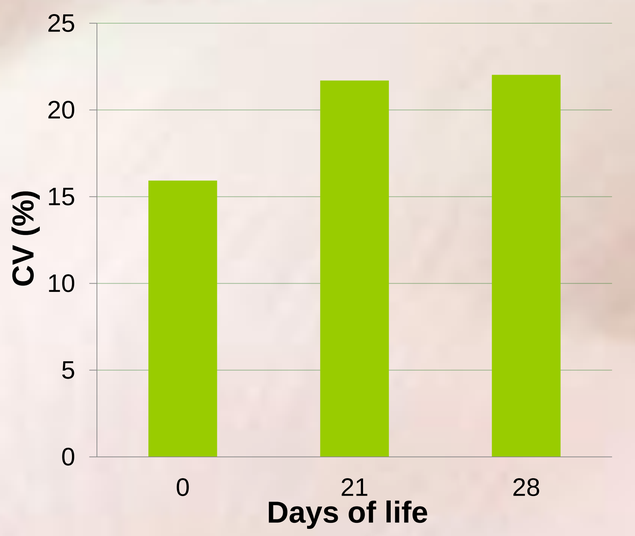
	Old	New
Measure	2,5m x 1,5m	2,5m x 1,5m
Design	Unfavorable	Favorable
Hotplate	Electric	Electric
Slat	Metal	Plastic
Situation	Adjacent to the gestation nave with a single air intake in an only side	Independent naves with windows on two sides
Ventilation	Manual by windows, no fans	

Statistical analysis

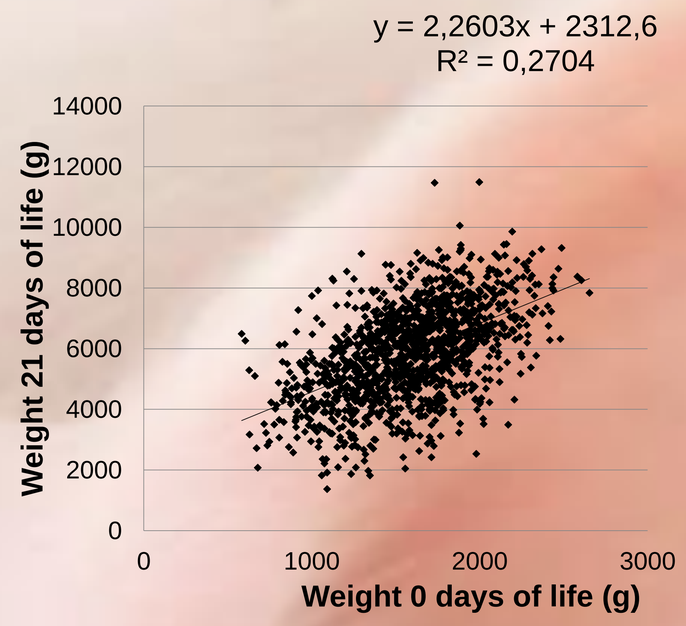
The regression analysis between BW at cross-fostering and after 21d was performed by using the REG procedure of the statistical package SAS®.
The SD per litter was analyzed taking into account the effects of farrowing crates and litter area, farrowing number, season and diet as main factors by using the GLM procedure of the statistical package SAS®.

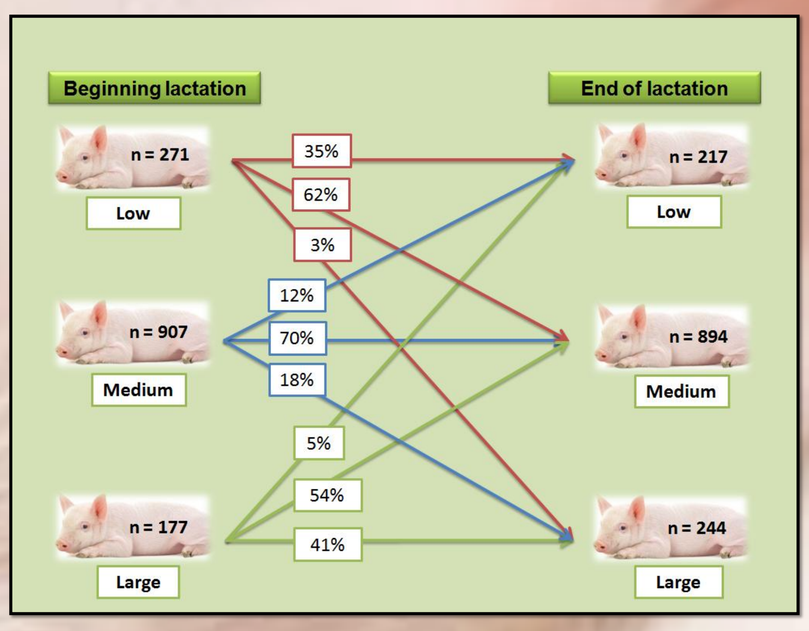
RESULTS

CV at 0, 21 and 28 days of life



Correlation, 0 and 21 days of life

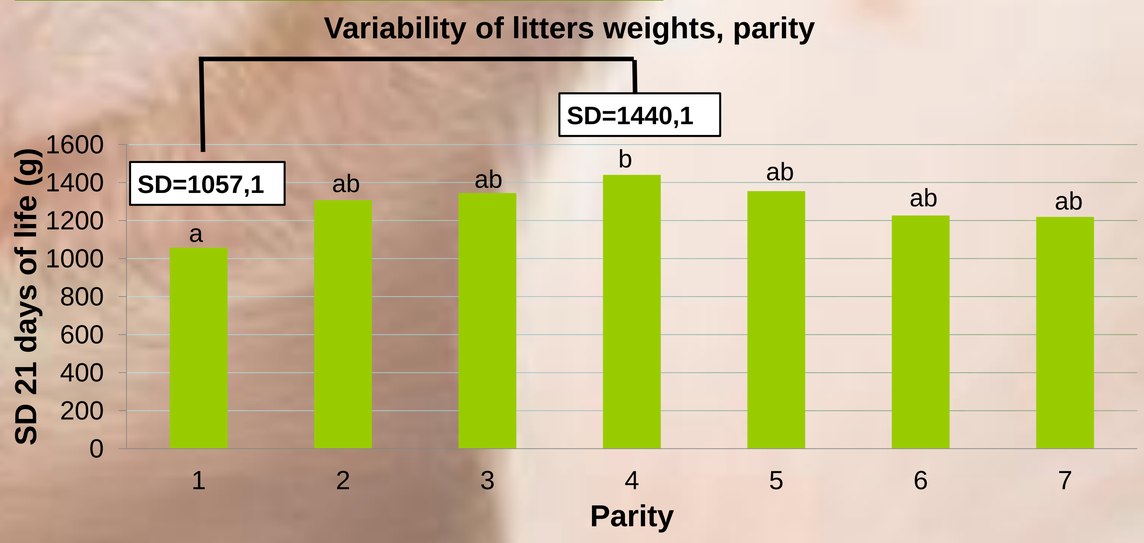




FARROWING CRATES:

New type of installations showed lower variability in the litters.

FARROWING NUMBER:



[a,b] Values with different letter tend to be different (P<0,10).

CONCLUSIONS

- During lactation, it was observed an increase on the variability of the piglets BW in each litter.
- Low correlation between birth and weaning BW indicates the existance of factors affecting the piglet's line growth, specially during the first 21 days of life.
- New farrowing crates and 1st and 7th sow parity promoted the lowest variability of piglets BW within the litter.