An analysis of piglet birth weight in relation to litter size from piglets born from sow that were housed in group gestation with Electronic Sow Feeding Stations (ESFS).

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Introduction

There is some published evidence that suggests that litters from group gestation sows yield heavier piglets at birth than sows that gestated in crates[1]. However, documentation is scarce, regarding statistical aspects of these litters.

Materials and Methods

At Albesa-Ramadera 3,200 sow, Site 1 farm, in Catalonia, Spain, litter weight of piglets born alive (PBA) was recorded at birth and correlated to litter size, between January 2011 and August 2013.

This farm is a commercial integration that utilizes Selección Batallé Genetics in their sow and boar line.

The farm has large group gestation (160 sows per group) and utilizes Electronic Sow Feeding Stations (ESFS). (Compident 7®,Schauer Agrotronic GmbH)

To reduce variation, and to adapt to the available parities present on the farm at that moment of the study, only second parity litters were recorded in this study. Piglets. Born dead, were not weighed with the litter or considered in the analysis.

Litters from gestations under 110 days and litters with less than 7 piglets or more than 15 were also excluded from this study, for considering they were too few to be statistically valid. All reasons for exclusion summarized less than 13%.

A total of 947 litters with 13.152 piglets were included in the analysis.

Litters were grouped by average number of piglets born alive, and the average weight of each group recorded.

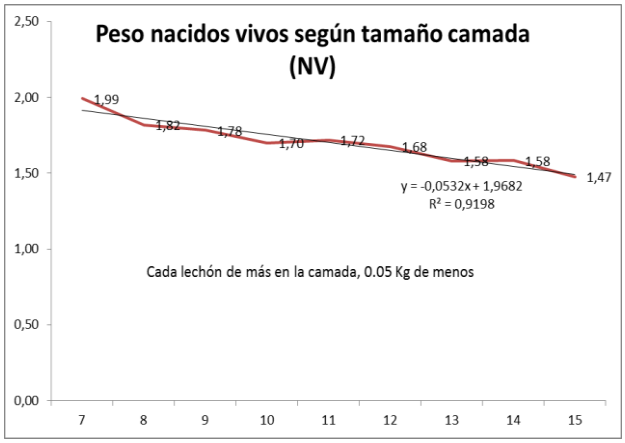
A regression analysis was applied to evaluate the correlation and data consistency between litter sizes.

All data was recorded electronically by use of PDA´s and introduced into the Farm´s Mother® software platform.

Results:

N° of Farrowing recorded	947
Total piglets born	13152
Total piglets born alive	11.926
N° of piglets born dead	1226
Av, Total born/sow	13,88
Av, Total born alive /sow	12,59
Av. Total born dead/sow	1,29
Av.Litter weight born alive	20,39
Av. Piglet weight	1,62

Piglets Born Alive	Average Weight (kg)
7	1,99
8	1,81
9	1,78
10	1,69
11	1,71
12	1,67
13	1,58
14	1,58
15	1,47



Conclusions

Although it was not possible to establish an on farm comparison of piglets birth weights born form conventional systems, litter weight from group gestating sows on ESFS, throughout the whole range of litter sizes was considered to be, very good.

The regression analysis shows a linear trend. For every extra piglet born over 7 piglets, the average weight of the piglets decreases 50 gr.

Discussion

The possibility to follow with high accuracy the ideal feed curve for every individual sow throughout gestation, as well as, allowing the sows to exercise during gestation, and a lower stress level associated to large group gestation may contribute to higher litter weights.

Although a "genetic effect" on the piglet weight, could not be discarded in this study, further research is recommended to fully understand the relative contribution of exercise, precision nutrition, stress and genetics on the litter weight at birth.

Acknowledgments

Albesa-Ramadera farm staff. Lerida, Spain.

References

1. Un published data: P. Loenen, Topigs- Press Release 14th July 2010.
2. Topigs Research: Flushing Sows Gives Higher Piglet Birthweight. The Pig Site, January 13 th, 2011.