

## Introduction

Over the last few years, there has been a great surge of so called “Macrofarms” and the traditional sow has been mostly replaced by those from genetic lines with high prolific potential. Both factors are of public concern due to their impact on the environment and animal welfare.

### Aims and Objectives

- To determine how the size of a farm and the prolificacy of the sows influence their productivity output.
- To study whether it is justifiable to keep on striving for bigger farms using sows with higher prolificacy.

### Material and Methods

Using a database with more than 400 Spanish farms, they were sorted into 6 groups according to their size and into 4 groups according to their prolificacy. An Analysis of Variance was then performed, followed by a regression study of all those factors that were statistically significant.

### Results and Discussion

Farm size does increase productivity (Weaned per sow/year) but in a quadratically shape. Once a farm surpasses a certain number of sows (2500-3000) the efficiency decreases, possibly due to the handling difficulties.

Productivity (weaned/sow and year) increases with prolificacy. However, sows will suffer

more during farrowing and the mean improvement is only about 45% of the maximum potential, due to the increase in stillborn and lactation mortality.

Figure 1: Farm size impact on Productivity (Weaned per Sow/Year)

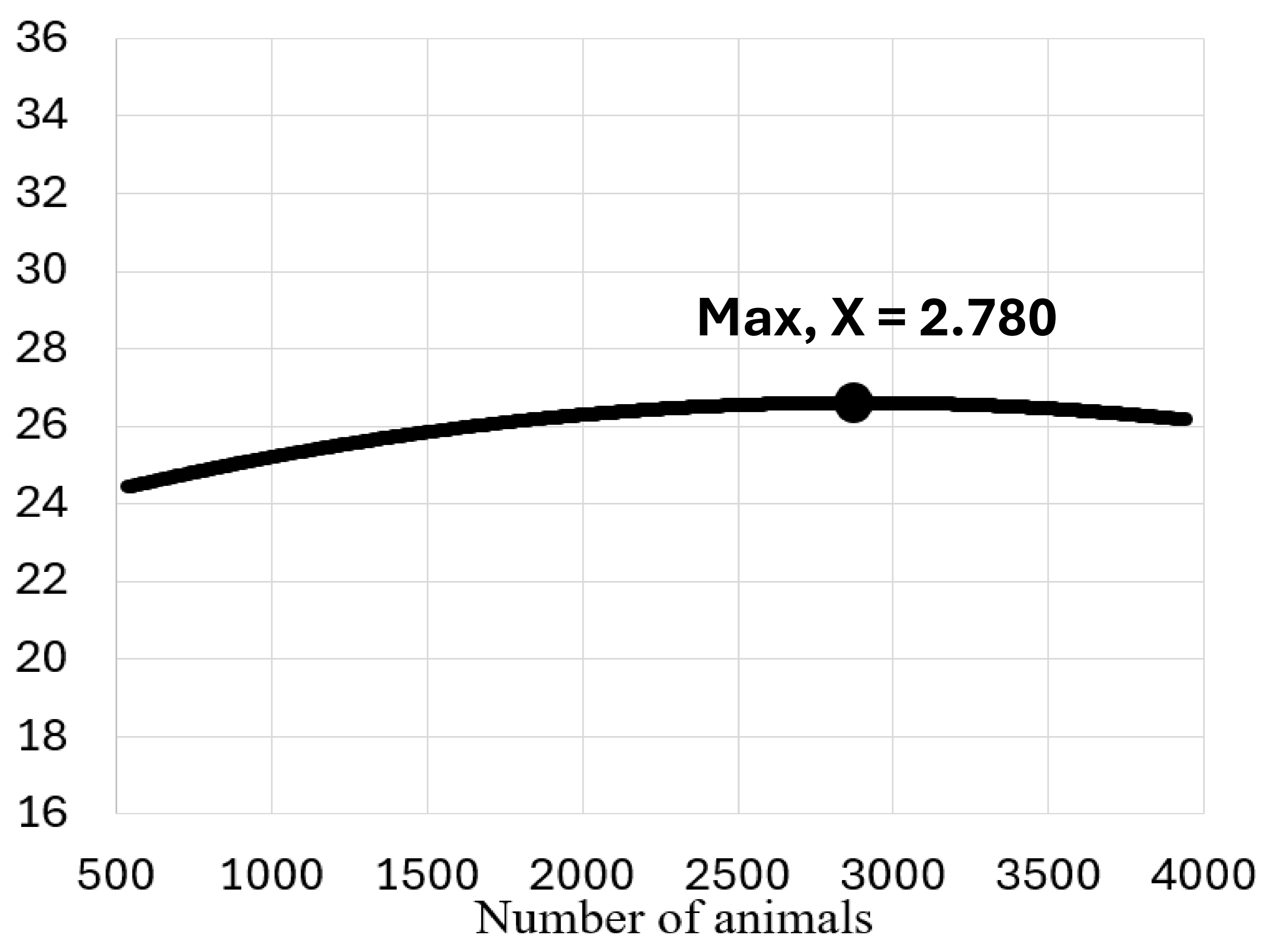
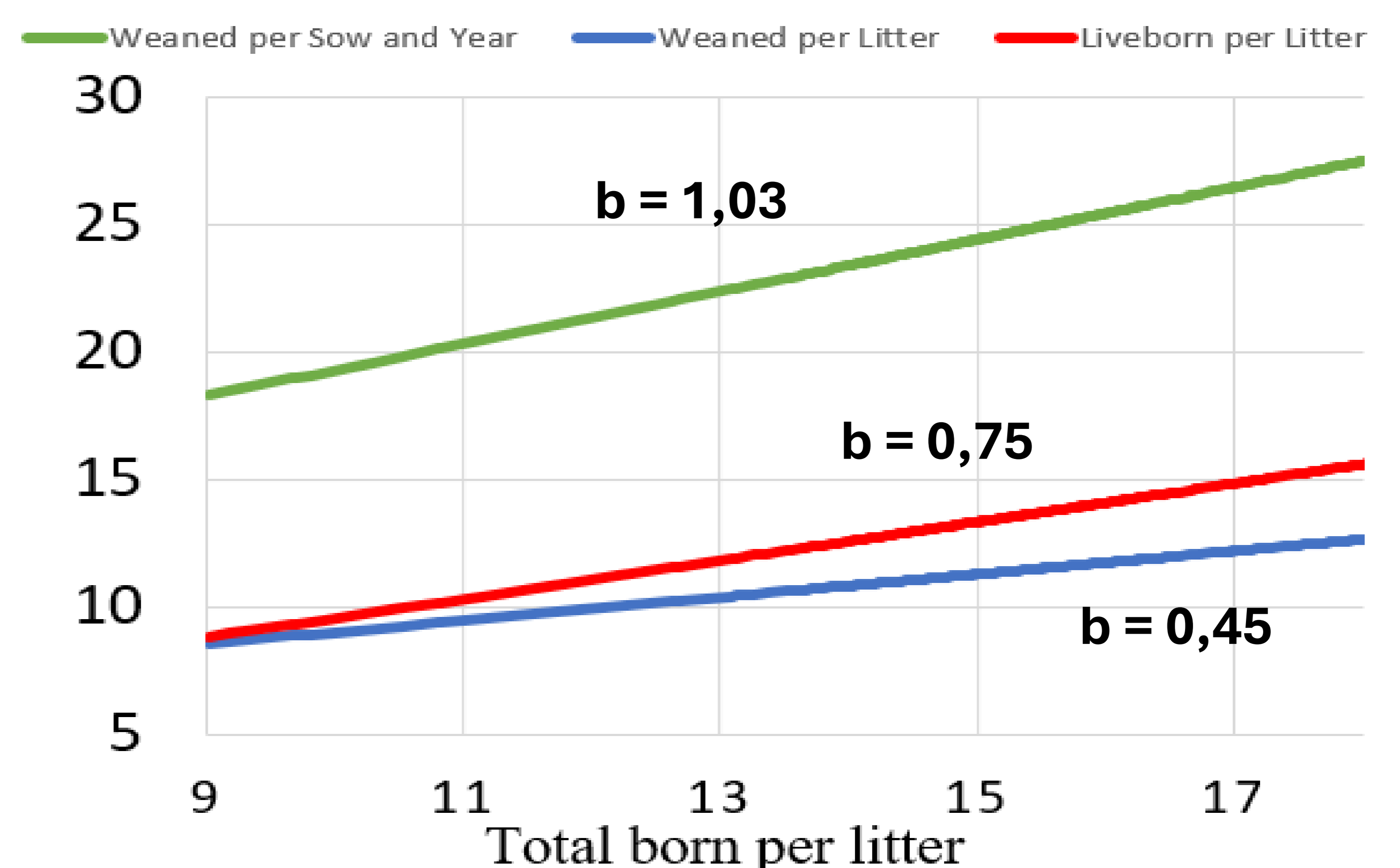


Figure 2: Prolificacy impact on Productivity, NV/farrow and Weaned/farrow



## Conclusions

- Farms will lose efficiency once they surpass a certain number of sows. More research is needed to narrow down this number in order to recommend an ideal number of sows per farm.
- A reassessment of the real benefit of using hyperprolific sows must be made. A higher number of piglets born does lead to higher productivity, but it does not necessarily improve profit, since it causes a decrease in the sow’s welfare and a big increase in piglet mortality.