Development of an organic piglet production system where batch-wise breeding is made possible by exploring the natural physiology of the sow

Ylva Sjunnesson (Department of Clinical Sciences (CS) SLU), Ann-Sofi Bergqvist (CS), Ola Thomsson (CS), Lena Eliasson-Selling, Farm and Animal Health, Sweden.

Abstract

Controlling lactation oestrus is an important factor for herd management in organic pig herds. Lactational oestrus makes it impossible to keep sow groups intact after weaning and intact groups are necessary to keep a batch-wise production. Without batch-wise weaning the production will become continuous and thereby increase the work load and the risk of outbreaks of contagious diseases as well as increase economic losses.

The aim of this project was to investigate if it would be possible to synchronize the oestrus of sows in organic piglet producing farms by introducing a boar as stimuli during the lactation.

Two organic piglet producing farms were enlisted and a total of 72 sows were followed with regards to lactational ovulation and successful pregnancy at insemination after weaning. To detect ovulation, fecal samples for progesterone metabolite analysis were collected twice per week starting three weeks before weaning. The sows were divided in three treatment groups: one control group with no boar present during lactation, one group with boar introduced 15 minutes/day during a period of 5 days starting 21 days before weaning and one group with boar introduced in the same way but 7 days before weaning.

There were no differences in the percentage of sows that became pregnant or not after the treatment but progesterone metabolites in feces from onset of sampling until weaning was significantly higher in the group who had been exposed for a boar 21 days before weaning compared to the control group ($p = 0.005$). This group showed a marked increase in progesterone metabolites within one week after the boar contact but the concentrations returned to basal levels before weaning. There was no difference between the control and the group exposed for a boar 7 days before weaning. There was a large difference in management potential (seen by comparison of the control groups) as well as total progesterone metabolite concentrations between the two farms.

In conclusion, the introduction of boar stimuli during lactation in the current organic system can have an impact on the progesterone production of the sow and thereby ovulation and it can therefore be possible to use this approach with boar contact to synchronize the oestrus of sows in organic piglet producing farms. However, further studies are needed to elucidate the possibility to use boar stimuli to improve the control of the lactational oestruses.