Sow body condition and reproduction in organic sow herds

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How does organic pig production differ from conventional production?

- In organic production the sows are kept outdoors in paddocks for most of their production cycle
- In organic production the weaning age is 7-8 weeks compared to 4 weeks in conventional

Why interest in the body condition and the reproduction of organic sows

- Danish and Swedish advisers: poor body condition is a problem in organic production
- Poor body condition at weaning may jeopardise the reproduction performance
- No systematic information of organic sows' body condition at weaning or reproduction performance

Aim of the study

- To evaluate the sow body condition at weaning
- To evaluate the reproduction performance
- To investigate relations between sow body condition and reproduction performance

... in organic sow herds

Herds

- 9 organic sow herds
- Herd sizes from 50 to 400 sows (mean 175 sows)
- Represent 40% of all organic sow herds in DK with more than 50 sows
- Weaning age from 7 to 10 weeks
- 5 herds with indoor service facilities, 4 herds with outdoor service facilities

Recordings

Body condition:

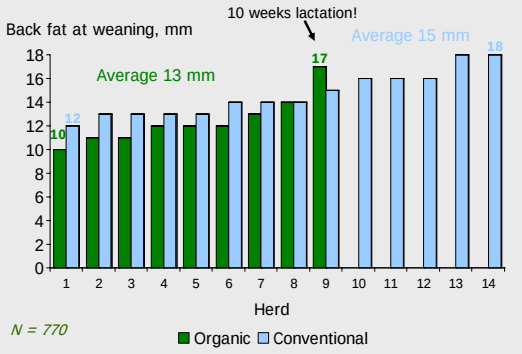
- 10 sows in each of 10 batches per herd
- Digital ultrasound back fat indicator
- P2 measurements

Reproduction:

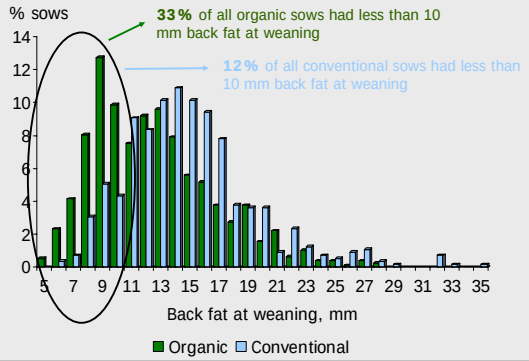
- All sows weaned from July 2005 to July 2006 were followed until farrowing or culling
- Weaning date, mating date (if known), culling date, farrowing date and piglets born per litter

Results – back fat

Back fat at weaning - large variation between herds



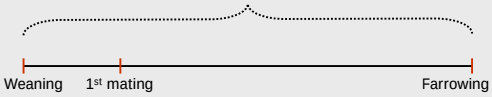
Back fat - large variation between sows



Preliminary results - reproduction

Definition – 'abnormal reproduction'

If more than 130 days from weaning to farrowing

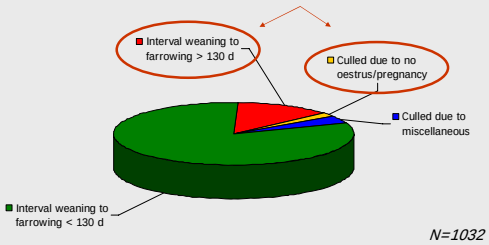


'Abnormal reproduction' includes:

1. Prolonged weaning to first service interval
2. Repeated matings
3. Culled due to no oestrus or no pregnancy

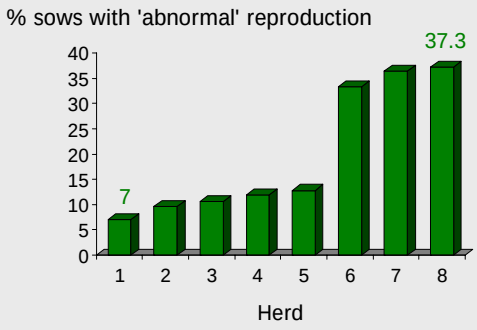
Overall reproduction performance

15% of all sows had 'abnormal' reproduction performances

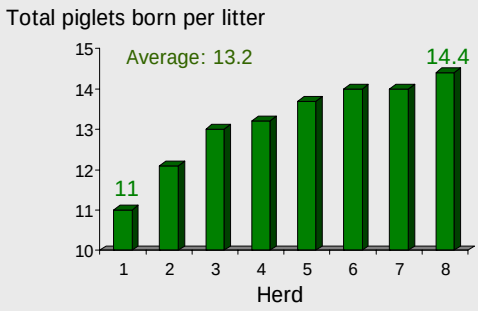


N=1032

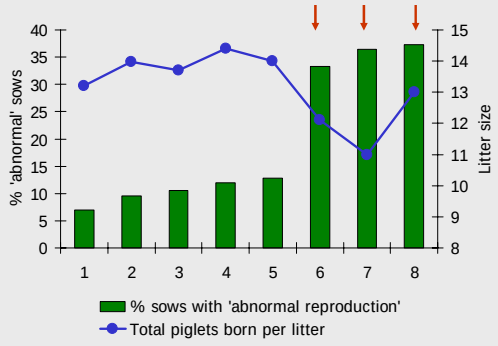
Large variation between herds



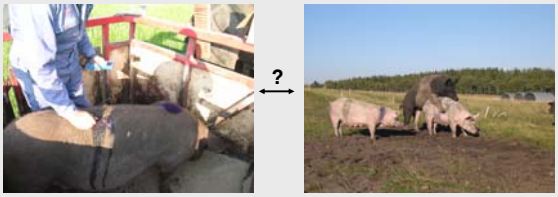
Litter size – also large variation between herds



Three herds stand out with very poor reproduction results

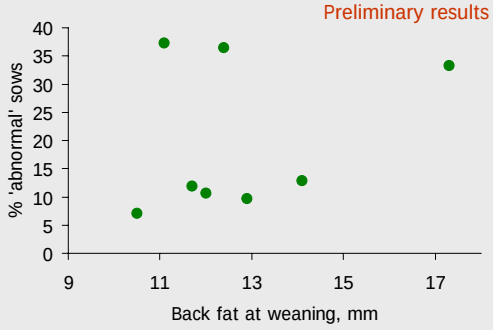


Relations between back fat and reproduction?



Relation between back fat and reproduction (herd level)?

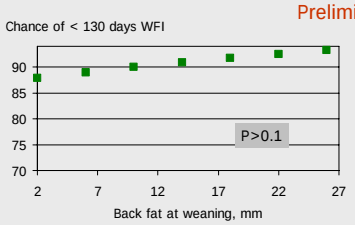
Preliminary results



Relation between back fat and reproduction (sow level)

No significant relation between back fat at weaning and “the chance of normal reproduction” (~less than 130 days from weaning to farrowing)

Preliminary results



N=211

Conclusions

- Average back fat at weaning: 13 mm (Conv: 15 mm)
- 33% of all sows had back fat below 10 mm (Conv: 12%)
- 15% of all sows did not farrow within 130 days after weaning
- Average litter size: total of 13.2 piglets born/litter
- No relations found between back fat at weaning and the subsequent reproduction

preliminary results !

Concluding remarks

Too many sows with poor body condition at weaning and poor reproduction in organic production

But - a large variation between herds

It is possible to improve the situation in many herds with improved management

Need to focus on sow nutrition!

Need to focus on reproduction management!

Thank you for your attention