

# Improved health, welfare and viability in young pigs: extended lactation to improve pig health and growth

## Description

Extending the lactation is one strategy to reduce the risk of post-weaning diarrhoea.

In Denmark, a few large-scale pig producers successfully extended lactation to ten weeks in pasture systems. Ten vs. seven weeks of lactation was compared in an experimental design with 20 sows in individual paddocks and piglets weaned on pasture. Piglet weight at 10 and 14 weeks of age was comparable between treatments (see Table 1). No piglet diarrhoea was observed after weaning. Piglets weaned after ten weeks consumed on average 845 g per pig and day from seven to ten weeks of age but with a substantial variation between litters (388 g to 1,266 g).

## Legislation

- EU organic Regulations 2018/848 and EU 2020/464 stipulate that pigs shall be fed with maternal milk for a minimum period of 40 days.
- In Switzerland piglets should not be weaned from natural milk before day 42 for label production (Bio Suisse regulation).
- In many European countries, including Denmark and France, industry agreements recommend a minimum average weaning age of 49 days.

## Applicability box

### Theme

Pigs

### Farm type

Pasture s

### Production stage

Sows + piglets

## Welfare Environment Cost



**Table 1: Comparison of weaning piglets at 7 or 10 weeks of age**

| Parameter                                      | Weaning age        |                 |                    |                 |
|--|--------------------|-----------------|--------------------|-----------------|
|  | 7 w <sup>1</sup>   |                 | 10 w <sup>1</sup>  |                 |
|  | Mean <sup>1</sup>  | SD <sup>1</sup> | Mean <sup>1</sup>  | SD <sup>1</sup> |
| Piglet weight at 7 w <sup>1</sup> , kg         | 19.7               | 4.5             | 19.4               | 4.2             |
| Piglet weight at 10 w <sup>1</sup> , kg        | 34.5               | 5.8             | 35.9               | 7.0             |
| Piglet weight at 14 w <sup>1</sup> , kg        | 65.8               | 9.1             | 66.7               | 9.0             |
| Daily feed intake 7-10 w <sup>1</sup> , g/pig  | 1,224 <sup>2</sup> | -               | 845 <sup>2</sup>   | 247             |
| Daily feed intake 10-14 w <sup>1</sup> , g/pig | 2,400 <sup>2</sup> | -               | 2,300 <sup>3</sup> | -               |

Piglet performance and daily piglet feed intake when weaned at seven and ten weeks of age, respectively. All piglets were moved to outdoor paddocks after weaning.

<sup>1</sup>w = weeks; Mean = mean value; SD = standard deviation

<sup>2</sup>In weaner paddocks (n = 4)

<sup>3</sup>In sow paddocks (n = 10), exclusive intake of sow feed



Ten-week-old piglets that weigh on average 35 kg take up a lot of space at the udder. Although the sows were still lactating, no udder or teat lesions were observed after ten weeks of lactation in the POWER project.

## Relevance for animal welfare

Under semi-natural conditions, the weaning process is gradual and is not completed before 13 to 17 weeks postpartum. An increased weaning age thus corresponds well to the central aim in organic livestock farming of allowing animals to express their natural behaviour. Further, it is expected to decrease the risk of weaning diarrhoea thanks to a more gradual shift from maternal milk to a plant-based diet, favouring the adaptation of the digestive abilities.



Hut- and nest size is an important aspect to take into account as in the POWER project each sow weaned on average 415 kg of piglets after ten weeks of lactation.

## Relevance for environmental impact

- At weaning heavy and healthy pigs improve the overall feed efficiency in the fattening stage, which is important for reducing the carbon footprint of organic pork.
- However, the risk of nutrient losses in pasture systems will increase if the paddock area is not enlarged to take into account the higher N and P deposited per sow and piglets per lactation.

## Cost and labour

- With extended lactations, fewer litters per sow are produced per year unless it is possible to induce lactational oestrus and successfully breed the majority of sows.

## Recommendations

- **Length of extended lactation:** Weaning at 7 or at 10 weeks of age both seem to be equally suitable strategies to obtain good piglet health and very high piglet growth rates until 14 weeks of age if high piglet feed intake in addition to the sow's milk can be achieved before weaning and if piglets stay in an outdoor environment after weaning.



Average daily sow-feed intake in the POWER project was 14 kg/sow from 7 to 10 weeks of lactation. A part of the sow feed was consumed by the piglets. After 10 weeks of lactation, all sows were in good body condition (body condition score 3 out of 5) with an average back fat depth of 12.4 mm.



- **Piglet feeding before weaning:** Piglets should have access to feed starting at 2 weeks of age. The piglet feed dispensers should be located close to the hut and should be of sufficient size to allow several pigs to eat simultaneously. Shelter should be provided at the dispensers to protect the piglets from rain and wind while eating.
- **Piglet feeding after weaning:** Mix pre- and post-weaning feed mixtures the first few days after weaning to avoid an abrupt change in feed.
- **Lactational oestrus:** If breeding/insemination is not possible before weaning, lactating sows should be kept in single paddocks and without boar contact to reduce risk of lactational oestrus.
- **On the pasture:** Paddock size should be increased, huts and feeders should be regularly moved and sow-feed protein content should be reduced at the end of lactation when the milk production is declining to reduce risk of nutrient losses

## Further Information

- **Bio Suisse (2021):** Standards for the production, processing and trade of BUD products. At: [www.bioaktuell.ch](http://www.bioaktuell.ch) [Link].
- **EU (2018):** Regulation (EU) 2018/848 on organic production and labelling of organic products. At: [eur-lex.europa.eu](http://eur-lex.europa.eu) [Link].
- **EU (2020):** Commission Implementing Regulation (EU) 2020/464 of 26 March 2020 laying down certain rules for the application of Regulation (EU) 2018/848. At: [eur-lex.europa.eu](http://eur-lex.europa.eu) [Link].
- **ICROFS (2021):** POWER, Extended lactation to improve pig health and growth. Video. International Center for Research in Organic Food Systems ICROFS, Tjele. Available in English: [www.youtube.com](http://www.youtube.com) [Link].

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