

# Improved health, welfare and viability in young pigs: designing an organic farrowing pen

## Description

A well-designed farrowing pen creates a safe environment for the sow, the piglets and the farmer. Dividing the pen into areas for the needs of the sow and the piglets ensures optimal use of the space, adequate temperature and easy management. Non-slippery flooring and the allowance of appropriate bedding enable the sow to exhibit her natural behaviour of nest-building around farrowing. Easy access to the piglets and the option to separate the sow ensure the farmers' safety during inspection and care of the animals.

## Legislation

EU organic Regulations 2018/848 and EU 2020/464 stipulate the following:

- Minimum space allowance per sow and litter is 7.5 m<sup>2</sup> indoors with a mandatory addition of 2.5 m<sup>2</sup> outdoors.
- Floors shall be smooth, but not slippery. At least half of the indoor surface areas must be solid.
- Ample dry bedding material (straw or other suitable material) must be provided in the resting area.

The Swiss Animal Protection Ordinance (AniPO, SR 455.1) stipulates that farrowing pens have to be designed so that the sow is able to turn around. Likewise national regulations in Sweden and Norway prohibit the use of farrowing crates, where the sow is not able to turn around, in all production systems – organic as well as conventional.

## Applicability box

### Theme

Pigs

### Farm type

Indoor housing with outdoor run

### Production stage

Sows + piglets

## Welfare Environment Cost



## Relevance for animal welfare

- The design of the farrowing pen influences the sows' ability to exhibit her natural behaviour, protects piglets against cooling and being crushed by the sow, and ensures good hygiene and easy control of the health of the animals.

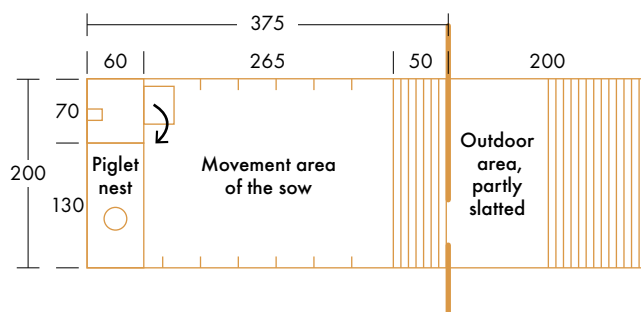
## Relevance for environmental impact

- Proper insulation of the building and providing a warm microclimate only in the piglet nest, reduces the energy consumption for heating.
- Heating the whole barn can even be detrimental for the sows as they need ambient temperatures around 15 °C. Piglets on the other hand need ambient temperatures of up to 33 °C. Therefore they will use the heated piglet nest less frequently if the whole barn is heated, increasing their risk of being crushed.
- A sloping floor indoors and outdoors (1-2 %), as well as a functioning drain, ensure suitable drainage of liquids and reduce ammonia emissions.

## Cost and labour

- Observation of the pigs can be simplified by ensuring that farrowing pens are easy to overlook and/or recorded with cameras.
- For the necessary treatments of piglets, the possibility to separate the sow indoors or outdoors improves work safety.
- Frequent monitoring without disturbing the sows around farrowing can save piglets, most sows farrow in the evening or night.

**Figure 1: Separate areas of a farrowing pen**



Layout example of a farrowing pen consists of different areas. The lying area provides space for the sow to rest, feed and move around. It should have at least 4 m<sup>2</sup>, so that the sow can turn around. Before farrowing adding some extra long straw to the lying area, is recommended, so the sow can use this bedding material for nest building. The piglet nest should be heated, as piglets need a higher ambient temperature compared to the sow. The outdoor run is used for exercise, resting, dunging and rooting.



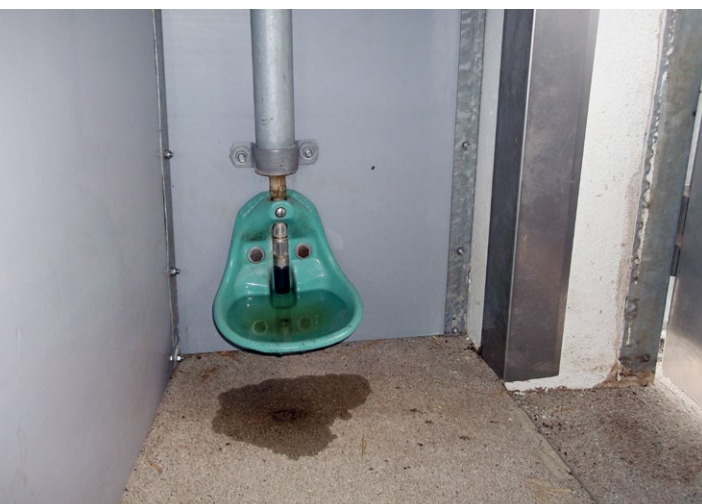
Picture 10.1: Keep-off rails create a save space for piglets when the sow is lying down and therefore help to reduce piglet crushing.

## Recommendations

- Farrowing pens should be divided into separate areas (see Fig. 1).
- **Indoor area:** Depending on the size of the sows, a minimum 7.5 m<sup>2</sup> indoor area (EU 2020/464) might not be enough.
- **Lying area:** The lying area of the sow should be big enough for her to turn around easily. A diameter of 2.4 m is usually suitable. Continuous fixation of the sows in crates during farrowing and the lactation period is not allowed.



Picture 10.2: Using windbreaks and plastic curtains can help to prevent drafts in the farrowing pen.



Picture 10.3: Bowl drinkers can be installed at a suitable height for both, the sow and piglets.

- **Prevent crushing:** The piglets must be able to walk around the lying sow to prevent crushing, which can either be achieved by keep-off rails on the pens' walls (see picture 10.1) or by providing more space.
- **Materials:** Since the surface must be easy to clean and disinfect, the use of plastic is recommended.
- **Floor:** Flooring should be non-slippery, so the sow can move securely, but not too rough to avoid joint lesions in piglets. Concrete with sufficient straw, mixed with sawdust to better absorb liquids, is a good solution.
- **Bedding material:** Chopped straw or a similar bedding material should be used to make sure, that newborn piglets can walk freely.
- **Draft:** A draft inside the pen should be avoided. Swivel doors or solid walls can be used as a wind-break (see picture 10.2).
- **Feeding area:** The feeding trough of the sow should be easy to reach from the service aisle, and visible to the piglets.
- **Water source:** Water should be provided in bowl drinkers for both the sow and piglets, so the piglets learn from the sows (see picture 10.3). The mother-child waterer should be protected from frost and positioned close to the outlet so that overflowing water can drain off easily.
- **Separation of the sow:** There should be a fast and easy option to separate the sow from the piglets. Solutions are a lockable door to the outdoor run, or a swivel fence to lock the sow while eating.

- **Ambient temperature:** The pen should be divided into temperature zones: 30-33 °C in the piglet nest, > 15 °C in the pen. Depending on the season, additional heating during farrowing might be necessary.
- **Piglet nest:** The piglets nest should be easy to reach from the service aisle to simplify their observation.
- **Access to piglet nest:** When (some) curtains of the piglet nest are open on the first days after birth, the nest is more accessible for piglets.
- **Outdoor run:** The outdoor run should be big enough for proper use by the sow and mechanical cleaning. A minimum of 2.5 m<sup>2</sup> for outdoor runs (EU 2020/464) is too restricted; 4 m<sup>2</sup> (2 x 2 m), should be the minimum area of an outdoor run.

## Further information

- **Bussemas R., Widmaier A. (2011):** Biologische Schweinehaltung: Fütterung, Management und Tiergesundheit. 3. Auflage. Bioland Verlag, Mainz.
- **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].
- **Swiss Federal Council (2008):** Animal Protection Ordinance (AniPO, SR 455.1). At: [www.fedlex.admin.ch](http://www.fedlex.admin.ch) [Link].

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