

PRACTICE-LED INNOVATION

ALTERNATIVE
HOUSING OF
FARROWING
SOWS ON A
COMMERCIAL
FARM IN
CATALONIA



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Universitat Autònoma
de Barcelona

Conventional farrowing crates raise serious welfare concerns for the sows and their piglets. Several countries in Europe, namely Switzerland, Sweden and Norway, currently prohibit their use. Denmark plans to have at least 10% of its breeding herd loose farrowing by 2021. The United Kingdom has already 40% of their sows farrowing in loose outdoor systems and the industry stated to increase alternative farrowing systems indoors. Confinement is strongly criticised by public opinion and the industry is moving towards innovative housing of lactating sows.

The majority of sows are housed in farrowing crates from approximately five days before they are due to give birth until their piglets are weaned at approximately 28 days of age. Farrowing crates were first introduced in the 1960s and their main purpose was to lower the risk of piglets being crushed by the sow by controlling her movements, particularly when lying down. Farrowing crates are considered to be economical, efficient and safe with maximising piglet survival as a main aim. However, they raise serious welfare concerns for the sows but also for the piglets.

IMPORTANCE OF NEST-BUILDING BEHAVIOUR FOR THE SOW

The sow will start nest-building behaviour approximately 16-24h before farrowing. She is more active, she digs and roots an area where she manipulates and arranges the rooting material. To perform nesting behaviour, the sow needs space and manipulable material. When the sow performs nest-building she is more calm and relaxed during farrowing. Oxytocin release is higher when the sows are relaxed. This hormone stimulates uterine contractions during farrowing, promotes the expression of maternal behaviour and maximizes milk ejection during the suckling period. This can have a positive effect on performance, including reduced mortality rate and a better growth of the piglets.

Alternative to farrowing crates should improve sow welfare giving her more movement and promoting nest building and maternal behaviour; however, the system should be designed to protect the piglets.

CONVENTIONAL FARROWING CRATES



WELFARE CONCERNS FOR THE SOWS IN CONVENTIONAL FARROWING CRATES

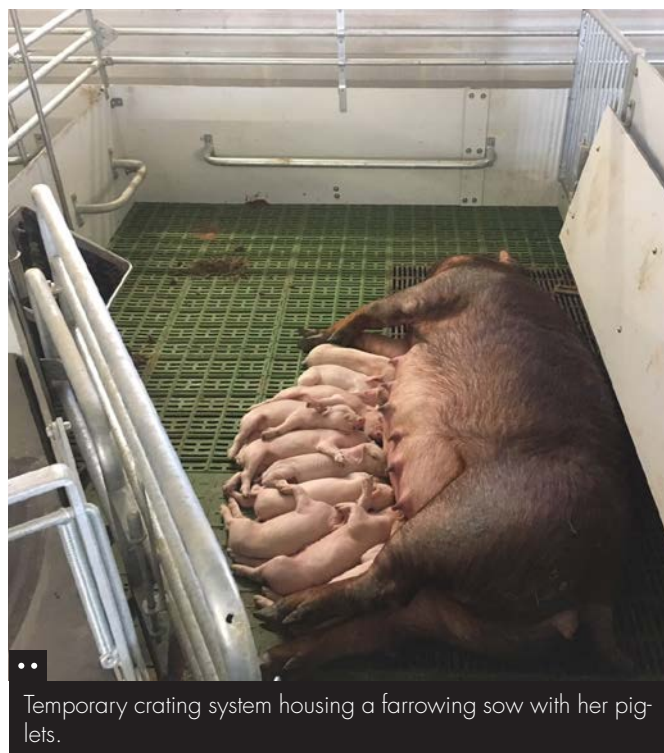
- Restriction of movement: the sows cannot turn around.
- The sow cannot express nest-building behaviour.
- Sows cannot express their normal maternal behaviour.

WELFARE CONCERNS FOR THE PIGLETS IN CONVENTIONAL FARROWING CRATES

- Increased risk of stillbirth.
- Higher risk of aggressions from the mother.

In free farrowing, piglets have to be well protected. Piglets are vulnerable when they are new-born.

They have to get to the udder and drink colostrum quickly. The sow is exhausted from parturition and still suffer from pain. If the sow does not control her posture changes carefully she is at risk of crushing her piglets.



Temporary crating system housing a farrowing sow with her piglets.

In free farrowing systems, sow's temperament and behaviour are particularly important.

Maternal behaviour should be promoted by good management around farrowing and this includes mainly:

1. Reduce pain around farrowing.
2. Provide manipulable material.
3. Develop good human-animal relationship.
4. Provide a housing that will protect the piglets. A well-designed and comfortable nest is of paramount importance.

Main types of free farrowing systems indoor (www.freefarrowing.org):

1. TEMPORARY CRATING

The sow can turn around but can be temporarily restrained around farrowing.

2. "ZERO CONFINEMENT" INDIVIDUAL CRATES

The sow is housed individually and she is not crated at any time. Simple pens are built on the same footprint as the conventional farrowing crates but with no restraining and with some features to protect piglets from crushing. Designed pens are more elaborated, larger and allow the sow to separate dunging and lying areas and they provide additional pen features to assist sow posture changes.

3. GROUP SYSTEMS

These systems allow sows and litters to mix before weaning. Most of them are based on multisuckling accommodation. Both sows and piglets have a greater amount of space and are often housed on deep-straw bedding. Sows are initially individually housed in pens and integrated with their litter into groups between 10 and 21 days after farrowing. Alternatively, sows can already be grouped prior to farrowing and have access to individual nest-boxes that can be removed later after farrowing.

Despite an increasing amount of literature available on the benefits of alternative farrowing systems, several concerns are raised when implementing such housing systems in commercial conditions. Doubts are particularly present in hot areas where heat stress can be an important welfare problem for sows.

Providing solutions for practice is essential to encourage changes. A multi-actor network has been created to test free farrowing systems under commercial conditions in Catalonia.

SOME FREQUENTLY ASKED **TOPICS** ABOUT **FREE FARROWING**

- Risk of crushing events.
- Management of aggressive sows, "bad mothers" or very active sows.
- Dealing with heat stress conditions.
- Type of floor.
- Hygiene of the pen and the sows.
- Suitable enrichment material.
- Management of the feeding system.
- Husbandry difficulties, extra time.
- Staff safety.

Conventional crates have been replaced by free-farrowing pens with temporary crating on slatted floors. Two systems of temporary crating are tested: the JLF15 and the SWAP (Sow Welfare and Piglet Protection). In both systems, the sow can turn around throughout farrowing and lactation, but, at the same time these systems allow the sow to be restrained around farrowing. Both systems provide a highly comfortable nest for the piglets. The nest is a key feature as a safety area for the piglets and makes husbandry tasks much easier. Finally, enrichment material is provided through a dispenser. JLF15 pen is 2.4 x 2.4 meters. SWAP pen is larger (3 x 2 meters) and allows the sow to separate dunging area, feeding area and lying area.



Temporary crating SWAP.



Temporary crating JLF15.



Comfortable nesting area for the piglets.



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