

# Farrowing housing and management



## Biology and needs of pigs

**To avoid unintended welfare problems in production, breeding, housing and management during and after farrowing, caretakers need to take the specific biology and behavioural needs of pigs into account:**

- A few days prior to farrowing, sows isolate themselves from their group and build a nest where they give birth.
- Piglets are attracted to the udder by the warmth and smell of the udder. At birth, piglet survival strongly depends on fast ingestion of colostrum.
- Nursing is signaled by the sow through a specific vocalization pattern and piglets will establish a teat order after some days.
- Before lying down, sows perform pre-lying behaviour, intending to move piglets out of danger of being trapped under the sows body.
- During the first days post-partum, sows are highly attentive to their piglets, and frequent nose-nose contacts occur between sow and piglets.
- The weaning process naturally starts around 3-4 weeks of age, and after 10-12 weeks piglets are weaned from sow milk. Under commercial conditions, the weaning is abrupt and takes place much earlier.

## Legal requirements



**Council Directive 98/58/EC** sets down general standards for animals kept for farming purposes. Article 4 states that:

“Member States shall ensure that the conditions under which animals (...) are bred or kept, having regard to their species and to their degree of development, adaptation and domestication, and to their *physiological and ethological needs* in accordance with established experience and scientific knowledge, comply with the provisions set out in the Annex.”

## Welfare of sows and piglets

**Based on the pigs' biology and needs, five focus areas regarding welfare of sows and piglets can be identified:**

### Five focus areas during inspections

- ✓ Space and freedom to move
- ✓ Comfortable climate
- ✓ Nest building and exploration
- ✓ Litter size and competition
- ✓ Mutilations



Welfare risks can be considerably reduced if correct measures and practices are introduced for these areas.

# Five focus areas for inspections

Relevance for pig welfare in conjunction with welfare indicators



## COMFORTABLE CLIMATE

Sows and piglets have different thermo-neutral zones:

- A typical farrowing room temperature around 22-24°C is below the thermo-neutral zone (34°C) of newborn piglets, and therefore hypothermia at birth is a risk.
- The sows' thermo-neutral zone, in contrast, is around 16-20°C. Crated sows and sows with large litters are particularly sensitive to heat stress.

Panting, and temperature of the room (sows)

Huddling/shivering/pilo-erection, and temperature in nest area, and size of nest area (piglets)



## LITTER SIZE AND COMPETITION

- Highly productive sows have difficulties ingesting sufficient feed to match milk yield/requirements.
- When number of piglets outnumbers functional teats this can hamper establishment of a teat order.
- Large litters are associated with reduced birth weight and growth, and higher piglet mortality.

Underconditioned sows

Teat lesions

Runts and mortality (piglets)

Facial/carpal joint lesions (piglets)



## MUTILATIONS

- Best practices to reduce the need for tail docking, are through reducing the presence of known risk factors.
- In order to reduce the need for teeth-grinding, litter size can be reduced and sufficient space for suckling provided.
- Methods for reducing pain and stress (fear) during surgical castration include providing anesthesia and/or analgesia prior to and after castration.

## NEST BUILDING AND EXPLORATION



- Sows have a strong motivation to build a nest. When the performance of nest building is prevented, this leads to stress.
- A complete nest built of materials like straw provides thermal comfort, and promotes piglets' growth. Nest materials also provide piglets with exploratory materials.

Type of nest building material (sows), and type of exploratory material (piglets)



## SPACE AND FREEDOM TO MOVE

- Sows need space for nest building, lying-down and getting-up movements, turning around, and exploration. If not possible, this results in frustration and stress.
- Piglets need space around the udder to get access to their preferred teat. They also need space for a thermally comfortable nest area where they all can rest together.

Body lesions, and space allowance (sows)







Teat lesions, and space to suckle for piglets

Facial/carpal joint lesions (piglets)

# Welfare indicators for inspections

To identify welfare issues related to farrowing housing and management








FOCUS AREA	INDICATOR	SHORT DESCRIPTION	INDICATOR FACTSHEET
<b>Space and freedom to move</b> 	Body lesions (sows)	Sows are scored for presence of fresh or healed lesions.	<a href="https://edepot.wur.nl/516964">https://edepot.wur.nl/516964</a>
	<i>Space allowance (sows)</i>	Space available to sows within the crate is assessed.	
	Teat lesions (also 'Litter size and competition') 	Udder and teats are scored for presence of fresh or healed lesions.	<a href="https://edepot.wur.nl/513898">https://edepot.wur.nl/513898</a>
	<i>Space to suckle for piglets</i>	The dimensions are assessed in terms of giving piglets enough space for suckling over the entire nursing period.	
	Facial/carpal joint lesions (piglets) (also: 'Litter size and competition') 	Face and carpal joints are scored for presence of fresh or healed lesions.	<a href="https://edepot.wur.nl/513897">https://edepot.wur.nl/513897</a>
<b>Comfortable climate</b> 	Panting (sows)	To detect signs of heat stress, sows are observed for signs of panting.	Under construction
	<i>Temperature of the room (sows)</i>	Basic conditions are checked by documenting the room's temperature.	
	Huddling/shivering/pilo-erection	To detect signs of cold stress, piglets are observed for huddling/(..).	<a href="https://edepot.wur.nl/517119">https://edepot.wur.nl/517119</a>
	<i>Temperature in nest area (piglets)</i>	Basic conditions are checked by documenting the nest area's temperature.	
	<i>Size of nest area</i>	Space available to piglets in the nest area is assessed, to verify a comfortable lying area for the entire litter.	
<b>Nest building and exploration</b> 	Type of nest building material (sows)	Nest building material is assessed for its suitability.	<a href="https://edepot.wur.nl/516953">https://edepot.wur.nl/516953</a>
	<i>Type of exploratory material (piglets)</i>	Exploratory material is assessed for its suitability.	
<b>Litter size and competition</b> 	Underconditioned sows	It is evaluated whether sows are in the proper condition.	<a href="https://edepot.wur.nl/514267">https://edepot.wur.nl/514267</a>
	Runts and mortality	Litters are checked for occurrence of runts, based on four different criteria; the percentage of mortality is calculated.	Under construction

All indicator factsheets "Farrowing housing and management": <https://edepot.wur.nl/513361>

# Legal requirements

Related to the five focus areas for inspections



<p><b>Space and freedom to move</b></p> 	<p><b>Council Directive 2008/120/EC</b></p> <ul style="list-style-type: none"> <li>✂ "The accommodation for pigs must be constructed in such a way as to allow the animals to:             <ul style="list-style-type: none"> <li>- have access to a lying area physically and thermally comfortable (...) which allows all the animals to lie at the same time,</li> <li>- rest and get up normally. (...)." {Annex I, Chapter I, point 3}</li> </ul> </li> <li>✂ "An unobstructed area behind the sow or gilt must be available for the ease of natural or assisted farrowing." {Annex I, Chapter II, point B4}</li> <li>✂ "Where a farrowing crate is used, the piglets must have sufficient space to be able to be suckled without difficulty." {Annex I, Chapter II, point C2}</li> </ul>
<p><b>Comfortable climate</b></p> 	<p><b>Council Directive 2008/120/EC</b></p> <ul style="list-style-type: none"> <li>✂ "A part of the total floor, sufficient to allow the animal to rest together at the same time, must be solid or covered with a mat, or be littered with straw or any other suitable material." {Annex I, Chapter II, point C1}</li> </ul>
<p><b>Nest building and exploration</b></p> 	<p><b>Council Directive 2008/120/EC</b></p> <ul style="list-style-type: none"> <li>✂ "in the week before the expected farrowing time sows and gilts must be given suitable nesting material in sufficient quantity unless it is not technically feasible for the slurry system used in the establishment." {Annex I, Chapter II, point B3}</li> <li>✂ For exploration "pigs must have permanent access to a sufficient quantity of material to enable proper investigation and manipulation activities, (...)." {Annex I, Chapter I, point 4}</li> </ul>
<p><b>Litter size and competition</b></p> 	<p><b>Council Directive 98/58/EC</b></p> <ul style="list-style-type: none"> <li>✂ "Natural or artificial breeding or breeding procedures which cause or are likely to cause suffering or injury to any of the animals concerned must not be practiced. (...)." {Annex, point 20}</li> <li>✂ "No animal shall be kept for farming purposes unless it can reasonably be expected, on the basis of its genotype or phenotype, that it can be kept without detrimental effect on its health or welfare." {Annex, point 21}</li> </ul> <p><b>Council Directive 2008/120/EC:</b></p> <ul style="list-style-type: none"> <li>✂ "No piglets shall be weaned from the sow at less than 28 days of age unless the welfare or health of the dam or the piglet would otherwise be adversely affected. However, piglets may be weaned up to seven days earlier (...)." {Annex I, Chapter II, point C3}</li> </ul>
<p><b>Mutilations</b></p> 	<p><b>Council Directive 2008/120/EC</b> {Annex I, Chapter 1, point 8}</p> <ul style="list-style-type: none"> <li>✂ "Neither tail docking nor reduction of corner teeth must be carried out routinely but only where there is evidence that injuries to sows' teats or to other pigs' ears or tails have occurred. (...)." {Annex I, Chapter I, point 8}</li> <li>✂ "(...). If castration or docking of tails is practised after the seventh day of life, it shall only be performed under anaesthetic and additional prolonged analgesia by a veterinarian."</li> </ul>



European Reference Centre  
for Animal Welfare *Pigs*

For any questions or suggestions regarding this factsheet, please contact [info.pigs@eurcaw.eu](mailto:info.pigs@eurcaw.eu)