H3 - The environment of the sow

This sow has plenty of room to lie down, rest and get up

The requirements for the sow's environment are fulfilled when the sow:

1. Is able to lie down, rest and get up without difficulty. The crate must be adjusted correctly.
2. Can have a large feed and water intake.
3. Is not too hot.
4. Has access to straw or other nesting material.
5. Lies on a dry floor.
6. Is not exposed to a draught.

Recommended temperature strategy in farrowing facilities

Design and management	Farrowing to d 4	D 4 - 14	D 14 to wean.
Sectioned Diffuse ventilation Partially slatted floor Floor heat in creep areas	20 - 22^{0}C	Reduce by approx. 0.3^{0}C a day	17 - 18^{0}C
Ventilation with air inlets	20 - 22^{0}C[1]	18 - 20^{0}C[1]	18 - 20^{0}C[1]
Continuous operation (not sectioned)	19 - 20^{0}C		
Fully slatted floor (sectioned farrowing facilities)	22 - 23^{0}C	20 - 22^{0}C	20^{0}C

[1)] Depends on ventilation rate, outdoor temperature and the environment in the pens. Piglets must always be kept in a draught-free environment.

The sow has tried to wallow in water and feed to regulate body temperature

The temperature is too high if:

- The sows try to wallow by playing with the water, if they frequently change positions or increase their water intake ⇒ check the room temperature and the temperature in the sows' activity area.
- The sows are passive, their feed intake is insufficient, they pant or have a high temperature that is not caused by disease.

The temperature is too low if:

- The sows primarily lie stern ally (on the chest)=> check temperature, draught and humidity. If the floor is still wet, the environment will be too cold for the sows.
- Many cases of mastitis are observed - also before farrowing.

	Additional comments - The environment of the sow
1.	The basis of a high milk yield is optimum conditions for the sows. It must therefore be easy for the sow to lie down, rest and get up. It must be able to have a high feed and water intake, and the temperature must not be too high. Sows manage best under temperatures around 16-20°C or below. The recommended inside measurements for farrowing crates (incl. space by the trough): • 220 - 250 cm in length • 65 - 90 cm in width Adjust the farrowing crate inwards the day before expected farrowing. Adjust it outwards on day 3 - 5 after farrowing when the piglets are mobile and primarily stay in the creep area.
2.	If the temperature is higher than 22°C, the sow's feed intake drops as does the milk yield. The sow furthermore spends energy on getting rid of surplus heat. This also increases the risk of piglets being crushed as they are not motivated to use the creep area as intended.
3.	Sows have an upper critical temperature of 22 - 28°C. Reduce the room temperature during lactation when the sow's heat production increases due to the increasing feed intake and the increasing metabolism due to a high milk yield. **How to reduce the temperature in the sows' activity area:** • Increase the air speed in the activity area (without exposing the piglets to a draught). • Cool the air with, for instance, high-pressure cooling. • Supply air to the activity area. Check the location of the ventilation sensor: it must be placed close to the sows' activity area. If the sensor is located too close to the air intake, it will record a lower temperature than the one in the activity area. As a result, ventilation will be lower than intended. The recommended temperatures are guiding. Adjustments must always be made on the basis of the sows' behaviour, and not only by checking the ventilation control.
4.	If nesting material is supplied before farrowing, it is possible to shorten both farrowing and the period until the piglets start colostrum intake.
5.	Piglets are not capable of perspiring, and the sows will therefore try to wallow to get rid of surplus heat. This reduces hygiene and increases the risk of shoulder lesions. The pen floor must be even without being slippery. Solid floor reduces the risk of shoulder lesions. It is important that the concrete be intact to avoid pebble or other irregularities that may annoy the sow. Talk to your pig advisor when selecting flooring for new facilities, but also when improving existing facilities.
6.	It is not possible for the sow to move around in the pen, and it is therefore essential that the sow's environment is draught-free. If the sow is cold, it will often lie stern ally (on the chest) to stay warm.