

# SoLiv 2.0

Soen længe Leve



## Summer in the gestation unit

### Rising temperatures in the gestation unit

A unit temperature of approx. 18 °C is advisable, but this will increase in summer.

Sows' thermal neutral zone is 22–34 °C, if their housing unit has concrete flooring. If litter (straw) is used, the minimum and maximum temperatures of the thermal neutral zone will fall.

The production of heat and level of production are constant within this temperature range. The thermal neutral zone is delimited by the lower critical temperature where the pig must generate more heat to maintain its body temperature. It is also delimited by the upper critical temperature where the pig will reduce its feed intake and use additional energy to get rid of the heat.

### The sow's indicators of overheating

A pig cannot sweat through its skin, and its only sweat glands are on its snout.

- The sow will try to cool off by increasing its contact with the underlying surface by lying down stretched out on its side.
- The sow will try to wallow to cool itself off by evaporation from the surface of its body.
- The sow will increase its respiration, which is an energy-intensive process and thus a significant 'cost' for the sow.
- In very hot periods, the sow can alter its circadian rhythm to be active at night rather than during the day.

Point of focus	Explanation and recommendations
Increase the rate of air exchange in the gestation unit	<p>Underpressure ventilation means that the greater the volume of air extracted from the unit (through one or more exhaust chimneys) the greater the volume of air that will enter the space.</p> <p>The ventilation system must therefore be dimensioned for the number of sows in the unit.</p> <p>The dimensioning of the ventilation capacity must also take account of the heat added to the room by installing skylights and large end windows.</p> <ul style="list-style-type: none"><li>• Clean the exhaust chimneys when pressure washing with a long lance-type nozzle.</li><li>• Make sure the exhaust damper fully opens to a vertical position.</li><li>• Make sure that all wall or ceiling inlets are set to be fully opened.</li><li>• Clean the netting covering wall inlets or in eaves using a broom or pressure washer.</li></ul>

Point of focus	Explanation and recommendations
Increase the air velocity in the sow's living area.	Installing air inlets that open in very hot periods will increase the flow of air around the sow.
Cooling off the intake air	<p>Establishing a high-pressure cooling system can lower the temperature of intake air.</p> <p>Remember that the system needs to be maintained and that employees must be keenly focused on adjusting the controls to avoid increasing the relative humidity in the housing space.</p>
Cooling off the intake air	<p>It is required by law that sows can regulate their own body heat.</p> <p>Establishing a high-pressure cooling system can lower the temperature of intake air. Remember that the system requires maintenance and that employees must be keenly focused on adjusting the controls to avoid increasing the relative humidity in the housing space.</p>
The sow's water intake	<p>Inadequate water intake will reduce the sow's feed intake and could heighten the risk of urinary tract infection.</p> <p>It must be possible for gestating sows to drink 12–20 litres of water every 24 hours.</p> <p>One automatic bowl waterer (preferably with a visible water surface) for every 15 sows with a minimum water flow of three (3) litres per minute.</p> <p>The water pressure must be 2–2.5 bar when 20% of the sows in the unit are drinking at the same time.</p> <p>To get a fair idea of the drinking valves' output, these must be checked when the watering system is strained, i.e. around feeding time or when washing or adding water to wet-feed systems.</p> <p>If buffer tanks need to be used, these must be safeguarded against bacterial growth.</p>