



## Summer in the farrowing house

## Rising temperatures in the farrowing house

A temperature of  $18-20\,^{\circ}\text{C}$  is advisable in the farrowing house, but this will increase in the summer.

Sows' thermal neutral zone is 12–22 °C. 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 air exchange in the farrowing house	Underpressure ventilation means that the greater the volume of air that is extracted from the house (through one or more exhaust chimneys) the greater the volume of air that will enter the space.  This is why the ventilation system must be dimensioned for the number of sows and pigs in the house, as well as the weaning age.  Clean the exhaust chimneys when pressure washing with a long lance-type nozzle.  Make sure the exhaust damper fully opens to a vertical position.  Make sure that all wall or ceiling inlets are set to be fully opened.  Clean the netting covering wall inlets or in eaves using a broom or pressure washer.
Increase the air velocity in the sow's living area.	Installing ceiling inlets that open in very hot periods will increase the flow of air around the sow.
Cooling off the intake air	Establishing a high-pressure cooling system can lower the temperature of intake air.  Remember that the system needs to be maintained and that employees must be keenly focused on adjusting the controls to avoid increasing the facility's relative humidity.

Point of focus	Explanation and recommendations
Sow feeding time	The recommended times of sow feeding are basically as follows: 34% of the feed at 7 am; 33% of the feed at 2 pm; and 33% of the feed at 9 pm.  When it is very hot, a different strategy should be considered, to give the sow the option of eating a larger portion of its ration when it is cool (morning/mid-morning and evening).
The sow's water intake	Inadequate water intake reduces sows' feed intake. During the nursing period, the sows' need for water will vary from 35 to 50 litres a day.  The drinking-valves must supply 4 litres/minute for wet feed and 10 litres/minute for dry feed.  The water pressure must be 2–2.5 bar when 20% of the sows in the farrowing house are drinking at the same time.  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.  If buffer tanks need to be used, these must be safeguarded against bacterial growth.

