

How pigs cope with cold weather conditions is dependent upon many factors such as age, body weight, stage of production and their accommodation. As a general rule older, larger and more productive animals better tolerate lower temperatures whereas neonatal pigs are very vulnerable to chilling.



THERMAL COMFORT ZONE

Temperature range within which pigs are most comfortable and productive

Bounded by UPPER AND LOWER CRITICAL TEMPERATURES (UCT and LCT)

LCT reduces as body weight increases

Temperatures below LCT require body reserves and feed intake to generate heat to keep pigs warm

Approximate guide to thermal comfort zones according to pig weight and flooring		
Weight (kg)	Straw bedding °C	Slatted flooring °C
5	27-30	30-32
10	20-24	25-28
20	15-23	19-25
30	13-23	17-25
90	11-22	15-24

Floor type influences lower critical temperatures:

Insulated floors and bedding materials provide protection against cold temperatures

No bedding and slatted floors give no additional insulation, so a higher ambient temperature is needed

Neonatal piglets have minimal fat stores and use these quickly in cold temperatures, becoming chilled very easily. This predisposes them to infections that can cause scour, meningitis, joint infections and respiratory problems, all of which can increase lethargy, reduce feed intake and further reduce nutrient reserves creating a vicious cycle. Ultimately, chilling of neonatal piglets can increase pre-weaning mortality, therefore ensuring the thermal comfort of young piglets is vital.

MAKING COLD CONDITIONS FEEL COLDER

DRAUGHTS – increased air speed has a chilling effect

WET – damp bedding causes pigs to lose body heat

NO OR LIMITED BEDDING – limited insulation around pigs enables heat loss

LARGE AIR SPACE – enables heat loss via convection

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HOW TO KEEP PIGS WARM

- Check temperatures using max/min thermometers
- Maintain/control building temperature if possible
- Provide a good layer of dry bedding
- Create microenvironments e.g. covered lying areas
- Utilise supplementary heat if safe and practical e.g. lamps
- Enable ventilation with clean air but prevent draughts at pig level
- Evaluate accommodation – decide what interventions will improve thermal comfort
- Arcs can be insulated and door flaps added to prevent draughts
- Move arcs away from very wet areas and site nearer feed and water for easy access
- Utilise materials such as straw/wood chip as “islands” in wet/muddy areas so pigs can limit mud and moisture walked into accommodation
- Feed diets that meet the maintenance needs of the pig
- Consider additional measures for accommodation where group size may be lower e.g. hospital pens

HOW CAN I TELL MY PIGS ARE COLD?

HUDDLING

SHIVERING

LETHARGIC

**INCREASED FEED
INTAKE BUT POOR
GROWTH**

**MORE SUSCEPTIBLE
TO DISEASE**



DON'T FORGET TO PLAN FOR COLD WEATHER

**Plan for freezing temperatures to ensure your pigs NEVER run out of water
Ensure that feed supply will be maintained during periods of bad weather**

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