

Pigs Action for Productivity

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Water supply



Water is essential for nearly all body functions including temperature regulation, absorption of nutrients, waste excretion and tissue growth. Over 80% of the body of a newborn piglet consists of water, compared to about 55% in a finisher. Severe water deprivation may result in death; even minor dehydration can result in reduced feed intake, lower daily gain, poorer feed conversion, reduced milk production and lower weaning weights. When performance problems are being investigated feed is often analysed, but the water supply is frequently overlooked.

It is a legal requirement that all pigs have ready access to good quality, clean water. The Welfare of Farmed Animals (England) Regulations 2007, and the Code of Recommendations for Livestock: Pigs state that "All pigs over two weeks of age must have continuous access to a sufficient quantity of fresh drinking water".



Optimal water availability (see tables 1-3)

Good water quality

Maximise water intake to optimise feed intake and growth efficiency

Water availability

- Ensure sufficient access to watering points (Table 1)
- It is advisable to have more than one drinker per pen; this will act as a back up in the event of a drinker becoming blocked or broken
- Check that all drinkers are clean and working on a daily basis
- Check flow rates of every nipple and bite drinker between batches. This is a simple task requiring a large measuring jug, a watch and a minute of your time

Operate the drinker for 30 seconds and note the volume of water collected. Double this to give the flow rate in litres/minute (refer to Table 2).



- When testing flow rates check the difference between those nearest to and furthest from the supply, as the variation between drinkers may surprise you. A significant difference between the first and last drinkers could indicate a blockage or problem with the water pressure
- Water pressure can be affected by factors such as: the diameter of the washer orifice within the drinker; cleanliness of the filter; pipe diameter; deposits within the pipe line; and header tank height
- Drinkers must be at the correct height for the size of pigs (Table 3). In grower pens/yards it is important to ensure drinkers are accessible to both the smallest and largest pigs on both entry and exit
- The drinkers should be positioned to allow easy access and ideally should be within 1–2 m from the feeders
- Easy and prompt access to water is essential to prevent dehydration. For the first few days after weaning consider additional "communal" drinker points, eg turkey drinkers



Water availability *continued*

- Wet-fed pigs require a separate source of clean drinking water
- Ensure that wastage is minimal and repair any leaking pipes or drinkers promptly. Remember, leaking drinkers will add to slurry volume and are expensive
- Monitoring water supply to a building can establish basic usage patterns, which can then be used to monitor changes in drinking behaviour, eg as a result of a blockage, leak, change of feed or environmental temperature or disease outbreak. Trials have shown that in the event of a disease outbreak a change in water consumption will often be apparent before clinical signs are

Table 1 *Drinker requirements*

System	Minimum requirement (grower/finisher pigs)
Nipple/bite drinker (restrict fed)	l per 10 pigs
Nipple/bite drinker (ad lib fed)	l per 15 pigs
Bowl (restrict fed)	l per 20 pigs
Bowl (ad lib fed)	l per 30 pigs
Trough space (>35 kg)	30 cm/25 pigs

Source: Defra Code of Recommendations for the Welfare of Livestock: Pigs; Genesis QA

Table 2 *Daily water requirements and minimum flow rates for various weights of pig*

Weight of pig (kg)	Estimated daily requirement (litres)	Minimum flow rate through nipple drinkers (l/m)
Newly weaned	1.0 – 1.5	0.3
Up to 20	1.5 – 2.0	0.5 – 1.0
20 – 40	2.0 – 5.0	1.0 – 1.5
Finishing pigs up to 100	5.0 – 6.0	1.0 – 1.5
Sows & gilts – pre-service and in-pig	5.0 – 8.0	2.0
Sows & gilts – lactation	15 – 30	2.0
Boars	5.0 – 8.0	2.0

Source: Defra Code of Recommendations for the Welfare of Livestock: Pigs

Table 3 *Recommended drinker heights*

Liveweight (kg)	Height (mm)	Height (inch)
7 – 8	250 – 350	10 – 14
19 – 35	350 – 450	14 – 18
35 – 60	500 – 600	20 – 24
60 – 95	600 – 750	24 – 30
Maiden gilts	750	30
Dry sows/boars	800 – 950	32 – 38

**Water quality**

The water offered to pigs should be fit for human consumption and hygiene is a critical factor.

- Bowl drinkers and troughs should be checked on a daily basis and cleaned as necessary
- Header tanks should be completely covered with intact, secure lids, to prevent contamination
- The complete water line, including drinkers, pipe work and header tanks should be regularly cleaned and flushed through, ie between batches. Check flow rates after flushing
- Routinely (eg between every batch) check if pipe work is clean by taking off a drinker and feeling for residue within the pipe
- Microbiological, physical and chemical factors can all affect water quality. If there is any doubt concerning quality samples should be sent for analysis
- Test water supplied from boreholes annually