



Key Targets

1 Optimal water availability (see tables 1-3)



2 Good quality water



3 Maximise water intake to optimise feed intake and growth efficiency



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".

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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 daily that all drinkers are clean and working



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- Check flow rates of every nipple and bite drinker both mid-batch and between batches. This is a simple task requiring a large measuring jug, a watch and a minute of your time

- When testing flow rates, check the difference between those nearest to and furthest from the supply, 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 pipeline, 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 **1-2m** from the feeders
- Easy and prompt access to water is essential to prevent dehydration. For the first few days after weaning consider additional drinker points, eg turkey drinkers
- With combined feeder and drinker stations, it is good practice to have separate, individual drinkers to enable pigs to have access when other pigs are feeding.











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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 observed.

Table 1: Drinker requirements

SYSTEM	MIN. REQUIREMENT (grower/finisher pigs)
 Nipple/bite drinker (restrict fed)	1 per  10 pigs
 Nipple/bite drinker (ad lib fed)	1 per  15 pigs
 Bowl (restrict fed)	1 per  20 pigs
 Bowl (ad lib fed)	1 per  30 pigs
 Trough space (<35kg)	30cm for every  25 pigs

Remember, leaking drinkers will add to slurry volume and are expensive

Source: Defra (2003) Code of Recommendation for the Welfare of Livestock: Pigs; Red Tractor Assurance (2014)

Table 2: Daily water requirements and min. flow rates for various weights of pig

WEIGHT OF PIG (kg)	ESTIMATED DAILY REQUIREMENT (Ltrs)	MIN. FLOW RATE (Nipple drinkers) (l/m)	WEIGHT OF PIG (kg)	ESTIMATED DAILY REQUIREMENT (Ltrs)	MIN. FLOW RATE (Nipple drinkers) (l/m)
Newly weaned	1.0 - 1.5	0.3	Sows & gilts (pre-service and in-pig)	5.0 - 8.0	2.0
Up to 20kg	1.5 - 2.0	0.5 - 1.0	Sows & gilts (lactation)	15 - 30	2.0
20 - 40kg	2.0 - 5.0	1.0 - 1.5	Boars	2.0 - 5.0	2.0
Up to 100kg (finishing pigs)	5.0 - 6.0	1.0 - 1.5			

Source: Defra (2003) Code of Recommendation 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/boards	800 - 900	32 - 38

Source: Defra (2003) Code of Recommendation for the Welfare of Livestock: Pigs

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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
- Test water supplied from boreholes annually as a minimum
- The complete water line, including drinkers, pipework and header tanks, should be regularly cleaned and flushed through, ie between batches, to reduce the buildup of biofilms. Check flow rates after flushing
- Routinely (eg between every batch) check if pipework 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
- Header tanks should be completely covered with intact, secure lids, to prevent contamination
- Private water supplies see 'Private Water Supplies: Technical Manual' (<http://www.privatewatersupplies.gov.uk/>).