

WATER QUALITY for QUALITY PIGS

Water flow rates



If water flow rates at drinkers are low, pigs do not necessarily compensate by spending more time drinking. Low water flow rates have been shown to significantly reduce food intake, which in turn reduces growth rates and in sows, reduces milk production. Poor access to water may also influence the incidence of disrupted behaviour patterns, and associated losses.

Water flow rates can be easily measured, and it is useful to apply a standard routine in each building and to note the results. Having a record allows you to prioritise any actions, and will serve as a useful record of maintenance.

1. Note room number/ ID
2. Use a plastic measuring jug with metric gradations
3. Test drinker nearest to water source (header tank or inlet)
4. Note volume of water in jug in 30 seconds. Doubling this value gives flow rate in litres per minute. Keep a note of actual flow rates.
5. Repeat for drinker furthest from the supply



Comparison of the results with recommended flow rates will give an indication of where action is needed. A significant drop in flow rates between the first and last drinkers in a room might imply that the pipework is getting clogged up by accumulated organic matter.

Target flow rates

Category	Flow rate Litres/min
Farrowing house	1.5 – 2.0
Weaners	0.7
Grower first stage	1.0
Grower second stage	1.5
Finishers	1.5 – 2.0
Dry sows	1.5 – 2.0



Low flow rates

Is it important? If pigs are ad lib wet fed, or have access to other sources of water in the pen, the low flow may not be significant.

How to correct flow rates? Routine maintenance: clean filters behind each nipple. On-farm work has shown improvements of up to 150%

Is it important? Pigs will become used to a low flow, and under-perform, producing hidden losses. Try providing one or more pens with recommended flow rates and check performance.

Check and change flow rate adaptors within certain types of drinker. If the flow rate has been set low to stop drips and leaks, change the drinkers! Leaking drinkers cost money, conservatively estimated at more than £10 per year per drinker. On the other hand, low flow rates cost money by reducing productivity. Consider the benefits of investing in better drinkers.

Cleaning the Water System

All water systems will naturally contain bacteria and virus contamination. There will be a build up of contamination over time, and the degree of contamination will depend on the quality of the source water, the extent to which the system is open (lids on header tanks), and any routine hygiene procedures in place.

The bacterial and viral load in the water can impact on disease transmission between batches of animals, and place an unnecessary burden on the kidneys and immune system of the pig. Cleaning the water system can help prevent this.

Drainable systems

1. Use Virkon S at a dilution of 1kg per 200 litres (0.5% dilution)
2. Isolate header tank at the mains and drain off from drinker points farthest from the tank.
3. Clean out gross soiling from the header tanks
4. Refill with water, add Virkon S at 0.5% dilution and ensure that disinfectant solution is fed through to all drinkers: leave for 10 minutes
5. Flush through to drain off all points and leave for 30 minutes
6. Refill with fresh water

Non-drainable systems and those with poor water quality

1. Use Virkon S at a dilution of 1kg per 1000 litres (0.1%)
2. Isolate header tank at mains
3. Add Virkon S to the header tank
4. Allow all water to be consumed until the system is empty
5. Remove any sludge from the header tank and clean drinkers out
6. Refill with water and add Virkon S



At a dilution level of 0.1% Virkon S can safely be used in the drinking water for pigs. Chlorine tablets can also be used, and may be especially useful where access to tanks is difficult.

It is quite normal for drinkers to become blocked by organic debris dislodged during cleaning. Check flow rates after cleaning.

Estimating volumes of header tanks: use a metric tape, and measure the approximate width and breadth of the tank, and the normal depth of the water in the tank in centimetres.

Width (cm) x breadth (cm) x water depth (cm) = volume in ccs.

Divide by 1000 to find capacity in litres. 1000ccs = 1 litre.



GO WITH THE FLOW – GIVE THEM PURE SCOTTISH WATER

For further information contact Allan Ward of QMS on 07879 272501

