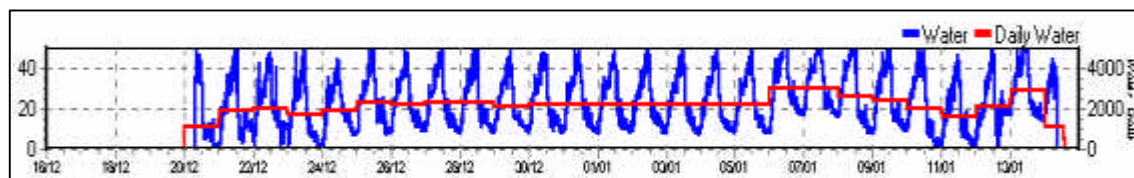


Water Leakage: Baseline Shift Example

The chart has been taken from the very first period of logging in a finisher building holding 900 animals, and shows clear evidence of water leakage/waste amounting to around 9c per pig in a 24 day period.



If water leakage occurs, it is revealed as a base line shift in the blue line as shown above.

That is, the lowest point of consumption doesn't go down to zero.

The fact that the base line suddenly goes up near the beginning, changes upwards abruptly later on, but returns to zero again dispels the suggestion that it may be genuine intake by the animals.

In a 24 day period, total use amounts to 54,000 galls, but a reasonable estimate of leakage from the charts is 16,500 galls, amounting to 30% of total use.

Since water leakage can be taken as passing directly into the slurry pit, leakage represents a pure loss. No benefit whatever and incurring costs in extraction and disposal. Conservatively, this is estimated at **0.5c per gallon**. Pigs might drink some "leakage" but this unlikely to be much of the amount estimated.

Using this figure, the period shown indicates a loss of **\$82.50, \$3.43 per day, or 9.2c per pig**.

This problem has been revealed as soon as logging commenced. It could be a one-off event, and pure coincidence that it has happened now (i.e. when logging started), but the suspicion would be that it is a routine occurrence on this site.

Projecting to annual costs at the rate estimated, it would amount to \$1,250 for this barn, **\$5,000** on the 4-barn site, or around **60c per pig produced**.

The most likely cause of leakage is worn out drinkers. Most farms ignore minor drips or dribbles, and don't replace drinkers until dribbling is obvious.

For reference, just one droplet per second from a drinker wastes 1600 gallons per year - \$8 (2.2c per day). A small "run" from a drinker costs around **\$1 a day**.

If a good quality replacement is \$20 including labour, and a realistic (no-drip) lifetime as 5 years, a replacement costs \$5 per year including capital cost (1.4c per day).

From these calculations, it can easily be seen that drinkers should be replaced at the first sign of drips or wear. A drinker used beyond its proper working lifetime will soon waste many times its replacement cost.

All drinkers wear out sooner or later, but no-drip lifetime is important. All manufacturers claim superior performance and reliability for their own products, so it is well worth producers carrying out their own comparisons. Barn Report monitoring is an invaluable aid, because of the baseline shift indicator. Total use on its own, from an ordinary water meter is a poor indicator when comparing drinkers.

For a quick rough guide to cost of leakage - divide the lowest point on the blue line (using the left hand scale) by 2.

For example, 7 (gallons per 15 minutes) / 2 = about \$3.50 per day.

If water use is shown per pig, the cost is per pig. E.g. 0.02 / 2 = 1c per pig per day.