



Big impacts on storage



A range of factors need to be considered when working out how much effluent storage your farm needs, but some have a bigger impact than others. DairyNZ's effluent expert **Logan Bowler** talks about the significant impact shed water use and application depths have on your storage requirements.

We're all familiar with the saying, 'reduce, reuse, recycle,' and the same principle can be applied to water use in the milking shed to significantly slash the amount of effluent storage you require.

After taking into account your soil-type, as we discussed in the last column, shed water use is the second most important factor to consider when determining how much effluent storage your farm needs.

Many of you know roughly how much

water you use to clean up the milking shed, but it's a good idea to calculate exactly how much.

On average, most dairy farms use about 70 litres per cow, per day in the milking shed. Some of you may be using slightly more, or less, depending on your shed set up and whether you're milking once or twice a day. By comparison, the average human uses about 250 to 300 litres a day.

WASTE NOT, WANT NOT

There are a few ways to reduce water use

in the milking shed, but I believe the one that has the biggest impact is installing a 'green water' washing system.

By washing your yard with recycled effluent, or 'green water', you can cut water use by up to 65%. This can significantly reduce your effluent storage requirements by 50%.

This could see a 500-cow farm drop their water use from 23,000 litres a day to 12,600 litres and reduce their pond size from 5700 cubic metres to 2400cu m.

Along with reducing water use and

Using green water can cut water use by up to 65%.

are ideal to irrigate.

As with most things, there is a trade-off. While shallow application depths will significantly reduce effluent storage requirements, it requires more labour, as you're irrigating more frequently, and through the busy calving period. So, it's worth weighing-up whether you'd rather spend a bit more and get a larger pond, which will allow you to store your effluent and apply deeper application rates when conditions are better in spring, summer and autumn.

Everyone's effluent storage requirements are different and no one-size fits all, so if you're looking at upgrading or installing an effluent system talk to an accredited design company to ensure you get the right system for your farm. 

More? About effluent storage and management visit dairynz.co.nz/effluent.

- Logan Bowler is a DairyNZ environmental extension specialist and effluent management expert.

effluent storage, there are significant electricity and labour savings.

If we consider the above example, that farm would also reduce their effluent irrigation from 77 minutes a day to 42 minutes. That 35-minute saving would free up staff to do other tasks.

So, if you're looking at installing or upgrading your effluent storage, I'd encourage investing in a green water washing system. You may be surprised and find the cost is largely offset by the money you save on requiring a smaller effluent storage pond or tank.

APPLICATION DEPTHS

Another key factor to consider is effluent application depths.

Once again, this comes back to the importance of understanding your soil-type.

If your farm is on high-risk soils, it's a good idea to take the 'little and often' approach and irrigate effluent on paddocks whenever conditions are right – dry soil and fine weather.

By using shallow application depths of 3mm, rather than 5mm and 10mm, this enables you to irrigate more often and reduces storage requirements.

This might sound contradictory, but soil is like a sponge – it can only hold so much water before it's either taken up by pasture or leaks out into ground water. Applying shallow amounts increases the number of opportunities when conditions

TechniPharm Comments

Dungbuster Automatic Yard cleaning systems reduce water use significantly
Dungbuster Greenwash Dual core is also an option to reduce water and effluent volumes
Flextank Round and Ecobag are advanced environmental storage systems
no nitrogen loss, no water ingress, no crusting, safe and easy to install