infrastructure

Soiled water storage

Many farms will need to raise their storage capacity to meet new requirements. TAMS can help

Tom Fallon Teagasc infrastructure specialist



s of 1 December 2023 dairy farmers will be obliged to have capacity to store 21 days' worth of soiled water. The requirement will increase to 31 days in December 2024. Soiled water results mainly from parlour washings but also includes runoff from open silage pits, etc.

Farmers supplying liquid or winter milk will have a further year to meet the 31-day requirement. Spreading soiled water on land will not be allowed during the final three weeks of this year.

The storage requirement is for the cow numbers milked at peak during the year and does not relate to the numbers milked during December. Nevertheless, farmers milking cows through December need to provide ample storage to comply with the new closed period.

The amount of parlour washings produced on farms varies a lot. It depends on the type of parlour and the area cleaned with a volume washer, etc. The volume of dairy washings and slurry produced per cow is under review in the nitrates action programme.

On many dairy farms, there is a slatted tank in the collecting yard and the milking machine and bulk tank washings are pumped into it. These farmers will have a good idea of how much parlour washings they are generating by virtue of the time it takes to fill this tank.

Another possibility is to estimate soiled water production by measur-



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ing the duration of wash down by the output of the washdown hose.

The typical volume of parlour washings produced on farms is 30 litres per cow per day or 0.21m3 per week. Rainfall on unroofed collecting and return yards may bring the storage requirement up to about 40 litres per

It's worth noting that if cows are eating silage while standing in the collecting yard, the contents of the tank is regarded as slurry and it has to be stored from 1 October until the end of the closed period for spreading

It is acceptable to store parlour washings in slurry tanks but it has to be stored for the full closed period. Parlour washings are classified as soiled water provided they have a biochemical oxygen demand (BOD) of less than 2,500 and a dry matter content of less than 1%.

Complying with the new requirements

Tom and Ruth Downey own Golden Amber Dairy and milk 300 cows near Golden, Co Tipperary. Mick Dawson manages the farm and they employ a full-time student Stephanie Stanley who is doing the new UCC/Teagasc degree in agricultural science.

"The full herd is dried off on 15 December with milking recommencing on 1 February," says Tom.

"There is approximately 33% extra slurry storage on the farm above the minimum required, thanks to a large overground slurry tower." This means that the farm is under no pressure to spread soiled water or slurry during the winter.

The two existing collecting yard tanks have a capacity of 190m3 but they can fill in two weeks. The farm is generating about 45 litres of soiled water per cow per day. "This reflects the fact that we completely wash down the collecting yard after each milking," says Tom.

It is clear that the farm needs to provide more than double the existing soiled water storage. "We plan to put in an underpass and extend the collecting yard," says Tom.

"This will involve a new double tank. Currently cows can be held after milking in the spring for on/ off grazing. The proposed tank at the back of the collecting yard will provide for this." Tom Downey in his collecting yard. The yard is too rough in places (picture on right) to install an automatic scraper. The two existing tanks are connected via a 250mm pipe near the surface.

"We get a contractor to clean the silage pits and yards two to three times a month," says Tom Downey.

"We plan to eventually buy our own yard sweeper. This is important because the runoff from open silage pits is regarded as soiled water unless it is kept clean."

TAMS and accelerated capital allowances

Additional soiled water storage is eligible for grant aid under TAMS III. Planning permission must be sought and submitted when applying for TAMS.

Slurry/soiled water and farmyard manure storage, automatic scrapers, simple slurry aeration systems and the floors and walls of buildings used to house animals are eligible for a two-year write-off against income tax.

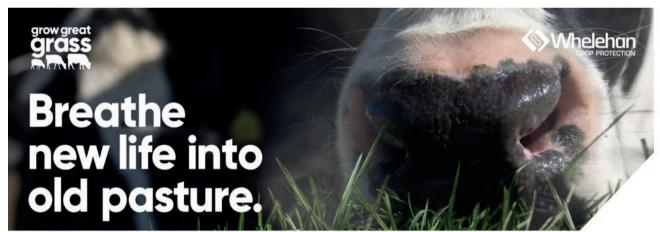
The Finance Bill Section 658A specifies that slurry/soiled water stores have to be covered. Slats meet this cover requirement.



Tom Downey with two of his water pumps.

THREE TIPS **OUR SOILED** WATER

- 1. Scrape vards instead of washing. where possible.
- 2. Reduce the soiled area, by for example confining cows leaving the parlour to a drafting chute. Holding yards where cows are held for Al will be clean for most of the year and any clean runoff should be diverted away from tanks where appropriate.
- 3. Switch from a high-volume lowpressure washer, typically having an output of 182 litres of water per minute to a low volume (45 litres per minute) medium pressure washer.



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