



Fact Sheet 2:

Avoiding Problems with Effluent Management

Key messages

To avoid problems with effluent systems:

- Upgrade the effluent system whenever there are significant changes on the farm.
- Clean solids traps and sumps regularly.
- Empty ponds before mid to late autumn.
- Ponds need to be stirred and de-sludged frequently.
- Contain runoff from manure stockpiles.
- Move irrigators regularly, and utilise a large application area.
- Good pond location and construction are important for achieving compliance.
- Keep up regular maintenance.
- Minimise water-use around the dairy.
- Plan for breakdowns.

Empty ponds before late autumn, to allow for winter and spring storage. In regions with winter dominant rainfall, it is usually too wet to apply effluent to land over the winter months, so an effluent pond is used to provide storage until warmer, drier weather returns. The pond can only provide storage if it is emptied before the start of the wet period.

Ponds need to be stirred and de-sludged. When effluent enters a pond, the majority of the suspended solids will settle out and add to layers of sludge on the bottom of the pond. Over time, sludge may build up to the point where it creates problems by travelling through to the the second pond. Stirring while desludging helps to remove the build-up of solids on the bottom of the pond and improves the uniformity of the sludge when it is applied to land.

Getting the best from your effluent system and working within environmental guidelines is simple if some basic principles are followed. If you take care of all of the following points, then you'll reduce your risk of non-compliance with environmental regulations:

Upgrade the effluent system when there are significant changes on the farm. Increasing cow numbers, or the time that cows spend on concrete, can significantly increase the volume of effluent needing to be managed. Adding a feedpad to an existing effluent system is a common reason for overloading pumps and ponds.

Clean solids traps and sumps regularly. Full sumps and solid traps can allow grit and foreign material to enter the pump and irrigator, resulting in more wear and tear on equipment, and increasing the likelihood of blockages.





Good compaction is essential. Poorly constructed ponds are at risk of contaminating groundwater.

Keep up regular maintenance. Even the most expensive system will fail unless it is maintained. Consider writing daily, weekly, monthly or annual maintenance tasks on the farm wall-planner or farm-diary as a prompt. This might be especially helpful for larger farm teams.

Minimise water-use around the dairy. Inefficient water-use increases storage pond requirements, as well as the amount of electricity used to pump it into and out of the system. Just 10 minutes of extra hosing each milking can add nearly 10 hours a month of extra effluent irrigation.

Plan for breakdowns. No matter how well an effluent system is designed and managed, breakdowns and emergencies are almost guaranteed. Having a contingency plan, particularly where employees are involved, will take some of the pressure and stress out of the situation, and might prevent an environmental mishap. A simple plan might include a list of contact phone numbers for repair services and contract spreaders. Having a few spare hose fittings, nozzles and other parts on-hand can be helpful too.

Contain runoff from manure stockpiles. Manure needs to be stored on an impermeable, bunded surface well away from waterways. Runoff from a stockpile should be directed back to the effluent system as it is likely to have high levels of nutrients and if it enters surface waters or is lost from the property boundary, this would be non-compliant. Consider spreading manure directly when conditions suit, rather than stockpiling it.

Move irrigators regularly, and use a large application area. Applying effluent in small amounts is the best way to use the nutrients and match pasture and crop requirements. Doing soil tests on the effluent re-use area allows changes in fertility to be tracked over time.



Good pond location and construction. Ponds should be built on stable ground with banks elevated above any reasonable flood level, and the base above any groundwater table. There are specific soil-type and construction practices required to ensure the pond seals.

References:

[View Avoiding problems with effluent management on dairy farms video](#)

Further information:

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