

6-14 Sludge treatment and vehicle spreading effluent

One method used to empty holding ponds or oxidation ponds of sludge is to use vehicle spreaders and apply the effluent to land several times a year.

Vehicle spreading provides flexibility if land applying effluent as the application site is not limited to a fixed area. E.g. Effluent can be spread in late spring on to silage and hay paddocks and in mid summer on to pasture to combat dry weather.

Desludging and removing the surface crusting from ponds can be a major maintenance expense. The cost of using a vehicle spreading system to carry out this operation depends on whether equipment and machinery are purchased or hired, and if contractors are used.

Effluent collection

Vehicle spreaders draw effluent from a holding pond into a mobile tank. The effluent must be stirred to mix the various layers into liquid slurry, before removing it from storage. Stirrers consist of a spinning arm or heavy propeller driven by a PTO.

Make sure pond sites and fencing allow vehicle access. If the storage facility is sealed with a liner, take care not to damage it with the stirrer or suction end of the pipe. If you are using a contractor, make them aware of the liner.

When stirring ponds, take care when backing the tractor up to the pond.

Effluent application

Effluent is pump sprayed from the rear of the mobile tank on to the land. The vehicle spreader runs up and down paddocks in strips, covering the application area.

When using contractors or hiring equipment, make sure that the equipment used has been cleaned before use on your farm. This is so diseases are not transferred within the effluent from one property to another.

Use vehicle spreaders when soils are dry. The vehicle and tank moving across the land can cause damage to the pasture and soil, especially around gate entrances.

Options for spreading

1. Using contractors

Contractors generally charge in two ways for cleaning ponds and spreading effluent onto land:

- By the hour, from the time pumping starts until it finishes
- By the hour, from the time of arrival to the time of leaving the farm gate

2. Purchasing equipment

The capital outlay for a vehicle spreading system ranges from what equipment can be hired and what is eventually purchased.

You need to cost out the following:

- Vehicle spreader with 5000 litre or 7000 litre tank - should include the tank, hydraulic brakes and PTO driven pump. The tractor size required will depend on the tank size
- Pond stirrer - necessary to mix in solid and liquid fractions before spreading
- Self-filling device - optional for tank filling
- Spiked roller – optional soil conditioner to ensure effluent infiltration

3. Equipment hire

Vehicle spreading equipment can be hired in some areas. Standard hire rates are usually per day plus fuel. A day generally refers to 24 hours.