

Waste management solutions for dairy farmers

Technical note

Managing farm waste is now easier, thanks to the recycling, collection, and safe disposal services available.

These waste management solutions ensure that waste is dealt with responsibly, greatly reducing the negative effects on the environment and on human and animal health.

Why is burning and burying a problem?

It is now illegal to burn certain materials such as tyres and some plastics. Burning releases harmful chemicals and contaminants into the atmosphere.

Many farm plastics are not biodegradable and if they are buried, can be disturbed and eaten by stock. Burying waste can cause chemicals to leach into soil. Burial pits can also create future problems if they are disturbed by farm activities.

Waste that can't be reused, recycled or collected should be sent to a consented landfill. Landfills are regulated and have resource consents to ensure they are operating responsibly. Depending on cost, it may be worth considering hiring a skip bin which can be regularly emptied to a consented landfill.

Plasback and Agrecovery both offer proof of recycling if needed for auditing or reporting. Plasback will send a recycling certificate after collection and Agrecovery can provide recycling reports on request. Both companies keep records of all previous collections made from properties.

Plastics – reusing, recycling and disposing

Many plastics can be reused, recycled or disposed of responsibly.

Commonly used plastics include silage wrap, feed bags, bailing twine, plastic containers and drums.

Why is burning and burying plastics a problem?

On-farm burning of plastics often occurs in a bonfire situation where temperatures do not usually get high enough to completely combust plastics. This can result in the release of carbon monoxide, heavy metals, dioxins and furans. These contaminants can have major negative health effects on people and animals and may be carcinogenic. The contaminants accumulate in animal fat and can be passed on to people when they consume animal products.

“Put your Plasback bin and liner on an old wooden pallet so it’s easy to pick up and move around.”

Silage wrap

Recycling company Plasback sells liners online which can be filled with silage wrap. Once full, collection can be arranged. One liner holds up to 200 round wraps and these can be purchased online. Bins to hold liners can also be bought online or you can build your own.

Plasback will collect polypropylene feed and seed bags, HDPE drums and bailing twine, but these need to be kept in separate liners.

Phone: 0508 338 240 | Website: plasback.co.nz

Plastic containers

Agrecovery has over 70 collection sites nationwide and holds collection events in areas without sites. On-property collection is available for large users (over 300 containers). Recycling containers is free for more than 3000 commonly used products and a list of these brands can be found on the Agrecovery website. The labels must be left on for brand identification.

Before collection, containers will be inspected and must be empty and triple rinsed inside and out to ensure they are free from residue and dirt. Agrecovery has instructions on their website showing how to correctly triple rinse containers.

Phone: 0800 247 326 | Website: agrecovery.co.nz



Photo courtesy of Agrecovery

Plastic drums

Empty plastic drums have a large number of on-farm uses. They are great for storing and transporting materials, providing they are cleaned thoroughly before use.

Agrecovery offers free on-property collection of drums and intermediate bulk containers (IBC) for a number of brands. Other brands can be collected for a fee. Please refer to the Agrecovery website.

Plasback will collect 100 and 200 L HDPE Ecolab and Agpro drums for free, provided they are in good condition.

Fertiliser bags

Major fertiliser companies (such as Ballance and Ravensdown) run a take-back system where fertiliser bags can be dropped back into the store to be recycled. Contact your fertiliser company to find out about the programmes they offer.

Feedbags

Feedbags can be reused for storage or temporary weed matting around plants.

Feedbags can be recycled through the Plasback recycling scheme. Place empty feed bags in a liner bought from Plasback and arrange collection when the liner is full.

Bailing twine

Bailing twine can be reused for a number of purposes and many farmers tie loops of it to their bikes to have it on-hand when needed. Bailing twine can also be recycled through the Plasback recycling scheme instead of being burned or thrown away.

Mini liners can be purchased which are ideal for collecting smaller volumes of feed bags and bailing twine. Different types of waste (waste streams) need to be kept in separate Plasback liners. Information on these waste streams can be found at plasback.co.nz.

Agrichemicals – safe disposal

Agrichemicals commonly used on farm include herbicides, insecticides, fungicides and veterinary medicines. They can be toxic, and may contain carcinogens, heavy metals and other compounds which can be dangerous to humans, animals and the environment. They are often only used in small amounts, but can have a large environmental impact if used or disposed of incorrectly. This means that correct management, storage and disposal are essential.

Agrecovery specialises in the safe collection and disposal of unwanted or expired agrichemicals and their containers. Many chemicals are free to dispose of, others may cost but are often subsidised. Collections are held on a regional basis.

To organise chemical disposal with Agrecovery, firstly take an inventory of unwanted chemicals for disposal and book online or call 0800 247 326. Any applicable costs will be advised before collection is confirmed.

Take extra care with Persistent Organic Pollutants (POPs)

It is now illegal to use or store any chemicals containing POPs, so the safe disposal of these should be a priority. Special care should be taken with POPs.

POPs are chemicals that persist in the environment and are known to cause adverse effects to health. They are a bio-accumulative, building up in the tissue of living things, and can be passed between species, either through the food chain or from mother to baby. DDT is the most well-known POP but there are a number of others, including dieldrin, aldrin and lindane.

The Great DDT Muster provides a free and confidential collection and disposal service for farmers across New Zealand. Visit thegreatddtmuster.co.nz or call 0800 247 326 to book a collection.

Dead stock – responsible disposal

Disposing of dead stock is a common problem on farms. Action needs to be taken quickly to ensure this type of organic waste is dealt with in an environmentally friendly way and cannot be seen from the roadside to avoid causing distress to the public.

The use of a collection service is the most common and easiest method for responsible stock disposal. Alternatively, correctly constructed offal pits or compost bins can be used to dispose of stock on-farm.

Dead stock should not be kept within 45 metres of the milking, milk receiving and milk storage areas; they should also be removed from beside tanker roadways within 12 hours. Check with your regional or local council for other regulations.



Collection service

A number of licensed commercial operators provide a collection service for dead stock.

The collection service needs to be notified as soon as possible so the animal can be collected on the next available pick up. Animal hides also need to be in good condition.

Some companies will charge a collection fee for the animal. Others will pay for certain stock, for example dead calves (with specifications).

Offal pits

There are strict rules around the placement and construction of offal pits. They should be more than 46m from the farm dairy. For more information see NZCP1: Design and operation of farm dairies or contact your regional council.

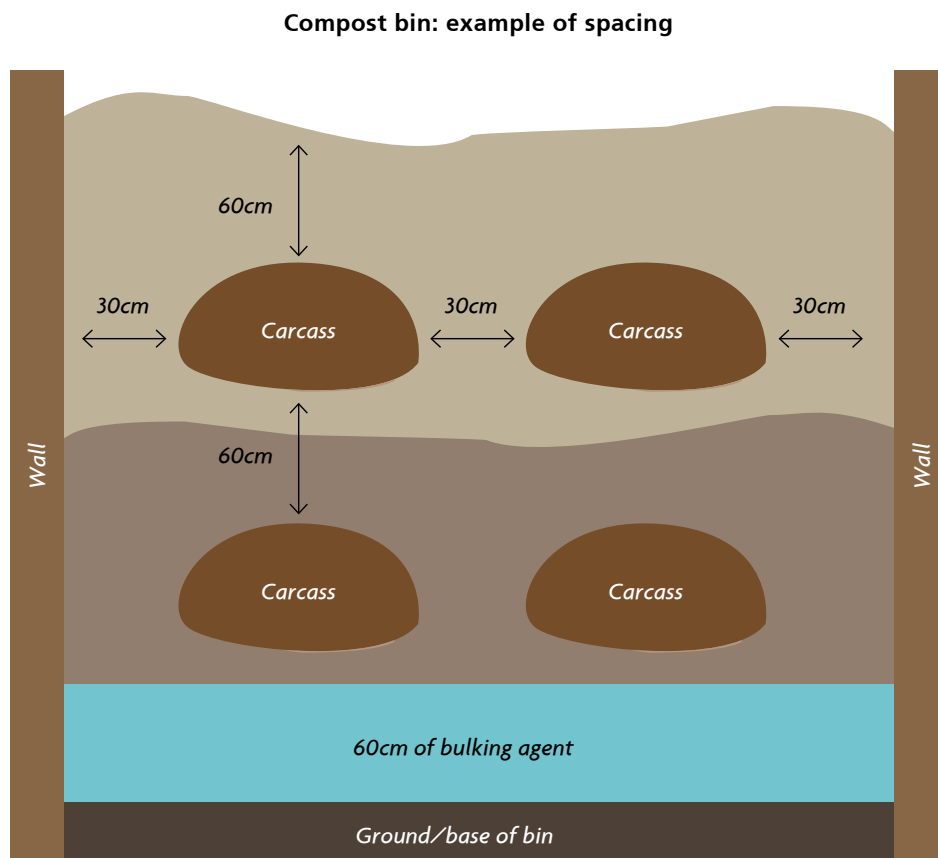
In general, offal pits should be well away from waterways, wetlands, bores, property boundaries and the farm dairy. They should also be shallow enough that groundwater will not enter. Surface water should be directed away from the pit using cuttings or nibs. Good practice is to seal the pit with a concrete slab or an airtight cover-plate, which is also important for health and safety. Organic matter produced on the farm should be the only material in the pit.

Composting

Composting is an effective way to dispose of dead stock while creating a useful product and minimising the potential for groundwater contamination. If managed well, composting can be low cost and relatively odour free.

Composting involves micro-organisms breaking down carcasses to form humus that can be spread over non-productive areas such as domestic gardens and shelter belts. The process requires using a material high in carbon, for example sawdust or straw, as a bulking agent. This is layered with the dead animal in bins (see figure below). Sawdust from calf sheds or chip from feed pads can be used as a bulking agent. The process may take up to six months depending on the size of the animal.

For a step-by-step guide to composting, see the Environment Canterbury website: ecan.govt.nz/composting.



Tyres – reusing, recycling and disposing

Tyres can be recycled or reused for securing silage stacks.

Burning tyres is illegal and produces toxic gases and disposing of them in landfills is not recommended due to the environmental risks.

Waste Tyre Solutions collects and either recycles tyres or disposes of them in a way that is legal and consented. They collect regularly from locations around the North Island and will collect from South Island locations by arrangement. The cost will depend on the type of tyre and pick-up location.

Waste Tyre Solutions

Phone: 0800 22 44 52 | Email: collections@pacificrubber.co.nz | Website: wastetyres.co.nz

Alternatively, there are a number of local tyre collection and recycling schemes that provide environmentally friendly options for end-of-life tyres. Contact your regional or local council for more information.



Used oil disposal

Some mechanics who service farm machinery and vehicles can take waste oil with them when they leave and dispose of it in a responsible way. Talk to the company that services your equipment and ask about any waste oil take-back schemes that they may run.

Supercheap Auto has 21 stores around the country with oil recycling bins. Disposal is free and should be dropped off during opening hours. Visit their website supercheapauto.co.nz for more information and store locations.

Other companies can pick up used oil in large amounts. Waste Petroleum Combustion Ltd operates in the North Island and does regular pickups. It is free for amounts over 400L or for contaminated fuel. To organise a collection or to find out when the next collection is, contact 0800 WASTEOIL (0800 9278 3645), email info@oilrecovery.co.nz or visit oilrecovery.co.nz. Oil should be in a sealed container with the cap on tightly.

Why does oil need to be safely disposed of?

Oil that has been used in machinery, vehicles or other equipment can become contaminated with substances such as heavy metals and other potential carcinogens. These are all harmful when in contact with humans and the environment.

Batteries – responsible disposal

Most petrol stations, garages and automotive shops will accept old batteries and council waste stations also have collection points. They are generally free to dispose of but check with your local council, petrol station or automotive shop. If batteries are broken or leaking, ensure they are in a sealed bag.

Some scrap metal recyclers also accept batteries as they contain lead. They will generally pay a set amount per kilo of battery. Check with your local scrap metal recycler for more information and prices.

Environmental risks of used batteries

Lead acid batteries are commonly used on farms in vehicles such as cars, tractors, motorcycles and uninterruptible power supplies. They contain sulphuric acid and lead; both are dangerous if disposed of incorrectly.

Sulphuric acid will burn lungs and skin and lead is a heavy metal which can poison people and the environment. When storing old batteries, ensure they are on a sealed surface, such as concrete, so that if leakage does occur, it doesn't contaminate soil or water.

Treated timber – safe disposal

Treated timber is widely used throughout New Zealand in many buildings and structures. It is most commonly treated with copper, chromium and arsenate (CCA), boron preservative or light organic solvent preservative (LOSP). This protects timber against attack from fungi and insects but creates an environmental hazard when it comes to disposal.

Currently, the best disposal method for treated timber is to take it to a landfill where the leachate can be managed and environmental effects mitigated. There are limited disposal options in New Zealand because of the toxicity of the chemicals involved.

Recycling on-farm may be an option, depending on what it is being reused for. Avoid reusing treated timber where there may be regular contact with humans or animals or where there is potential for contamination of groundwater.

Treated timber can be painted or sealed to reduce the potential toxicity, allowing it to be reused for a wider range of purposes.

Wooden pallets, such as those from bulk fertiliser, can usually be returned to the supplier and some offer a credit for their return.

Timber which is not treated can be burnt or reused for things such as raised garden beds.

Why is burning and burying treated timber a problem?

When treated timber is burnt, heavy metals and chemicals are released into the atmosphere and accumulate in ash. This poses a risk to humans, stock and wildlife as these metals can be carcinogens at high concentrations. Burying treated timber may result in leaching of heavy metals, leading to contamination of soil and waterways.

Scrap metal – recycling

Scrap metal can be collected and recycled through dealers who will often pay for the metal. The value will depend on the type of metal and its condition.

Collecting and safely storing pieces of scrap metal until you have enough to be exchanged for cash, is an easy way to reduce the amount of waste to be disposed of.

Contact your local scrap metal dealer for more information on collection and prices for scrap metal.

“Have an old drum which is designated for collecting scrap metal. Collect everything from old bits of wire to fence staples, and when you have enough, take it to a dealer to exchange for cash.”

Needles and syringes – safe disposal

Needles and syringes should not be burned, buried or put in domestic rubbish.

The correct disposal method is to collect them in a puncture-proof container and when it is full, seal it and secure it with duct tape. It should also be labelled as a biohazard waste container. Ideally, the container should be taken to a vet or other service provider who accepts waste sharps and can dispose of them correctly. Vet clinics may be able to provide a specialised sharps container to keep on farm and return when full.

Paint take-back schemes

Paint take-back schemes are run by major paint companies. Resene runs PaintWise, a scheme where certain leftover paint and containers can be returned to selected Resene stores. The leftover paint will either be distributed to a community organisation that requires it, recycled or disposed of appropriately and the containers recycled. For Resene products, this is free and for other brands a small charge applies. For more information, contact your local Resene store or visit resene.co.nz/paintwise.

Dulux also runs a paint take-back scheme which allows leftover paint and empty containers to be returned to select Dulux centres for reuse or recycling. Dulux products are free to recycle and for other brands there is a small charge.

For more information contact your local Dulux store or visit dulux.co.nz/sustainability.

