

Composting Manure

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What is composting?

Composting is the natural process that occurs when microbes in the soil break down organic matter such as leaves, grass clippings, and manure. Composting is a great way to manage manure on your farm to transform it into an excellent fertilizer.



What are the benefits?

When composting is done correctly, it has many benefits compared to raw manure:

- Better fertilizer—the nitrogen (N) in compost is more available for plants to use than in raw manure.
- Better water-holding capacity of your soil.
- Smaller volume of waste due to microbes breaking down waste.
- Less odor.
- Compost can reach high enough temperatures to kill weed seeds and parasite eggs and larvae.
- Reduces run-off.
- Easier to handle.

Find more information on composting manure in the [Land Management Guide](#)

Where do I locate my manure composting pile?

- Compost should be stored on high, dry, level ground away from any bodies of water.
- All compost storage must be covered, and stored at least 4.5m (15 ft) from your property boundaries.
- A permanent compost storage structure (required for storage of 7 months or more) with three walls, roof and protective base must be at least 30m (100 ft) away from drinking water sources and 15m (50 ft) away from all other waterways.
- Compost piles must be at least 30m (100 ft) from all waterways.
- Accessible by tractor if needed.



How do I balance my compost mixture?

The microbes that break down compost need a careful balance of different nutrients in order to thrive. They need carbon for energy and nitrogen for growth. If the balance between these two nutrients is off, it can slow down the composting process. Carbon rich material tends to be brown in colour, while nitrogen rich material tends to be green. However, despite its colour, manure belongs in the nitrogen-rich category.

The ideal ratio is 25:1 to 35:1. This means 25 to 35 times more carbon than nitrogen in your compost pile.

There are two main ways to achieve aeration:

- Mechanical aeration involves regularly turning the compost over with a tractor.
- Passive aeration uses some kind of ventilation to let air into the compost pile. One easy way to do this is to drill holes in pieces of PVC pipe and insert them into your compost.



Perforated PVC pipes for aeration.

How damp should my compost be?

Compost needs moisture to work. It should feel as damp as a wrung-out sponge. It should stick together in a clump when squeezed in your hand, but not drip any water. Add water as needed during dry months and cover compost during wet months.

High carbon materials	High nitrogen materials
Sawdust	Manure
Straw	Hay
Dead leaves	Fresh Leaves
Wood chips	Vegetable scraps
Paper	Grass clippings

How do I aerate my compost?

There are two kinds of processes that can take place during composting: aerobic (with oxygen) and anaerobic (without oxygen). The benefits come from the aerobic process, while the anaerobic process tends to be smelly and not produce enough heat to kill parasites or weed seeds.

The aerobic microbes that break down your compost need oxygen, just like we do. As compost piles up, the material at the bottom starts to get compacted and air can no longer reach it.

You will need to aerate—allow air into—your compost regularly. Use aeration to reach temperatures of at least 55°C (131°F) for at least three days to kill most parasites and weed seeds.

Tips for Success:

- Remove manure every 1-3 days from stalls, paddocks and other confinement areas or deep bed with chips or straw for less regular clean outs.
- Match carbon in bedding to Nitrogen in manure for 25:1 to 35:1 ratio.
- Use a compost thermometer to make sure your pile reaches 55°C (131°F).
- Spread on pastures in the growing season.
- Learn more on manurelink.com

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