

Manure Management

Find more resources at www.manurelink.com

Why is manure management important?

Proper storage and use of manure is important on small farms and commercial farms. Good manure management is necessary to optimize use of manure as fertilizer and to prevent nutrients and bacteria from entering waterways. Clean water, less mud, and healthier animals are the result if you follow manure management recommendations.



Manure piles should be covered from October 1 to March 31 to prevent oversaturation

What are the benefits of careful manure management?

Ensure health of your livestock: Manure and urine-soaked bedding is a perfect medium for the proliferation of bacteria and flies. Regular collection of manure from stalls, paddocks and winter confinement areas is essential to the health of your animals.

Manure that is not properly stored and covered can infect humans and livestock with parasites, bacteria or other pathogens. Disease may even spread from one farm to another.

Protect waterways: When it rains, run-off from manure can be carried into nearby waterways, damaging the health of the stream and possibly even affecting drinking water. Proper management helps keep manure out of the water.

Beneficial nutrients: Manure can make an excellent source of nutrients for your land, enhancing pastures and gardens. In a year, a single horse produces enough manure to contain 45 kg (100 lb) of nitrogen (N), 8 kg (17 lb) of phosphorus (P), 28 kg (62 lb) of potassium (K), and 8084 kg of organic matter! However, the nutrients in raw manure are not in an easily usable form. One way to transform manure into an efficient fertilizer is by composting it. Composting is the best management tool for dealing with large quantities of manure and turning it into a valuable fertilizer.

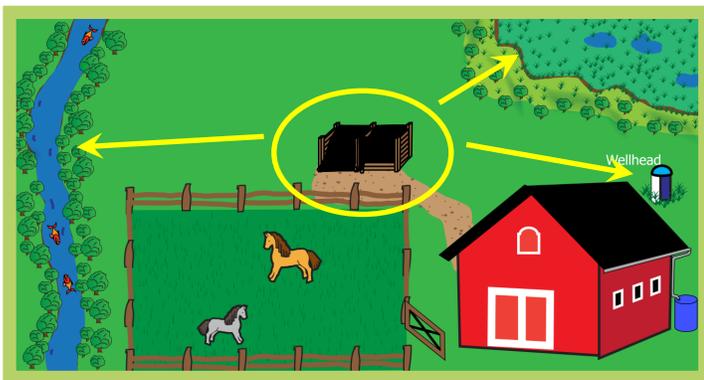
How much storage do you need?

Manure can not be applied to enhance pastures part of the year so it needs to be stored. The amount of space required for manure storage depends on the type and number of livestock.

Livestock Type (single animal)	Storage Required for 6 Months (Oct-March)
Horse	5.5 m ³ (7 cu. yrd)
Cattle	7 m ³ (9 cu. yrd)
Swine	3.5 m ³ (5 cu. yrd)
Sheep/Goat	5 m ³ (6.5 cu. yrd)

Where do I locate my manure pile?

- Manure storage should be located on high, dry, level ground away from any bodies of water.
- All manure storage must be covered and at least 4.5m (15 ft) from your property boundaries.
- A permanent manure 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.
- Manure piles must be at least 30m (100 ft) from all waterways.
- Accessible by tractor if removal is needed.



Which manure storage option is best for your farm?

Stockpiling involves storing manure on your property and having it removed at a later date.

- Pile manure and soiled bedding at least 30 m (100 ft) from surface water.
- Use a tarp to cover the pile, reduce runoff concerns, odors, and flies.
- Improved base and 3 walls makes manure easier to access and to cover.
- Protective base (such as concrete, hog fuel, or a tarp) is needed if the manure pile is over a vulnerable aquifer.

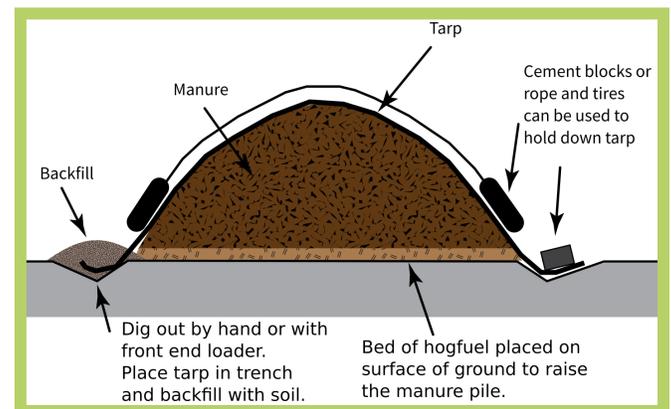
Find more information on composting manure in the [Land Management Guide \(leps.bc.ca\)](http://leps.bc.ca)

Composting is the natural process that occurs when soil microbes break down organic matter such as manure, resulting in a great fertilizer.

- Stabilizes available nutrients, reduces odor and volume.
- Compost stored in a permanent structure must be covered and stored at least 15m (50 ft) away from drinking water and 30m (100 ft) from all other waterways.
- Compost piles must be covered and stored 30m (100 ft) from all waterways.
- Use aeration to reach temperatures of at least 55°C (131°F) for at least three days to kill most parasites and weed seeds.
- Aeration can be achieved either mechanically by turning over compost with tractor, or passively by inserting perforated pipes into the compost.
- Cost can be moderate to high depending on the complexity of the facility.
- Spread on pastures in growing season.



Perforated PVC pipes inserted into compost pile increases aeration.



A simple stockpiling set up.