



Farm Manure Management

Manure contains high concentrations of bacteria, phosphates, and nitrates. When it enters surface or ground water, it damages water quality and sends disease carrying bacteria to livestock and people.

Phosphates promote algae growth when dissolved in surface water. As algae dies, decomposing bacteria removes oxygen from the water, killing fish. Algae plugs irrigation filters and reduces stream scenic and recreational value.

High nitrate levels in well water can harm livestock and human infants and ammonia forms of nitrogen remove oxygen from water, killing fish.

Benefits of Storing and Composting Manure:

- * Reduces parasite re-infestation in your horse or livestock
- * May reduce fly populations
- * May reduce odor
- * Reduces volume of manure and savings by about 50%
- * Reduces the manure contaminated runoff to surface or groundwater
- * Provides a free, easy source of compost/fertilizer
- * Improves property appearance.

Objectives

- A) To develop healthy pastures which will filter wastes from surface water runoff before it gets to streams and groundwater
- B) To increase pasture quality, yield and utilization
- C) To protect the natural functions of wetlands and near-stream areas which serve to filter pollution, move surface water to ground water storage, and provide habitat for wildlife



What Can Be Done?

Store manure under a roof or tarp to prevent the leaching of nutrients in to surface or groundwater.

Select a storage site away from surface water and not in the path of runoff from other areas-optimal storage is on a concrete slab with walls or curbs.

Install gutters on manure storage structures to divert runoff away from buildings.

Add grass clippings and other organic yard debris to the pile to reach the proper carbon-to-nitrogen balance for quick composting. Add water when new material is added.

Place a few PVC pipes, with holes drilled in them, into the pile to add air to speed the composting process and reduce odor. Avoid compacting the pile...composting needs air. Do not add lime or enzymes.

Compost bedding and manure to make usable and marketable farm or garden fertilizer.

Consider hauling manure off property and clean confinement areas regularly. Manure is ready to spread when it has reduced in volume by about 50% and it looks evenly textured and crumbly like soil.



Reduce parasite and fly problems by raising the temperature of the compost pile to 135-F for several days and/or harrow the manure in pasture.

Manure Use

Apply only as much manure as your crop or pasture can use (Test soil and manure every 3 years). A minimum of one acre to well vegetated land is needed for annual spreading of manure from 2 horses or cows (Recommended is 2 acres perhorse or cow. Contact nurseries, crop producers or gardeners to use left over manure-or remove to landfill annually.

Manure should be spread between Feb. 15-April 1. Requirements include a slope of less than 15%, depth of water table greater than 2' from ground surface, more than 50' to nearest waterbody or well, and no flooding on site.

Avoid spreading manure from October to March-plants are growing slowly and may not capture nutrients, which will just wash away.

Apply composted manure evenly, don't use as fill material and avoid putting uncomposted shavings on pastures. They take too long to break down.

Spread stockpiled and composted manure on fields at start of growing season and work it into the soil. Apply manure carefully, away from water bodies, open ditches, ponds and streams.