

Disposal Options

1. **Dispose off-site** to a landfill that accepts manure or hire someone to pickup and dispose of manure for you.
2. **Compost manure.** This requires the right ratio of carbon (bedding or leaves) and nitrogen (manure). Try 30 carbon to 1 nitrogen by volume. Water to keep the pile 50% moist and aerate the pile regularly.
3. **Spread manure.** Spread in spring or summer. Test manure for nutrient content and spread based on soil test recommendations. This will ensure the nutrients are being utilized by the vegetation growing. Unused nutrients can pollute water bodies and groundwater. Remember that raw manure may contain weed seeds which will be spread back on the land.

Estimated Horse Manure Application Rates*

- Dryland range: 1 ton/ac/yr
- Irrigated alfalfa: 5-10 tons/ac/yr

*Test manure for nutrient content and spread based on soil test.

Use a thermometer to monitor the temperature of your compost.



For more information on manure and composting, visit
<http://sam.extension.colostate.edu/>

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Manure Management for Small Acreages



www.co.nrcs.usda.gov
<http://sam.extension.colostate.edu/>

Why Manage Manure?



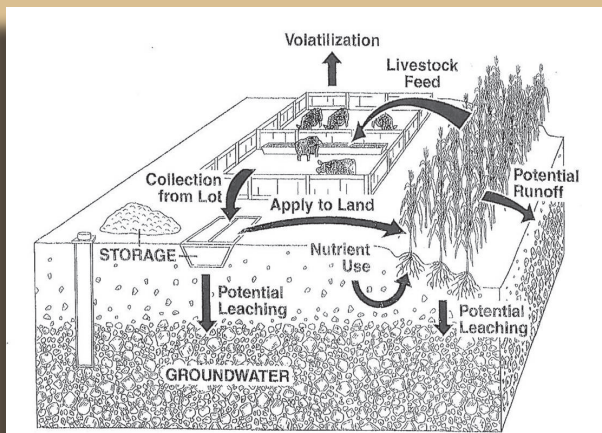
Constituents of Animal Waste

- Pathogenic organisms
- Organic matter
- Heavy metals
- Salts
- Micronutrients (*Ca, Mg, S, Mn, Zn, Cu*)
- Potassium
- Phosphorus
- Nitrogen (*nitrate NO₃, ammonia NH₃, ammonium NH*)

Manure can be a valuable resource but can also be a source of water pollution, odor, flies, parasites, and other nuisances. **If not properly managed, manure can contaminate drinking water, harm wildlife, and reduce property values.**

Mud and manure can cause abscesses, thrush, and other diseases in livestock. Dried manure produces molds that contribute to respiratory problems in horses and cattle. By adopting simple and low cost best management practices (BMPs) for storing, handling, managing and utilizing manure, the environment and health of farm animals will benefit.

Nutrient Management Loss



Lost nutrients can contribute to water pollution. Manure nutrients are lost via:

- Erosion
- Water run-off
- Volatilization
- Leaching

Manure Management Goals:

1. Utilize manure nutrients for enhancing soil.
2. Protect the health and safety of the public and livestock.
3. Prevent surface and ground water contamination.

Best Management Practices (BMPs)

1. Divert clean water away from manure:

- Construct berms, terraces or waterways, and/or use downspouts to divert clean water away from corrals and manure storage areas.

2. Ensure manure discharge will not enter a water body or leave the property:

- Limit animal access to ponds, streams, ditches, and wetlands.
- Collect manure frequently.
- Stockpile manure at least 100 feet outside a floodplain.
- Do not stockpile manure in a dry creek bed or ditch.



To reduce erosion and maintain water quality, water livestock off-stream and manage stream access with fencing.

3. Protect ground water:

- Locate manure storage piles and livestock corrals at least 150 feet down-gradient from wells.
- Use a 150 foot buffer around wells when land applying manure.

4. Reduce nuisances like flies and odor:

- Stockpile manure downwind from barns and 200 feet away from neighbors.
- Plant trees to reduce wind and odor from stockpiles.
- Keep a lid on manure dumpsters.
- Remove manure from corrals and pens every few days to prevent flies, parasites, and worms.
- Cover fresh manure in stockpiles with at least 5 inches of clean bedding, straw, or hay to prevent flies.
- Prevent flies by using pesticides or fly predatory wasps (non-stinging) which can be purchased to manage flies.