A composting location should be carefully selected. The site should be well drained and away from steep slopes and floodplains. Proximity to watercourses, wetlands, wells and property lines should be also be considered. Local ordinances may vary.

Pile composting may be most practical and environmentally acceptable for the 1- or 2-horse owner. Composting in 1-, 2- or 3-walled bins (with or without a shed roof and hard floor surface) is the most practical approach for the small or large horse farm owner. Using a temperature probe in your compost pile determines the level at which your pile is decomposing. Ideal pile heat is 130 degrees, the minimum temperature at which pathogens and weed seed begin to die. Ensuring the uniform heating of a pile is accomplished by turning the pile and balancing all pile components. Designs for composting structures can be found readily by using the resources at the end of this card, farm management books or by consulting with your local farm management professional.

Composting workshops in your area highlight the smart, environment and water-quality friendly approaches to waste management.

Other Resources

The Cornell Waste Management Institute
cwmi.css.cornell.edu

NYS Horse Health Assurance Program
www.agmkt.state.ny.us/NYSHHAP/horsehealth.html

NYS Department of Agriculture and Markets
Agricultural Environmental Management Program
www.agmkt.state.ny.us/soilwater/AEM/

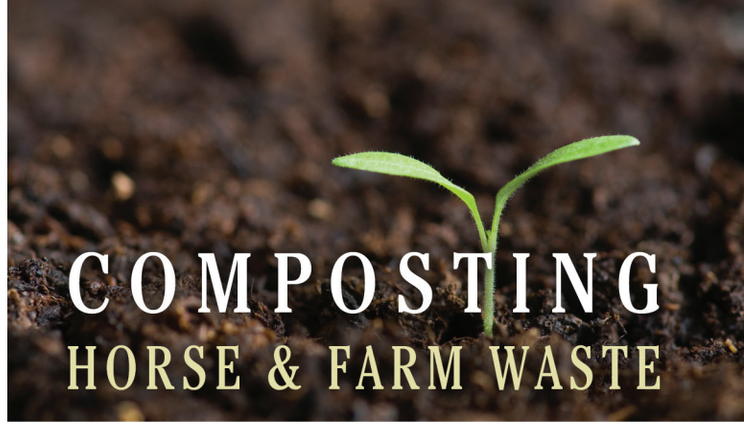
Equine Science Center at Rutgers University
Rutgers Cooperative Research & Extension (RCRE)
www.esc.rutgers.edu/

Watershed Agricultural Council
www.nycwatershed.org

East of Hudson Program
1275 Hanover Street
Yorktown Heights, NY 10598
(914) 962-6355

Agricultural Program
44 West Street
Walton, NY 13856
(607) 865-7090

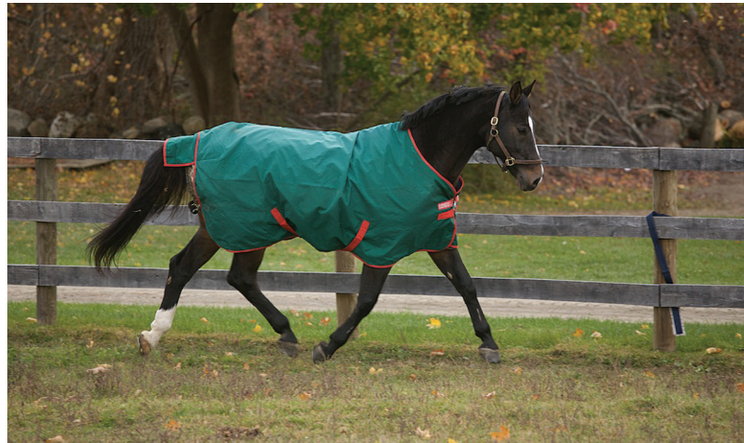
The WAC is funded by the New York City Dept. of Environmental Protection, U.S.D.A., U.S. Forest Service, and other sources. The Council is an Equal Opportunity Provider and Employer.



COMPOSTING
HORSE & FARM WASTE

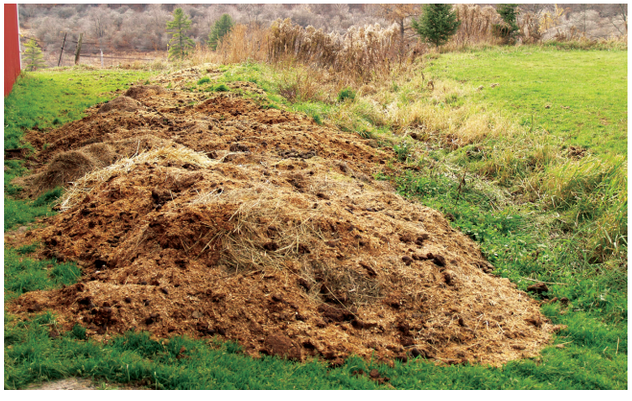
Horses produce a lot of manure. Anyone who cares for horses understands how quickly this becomes a waste management challenge. This is especially true when you have limited space available on your property to manage, store and spread manure. Many stable managers and horse owners contract with waste haulers and use dumpsters to routinely remove manure and waste bedding. However, an alternative waste management option exists for those with the space, energy and interest: composting.

Composting is a managed biological process that uses the activity of micro-organisms and presence of oxygen to convert organic material into fine-particled humus, suitable for use as a soil amendment. However, composting is only a viable waste management alternative when the person responsible has the time and interest to manage the process. Knowing that labor and thought must be applied to the operation is vital to a successful composting operation.



The Benefits and Considerations of Composting

Compost is a valuable resource, a nutrient-rich soil enhancer that can promote plant growth, retard weed growth and mitigate the passage of manure contaminants to water sources. Composting waste materials reduces pathogens and weed seeds that can be present in manure and farm waste. Heat generated by the composting process kills these temperature-sensitive organisms like *Giardia lamblia* and *Cryptosporidium parvum*. Additionally, composting horse and other farm waste decreases the raw waste material volume, facilitating the ease of its disposal or re-use. Gardeners, farmers, homeowners, road and drainage contractors all use compost to help establish plants and stabilize the ground. Good compost can be given away or even sold to such end-users if the farm owner does not have sufficient use for it.



An example of poor composting location and practice: a single stagnant pile next to a drainage way.

Getting Your Compost Started

Evaluate the quantity of your raw material. On horse farms, raw material is usually a combination of horse manure, waste bedding, unused feed or hay, and any other organic waste material that the farm produces, such as grass clippings. An average 1,000-pound horse produces about 30 pounds of manure and 20 pounds of urine per day. When these wastes are paired with average soiled bedding amounts, the total waste a horse produces per day can range from 50–83 pounds or 1.5–3 cubic feet per day. Calculating the quantity of raw material you will add to your compost will help you determine the ground space or the bin size you need. (See RCRE Fact Sheet E307.)

Analyze the composition of your raw material for composting. Typically, composting is achieved most efficiently when your raw material and compost method foster an ideal balance of moisture, oxygen, carbon and nitrogen. Moisture content depends on the raw material wetness and hydration system used during composting. The presence of oxygen, or air, in your composting process depends on:

- the particle size of your raw material (as larger particles allow for great air capture in the pile),
- the pile surface area,
- the frequency of manipulation, or turning, of the pile, or
- the direct infusion of air through blowers or vents.

The carbon content of your raw material depends on the amount and density of woody material you incorporate into your compost such as bedding shavings. For instance, some farms that bed horses heavily in cedar or pine shavings will often have dry compost with a higher ratio of carbon to nitrogen. Nitrogen can be found in other compost waste materials such as manure, urine, and green grass clippings. Optimal starting carbon-to-nitrogen (C:N) ratios are between 30:1 and 40:1. Moisture should consistently be about 50%; the compost should feel like a wrung-out sponge when you squeeze a handful. The volume of your raw material pile should decrease by 50% within 3 to 6 months depending on the balance of these conditions.

Choose a method of composting. The chosen method will depend on a combination of available space, resources, amount of raw material, and intended management intensity. You can choose to compost:

- in a simple pile on the ground
- in a walled bin
- in a shed built with a variety of materials and
- on any number of surfaces.

Multi-bay, forced air structures like this are state-of-the-art composting.

A concrete, multi-bay windrow system allows one to move and turn composting material easily while preventing polluted run-off.

A large windrow system. Breathable tarps allow for better control of moisture, heat, and other factors that affect compost quality.