



Manure Management

We often focus on what goes in the front end of the horse, but we must also consider what comes out the hind end: their manure!

An average-sized horse (~1000 lb) produces up to 40 to 50 pounds of manure each and every day. This adds up to over 8 tons of manure each year. Manure not only piles up quickly, it is also a haven for parasites, leading to an infestation of flies and other insects and can even attract rodents. Thus, it is imperative every horse owner has a solid manure management plan.

There are multiple ways to handle the buildup of horse manure. If your horses are stalled or held in paddocks, the manure must be collected, stored, and then disposed of. Even if your horses are out on pasture, you will still need a manure management plan. On larger acreages, pastures should be dragged during times of hot weather to break up the buildup of fecal balls, which exposes parasites to the environment and kills them off.

When picking up manure and stall bedding, owners can either store it for composting or spread it on pastures using a manure spreader. While usually not recommended, spreading fresh manure on a pasture can act as a fertilizer. The downside of using fresh manure on pastures is that it can potentially spread parasites. Thus, if spreading fresh manure, it is usually recommended



that horses are kept off that pasture for a month to allow the parasites to die off.

The most recommended method of disposal of horse manure and bedding is through composting. This is a carefully managed process where microbes decompose the organic material. With proper aeration and moisture, the microbes will efficiently decompose the manure and bedding quickly. Once finished, compost is an excellent fertilizer for pastures and gardens.

Composting has four basic ingredients:

- Carbon: source is manure and wood-based bedding (shavings) or straw
- Nitrogen: source is horse urine and manure
- Air: a proper compost pile needs to be aerated to allow the microbes to receive oxygen
- Water: moisture is important for compost, but too much can hinder it

The first consideration for composting is to determine where you will gather the manure and any stall bedding. It is often recommended to have composting bins available. For example, a good strategy is to have at least three large bins, where one is composting, while starting a second, and then a third.

Once a compost pile is started, it should be covered. This prevents any leaching from rain. Then, to properly aerate the pile, it should be turned twice a month by pulling the interior of the pile out. Also, the moisture content of the pile should be like a damp cloth and not dripping wet or leaking. If the pile gets too dry, water should be applied.

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Another important consideration for a composting pile is the interior temperature. As the microbes work to break down organic material, they give off heat. To monitor this, a compost pile thermometer can be purchased from many farm supplies stores. The interior temperature of a compost pile should be kept between 140 to 160 °F. If the pile gets too hot, turning and providing air will lower the temperature. If the pile is too cold, the pile may need more moisture or nitrogen. An added benefit of these high temperatures is that they will kill off any parasites rather quickly.

A common problem with composting on equine farms is that there is too much carbon provided by the bedding. The optimal composting carbon to nitrogen ratio is 30:1. However, wood-based bedding on its own is at a ratio of 400:1, much too high for composting. Thus, if too much bedding is included in the compost pile, the microbes will not be able to break down all the organic material. If the compost pile is not reaching the proper temperature, fertilizer, such as ammonium nitrate or sulfate, or even urea can be added to provide more nitrogen. This will allow the microbes to do their job and help keep the pile activated.

The composting process is done when all the organic material (manure and bedding) is decomposed and resembles potting soil or other common garden fertilizer. Normally composting can take anywhere from 2 to 4 months and is weather dependent. It will take longer during the winter months. Once complete, compost can be used like any other fertilizer.

Besides spreading manure or composting manure on your own farm, a manure removal service is also available in some regions. While this can be expensive, it is an option. It is also important to remember to always comply



with local environmental laws and regulations when it comes to equine manure management. You can always check with your local or state extension service if you have any questions.

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