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Mud Management for Horse Operations

Introduction:

If you have horses on limited acres of land, especially in the Northeast where the average annual precipitation is over 40 inches, muddy conditions will pose a challenge for your operation.

Mud:

- Transmits bacterial and fungal diseases. Examples are thrush (affects the frog of the hoof), mud fever (crusty scabs on lower limbs), rain scald (same condition on upper body), sand colic (ingesting dirt and sand when feeding), low body temperatures (burn more calories).
- Creates unsafe footing
- Provides a breeding ground for flies
- Makes core time unpleasant
- Increases polluted runoff

Although you may not be able to eliminate mud you can significantly reduce muddy conditions.

What Causes Mud?

Factors that create or enhance mud include organic matter in manure, barn and shelter roof runoff, poor soil infiltration, and poor pasture management.

You may think that mud is an unavoidable part of owning horses on limited acreage. Although you may not be able to eliminate mud you can significantly reduce the amount of mud with proper maintenance.

BMPs for Controlling Mud:

The best management strategy for controlling mud is prevention. Reducing the amount of rain that runs through your animal yard will reduce mud and polluted runoff.

- **Install Roof Gutters and Downspouts:** One inch of rain on a 50 by 20 foot roof collects about 620 gallons of water. Therefore, 40 inches annual precipitation directs 25,000 gallons of additional water to the yard! Empty downspouts into rain barrel (for emergency use), dry well, road ditch, or a creek. Keeping clean water clean is easier than treating it once it has become contaminated with manure and sediments.
- **Use Sacrifice Areas:** Horses on wet pastures kill or weaken grasses and create mud. Confine horses to paddocks during the winter and early spring as well as in the summer before the pastures become overgrazed. Using a sacrifice area creates a healthier pasture. The size depends on available land, number of horses, horse age, and many other factors. An area of 25 ft by 100 ft should be large enough for a horse to be able to run or play in a paddock.

- **Install Firm Footing:** Mud often forms at barn entrances, gates, and loafing areas. In these high traffic areas, use of geotextile fabric and gravel allows water to drain down while stopping mud from emerging through the gravel. In less trafficked areas, wood chips or hogfuel (unprocessed mix of barks and wood fiber) can be used.
- **Remove Manure:** Picking up the manure every one to three days will help reduce your horse's parasite load as well as reducing flies and insects. Regular removal of manure also greatly reduces the amount of mud that develops and it will prevent contaminated runoffs from reaching the surface waters in your area. The manure you pick up can be composted and reapplied to your pastures during the growing season.
- **Rotate Watering and Feeding Containers:** This prevents too much manure and traffic in one area compacting the soil, and thereby leads to mud formation after heavy rainfall.
- **Use Grass Buffer Strips:** You can help to control the runoffs by surrounding the sacrifice areas, paddocks and other confinement areas with at least 25 feet of lawn, pasture, woods or even a garden. Vegetation in buffer areas will act as mud managers, a natural filtration system that slows down runoff and reduces sediments and nutrients. Buffers of grasses and legumes can be grazed in the spring and summer and left ungrazed to function as a buffer during times of slow growth, steady rain, or potential flooding.

Additional Information on Mud Management:

Massachusetts Department of Environmental Protection. Mud and pasture management. http://www.mass.gov/dep/water/resources/pasture.pdf

Oregon Association of Conservation Districts. Small Acreage Factsheet # 11; managing mud and manure. http://www.oacd.org/factsheet_11.html

Oregon State Extension service. Mud and manure management. http://smallfarms.oregonstate.edu/mud%2526Manuremanagement

Pennsylvania's Small Scale Livestock Committee. 2002. Mud management for small scale livestock operations.

For more information visit www.umass.edu/cdl

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This publication has been funded in part by Mass. Dept. of Agricultural Resources in a grant to the Massachusetts Farm Bureau Federation, Inc. and by Mass. Dept. of Environmental Protection, s319 Program.