Protecting Water Quality on your Horse Farm

Reducing Mud

Mud is a common problem on a horse farm. It can adversely affect horse health, make chores difficult, and pollute nearby water bodies. Rainwater run-off from muddy areas contains sediment, nutrients, and bacteria, which will run into nearby streams and rivers.

Follow these steps to prevent mud on your horse farm:

1 **Create and use a sacrifice area when pastures are wet.**
To keep pastures from turning into mud lots establish and use a "sacrifice area," also known as a paddock, pen, run, or dry lot. This is an area where horses are kept during wet conditions to save the pasture from being torn up. No grass is expected to grow here: therefore, it is "sacrificed." The area should provide a minimum of 400 to 500 square feet per horse. Ideally it should be in a high, well drained area with some slope (2-4%) to drain water.

2 **Improve footing.**
Crushed rock or sand and gravel mix are common types of improved footing, but make sure gravel size is small enough so horses can walk comfortably. If using sand, do not feed hay directly on the sand as this can cause colic. Wood chips and trimmings should not be used, because they hold moisture and degrade to form an organic layer just like manure. Excavating the top soil layer and lining with geotextile fabric can help hold footing. Stall mats and grid products can also be used in high traffic areas around gates and water troughs.

3 **Install gutters and downspouts.**
If your roof drains into the sacrifice area, install gutters and downspouts to catch run-off and direct it away from your paddock and barn. Downspouts should empty away from and downhill of the barn and paddock area. Rainwater can also be collected and stored in a rain barrel or cistern and used to water gardens, arenas, compost piles or pastures. French drains and dry wells can also be used to move water away and prevent mud.

4 **Regularly pick up manure from paddocks.**
Mud is created from a mixture of three ingredients: manure, soil and water. By using proper footing over the native soil and re-routing water, you eliminate two of the three ingredients. However, mud is sure to come back unless you eliminate the third ingredient, manure. Regularly picking up all manure from paddocks is one of the most important things you can do to reduce mud on your farm.

5 **Use plants to soak up and filter rain water.**
Plant native, water-loving plants (shrubs, grasses and flowers) in areas below driveways, roofs, paddocks, pastures and wash areas. These plants will help soak up and filter pollutants, such as sediment and excess nutrients, out of rain water run-off before it reaches streams. Group plants together in low areas to create “rain gardens,” or spread them along shallow ditches to create “bioswales.” Be sure to have soils with good drainage in rain gardens and bioswales, as they should drain within several hours after a moderate rain event.

This sacrifice area with improved footing helps reduce mud on the horse farm.

Photo courtesy of Prince William (Virginia) Soil and Water Conservation District

North Carolina Division of SOIL & WATER CONSERVATION

Sustainable Stables
Horse Farm Planning & Design

NORTH CAROLINA SOIL & WATER CONSERVATION DISTRICTS

Contact your local Soil and Water Conservation District
www.ncagr.gov/SWC/findyourdistrict.html
or County Agricultural Extension
www.ces.ncsu.edu/local-county-center
for more information, recommendations and possible financial assistance.

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