



Small Scale Solutions for your Farm

Heavy Use Area Protection



Do You Have Problems with:

- Cows knee deep in mud
- Muddy areas around watering troughs or feed bunks
- Muddy areas around buildings from equipment traffic
- Muddy and eroded walkways used by livestock

Heavy Use Area Protection Helps:

- Provide safe and stable access to frequently used areas
- Keep your animals cleaner and healthier
- Improve safety on your farm
- Improve efficiency on your farm



Heavy Use Area protection on water tank.

Purposes and Benefits of Heavy Use Area Protection

- Improves the appearance of your farm
- Improves water quality
- Reduces accidents
- Reduces odors
- Reduces erosion
- Reduces flies and mosquitoes
- Reduces equipment maintenance
- Less time spent pulling equipment and animals out of the mud



Protection around a waste facility.





How to Install the Practice:

A heavy use area is protected by first removing all the mud and muck, then replacing it with something that will last for a long time such as gravel or clam shells. A layer of filter fabric placed on the ground before you place the gravel or shells will help to keep it clean. (Filter fabric is a light weight cloth made out of plastic that has very small openings which allows water, but not soil, to pass through it.)

You can sometimes correct problems by changing the way you manage your operation. For example, you can change the travel lanes used by your tractor and other equipment when you see mud beginning to appear, or you can block animal walkways so they will walk in other areas. You can eliminate a muddy area around watering facilities in your pasture by using a portable watering trough and moving it to a new location often. You can also eliminate muddy areas by fencing the animals out temporarily while the area is regraded, seeded, mulched, and allowed to grow again. Later you can allow the animals back to this area, being careful not to allow them to stay too long or in wet weather.

Mud is often associated with wetlands. Work with the NRCS office to make sure wetland rules are not violated when you clean up a muddy mess.

Pavement Protection

If you have an area on your farm where heavy trucks make frequent visits, or areas that need to be scraped to remove manure or other materials, paving may be the best solution. Materials such as concrete, asphalt, soil cement, fly ash and paving blocks can be used for paving.

To install paving you need to get rid of the mud and add some gravel to make a base.

If you use concrete, you will need to have forms constructed, woven wire steel reinforcement and expansion joints.

Make the edges of the heavy use area pad thicker to prevent cracks. Asphalt is not as durable as concrete, but it's cheaper and faster to install. An asphalt contractor will be needed to install the asphalt.



Practice can be used to protect any heavy traffic areas.



A protected water tank.



Manure and urine in a water source will increase animal health challenges and veterinarian costs.





Other Materials:

Soil cement and fly ash can both be used to make pavements that are cheaper to build although they are not as durable as concrete or asphalt. Soil cement is made by mixing Portland cement with soil and compacting. It will harden to make a durable surface.

If your farm is near a coal fired power plant, fly ash may be available at a low cost. Fly ash can be used to form a paved surface when properly prepared. Typically fly ash is mixed with sand and water in a cement mixer and poured into forms and allowed to harden, which may take a few weeks. Fly ash pavement is more likely to crack than concrete and is easily damaged by scraping.



A portable watering tank.

How to Maintain the Practice

Heavy use areas should be checked regularly to repair any problems that occur.

- Areas using vegetation for protection should be mowed periodically
- Fertilize and lime all desired vegetation around the heavy use area yearly
- Move portable water troughs often
- Move fences when mud appears
- Add gravel or wood chips when needed
- Check pavement for cracks and repair them
- Fill pot holes before they get big

Associated Costs

The costs for Heavy Use Area Protection will be different depending on what you use to build it and how large an area needs treatment. Some of the costs to think about are:

- Removing mud
- Finding and moving fill dirt
- Buying fabric
- Buying stone or chips





Technical and Financial Help Is Available

Whether you measure your farm in terms of feet or acres, your local Natural Resources Conservation Service (NRCS) office has experienced conservationists that can help you develop a Conservation Plan to conserve, maintain, and restore the natural resources on your land and improve the long-term health of your operation.

There is no charge for our assistance. Simply contact your local office to set up an appointment. You may also be eligible to receive financial assistance. Your NRCS office will explain any programs that are available so you can make the best decision for your operation. All NRCS programs and services are voluntary.

For More Information

Visit the [Natural Resources Conservation Service](#) or visit farmers.gov/service-locator to find your local NRCS office. You can also check with your local USDA Service Center, then make an appointment to determine next steps for your conservation goals.

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NRCS conservationist assisting small scale farmer with developing a customized conservation plan.

