



Boot Sucking Mud?

Consider This Alternative Vegetative Heavy Use Areas

NOTE: This factsheet should be used in conjunction other HOW factsheet's including: *Rotational Grazing* and *Seeding Small-Acreage Horse Pastures* - www.horseboard.org/how

Introduction

Turning horses out in pasture is beneficial for many reasons. Horses are athletic animals that enjoy freedom of movement. They are well-suited for eating small forage meals throughout the day, constantly moving as they do so. This movement and constant flow of forage through the digestive tract helps to promote normal behavior and reduce the risk of digestive upsets.

Facilities that are limited in turnout space but high in horse numbers may overuse the land. Overuse can lead to soil compaction, mud, loss of pasture grass, and soil erosion. Another problem that can arise is weed invasion, which can increase the likelihood of a horse consuming toxic weeds. Maintaining a healthy stand of grass in heavily used areas will provide your horse with a safe source of forage to nibble on and a mud-free area for them to roam freely. Healthy grass stands will reduce the possibility of contaminating local water resources with soil and nutrient movement from your farm. A general rule of thumb is to manage the land so that at least 50% of it is covered by grass year round.

Vegetative Heavy Use Areas

A *heavy use area* is a section of the farm that is heavily used by horses when regular pastures are too wet, need to recover from grazing, or where hay is being fed (winter, early spring, drought, supplemental). While these areas are useful, they often develop thick mud during wet weather and encourage year long weed proliferation. Establishing and maintaining grass in these areas, thereby turning them into *vegetative heavy use areas*, is not only beneficial to horses and horse owners, but to the environment as well.

Establishing a vegetative heavy use area on a horse farm is not difficult, but it is recommended that horse farm owners seek the assistance of their soil conservation district personnel to ensure that their effort and money are well spent. Here are a few guidelines to consider when establishing vegetative heavy use areas on a horse farm:

- ◆ Establish a vegetative heavy use area that is at least 600 square feet/animal unit (1 animal unit = 1,000 lbs). A minimum of three vegetative heavy use areas is recommended on horse farms if

there is less than 1 acre of turnout space per horse. Example: for 10 horses weighing an average of 1250 lbs, each vegetative sacrifice area should be at least 7,500 square feet (12.5 animal units x 600 square feet) or 0.17 acres.

- ◆ Seed vegetative heavy use areas following recommendations below and in accordance with *HOW Factsheet: Seeding Small-Acreage Horse Pastures* – www.horseboard.org/how.
- ◆ Manage vegetative heavy use areas in accordance with *HOW Factsheets: Management of Established Horse Pastures and Rotational Grazing* – www.horseboard.org/how.

Grasses Best Adapted for Heavy Use Areas

Tall fescue is widely recognized as a superior soil conservation and pasture plant because of its deep, fibrous root system, tolerance to a wide range of soil conditions, adaptation to various climates, and long stand life. It is persistent, easy to establish, more tolerant of continuous and close grazing than orchardgrass, and usually produces higher pasture yields than other cool-season grasses. It tolerates excessive soil moisture (somewhat poorly drained soils) and dry, droughty sites. It survives on acidic (pH 5.4 to 6.2), low fertility soils, but a good soil fertility maintenance program will aid in producing more vigorous growth under conditions where soil stabilization is critical. And whereas orchardgrass and timothy have been seriously damaged by insects and diseases in recent years, tall fescue is seldom injured by insects or diseases

Tall fescue is more tolerant of horse and machinery traffic and mismanagement than other cool-season grasses such as orchardgrass and timothy. Two very desirable features that make tall fescue useful in providing cover on heavy use areas are its abilities to produce a large amount of coarse, tough roots and to form dense ground cover quickly, thus forming dense solid stands that make it almost impossible to pull the plant out of the ground. Benefits to the soil from such an extensive root system include improved soil structure, decreased soil density, and reduced surface soil erosion. The high density of plant tillers makes tall fescue effective in protecting the soil from erosion and filtering surface water flowing over the crop. The dense root system resists treading damage by horses during extended periods of wet weather.

Turf-type tall fescue varieties should not be used for pasture and forage purposes for horse breeding operations because it can lead to reproductive problems in broodmares. However, for other horse operations, turf-type varieties of tall fescue are better suited for heavy use areas than forage-type varieties. Wide acceptance of tall fescue as a turf species is due to the development of low growing, high tiller density plants having improved durability due to greater pest and wear tolerance. Many of the turf-type varieties are infected with high levels of an endophytic fungus, which provides the increased pest resistance.

Horse owners who are reluctant to use endophyte-infected turf-type tall fescue varieties can use so-called ‘novel’ or ‘friendly’ non-toxic forage-type varieties sold under the trade name Jesup/Max Q® (the only variety currently available). But recognize that the forage varieties are not likely to be as durable and persistent as the turf-type varieties under heavy use conditions.

Kentucky bluegrass is also an excellent erosion control plant because of its dense, vigorous turf-forming habit. Kentucky bluegrass spreads by underground rhizomes (stems) and is a true sod-forming grass, whereas orchardgrass and tall fescue are bunch-type grasses that do not spread. But Kentucky bluegrass is not well adapted in much of Maryland and Delaware. Bluegrass is sensitive to

hot, dry conditions and goes dormant during much of the summer period. However, its sod-forming characteristic is beneficial in providing ground cover between the bunch-type tall fescue plants and is often recommended in mixture with tall fescue or orchardgrass for horse pastures and heavy use areas.

Bermudagrass also shows promise for providing cover of heavy use areas, especially the vegetatively propagated varieties (established from plant parts or sprigs, not seed). Successful plantings of the variety ‘Quickstand’ have been established throughout Maryland but unavailability of sprigs limits its use. Recommendations in the state of Maryland for the seeded varieties of Wrangler, Mohawk, and Cheyenne are being evaluated based on USDA plant hardiness zones and site conditions.

Seeding Recommendations

For Jesup Max Q® tall fescue and Kentucky bluegrass plantings - 30 lbs pure live seed (PLS) per acre of Jesup Max Q® tall fescue and 10 lbs PLS per acre of Kentucky bluegrass. Suitable varieties of bluegrass include Slezanka, Park, Troy and Ginger. Seeding rates much higher than those used for hay and pasture production are recommended to quickly and effectively establish the dense sod and cover needed to resist wear and tolerate the pressures on these areas.

Maintenance

In mid-summer of every year, the vegetative heavy use areas should be evaluated for renovation needs. Overseeding may be necessary and can be done in accordance with *HOW Factsheet: Guidelines for Seeding New Pastures and Renovating Old Pastures* – www.horseboard.org/how

Non-Vegetative Heavy Use Areas

For areas that cannot maintain grass vegetation, other Best Management Practices such as the use of aggregate material, roof runoff structures, grassed waterway/diversion and vegetative filter strips should be employed. Install a heavy use pad for horses in accordance with *HOW Factsheet: Give Mud the Boot* – www.horseboard.org/how

Help is only a phone call away!

Contact your local Soil Conservation District or Cooperative Extension office for guidance in establishing and maintaining your vegetative heavy use areas.

For more information on horse manure management and other soil conservation and water quality practices, contact your local Soil Conservation District. For more information contact your local Soil Conservation District/ Natural Resources Conservation Service/ (SCD/ NRCS) office or county Maryland Cooperative Extension (MCE) office. Addresses and phone numbers can be found at http://www.mda.state.md.us/resource_conservation/technical_assistance/index.php , <http://www.md.nrcs.usda.gov/contact/directory> or <http://extension.umd.edu> or check the listing County Government for SCD/MCE or US Government, Department of Agriculture for NRCS of the phone book blue pages. The Horse Outreach Workgroup was established to provide information to horse owners on pasture and manure management issues. Technical assistance is available from local county Soil Conservation Districts/Natural Resource Conservation Service and the Maryland Cooperative Extension office. The workgroup consists of representatives from local Soil Conservation Districts, Maryland Department of Agriculture, Natural Resource Conservation Service, Cooperative Extension, University of Maryland, the Equiery, and the Maryland Horse Council. The Maryland Department of Agriculture’s Office of Resource Conservation provides coordination for the workgroup. January 2009