



MANAGEMENT OF ESTABLISHED HORSE PASTURES



High quality pasture can be the best and least expensive source of feed for horses. In addition, well kept pastures provide the best place for horses to exercise, rest, and have access to fresh air and sunlight. Productive, high quality pastures are the result of applying good pasture management practices. But many horse owners often do not manage pastures to maintain the desirable plant species and maximize forage output due to a lack of management awareness as well as proper equipment. Good pasture management practices are based upon knowledge of the soil resource available, how plants grow, the soil and climatic requirements of plants, and how plants respond to grazing. Horse owners need to

understand the adaption, growth and cultural requirements of forage as much as they need to understand feeding and care of the animals. Grass is a horse's natural feed. Productive, well managed pasture can provide most of the nutritional requirements of horses during the growing season, including protein, vitamins and minerals. Good management can also greatly extend the period over which adequate pasture is available for horses without the need for additional hay. Horses grazing on well managed pastures will be in better condition and have improved health compared to those grazing on poorly managed pastures.

Poorly managed, abused, and worn-out pastures not only supply little or no feed, but are frequently the source of many internal parasites found in horses. Poor pasture management results in feeding more supplemental feed, reduced plant vigor and productivity of the stand, and increased weed problems. All of these increase the total cost of keeping horses.

Most permanent pastures are not producing up to their potential. In fact, unimproved pastures may yield only 2000 or less of dry matter per acre per year. Thus, it may require 2 acres or more to produce enough forage to feed one horse during the normal summer grazing months. Furthermore, unlimed, unfertilized, unclipped, weedy pastures fail to provide a balanced ration when grass is dry and weathered.

If you already have good stands of desirable grass and legume species, then lime and fertilizer together with proper grazing management should be sufficient to ensure good horse pasture. Yields on many abused and worn-out pastures can be doubled simply by applying lime and fertilizer.

LIMING & FERTILIZATION

How much lime and fertilizer should you apply? That depends on the existing pH and soil fertility levels. A soil test (analysis) will determine the pH (acidity) and nutrient level of your soil. Tests should be taken every 2-3 years to determine the soil's fertility status.

Soil tests can be obtained through commercial testing laboratories. Contact your local extension office to obtain a list of testing laboratories and information on how to properly take a soil sample of your pasture. Testing your soil won't guarantee top-quality pastures, but an analysis of a properly taken soil sample will tell you how much lime and fertilizer you should apply. It will give you the best information available to bring your pasture to the desired, balanced fertility condition.

If you have not been routinely applying lime and fertilizer, and the pH and fertility are low, the response is often slow when you apply lime and fertilizer on the surface of the ground. It may take 1 to 3 years, depending largely on the lime and fertilizer needs and the grass and legume (clovers, alfalfa, etc.) species present, before your pasture sod is thick and productive again. Pastures generally must be fertilized annually if they are to be productive and have the grasses and legumes persist, especially if the legume component of the stand is less than 25%. If the stand is less than 25% legume, then nitrogen (N) fertilizer needs to be applied each year. A total of 150-160 lbN/acre/year is recommended, split into three applications--50-60 lbN/acre in March, 50 lb/acre in mid- to late May, and 50 lb/acre in mid- to late August. Nitrogen is water-soluble and cannot be stored in the soil for use throughout the entire growing season. It must be applied in increments for efficient use.

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GRAZING MANAGEMENT

The goal of your grazing management should be to utilize as much of the available forage as possible while still maintaining dense stands of the pasture grasses and legumes. During a regular growing season, two acres of well-managed pasture should provide adequate grazing and exercise for a mature horse. The total pasture acreage should be divided into 2 or 4 separate paddocks. This will permit rotating the horses among pastures to allow time for heavily grazed areas to recover and for liming, fertilizing, clipping, etc., when horses are not in the paddock. Letting the horses graze first in one paddock for about a week, then moving to another, helps keep legumes and grasses growing more vigorously and increases the carrying capacity per acre. Furthermore, by rotating the grazing pattern, you can break the life cycle of some parasites.

Avoid over- or under-grazing. Since horses are notorious spot grazers, they will seriously damage desired species by repeatedly grazing the same areas and avoiding others unless they are frequently moved to new pastures. Begin grazing when orchardgrass/clover and tall fescue/clover pastures are 6-8 inches tall. Horses should be removed when the shortest areas of the pasture have been grazed down to a height of 2-3 inches. Grazing of predominantly Kentucky bluegrass pastures should begin when they are 5-6 inches tall, and the horses should be removed when the shortest areas of the pasture have been grazed to a height of 2 inches.

Do not allow areas of the pasture to be overgrazed. Before pasture plants are grazed to the ground, move the horses to another paddock. Keeping pastures grazed down below 2 inches weakens and thins stands, allowing weeds to invade.

Grazing plants to the ground, typical in many horse pastures, is a significant reason for the loss of desirable grasses and legumes and the encroachment of weeds. Undergrazed areas that have tall growth, especially mature growth with seed heads present, should be clipped.

CLIPPING PASTURES

Clipping your pastures regularly during the growing season is also

a critical management practice. Clipping at a height of 2 to 3 inches after horses are moved to a new paddock helps to promote more uniform grazing, control weeds, prevent grasses from heading, and, in general, keep the vegetation in a more palatable condition. Pastures may need to be clipped three or more times per year.

DRAGGING PASTURES

Manure droppings in the pasture contribute to uneven grazing because horses avoid grazing near them. Scattering the manure periodically during the grazing season will reduce this problem. It also helps to reduce the parasite populations by exposing them to air and sunlight. Chain or link harrows work well for this. A good time to do this is immediately after clipping the pasture. Dragging can also smooth over areas dug up by horses' hooves when soil is wet or soft.

WEED CONTROL

Weeds lower the forage yield of a pasture and compete with the desirable forage grasses and legumes for water, light, and nutrients. In addition, some may be harmful to your horses. Proper fertilization and grazing management are the easiest weed control measures. If weeds do invade, clipping before the weeds form viable seeds or crowd out the desired grasses and legumes is helpful. Spot spraying with selective chemicals such as 2, 4-D and dicamba, or hoeing/digging out the weeds when first discovered, can also be used as weed control measures.

SUMMARY

It is often surprising how productive worn-out, poorly managed, weedy, overgrazed pastures can become with proper grazing management practices. Productive, high quality pastures are the result of applying good pasture management practices. Liming and fertilization, proper grazing management, clipping, dragging, and weed control are the basic management practices for established horse pastures.

For more information on horse manure management and other soil conservation and water quality practices, contact your local Soil Conservation District. Addresses and phone numbers can be found through mda.maryland.gov/HOW.

The Horse Outreach Workgroup (HOW) provides information to horse owners on pasture and manure management. HOW consists of representatives from local Soil Conservation Districts, the Maryland Department of Agriculture, USDA Natural Resource Conservation Service, University of Maryland Extension, and the Maryland Horse Industry Board.

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