FACT SHEET

Department of Animal Science, University of Connecticut

Effective Horse Management - Third in the Best Practices Series

Pasture: Evaluation and Management of Existing Pasture

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Pasture management is very important for horse owners. By managing horse pastures more effectively, horse managers can increase forage production, lower production costs, improve aesthetics, and promote a healthier environment. The benefits of a well-managed pasture include reducing environmental impacts of your operation, including movement of soil and manure to water bodies; improving property aesthetics, which makes for good neighbor relations and increases property value; and providing feed and recreation for your horses. Using a rotational grazing system can enhance these benefits.

For optimal health, horses need to eat 1 to 1.5% of their body weight in hay or pasture grasses and legumes daily (15 lbs of dry matter intake for a 1,000 lb horse). Horses will generally eat about 1-1.4 lbs of pasture grasses and legumes per hour on a dry matter basis if they have enough pasture available. With 24-hour access to good quality pasture, a horse grazing 17 hours each day can consume up to 25 lbs as forage, which is more than enough to satisfy his daily dry matter intake. A minimum of 11-15 hours per day on good quality pasture would be needed to meet the dry matter intake of 1.5% body weight.

Evaluation of Current Pasture

Begin by evaluating your pasture. Move hay and water troughs every year to encourage even plant growth and reseed with grass species that can stand up to horses' hooves (such as orchardgrass, Kentucky bluegrass, and perennial ryegrass). When planting, check to see if bare areas are heavily compacted. If you can't push the blade of a trowel into the ground, loosen the soil with a tiller before reseeding. Next, eliminate areas of standing water by regrading the area

or installing drains after checking with your local government environmental agency to be sure that it is not a wetland. Eliminating standing water will benefit your pasture; it will also be an aid in disease control, since mosquitoes and other insects tend to breed in standing water. Identify plants in your pasture and see if what you seeded last spring is present. If plants you seeded last spring are not present, you need to reevaluate your seeding methods and try planting again. You also want to remove poisonous plants with an herbicide.

Management

Resting pastures is critical! Recovery time for grasses ranges from 10 to as many as 60 days, depending upon season, weather, and soil characteristics. Generally expect to wait at least 14 days for grasses to regrow to grazing height in spring, and 30 or more days in summer. A good rule of thumb for grazing in Connecticut is to avoid exceeding 7 days on any one paddock. If you have enough land to do this, divide your total pasture area into a minimum of 5 paddocks, and rotate animals to a new paddock at least once a week. This system will allow each paddock to rest for 28 days. If it is not possible to have 5 paddocks, divide your land into as many paddocks as possible to allow the areas to rest.

A rule of thumb is to graze animals when grass is 6 to 8 inches high. Rest grass when it is grazed down halfway (3 to 4 inches high). "Graze ½, leave ½." Grazing 50% only removes 2-4% of growth but grazing it 60% removes over 50% of growth! Grazing plants too short may cause horses to ingest soil resulting in sand colic, remove growing points of grass and take longer to recover pasture, allow more weeds to invade the pastures, increase the chance for consumption of toxic plants and increase the need for weed control. However, a Kentucky bluegrass and white clover pasture can be grazed beginning at 4 inches of height. Bluegrass is tolerant of shorter grazing heights, and sunshine will stimulate al grasses and legumes.

In springtime when grasses are growing quickly, you may need to move horses through the rotation faster or work in a mowing regime as well in order to prevent plants from getting too mature and unpalatable before they've been grazed. If you make hay, you may choose instead to withhold 1/2 of your pasture from your grazing system so that you can harvest a first cutting from it. After regrowth, this area may be added back into your rotation system.

Experiment with portable electric fencing systems to subdivide pastures into paddocks. Paddocks are usually large pens or a small pasture that encompass one-half to several acres. Ensure that the permanent perimeter fencing is sturdy and reliable. Portable or temporary fencing allows flexibility in how much area you give your horses daily. It also facilitates mowing and haying operations due to the ease of picking it up and getting it out of the way. Subfencing is not good for foals and weanlings, however. Over time you may find that you are placing your fences in the same places, and choose to erect permanent fencing in its place.

Keep grasses in their "vegetative" state with a combination of grazing and mowing. Harvesting grass before it gets too tall will prevent it from becoming reproductive, also known as "going to seed." Mature grass is coarser, stemmy, and not as palatable or nutritious as leafy, actively growing plants. Clip weeds before they form a seed head to reduce the weed seed in your pastures and control woody plants such as tree and shrub seedlings, which may invade open areas. Ideally, a paddock should be mowed as soon as possible every time animals are removed and rotated on to the next paddock. Just like grazing, you should allow grasses to grow to 6 to 8 inches and mow to 3 to 4 inches if not actively grazing to keep pasture grass healthy.

Soil test pastures to determine the need for fertilizer and lime, and follow recommendations. If pasture is new or has not received lime and fertilizer for many years, you

may wish to test for 2-3 years in a row to establish a healthy fertility level. After that, a test every 3 years is sufficient. Remember that if soil pH is too low, any fertilizer you apply may not be accessible to the grass, resulting in a waste of money!

"Drag" or chain harrow pastures as needed to break up and spread manure piles. This will help manure to be broken down more quickly, spread fertility more uniformly, and dry out parasite eggs more quickly. During wet weather, parasites may not be controlled by this method, so manure should only be spread during dry weather periods. Be sure to follow a regular deworming program. Removing feces twice weekly from pasture, is an effective parasite control method according to a study by RP Herd in 1986.

Animals should be fenced out of wetland areas, because they can cause damage to these fragile environments. When thinking about fencing, you should consider safety first. Fences should be clearly visible to horses and not located at the base of a hill where horses can easily run into them. Some good options for fencing are small wire mesh, post and rail, PVC, or electric fencing. Fences should be designed so that horses cannot get their hooves caught in the openings. Barbed wire should never be used around horses.

Introduction of Horses to Pasture

If not grazing year round, be sure to gradually introduce horses to spring pasture. There is no need to do this if horses are maintained on pasture year round, since the growth of pastures in the spring is not rapid enough to warrant stalling horses that are typically turned out. The only time to worry about this is if horses are stalled with no turnout and all of a sudden in the spring are going to be allowed pasture. Pasture grasses are high in sugars (sucrose, glucose, fructose and fructan) particularly during rapid growth. The simple sugars (sucrose, glucose, and fructose) can be digested in the small intestine by the horse but not the fructans, which reach the horse's large intestine undigested. The fructans are then rapidly fermented by the action of microbial enzymes with the production of lactic acid and a decrease in cecal pH leading to colic and laminitis. The first day or two after the onset of pasture growth, try to limit grazing to 30 minutes to 1 hour. Then gradually increase the time over the next 7-10 days. Avoid grazing laminitis prone horses and ponies on spring or lush pasture that may trigger laminitis. Use a dry lot for overweight horses and ponies.

Careful management of land resources will ensure greater production of healthy grasses. Managing horses carefully on grasses will enable you to maintain them in good health and prevent laminitis and other problems from occurring. By following these guidelines, you will be more able to maintain healthy horses and healthy pastures.

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