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Year-Round Tips for Optimal Pastures

Pasture management involves five key steps: resting, mowing, dragging, fertilizing, and controlling weeds

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ow can you set your pastures up for success and maximize grazing opportunities? Simple year-round management strategies can help prevent erosion, control weed growth, and provide quality forage for your horses.

Krishona Martinson, PhD, professor and extension horse specialist at the University of Minnesota, in Minneapolis, breaks pasture management down into five key steps: resting, mowing, dragging, fertilizing, and controlling weeds.

Resting

Rotating pastures is a simple way to improve them, says Krista Lea, MS, research analyst at the University of Kentucky's Forage Extension Program, in Lexington. "People think rotating pastures is a complicated procedure, and it doesn't have to be," she says. "Any time you can give a pasture a break from horses for a couple of weeks, it's beneficial."

Rotation allows pastures to rest, preventing overgrazing and allowing new plant growth. To keep it simple, Lea suggests starting with two paddocks, putting horses on one for a few weeks and then moving them over to the other. "You can then add more paddocks into the rotation and start



Once horses have grazed a field down to about 3 to 4 inches, mow. This creates uniform regrowth, which helps optimize grazing and prevents dead spots and weed strongholds.

changing the length of that rotation to find what suits your horses and your pastures," she says. "To start off: two pastures, every two to three weeks, and move the horses back and forth."

Mowing

With rotational pasture resting comes mowing. "Resting goes hand in hand with mowing," says Martinson. "When horses have grazed down cool-season grass pastures ... remove them from that pasture to another pasture or back to a drylot. Horses don't graze uniformly, so look at the area of the pasture where they graze most often, and use that as a sentinel area to decide when to rest the pasture. Once grazed down on average to 3 to 4 inches, mow. So whenever you rotate, you also mow."

This 3- to 4-inch average grass height can be deceptive, says Martinson: "I think many people are surprised by this, because in the minds of horse people, there's still a lot of forage out there. But the plants need that leaf area to capture sunlight to keep regrowing."

Set the mower to your desired grass height, and mow the entire pasture. "In the areas the horses graze most frequently, you won't cut anything, but you will in taller areas, such as where horses have defecated and don't graze," says Martinson. "This restarts the plant so regrowth is even." Uniform regrowth helps optimize grazing and prevents dead spots and weed strongholds.

Weed Control

For farm owners who would rather forgo herbicide use, Martinson advises being vigilant with these five best-management practices, in particular avoiding overgrazing, which creates the ideal environment for weeds.

"The great thing about forage is that when properly managed and given the opportunity to rest and regrow, a healthy pasture will outcompete most weeds," she says.

Owners interested in applying herbicides to their pastures have various options, says Martinson. "There are several herbicides that are safe for pasture use if applied to label directions," she explains. "Look for a product that is labeled for your state and for pastures (not lawns, for example). Make sure it's formulated to control the weeds you want, and make sure the grazing restrictions are acceptable for your situation—some have a zero-day grazing restriction, while others have a 21-day grazing restriction. The key point: As long as labels are followed, the product is safe for use in horse pastures."

Mowing Simplified

Mow with a purpose, not by the calendar, says Krista Lea, MS, research analyst at the University of Kentucky's Forage Extension Program, in Lexington. Reasons to mow include:

- To remove seedheads and weeds that are taller than grasses. For these, set the mower high.
- When rotating off a pasture.
 Horses are spot grazers, so mow to level out vegetation, allowing plants to regrow at the same rate. Opt for a midlevel mower setting.
- Before seeding, to open the canopy so sunlight can reach seedlings. Mow close to the ground.

Fertilizing

"Fertilizing is a word that covers a lot of things," says Lea. Soil amendments, she explains, include nitrogen (most commonly in the form of urea) that is best applied in fall in southern areas, such as Kentucky, to boost grasses going into winter. Others—lime, phosphorus, and potassium—require a soil test to determine need. For this, Lea recommends reaching out to your county or regional extension agent.

Here, Martinson reminds us that seasonality often depends on geographic location. In northern regions like her home state of Minnesota, for instance, nitrogen fertilizer is best applied in the spring to support the rapid plant growth commonly seen in during that time.

Dragging

While fecal egg count and deworming protocols are crucial for identifying and treating parasites in horses, good pasture management strategies can also help mitigate parasite populations. Parasite eggs and larvae remain protected within manure, says Martinson, and dragging pastures breaks that manure up. The caveat is optimal timing.

"By dragging during hot and dry

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Rotate horses between two or more pastures every two to three weeks to let pastures rest, prevent overgrazing, and allow new plant growth.

conditions, the sunlight does a really good job of breaking down manure and killing parasites," she explains. "This can be done two to three times per year, but only during very hot and dry periods; dragging during cool and wet conditions is less effective in controlling parasites."

Fortunately, you don't need expensive equipment to drag: A section of chain-link fence, a pallet, or an arena drag turned upside down can do the job, says Martinson.

While dragging is a widely used practice, researchers haven't studied its true benefit to grasses, says Lea. "We do know that dragging breaks up manure piles, which would otherwise kill the grass underneath, and also spreads out the nutrients, but I worry about also spreading aggressive weeds," she says.

Seeding

Many believe seeding is part and parcel of pasture management, but Martinson says

it's a task you might be able to cross off your list: "When you look at your pasture, if you have at least 75% ground cover with a desirable species—a cool-season grass in northern areas, a warm-season grass in southern areas, or even a legume like clover—just being mindful of the five best-management practices will usually bring that pasture up to peak productivity."

Some pastures do require seeding: "If you have between 50% and 75% of desired species in your pasture, you need to overseed (plant directly onto existing soil)," says Martinson. "If you have less than 50%, you need to start over—and that is where you have a significant investment in time and money."

A newly planted seed needs access to sunlight, water, and nutrients, explains Martinson. "For overseeding, you must mow close to the ground, so those seedlings will have access to sunlight," she says. "If are you starting over and are tilling the area, you want to make sure you have a firm, smooth

seedbed. If your shoes sink down more than a quarter to a half an inch, it's too fluffy. The key to germination is soil-to-seed contact." Then, whether newly seeded or overseeded, pastures need several months without horse traffic for the plants to establish, says Martinson. "In general, any time you seed a pasture, you have to break out your patience. Horses graze with such force, if the seedling is not established, horses can pull the entire plant out by its roots, and then you are back to square one."

Once seedlings grow to 4 to 6 inches in height, mow down to 3 to 4 inches. "In a plant's mind, it has been 'grazed' by the lawn mower, and you don't have the force of horses grazing to pull the plant up and uproot them. Ideally, you'll do that cycle three times," says Martinson. "After a few months, the plants should be established enough to withstand the force of hoof traffic and horses grazing."

"Seeding is all about having the right



Consider installing high-traffic pads around areas such as gates, water sources, and alleys where horses gather to keep mud at bay.

conditions," adds Lea. "For starters, you have to have some open space in your pastures; nondesirable plants will take over your seedlings. The right time of the year to seed in Kentucky is early September, for example, but earlier in places farther north and later for places south. Seed to the right depth. A lot of people get the seed too deep. You want about a quarter of an inch depth—just under the surface. Pack it down tight, and give it time to germinate and establish."

Traffic Areas

Keeping mud at bay is a seasonal struggle familiar to farm owners regardless of region, with high-traffic areas such as gates, around water sources, and alleys being the most troublesome. Solutions range from high- to low-budget. While an investment, a high-traffic pad might pay off in the long run, says Martinson. To create one, first remove the organic matter and top 8 inches of soil from the high-traffic area, installing a drain tile as needed. Layers of geotextile fabric, larger rock, and smaller rock facilitate drainage, create a stable surface, and mitigate mud in that area.

While budget lies at the forefront of most people's minds, Lea says funding does exist. "Cost-share programs offset costs

for projects like this," she says, outlining programs in Kentucky that cover 50-100% of the expenses to install geotextile fabric and rock in pasture gateway areas. She recommends reaching out to your extension agent and National Resources Conservation Service office to find similar programs. "It's good practice to maintain a relationship with these agencies; when new programs come out, they reach out to their database of contacts," says Lea.

In addition, don't forget your most budget-friendly mud management option is simple pasture rotation, she says: "When the whole pasture rests, so does the traffic area."

Spring Starters

Being proactive in winter lays the right foundation for spring pastures. During winter, grass is dormant, so pastures should rest, as grazing in the nongrowing season damages both the plant and the root. While horses and owners alike savor spring, Martinson counsels patience when it comes to spring grazing to give plants time to grow and establish.

"Wait until cool-season grasses are on average 6 to 8 inches tall in the spring before you even think about grazing," she says. Spring growth is also an ideal time to apply fertilizer if soil test results indicate it's needed.

Then, once pastures have reached the desired height, Martinson recommends allowing horses to begin grazing in 15-minute increments:

- Day 1: 15 minutes
- Day 2: 30 minutes
- Day 3: 45 minutes
- Day 4: 1 hour

"If you want to continue, you can keep adding in 15-minute increments until you reach five continuous hours of grazing," she says. "Once you reach five hours, you have allowed for a gradual transition from a mostly hay diet to a lush spring grass pasture; the chance of colic or laminitis dramatically decreases by providing that acclimation." Conversely, Martinson reminds owners to again transition horses slowly, over a 10-day period, in the fall from pasture to hay.

Take-Home Message

"I think horse owners become overwhelmed with pasture management because many are horse people and not plant people," Martinson says. Reach out to your local resources for guidance, taking small steps for best practices. **SM**

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