Pasture Pointers

Rest, rotation and getting rid of weeds are all winning strategies to improve pasture potential.

To allow pastures adequate rest, range managers apply the rule "take half and leave half." This means that once forage has been grazed to half its height, cattle should be moved to a new paddock. [PHOTOS BY SHAUNA ROSE HERMEL]

Story by
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If you had to rate your pasture management practices would you pass with flying colors, or could you do better? Following are three questions to help evaluate the status of your pastures — and some advice on how to make the grade.

Question 1: Are pastures being rested at some stage during the growing season to allow for regrowth?

Resting pastures is one of the most important tools to keep forages and native range healthy, says Pat Reece, a range ecologist with the University of Nebraska's Panhandle Extension and Research Center in Scottsbluff.

He explains that resting pastures after grazing allows plants to regrow leafy material and replenish root reserves. Over time, plants that are grazed continuously, without the opportunity to restore energy reserves, become stressed and less vigorous. If heavy grazing continues without time for regrowth, stressed plants will eventually die, which decreases forage supplies and allows invasive weed species to take over pastures.

To allow pastures adequate rest, range managers apply the rule "take half and leave half." This means that once the forage has been grazed to about half its height across the pasture, cattle should be moved to a new paddock. Pastures can be grazed shorter, but then cattle should be removed with enough time left in the growing season to allow plants to regrow to at least half their height.

An added benefit of having residual plant matter left in pastures is that it keeps the ground covered to minimize erosion and prevent weed seeds from getting established, according to Pat Johnson, a range scientist with South Dakota State University (SDSU). The plant material also catches precipitation and snow so the moisture soaks into the ground rather than running off, she says.

Question 2: Is some form of rotation system being employed to extend the grazing season and fully utilize pasture potential?

Rotational grazing systems come in a variety of forms. But the common goal of all rotation systems is to better utilize available forages and, in turn, give pastures adequate rest for regrowth.

With proper planning, rotational grazing systems can also extend grazing earlier into the spring, longer in the fall and even through the winter, Johnson says.

For early spring grazing in her region, she advocates establishing pastures with cool-season, introduced forages such as crested wheatgrass or smooth bromegrass. These plants can be grazed when they green up in late April or early May until warm-season pastures are ready for grazing in June. They should then be rested until fall.

To extend grazing longer into the fall or winter, Johnson suggests utilizing pastures that were lightly grazed — or not grazed at all — during the spring or early summer. Or managers could consider establishing pastures of cool-season forages, such as Russian wild rye, that are suited for fall and winter grazing.

But Johnson cautions that when grazing during these seasons producers should be mindful of leaving enough residual plant cover to protect the crowns of plants from freezing and to catch snow or other moisture.

"You can damage pastures by overgrazing in the winter," she says.

Another fall or winter grazing option is crop residues, which the University of Nebraska's Ivan Rush refers to as "the most economical feed."

He points out that grazing crop residues such as cornstalks, sorghum or Sudan regrowth, or wheat stubble also allows pastures to rest during the fall and winter.

Question 3: Are weeds limiting the amount of forage that pastures can produce?

Weeds steal moisture and nutrients from other desirable plants. Over time, this gives them a competitive advantage and allows them to consume large areas and reduce carrying capacity on pastures.

"Grazing heavily — especially during drought — is guaranteed to negatively impact range condition and spawn annual weeds," Reece says.

Weeds are more likely to infest heavily grazed pastures because of the reduced competition from grasses and the resulting bare ground and open space that allow sunlight and precipitation to reach the weed seeds in the soil, Reece adds. A similar weed scenario can result on pastures burned by wildfire or if a controlled burn is conducted at the wrong time of year.

Typically, weeds that appear the year after heavy grazing or a drought will be annuals. But, if an area is heavily grazed year after year, weeds can become perennial infestations and a growing problem.

So, what can be done?

First, to reduce the risk of weeds, run lighter stocking rates or defer grazing for as long as possible on pastures that were heavily grazed the previous year to allow pastures to recover.

If weeds are already a problem, grazing, herbicides and mowing — or a combination of all three — can be effective management tools to help set back weed infestations.

The grazing option. For cool-season annual weeds — those that are the first to green up in April and May — Jerry Volesky suggests flash grazing those pastures with cattle in the spring. Volesky is an Extension range and forage specialist at the University of Nebraska's West Central Research and Extension Center in North Platte.

He says lush, green weeds can be fairly palatable in the spring and by keeping them grazed down, weed plants are weakened and seed production is minimized.

Some producers are also finding success by running a few sheep or goats to keep weeds grazed down.

For example, in Kansas goats are being used to help control sericea lespedeza, which is considered a noxious weed there. On heavily infested pastures, a stocking rate of four goats per acre is effective; otherwise, one to two goats per acre is sufficient.

"Goats readily consume sericea," says Gary Kilgore, an agronomy specialist with Kansas State University's Southeast Area Extension Office in Chanute, Kan. Goats

graze sericea low enough to the ground that seed production is minimized, and eventually tiller (sprouts from the base of the plant) numbers are reduced.

Best of all, goats and cattle can co-exist in pastures. "Goats usually leave grass alone. They like broadleaf and brushy plants and even eat eastern red cedar," Kilgore says.

Sheep have been utilized in a similar manner to combat leafy spurge infestations across the West.

The mowing option. Mowing can be an effective weed-control tool — if it is done at the proper time of the weed's growth cycle.

That critical time is when desired grasses are dormant and weeds have reached the flowering stage, according to Montana State University Extension weed specialist Roger Sheley.

Mowing during this time can greatly reduce or prevent weed seed production and weaken the weeds after they have invested a large amount of energy for growth.

However, if mowing is performed later in the season, when weeds have already set seed, mowing will only aid in dispersing the weed seeds, Sheley cautions. But, if mowing is performed too early (before desirable grasses have gone dormant), the stress can reduce vigor and competitive abilities of these grasses.

The primary drawback to mowing is that it is labor-intensive. Repeated mowing may be required within a single growing season if the weeds get enough moisture for regrowth and to flower. And, to be effective, mowing may be required for several years to eventually reduce weed numbers.

The herbicide option. Most range scientists agree that while herbicides can be costly, if weed infestations are extensive, herbicide treatments may be needed.

The key to an effective weed kill is to spray at the right time. Weed specialists say the window of opportunity for spraying is from mid-May to early June, when plants are actively growing.

If it's a drought year, save your money. "When it's hot and dry and things have shut down, the weeds and brush aren't going to translocate herbicides to their roots for an effective kill," Kilgore says.

But he adds, "Weeds will revive with moisture. So, if you get 1-2 inches of rain, wait a few days, and then applying a herbicide can be effective."

However, this rule does not hold true for brush control. "Brush really should be actively growing when herbicides are applied. If it's too dry in the spring, I'd recommend waiting to see if there's more moisture the next year," Kilgore says.

Lastly, when establishing a weed-control plan, realize that having pastures that are totally weed-free is not realistic — or cost-effective. Instead, getting weeds under control, that is, not spreading and not choking out native growth, is an outcome to strive for. To achieve that goal, a well-rounded combination of rotating and resting pastures for regrowth, as well as utilizing grazing, mowing or herbicides will all be necessary to be effective.

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