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Planned Grazing

A good grazing strategy can help producers improve their bottom lines.

by ***Heather Smith Thomas***

There are many facets to a well-planned grazing system. How you manage the grazing on your place will depend a lot upon your soils and climate, topography and types of pasture, and your goals.

Rotational short-duration or management intensive grazing (MIG) has become well recognized as a way to increase cattle performance, pasture health and productivity. How long the animals stay in one place before being moved to the next paddock, pasture or strip will depend in part upon the constraints and individual features of the land base (size, type of pastures and forage species, whether it's rangeland or irrigated pastures) and upon the purposes and goals of the stockman. The nutritional needs of the animals will also be a factor, whether they have high requirements for protein and total nutrients (such as lactating cows or young, growing stocker cattle) or lower needs (such as mature, dry cows).

Maximizing pasture production and allowing cattle to graze as much of the year as possible will help improve any rancher's bottom line. As pointed out by Jim Gerrish, American Grazinglands Services of May, Idaho, finding ways to allow cattle to harvest their own forage is the most cost-effective management tactic.

An old idea is new again

"What we've been 'discovering' in the last 20 to 30 years was known in the late 1700s," says Gerrish. "An agriculturalist in Scotland, James Anderson, wrote basically the same book that I wrote on management intensive grazing. In 1777 he wrote about daily rotation, turning cattle into a pasture at optimum quality stage of growth and allowing plant recovery."

The difference today is that it's easier to do it. "In Anderson's day, in Scotland, if you wanted to split your pastures up so you could move the cattle every day, it was all done with stone fences. The labor to build miles of stone fences made it much harder and, most people didn't do it," says Gerrish.

"We've seen this old system in Ireland on some of the farms that were abandoned in the mass exodus due to the potato famine in the 1840s and 1850s. These farms were all subdivided with stone fence. They had a hand-dug ditch that started at the top of the farm, snaking back and forth through all the pastures so they'd have stock water in every pasture. Today, electric fencing has revolutionized our ability to do rotational grazing, but the understanding of plant-animal relationships and time-controlled grazing is not new."

Stored feed usage

"Stored feed costs are the biggest expense for most cow-calf producers. Our basic goal is to reduce stored feed use," Gerrish explains. "There are three big considerations from the animal side of the equation. First is the type of cow you're running, in regard to relative milking ability. Also, many ranchers don't realize how much the feed demand increases for cows at peak lactation. Many producers chase high milk value EPDs (expected progeny differences), and those cows have a high feed requirement compared to maintenance levels — as much as 60-80% higher. If you have a herd of 100 cows, when they're at peak lactation, it's more like you have a herd of 150 to 160 cows, in terms of feeding them. Those high-milking individuals not only have a higher quantity demand but also higher quality demand."

Secondly, timing of calving will also make a difference in determining whether you'll have peak demand occurring during your peak pasture season or when you are feeding stored feed. "This is another make-or-break issue for many producers," says Gerrish. Late spring or early summer calving is one way to match peak demand with peak forage production.

In a fall calving situation, a good pasture management strategy is to wean calves at the start of spring grass and let them graze the best lush pastures, following them with dry, pregnant cows to utilize the aftermath, since the cows at that stage don't need the highest quality forage. The key to successful fall calving is low-cost winter grazing, however, so your climate will dictate whether it will work for you.

The third key is the forage resources available. "Is the pasture strictly rangeland, or is there irrigated pasture involved? The types of forage plants in a pasture are not as important as what you do with them, however. Even some of what we consider less-than-desirable forages can be used effectively with the right planned grazing strategy," explains Gerrish. You can graze that forage at peak nutrient quality. Avoiding maturity by grazing the plant sooner — when it has optimal energy and protein level and palatability — can maximize animal performance on these types of forage.

"Grazing creeping foxtail is a good example. Many people don't consider it very good forage, but if we graze it when it's immature, we get excellent animal performance," says Gerrish. It can be grazed and allowed to regrow, keeping it at a vegetative and more palatable stage.

Grazing strategy

"Back in the early 1980s when we were first starting recommending controlled grazing, going to shorter grazing periods — down from a week to five days, then three days, and then to moving cattle every day (which is what we recommend today) — I thought the primary benefits we got were increased uniformity of grazing and more consistent pasture. Then as the years went by, I realized how much benefit we're also gaining with animal nutrition," he says.

The shorter grazing periods take away the cows' opportunity for selective grazing. "When you put cows in a new pasture for a week, they eat all the best forage within the first two days and by the end of the week may be on

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Management intensive grazing is not a new concept, it is just easier today with more portable fence materials.

a maintenance diet or less. But you can take that same pasture and split it into more feed breaks and get better individual animal performance," he explains.

"Regarding the type of animal (stocker, lactating cow, dry cow, etc.), the greater the nutritional demand of that animal, the greater the benefit of going to shorter grazing periods," Gerrish adds. "This gives the animal a balanced diet with optimum nutrients. The place where you really see this illustrated is with pasture-based dairies. Typically, they move cows to new pasture after every milking — so the cows are in a pasture for only 12 hours. But some of these dairymen go out and move the cows again between milkings, and maybe a couple times in between. No matter how full a cow thinks she is, if you open up a new bunch of feed, she'll get up and go eat some more."

Dairymen see the beneficial response from this short-term rotation every day — in the milk tank. With beef cattle, that same type of response is there, but producers don't see it until they weigh the calves at weaning.

"Young calves are a little less responsive than older animals, but we see it very clearly in grazing stockers or finishing cattle on pasture. This is where you see the real benefit of more frequent moves," he says. For grass-finished cattle, especially, using this type of rotation would be a way to maximize their intake and production because the forage would be at its best each day.

There are other advantages from planned rotational grazing. High-density, short-duration grazing is healthiest for the land and vegetation, spreading the cattle manure more uniformly over the pasture to get nutrients back into soil. It's the most optimum way to improve soil health and vegetation.

"Typically, the shorter the grazing period and the higher the stocking density, the more uniform the manure distribution," Gerrish says. "Also, if you are managing each pasture to graze it at optimum quality stage, the breakdown of the manure will be much swifter than if forage is grazed at a mature stage. If the rumen bugs can't readily digest the forage (due to low protein content), soil microbes won't either. The higher the quality of forage going into the rumen, the more effectively rumen microbes can process it."

Thus the forage goes through the tract faster, enabling the animal to eat more total volume in a shorter time (and hence obtain more total nutrients), and comes out as looser, more moist manure — rather than firm. It breaks down much more readily on the ground.

If cattle are grazing the tops of the plants and then moving on, they are also less likely to become re-infected with internal parasites. They graze down to a uniform height but leave a lot of the plant to regrow. Since parasite larvae don't crawl very far up the plant, they won't be ingested if cattle merely eat the top portion. This type of controlled grazing can be a huge help in parasite control.

"The more you explore all of these relationships between the grazing animal, the soil and the forage, the more you understand the many benefits obtained with well-planned rotational grazing — things you don't even think about when you first start out," Gerrish says.

The success of any grazing management will depend on how well you can adapt it to your own ranch situation to take advantage of what your ranch produces, pasture-wise. And in a drought year, a person must be prepared to reduce numbers.

"Stan Parsons, who started the Ranching for Profit school, once said that if you try to feed your cow herd through a drought and maintain numbers, it will generally take the profit of the next five years to pay off the debt for that feed bill — for one drought year. Always have a drought strategy, and this should include being willing to destock to whatever number your ranch can support in dry years," explains Gerrish. HW

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Reseeding a pasture

Glenn Shewmaker, University of Idaho state forage specialist, says people often ask what types of plants are best for a good pasture. If you are reseeding and selecting a certain species or mix of forage species, make sure you have optimum conditions for establishing a good stand. He recommends using high-quality, certified seed; selecting the best species for local conditions; and possibly using a mix of species to optimize a pasture. Reseeding will only be successful if pastures can be well managed and rotated, giving plants some rest periods.

"Until a pasture is no longer subjected to continuous season-long grazing, it won't matter what a person plants, to try to improve the pasture, because they'll end up with just bluegrass or quack grass again," he explains.

Interseeding with legumes can boost production and also reduce the need for nitrogen fertilizer. "Having a legume in the pasture really helps keep animal production levels high, especially in July and August when grass plants don't have as much recovery during hot weather," Shewmaker says. "The legumes grow back better after being grazed. This requires a rotational system, however, and more intensive management than season-long grazing."

The first year after reseeding, he recommends clipping or haying the pasture rather than grazing — until young plants are well established with a good root system. HW

Shorter grazing periods take away the opportunity to selective graze.

Grazing terminology

Rotational grazing is a term that's been used a lot during the past 30 years, but it is not specific enough to describe the type of managed grazing most producers use today. Rotational grazing means moving cattle around, but there is no specified time element.

"The term 'short-duration grazing' is only slightly more specific. For the rancher who has been moving cattle once a month — and now moves them once a week — the once-a-week move is short duration. Another rancher who has been moving cattle once a week may go to once a day. To him a week was a long grazing period and now the single day is short duration," explains Jim Gerrish of American Grazinglands Services.

Another rancher might take it a step further and call the system "short duration, high-density grazing," but this again is not specific because what might be high-stock density to one producer may not be so high to another, Gerrish adds. The term "management-intensive grazing" or "time-control grazing" is more flexible because it indicates intensive management rather than intensive grazing. HW