Pasture Systems and Grazing Methods

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Grazing management is the human manipulation of grazing livestock and the pasture resource to produce a profit for the manager and still maintain the productivity of the animals, productivity of the pasture, and long-term stability of the site. Grazing management is more than producing maximum animal product from pasture. Grazing management combines the use of these practices to maintain long- term productivity of the system.

The approaches, styles, and successes of grazing management are as varied as the individual people involved in grazing enterprises. The land, animal, and capital resources, as well as goals, skill, mental attitude, and ability to adapt to the daily challenges of the enterprise influence an individual's management.

It is difficult to separate grazing management from the grazing system or method being used. A pasture system in its simplest form includes how the pasture area is arranged and the general plan for handling the animals. Each grazing method has advantages and disadvantages. Some grazing plans are simple, but rigid and inflexible, limiting the manager's ability to adapt to even the normal problems associated with seasonal change, whereas other systems are designed to be much more adaptable when even minor challenges arise, such as drought.

Continuous Grazing or Continuous Stocking

With continuous grazing, a group of animals has continual access to an area of land over some set time period. If the number of animals remains the same, this method is called set stocking. Continuous stocking is probably the most common grazing method. A producer will typically turn a group of animals from the winter-feeding area onto the pasture to graze from April through September or October. A one pasture grazing system requires the least amount of money invested and management because of its simplicity. But unrestricted access allows the animals to be highly selective during much of the grazing season, creating areas of both overgrazed forage and areas of underused and wasted forage. Loss of desirable forage species, the invasion of weeds, erosion, and the non-uniform distribution of animal manure frequently are problems in continuously stocked pastures. Continuous stocking can be reasonably successful grazing method if the stocking rate (number of head divided by size of grazing area) is set to the productivity level of the site during average and better growing seasons. Short term mid summer forage shortages will be common, with severe shortages in drier years. Producers may feed hay on the pasture or move animals to an emergency pasture area to deal with forage shortages.

Rotational Grazing or Rotational Stocking

Rotational grazing or rotational stocking is a method that uses frequent periods of grazing and rest among two or more pastures for some set time period. A common rotational grazing system has two to four pastures, with animals grazing a pasture for about seven days or less and then being moved to the next pasture. This allows a rest period from ten to thirty days during each cycle. With rotational

grazing management, pasture plants benefit from rest with more growth and vigor, animals gain from a more stable and more nutritious forage supply, and manure is spread more uniformly.

Rotational grazing requires more fences and slightly more labor than continuous grazing. Rotation through several pastures is still a relatively inflexible system that does not balance for the wide variations in forage growth during the growing season and from year to year. Forage shortages will still be a management concern. Rotational grazing or a well balanced continuous stock system can both be successful, but rotational grazing provides for more productive and stable forage condition and can reduce the need to use more costly stored feed.

As a few more fences and paddocks are added to a simple rotational grazing system, it becomes what many refer to as "intensive rotational grazing". Just where the shift occurs can be debated. Often a system of six or more pastures in the grazing system moves into the intensive category. A total of eight to twelve pastures or even up to fifty to sixty pastures is not that uncommon for experienced rotational graziers. Grazing management can really begin to be used with an increased number of paddocks. Livestock will be less selective in smaller paddocks and consume the available forage more uniformly in a shorter period of time. The shorter grazing period is followed by a longer rest period, benefiting the vigor and productivity of the pasture as a whole. The better seasonal production can often support several more animals on the same acreage of pasture. This higher level of productivity requires input costs for fencing and water and a greater commitment of labor and management time.

In managing a rotational system, an important distinction must be made between rotating animals through pastures every three to four days by the calendar and basing animal movement on the growth and recovery of the forage and the nutritional needs of the animals. Rigidly scheduled moves don't adjust for different pasture size and productivity. Another common result of a rigid rotation is that the forage growth is often so fast in the spring that ¼ to 1/3 of the pastures can get ahead of the animals. If animals stay too long in the earliest paddocks grazed, the forage in other pastures can become stemmy, unpalatable, and less digestible before those paddocks are grazed. And, as pasture regrowth slows during the warm summer months, manager on a rigid move schedule will soon find that the pasture is out of grass 1 or 2 days sooner than the move schedule calls for. The common reaction is to then move animals a day sooner, speeding up the rotation and often leading to moves every 2 days, then every day, until the manager is completely out of grass.

Management Intensive Grazing

A rotational grazing system gaining interest and acceptance is one that relies on pastures being divided into numerous paddocks. This type of grazing system had many names. The name gaining favor with producers and grazing advisors is management intensive grazing, or MIG. A key difference between rotational grazing through 2 or more pastures and management intensive systems is that the latter emphasizes more management of forage consumption, quality, and regrowth. The successful manager takes the time necessary to study each paddock in the system to assess how much forage the animals are using (or wasting) during the grazing period, to determine whether the forage nutritive quality is sufficient for the expected performance needs of the livestock, and, more importantly, to consider how rapidly the past few and the next few pastures are recovering.

More pastures allow more flexibility for the manager. Pastures are grazed on the basis of their growth and quality, and not always in the same order. If it appears that some pastures are growing (plants maturing) faster than the rate that they can be grazed, decisions can be made to harvest the more mature pasture or pastures for hay to allow better control of grazing in the remain pastures. The regrowth from harvested pastures can be grazed later as needed. During period of slow growth, some pastures may be skipped for a few extra days or weeks until they are again suitable for grazing. With regular monitoring of the growth and recovery rate of pastures in the entire grazing system, the

manager can make decisions about the need to begin supplemental feeding, reduce animal numbers, or wean young animals early to reduce the demand on a thinning forage supply and avoid undue stress on the pasture plants.

Flexibility is a key feature of a well-run management intensive grazing system. Flexibility can be built into a system with a pasture design allowing varying amounts of temporary fencing, with portable water supply equipment, and arranging gates, lanes, and livestock handling facilities to best accommodate hay harvest and supplemental feeding. It is highly recommended that as you think about developing a management intensive grazing system you meet with grazing advisors in the extension system, Natural Resources Conservation Service, Conservation District, or private consultants, and with other producers to get as many ideas and suggestions about your specific resources and goals as possible. The most conservative approach is to then begin with a minimal number of pastures (5 to 8) to gain some experience with the kinds of observations and daily decisions necessary to make the enterprise successful. As you begin to develop the initial pasture layout, carefully consider water access and gate and fence placement with the idea that you will eventually add more subdivisions and pastures. Producers often see where more pastures often allow them more control over forage management, even in the first year of grazing the system.

Just as reducing the size of pastures improves the uniformity of pasture plant use; a manager can make livestock eat as much of the forage as desired by very carefully rotation the forage by using strip grazing. In strip grazing, temporary fence (usually electric) is used to portion out only the amount of forage that the animals can eat in a particular short period of time.

Strip Grazing

Strip grazing is useful to help prevent bloat (and founder) in pastures containing a high proportion of legumes (clover) because it forces animals to eat both the leaves and the stems. Producers want their livestock to have fresh, leafy, high quality forage at all times will use temporary fence to ration only a day's or even half day's forage supply in strip razing system that may be the equivalent of a 50 or 60 pasture rotation.

Other Grazing Methods

There are additional grazing methods that may be useful. One is variable stocking of any of the above systems, where a few animals are added or withdrawn from the main group to better match the animal use to the varying forage supply. The second is leader-follower (or first-last) grazing, where the first group of animals (with the highest nutritional needs) has first access to the best forage in each new pasture, followed by a second group of animals (whose nutritional needs are lower) to graze the less desirable forage remaining in the pasture. In the leader-follower method, animals can be different groups of the same species or groups of different species.

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