



# Grazing to Maintain a Healthy Range

To a cow, grazing is the natural means of getting her daily sustenance. To the manager, grazing should be more than that because when and where she grazes has a great deal to do with maintaining and improving overall productivity of both plants and animals. Plants have differing nutritional qualities throughout the year and cattle, no matter where they are, constantly eat what they prefer and as much of it as they possibly can to meet their requirements. Therefore, managing grazing to meet both animal and plant requirements becomes a challenge that must be mastered in order to perpetuate the animal, plant, and soil resource.

Enumerable ways exist to achieve grazing management objectives. A number of factors need to be considered in developing and carrying out successful grazing plans. You need to visualize what animals are doing to each plant species each day they are on range and pastures. Grazing removes leaves and stems. The time of removal as well as the amount can have a positive, a negative, or even no effect on a plant and its immediate environment. If the effect is harmful, you need to know in what way it is harmful. With that knowledge, ways can be designed to overcome negative effects.

Try to visualize what grazing a plant is doing to its ability to grow and compete. At the same time, assess what the lack of grazing on associated plants is doing. As an example, cattle almost never graze big sagebrush except perhaps during a rough winter. Big sagebrush, therefore, is completely

free to compete with the more desired species. The same can be said of other non-grazed species.

Thus, think of grazing in terms of how many animals there are for a given area, or *intensity of use*; how often grazing is done, or *frequency of use*; when grazing occurs in a plant's life history, or *season of use*; and what plants are being eaten, or *selectivity of use*.

On ranges in the West, there will be four periods in the year to consider for plants.

- *Period 1*—Initial growth, usually in spring. Soils are damp and cold. Growth is slow and leaves contain much moisture. New leaves are high in crude protein, minerals, and energy, but cattle cannot usually get enough new growth to satisfy their intake needs. Plant growth is less than animal demand unless stocking pressures are very low. This period is before traditional range readiness. If some of the previous year's residue remains, more of the animal's intake needs will be met and there also could be a lessening of the grazing effect on the plant. But, if more than one year's old growth is present, animals will avoid such plants and concentrate on the new plants, putting more pressure on them.

- *Period 2*—Plant growth is just about even with animal demand. This is usually a short time period, from a few days to a very few weeks at most. Nutritional values are just about adequate to meet requirements.

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- *Period 3*—This is the flush period where animal demand is usually less, sometimes greatly so, than the forage supply. Nutrition is high, animals gain well during the entire period but less well as the end arrives. In this period, heavy stocking pressure will permit more uniform use of all species since all but the most undesirable ones will be grazed.

- *Period 4*—Dormant period. This will certainly be the dry season and may be during the wet season, also. There may or may not be a late summer-fall green-up which is a short time repeat of Period 1 but not of Period 2 and 3. Period 4 will be the longest period of the year. During this period, nutritional values may limit animal performance. Grazing selectivity will be high and many plants may go ungrazed. High grazing pressure will be necessary to achieve uniform use on all species. Ingenuity in grazing management is especially needed in Period 4. But, if good management has prevailed in the other periods, many of the negative factors can be sharply reduced.

#### Some common planning terms

**AUM.** Animal unit month. The amount of dry matter to provide an animal unit with its needs for one month. One AU is commonly accepted as one cow with calf less than 6 months old. There is no agreed-upon standard weight of forage. Figures of 750 to 1,000 pounds often are used.

**AU EQUIVALENTS.** Various conversion factors used with no universal agreement. Following are the suggested:

Cow with calf less than 6 mos.	1.0
Dry cow	0.8
Coming 2 year old	0.8
Bull	1.25
Horse	1.5
Weaned calf	0.5
Short yearling	0.6
Long yearling	0.7

**STOCKING RATE.** Unit area needed to support 1 AU for 1 month. Expressed as acres per AUM.

**GRAZING CAPACITY.** Number of livestock that will yield the greatest production without damaging the land, vegetation resource, and/or other values from that resource.

**CARRYING CAPACITY.** Refers to the specific commodity for a specific time period, e.g., the summer carrying capacity for yearling steers.

**OVERSTOCK.** Too much grazing pressure for the amount of forage.

**OVERUTILIZED.** Too much use for the plants at any time, but generally the end of the season.

**OVERGRAZED.** Too much grazing pressure over too long a period of time.

**CONTINUOUS GRAZING.** Unrestricted use access during the grazing season. Does not refer to level of use.

**SEASON OR SEASONLONG.** Grazed for the duration of a particular season of the year.

**REPEATED SEASONAL.** Grazed at the same season each year.

**DEFERRED.** Not grazed until the main forage plants have reached a set level of maturity, often setting of seed.

**ROTATIONAL.** Animals moved from pasture to pasture on a particular schedule. The schedule may be based on the calendar, on level of use, or stage of growth.

**RESTED.** No grazing during at least a one-year period.

**REST-ROTATION.** Scheme incorporating at least one rested pasture on a rotational basis.

**SEASONAL REST OR RELIEF.** No grazing for various periods during the year.

If you need to get professional assistance in developing a grazing plan, make certain that the plan is more than just a series of animal moving dates from pasture to pasture. You should have direct input into developing the plan and have confidence that it will work. Use all the plant and animal knowledge at hand. Recognize the general times that the four periods will occur in each pasture and tailor the grazing to that.

No one kind of grazing scheme fits all situations best, but there may be some best program for your situation. It could be a combination of deferment, rotation of animals, some seasonal rest, and perhaps some continuous use. All approaches have merit in the right place with the right person. The skill of the manager is more important than any other factor. And, *skills are learned.*

Grazing plans should have objectives for each pasture unit. If no objectives exist, you will never really know how good your management is. As an example, let's say you have rated the range in unit "X" and the composition is made up of 60 percent less desirable plants and 40 percent desirable plants. You want to increase desirables to 60 to 70 percent. You know that to do this it will take a combination of Period 2 and Period 3 grazing with some growing season deferment. With either

a known stocking rate or with an estimated initial stocking rate based on forage production, you can plan the management of the pasture and see how it fits with other pastures.

Move livestock in relation to plant growth stage and forage utilization, not by calendar. Be certain enough forage is available in the next pasture or another move will be imminent. Movements during Period 4 could be the exception to this, since one objective may be to graze all pastures each year.

### General observations

- Stocking pressure or grazing intensity is more important than the kind of grazing schedule developed. Heavy pressure at the “wrong time,” combined with appropriate seasonal rest periods, can improve range productivity. But, there is a point to make—How much is too much? It’s up to the manager to decide.

- Pastures generally do not have to have all-season rest to maintain range forage yields. Grazing may loosen soil, plant seed, tramp litter into the surface, and cycle nutrients. Perhaps most important of all, it removes the old growth, which if not removed, will contribute to less uniform use the following year.

- Additional pastures mean more flexibility to the point of obtaining maximum safe forage use.

- Use stock water as a way to move grazing use. Fencing water from cattle or turning off water valve in areas that need relief can be effective in continuously or season-long grazed pastures.

- Continuous grazing should not be discounted as long as objectives can be met. Excessive stock-

ing pressures have given continuous use a bad name.

- It is all right to use repeated seasonal grazing in some cases. Crested wheatgrass is a good example (spring-grazed each year).

- If a plan calls for more dollar expenditure, scrutinize the level of expected benefits. In other words, what is the point beyond which you can’t get back your investment? You don’t want to go that far.

- Cattle can be effective tools to improve ranges by closely managing forage utilization. Yearlings are the best class for this; next are dry cows. Cows with calves are least effective. But, you need to maintain good gains on yearlings so their use as management tools is restricted to times of adequate forage value.

- Move cattle at the early end of “ready” period rather than the late end. Performance declines as grazing satisfaction declines.

- Don’t move cattle until forage is properly used. Then, have more than one pasture to go to. Emergencies can and do arise.

- Seasonal grazing relief has real payoff in three periods: growth Period 1; the period from the time when growth buds of perennial grasses are elevating to seed maturity; and the period when late energy storage is occurring.

- It is better to graze one pasture correctly and not use another at all in a particular season than to graze both improperly.

- Producers should have a hand in developing grazing plans. Realism thus will be assured.