



Cattle Producer's Handbook

Range and Pasture Section

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Designing Your Grazing System

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A grazing system is a particular way of managing the interactions between plants, soils, and grazing animals. If you graze cattle, you already have a grazing system of some kind. As you begin to design or redesign your grazing system, remember that any grazing management problem usually has many possible solutions and very few things you can do are “right” or “wrong.” Most of all, remember that no one grazing system is “best.”

Most grazing management problems can be solved by reducing them to a formula of simple fundamentals or principles. To be successful, you will need to creatively combine these principles into a grazing plan designed specifically for your operation's unique circumstances. **Your** grazing system will be your particular way of managing your plants, soils, and grazing cattle.

Grazing Management Principles

Timing of Grazing: Avoid repeated grazing during critical stages of plant growth. The most critical stages are when plants are initiating new growth. This includes new growth in the spring or fall and midseason regrowth after grazing. New plant growth requires energy from the plant, and the plant needs a chance to replenish the energy used. To produce energy, the plants need ungrazed leaf tissue. Also, avoid grazing when soil moisture is too high and soils are more susceptible to trampling damage.

Frequency of Grazing: Avoid grazing too often during a single growing season. If given an opportunity to regrow and replenish its energy stores, a plant can be grazed several times during one growing season. If grazing is too infrequent, some plants will become “choked” by too much dead material, and subsequent plant growth will be restricted. Too-long ungrazed periods will also cause the forage's nutritional quality to decline.

Severity of Grazing: Avoid removing too much of a plant's leaf area. Leaves are the main sites of energy production for the plant. If too little leaf area remains

after grazing, the plant will be unable to regrow and replenish its energy reserves. Also, leave enough plant material to hold the soil in place and to protect the plant's roots and stem bases from excessive cold or heat.

Season of Grazing: Avoid grazing an area at the same time of year, year after year. Some plants can cope with this better than others (e.g., crested wheatgrass), but varying the season of grazing from year to year is recommended for most kinds of plants. If altering the grazing season is not possible, you may need to reduce the severity or the frequency of grazing. Grazing during winter dormancy may help reduce buildup of dead plant material.

Type of Cattle: Graze the type of cattle best matched with the kind of forage available and its nutritional quality. For example, dormant forage will not meet the high nutrient requirements of growing yearlings. You should also match the type of cattle to your area's topography. Cows with calves, for example, usually will not use steep topography as fully as dry cows or yearlings. Use the type of cattle accustomed to your environment. Cattle raised on flat, open grasslands usually do not adapt well when relocated to steep or timbered grazing lands. An animal's previous grazing experience should also be considered when purchasing new animals. This is because cattle unfamiliar with the kind of plants in a pasture usually will not perform as well as cattle that previously have grazed similar forages.

Number of Cattle: This is probably the most important decision with any grazing system. Too many animals will cause cattle performance to decline, but the soil and vegetation will have deteriorated **before** animal performance begins to suffer. Most grazing systems that include strategically timed ungrazed periods during the growing season will, over time, support more animals than grazing systems where pastures are grazed continuously throughout the growing season.