

A Quick Guide to Pasture and Grazing Management

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For many, the details of pasture management are fun to understand. However, for someone not familiar with the how and why of grazing management, the details can be overwhelming. As a professor who studies and teaches pasture management, I appreciate knowing the intricacies of livestock grazing. As a livestock producer, I have learned there are three principles that enable the producer to achieve near-maximum production at the lowest cost in time and money. The three principles are soil fertility; timing and intensity of grazing; and balancing forage production and livestock feed demand.

Soil fertility is evaluated by proper soil testing. Mixed cool-season pastures of orchardgrass, tall fescue, bluegrass and clover need a soil pH of 6.0 or higher with soil tests that show phosphorus, potassium and magnesium in the optimum range. If pH is below 6.0, apply high-quality lime. If magnesium is below optimum, use lime containing magnesium. If the soil is below optimum in phosphorus or potassium, apply the recommended fertilizer to bring these nutrients into the low end of the optimum range. Grass-clover pastures do not need nitrogen fertilization. Clover produces the equivalent of 150 to 200 pounds of nitrogen per acre per year if the soil fertility for other nutrients is optimum. With soil fertility in the optimum range, proper recycling of nutrients in dung and urine will largely maintain adequate plant nutrient status in the soil.

Timing and intensity of grazing determine the health of pasture plants and nutrition of the grazing animals. Plant height provides the guidelines for proper grazing timing and intensity. Plant height is the tallest leaf within a 9-inch diameter circle (a hand span) around a pasture stick. Use the average of 20 or more plant heights across a pasture.

Timing of grazing is the plant height at which animals should go onto a pasture. Intensity of grazing is the plant height at which animals should be taken off a pasture and put onto a fresh pasture. In all cases, animals should graze a pasture for no more than seven days.

Timing or pre-grazing height:

- Cool-season grass-legume pastures should grow to an 8- to 12-inch height before grazing.
- Graze at a lower regrowth height to obtain less-mature, high-quality forage.
- Graze at a taller height to obtain high forage mass and to stockpile for deferred grazing.

Intensity or post-grazing height:

- Move animals out of the pasture when it is grazed to a 2- to 4-inch height.
- Graze to a shorter height for high gain per acre, to stimulate legumes and in cool weather.
- Graze to a taller residual height for high gain per head and in hot, dry weather.

Where pastures are continuously grazed, the number of animals (or acres) grazed needs to be adjusted so that average pasture height stays in a 4- to 6-inch range.

Pastures grow faster in the spring than in the summer and fall, so there needs to be a plan for balancing forage supply and animal feed demand. One way West Virginia farmers do this is to make first-cut hay on some fields, then graze the aftermath growth instead of making second-cut hay. Other options are growing warm-season annuals or perennials or moving stocker cattle off the farm in August at board-sale time when prices are high. When there is a drought or in winter, animals need to be confined to fewer pastures or hay meadows and fed hay. This should be done on land that can use the fertility from the manure produced from the hay. Also, do not over stock the farm. As the stocking rate goes up, production costs go up and animal performance goes down. Stock at a moderate rate to increase net income and reduce risk.

Follow these management principles to ensure that pasture grasses and legumes flourish and provide excellent nutrition to the grazing livestock. More detailed information on forage management can be found on the WVU Extension Service website at <http://extension.wvu.edu/agriculture/pasture-hay-forage>.

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