



Managing Cool-Season Perennial Grasses during 'Summer Slump'

Ryon S. Walker, U of M Beef Team

Paul Peterson, U of M Extension

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As you recall, the summer drought of 2006 caused some producers to overgraze their summer pastures, greatly impacting pasture productivity and leaving very little opportunity for any fall forage production. Mismanagement, or overgrazing, of pastures can have the most detrimental effects on overall production cost for a producer, especially during times of drought stress. The closer you graze a pasture, the longer the rest period is required for forage recovery, impacting the productivity of those pastures. Without management, animals will continue to graze the most desirable species, weakening and shrinking their root system, thus decreasing the chances of those plants surviving. So it becomes crucial to rotate cattle from pasture to pasture leaving a stubble height of 3-4 inches and allowing those pastures to rest, particularly during the summer slump.

The summer slump is often the warmest time of year (typically July and August) where temperatures have the greatest impact on cool-season grass production. Most of the Upper Midwest consist of cool-season perennial grasses which are often the most difficult to manage during the summer. These cool-season grasses have seasonal growth patterns and understanding these growth patterns for different forage species is essential to properly managing your pastures and avoid those extended or prolonged recovery periods. In cool weather, cool-season grasses need as little as 2 weeks of rest and during hot weather as much as 5 to 7 weeks of rest. The most common cool-season grasses in the Upper Midwest includes: Kentucky

bluegrass, orchardgrass, perennial ryegrass, quackgrass, reed canarygrass, smooth brome grass, tall fescue, and timothy.

- Kentucky bluegrass has a poor heat tolerance with productivity starting to decline towards the end of June, reaching its lowest production point in early to mid August. Tolerance levels during drought conditions are fair and legume compatibility is poor. So pastures with a high percentage of Kentucky bluegrass will require longer rest periods during the months of July and August.
- Orchardgrass is competitive and recovers rapidly after grazing. Its heat tolerance is moderate, reaching its lowest production point in late July to early August. Tolerance levels during drought conditions are fair and legume compatibility is poor unless mixed with a competitive legume such as red clover. Due to its slow production during the summer, extended rest periods can be expected in orchardgrass dominated pastures.
- Perennial ryegrass is easy to establish, grows rapidly, and is very palatable. Its heat and drought tolerance is low restricting adequate productivity during the summer slump and can be competitive with legumes. However, perennial ryegrass lacks winter hardiness, limiting its persistence from year to year.
- Quackgrass, commonly referred to as a weed, can offer excellent forage to livestock during the spring and

fall, and is compatible with most legumes. Its heat and drought tolerance is good providing opportunity for grazing longer into summer. Productivity typically starts to decline in early July through the end of August.

- Reed canarygrass (naturalized) are high in alkaloids, difficult to establish, and very persistent. Newer (low-alkaloid) varieties are less invasive and more palatable. Reed canarygrass has good heat and drought tolerance providing great forage production throughout the cool and warm seasons. Very competitive with most legumes but offers excellent production when seeded with alfalfa or red clover.
- Smooth brome grass is a commonly used cool-season grass with great forage compatibility, particularly with legumes. Its heat and drought tolerance is fair, but productivity begins to decline in early July reaching its lowest production point in August. Re-growth potential is slow providing poor summer productivity.
- Tall fescue has a wide range of adaptability and handles grazing pressure extremely well; however, endophyte-infected fescues are less palatable and depress animal performance and health. Has fair heat and drought tolerance, works well with legumes, and provides opportunity for some forage production throughout the summer. Productivity begins to decline by mid July through early September. Endophyte-free varieties are recommended to ensure good animal utilization, health, and performance.
- Timothy is another commonly used cool-season grass with great compatibility, particularly with legumes. However, timothy is slow to re-grow and has a poor tolerance for heat and drought. Timothy has a longer

summer slump period reaching its lowest production point in August requiring a longer rest period.

Typically, most of these cool-season grasses do not offer much forage production during the summer slump, with the exception of reed canarygrass and some legumes such as alfalfa and birdsfoot trefoil. So it becomes critical to properly manage your cool-season grasses to increase the number of grazing days in the fall and early spring. These are a few critical rest period recommendations for cool-season grasses:

- Reduce stocking rates on cool-season grass pastures just prior to and during the summer slump.
- Feed hay in July and August. Use your average quality hay vs highest quality hay. Save the highest quality hay for the months just prior to and after calving, when nutrient requirements are highest among cattle.
- Include forage species in some of your pastures in the future that will provide more summer forage such as alfalfa, birdsfoot trefoil, reed canarygrass, warm-season annuals, and/or native warm season perennials.
- Lastly, use good rotational practices and maintain good soil fertility cannot be preached enough. Leaving a stubble height of 3 – 4 inches will prevent weakening of the root systems.

More information about this article can be found in the publication "Pastures for Profit: A Guide to Rotational Grazing", developed by University of Minnesota Extension and University of Wisconsin Extension. For more information on this publication, visit the website at: <http://learningstore.uwex.edu/Animals-C11.aspx>.