

Crabgrass: Friend or Foe?

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Georgia Cattleman August 2002

A weed is often defined as a “plant out of place”. Everyone will agree that crabgrass is a weed in gardens, flowerbeds and lawns, but feelings about the role of crabgrass in forage systems are far from unanimous. In this article, I’ll discuss some of the virtues and pitfalls of crabgrass as a forage species.

Crabgrass overview

Crabgrass was introduced to the United States in 1849 for use as a forage species. The majority of its forage production in Georgia occurs between mid June and early September. Crabgrass can produce relatively large amounts of high quality forage, but is an annual and must produce seed to persist. Pure stands of crabgrass have reportedly produced three to five tons of forage per acre in other states when fertility is high and moisture is adequate. Some cattle operations in the Great Plains rotate crabgrass and small grains or ryegrass to produce high quality forage for stocker cattle.

Crabgrass plants are easily identified by their creeping growth habit and long fine hairs that emerge from stems at a 90 degree angle. The prostrate growth habit allows many growing points to avoid defoliation and enables crabgrass to compete well with other plants in grazed pastures and hay fields.

The high nutrient content and good production potential of crabgrass ultimately led to the development of “Red River” crabgrass by R.L. Dalrymple in Oklahoma. This is currently the only improved crabgrass variety on the market. Many pastures already contain adequate quantities of crabgrass, but this commercial variety can be spring planted at 4-6 pounds per acre if desired.

The pitfalls of crabgrass

Crabgrass suffers from an image problem. Most negative connotations of crabgrass may arise from peoples experience in yards and gardens. The crabgrass “problem” in bermudagrass hay is typically cosmetic. Most hay producers and buyers like to see a green, leafy, uniform hay. The color and texture of crabgrass are conspicuous in hay and are unfortunately associated with other unpalatable and low quality weeds. Horse hay buyers are particularly opposed to crabgrass in purchased hay which ultimately forces hay producers to keep fields clean for premiums. As we’ll discuss later, crabgrass is a high quality and palatable addition to most hays; even those fed to equines.

Although small amounts of crabgrass in hay fields are not harmful, large populations can encroach upon bermudagrass and yields can be negatively affected. Typically around ten percent of the hay field can be made up of crabgrass without much impact on yield or

subsequent year stands of bermudagrass. Fields that exceed this level of crabgrass may benefit from weed control measures.

Crabgrass can also encroach upon and thin some tall fescue stands, especially those located in the middle Piedmont. Severe crabgrass encroachment is usually only a problem in tall fescue pastures if fertilizer is applied during late spring or summer months.

Crabgrass and other summer annuals like browntop millet are highly dependent upon rainfall for forage production. Without rainfall, little or no forage is produced which can be disastrous for operations based heavily on annual forages. Forage programs should use perennials for a “foundation” and annuals like crabgrass, millets, small grains and ryegrass should be utilized to fill forage voids.

The virtues of crabgrass

Crabgrass forage is highly palatable and digestible, particularly under grazed conditions. To demonstrate this, I've summarized data from a trial Dr. Carl Hoveland conducted in Alabama several years ago. Figure 1 shows the digestibility of crabgrass in comparison to selected perennial warm season forages. Vegetative crabgrass was very digestible and this high quality was maintained through all maturities reported. In fact, crabgrass harvested after heading had numerically higher digestibility than earlier cuttings of bermudagrass or pearl millet. This helps to explain why cattle preferentially graze crabgrass instead of introduced forage species when given a choice.

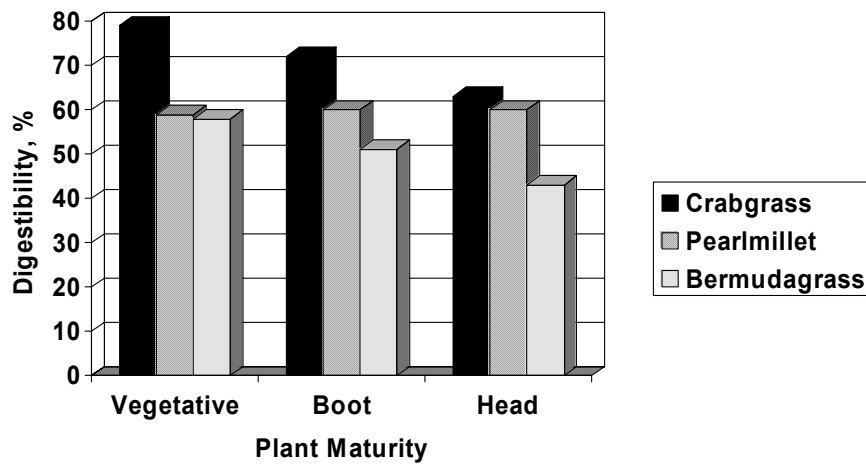
Although high crabgrass concentrations can decrease overall yields and negatively impact stands of bermudagrass, the high nutrient content of crabgrass can improve overall hay quality. Using the data from Figure 1, crabgrass harvested with the bermudagrass would actually improve overall hay quality- particularly if bermudagrass is harvested improperly at a mature growth stage. Again, many times crabgrass contamination in bermudagrass hay is a “cosmetic” problem. Horses and cattle do not appear to care that crabgrass is present in hay; in fact, some testimonials indicate that animals *prefer* crabgrass over bermudagrass.

Crabgrass contamination of tall fescue stands can also be beneficial for other reasons. First, crabgrass is a warm season forage and most production occurs in the heat of the summer when tall fescue growth has slowed. This improves overall forage distribution and increases summer carrying capacity. The high quality crabgrass forage also serves another purpose. Crabgrass also dilutes toxins present in tall fescue- much like clover does during spring and fall. This dilution of toxic alkaloids can greatly improve animal performance on tall fescue pasture during hot summer months.

Summary

Crabgrass can be a beneficial addition to many pastures and some hayfields. Many of the perceived problems associated with crabgrass are cosmetic as crabgrass can actually improve animal performance. Take advantage of low to moderate crabgrass populations in your pastures and hayfields and begin to acknowledge it as a valuable high quality forage species.

Figure 1. Effect of plant maturity on digestibility of crabgrass, bermudagrass and pearl millet (Hoveland, Buchanan, Bosworth and Bailey; 1986)



Hoveland et al., 1986