



Pennington Forage News

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SEEDED BERMUDA OFFERS DISTINCT ADVANTAGES

Bermudagrass has long been a staple of southern pasture and hay forage systems. As a summer perennial forage, bermudagrass is productive, durable and able to withstand heavy grazing pressure and weather extremes seen in many areas of the U.S. Over the years, extensive research has gone into developing improved cultivars of both hybrid and seeded bermudas. The result has been the release of better yielding, more digestible and wider adapted bermuda varieties.

Following a well established tradition of offering superior forages, Pennington markets a premium line of seeded bermudagrass products including Cheyenne II, Mohawk and Rancho Frio. Each produces top yields for hay or grazing and has excellent digestibility and palatability.

Seeded bermuda varieties offer numerous advantages over hybrid varieties that must be sprigged including faster establishment and less initial cost per acre. In addition, they work well for the do-it-yourself farmer who may wish to establish a few acres using existing equipment. Carthage, TX producer Larry Davis has first hand experience with seeding bermuda. **“Planting Rancho Frio reduced my establishment cost over sprigging by at least \$70 per acre. I also did it myself when weather conditions were favorable. There was no waiting on a sprigger. With Rancho Frio, I got quicker establishment than if I had used a sprigged variety.”**

With an extensive dealer network, Pennington bermudagrass seed are readily available from a nearby store in most areas of the country. Each variety of Pennington forage bermudagrass features Pennington's exclusive Penkoted® seed for a faster start, stronger root system and a thicker, healthier grass stand. It should be noted

that Pennington seeded bermudas are improved, stable varieties that will not revert to common.



Planting seeded bermuda varieties offers numerous advantages over hybrid varieties that must be sprigged including faster establishment and less initial cost per acre.

Advantages of Seed

- Easy to plant on small acreage
- Can plant on rough ground
- Less cost per acre
- Can plant no-till
- Plant when conditions are right (no waiting on custom sprigger)
- Make fewer trips over the field
- Excellent first year results
- Easily done with existing equipment

SUCCESSFULLY ESTABLISHING SEEDED BERMUDA

Competition from other grasses and weeds is the number one reason for seeded bermudagrass stand failure. Taking steps to reduce this competition will increase one's chance of success. First, don't get in a hurry to plant. If soil temperature is not 65° or higher at a depth of 4", bermudagrass will not germinate. When the seed does germinate, the seedlings will be less vigorous and more subject to disease.

For No-Till

- Check that seed are not dropping too deep; 1/8" or less is ideal. One method to prevent deep planting is to pull the drop tubes from the openers and let the seed fall behind the opener to be pressed into the loosened soil by the press wheel.
- Be sure that existing residue is not too thick for seedlings to emerge and that the seed is making good soil contact beneath the residue.

For Clean-Tilled Ground

- Plow and disk, then culti-pack before and after planting to form a very firm seedbed. Several passes may be necessary to achieve proper firmness. Bermudagrass seed will not establish in a fluffy, loose seedbed. Take care to place seed at a proper depth of 1/8" or less.
- For fields with a history of undesirable weeds and annual grasses, prepare the seedbed well in advance to allow the first flush of crabgrass and other weed and grass competition to emerge. Use a non-selective, non-residual herbicide such as glyphosate to kill this flush of weeds before planting seeded bermuda varieties.

Fertilizer

- Apply lime, phosphorus and potassium fertilizer according to soil test recommendations. Apply 20-30 lbs/A of nitrogen at planting time. When the new plants begin to develop runners, apply an additional 50-60 lbs/A of nitrogen.



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Management

- Delay grazing newly established bermuda until forage is 8-10" tall. On established bermuda stands, apply 50-75 lbs/A of nitrogen for each cutting of hay. If grazed, apply up to 150 lbs. of nitrogen per year in split applications throughout the summer. The last nitrogen application each year should be made a minimum of 6-8 weeks prior to the expected date of a killing frost to help prevent cold injury. Do not graze or clip for hay shorter than 2". Rotate animals more often during periods of drought stress.

ROTATE GRAZE TO INCREASE STOCKING RATE, IMPROVE FORAGE PERSISTENCE AND SUPPRESS WEEDS

There are numerous ways to maximize pasture utilization and efficiency, but perhaps none more so than implementing some form of grazing management system. Without question, a key component of any grazing system would be a pasture “residue and rest” or rotational grazing scheme.

The concept behind a “residue and rest” grazing scenario is quite simple. Livestock pastures are subdivided into small mini-pastures or paddocks. Livestock

Another plus for rotational grazing is its’ positive effect on pasture weed control. Weeds are very opportunistic and as such, become quickly established in pastures with thin grass cover. Forages in rested pastures are more vigorous and healthy with thicker ground cover, thus helping prevent the introduction and establishment of unwanted weed species.

The resting period allowed in a rotational grazing system gives the added benefit of a more robust pasture forage plant. These robust plants grow longer into the early stages of drought and respond quicker with new growth when adequate rainfall occurs. This provides greater persistence and longevity of the grass stand.

The advantages of rotational grazing do not end with these. Additional benefits cited include improvement in animal parasite control, easier handling

cattle and improved livestock management. It also enhances recycling of nutrients through more uniform distribution of feces and urine.

are allowed access only to one paddock until the forage is grazed to a predetermined height. At that time, the animals are moved to the next paddock while the grass in the previously grazed paddock is allowed to rebuild energy reserves and produce new forage growth. This process is dependent on weather conditions, but can range from about 2 weeks for bermuda, bahia and clover to 3-4 weeks on more for fescue, orchardgrass and some of the native grasses.

The advantages of rotational grazing are numerous and well documented. Studies have shown forage utilization is significantly higher in a rotational grazing scheme than with continuous grazing. Total pounds of forage produced is also greater. These two advantages combine to allow an increase in cattle stocking rates of 20-35%.

Forage	Begin Grazing	End Grazing	Days Rest
Fescue	4-8”	2-3”	15-30
Bermuda	4-8”	1-2”	7-15
Bahia	6-10”	1-2”	10-20
Brome(smooth)	8-12”	3-4”	20-30
Bluestem (big)	15-20”	10-12”	30-45
Indiangrass	12-16”	6-10”	30-40
Orchardgrass	8-12”	3-6”	15-30

Source: Southern Forages 2nd Edition

<u>Forage Utilization</u>	
<u>Grazing System</u>	<u>% Utilization</u>
Continuous	35
3-4 paddock rotation	50
8+ paddock rotation	60

Source: NRCS - USDA

FESCUE SEEDHEADS SPELL LOWER FORAGE QUALITY AND HIGHER TOXIN LEVELS

For livestock producers, the appearance of fescue seedheads in the spring is no welcomed sight. With most forage grasses, including tall fescue, the formation of seedheads signals the onset of a significant decline in forage quality. In research at the University of Georgia, crude protein levels of Ky 31 tall fescue fell from 16% at the late boot stage of growth to 8% at the seed dough stage while in-vitro dry matter digestibility (IVDMD)



The appearance of seedheads on most grasses signals lower forage quality. Seedheads on toxic fescue also contain concentrated amounts of toxic endophytes.

decreased from 71% at the boot stage to 53% at the seed dough stage (See Table 1).

This decline in forage quality happens rather quickly. In one hay quality study, fescue hay digestibility fell from 66% at early bloom stage on May 14 to 56% at early milk stage (seed forming) just 11 days later on May 25. Protein content fell from 10.2% to 7.6% (Table 2). As a general rule, forage digestibility drops at a rate of almost 1% per day for each day beyond the

early flowering stage of growth.

For those producers who have cattle grazing toxic fescue pastures, there is another key reason seedheads are an unwelcomed sight. Seedheads on toxic fescue varieties contain a high concentration of toxic endophytes. Cattle feed on fescue seedheads and in so doing, consume significant amounts of these performance and health robbing toxic compounds.

Periodic clipping and/or close grazing of fescue pastures in the spring and early summer can reduce the number of seedheads and help keep the grass in a higher quality vegetative stage of growth for a longer period of time. The prevention of spring seedhead development also gives the producer greater flexibility to convert toxic fescue pastures to novel endophyte, non-toxic fescue varieties such as MaxQ in the autumn months.

TBL 1

KY31 Tall Fescue Nutrient Content By Stage of Maturity - 3 Yr. Avg.

<u>Maturity Stage</u>	<u>Crude Protein %</u>	<u>IVDMD%</u>
Pre-boot	19	72
Late boot	16	71
Early bloom	14	66
Seed dough	8	53

Source: C.S. Hoveland & N.S. Hill - UGA

TBL 2

Effect of Stage of Harvest of Fescue Hay on Quality and Animal Gain

<u>Stage of Harvest</u>	<u>% Digestible</u>	<u>% Protein</u>
Late boot to head, cut May 3	68	13.8
Early bloom stage, May 14	66	10.2
Early milk stage, seed forming May 25	56	7.6

Source: Virginia Coop Ext Pub 400-055, Quality Hay Production