

STOCKPILE FORAGE TO MINIMIZE HAY FEEDING THIS FALL

July 2015 – Georgia Cattlemen’s Association
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In the South, we are blessed with a very long grazing season. With periods of drought as the exception, the only “lean times” for forage production is during October through January in South Georgia and late November through March in North Georgia. In most years, forage can be grown in late summer or early fall and saved for grazing later. This is commonly referred to as stockpiling forage, where forage is accumulated so that it can be grazed at a later time. Stockpiling forage is one of the least expensive ways of feeding cattle. Most economists have found that stockpiled forage can be fed at about 1/3 the cost of feeding hay and about 2/3 the cost of grazing winter annuals. But, like so many other things, there is a right way and a wrong way to do it.

What Should Be Stockpiled?

The two forage species that are most commonly used for stockpiling in Georgia are tall fescue and bermudagrass. Tall fescue is an excellent species to stockpile in North Georgia, where it is used extensively. Essentially all tall fescue varieties can be useful for stockpiling. Non-toxic or novel endophyte tall fescue varieties generally are the best fescue for stockpiling, as they have no or insignificant levels of the toxic alkaloids that can reduce animal productivity. Tall fescue varieties infected with the toxic endophyte (e.g., KY31, Jesup, etc.) can be stockpiled for use in the fall, but one should recognize that the alkaloid concentrations may still be high enough to reduce animal performance or pregnancy rates.

Bermudagrass is also a great species for stockpiling forage in the fall, especially below the Fall Line. It is best to use a hybrid or improved bermudagrass variety for stockpiling rather than a common or seeded variety. Hybrid bermudagrasses (e.g., Tifton 85, Tifton 78, Tifton 44, Russell, Coastal, etc.) are generally more productive in the late summer and early fall. Most (though not all) common ecotypes do not grow well past early September, since most are very daylength sensitive. Hybrid bermudagrasses generally are more resistant to fungal infection. Occasionally, common bermudagrass plants develop a toxin producing fungus that causes animals to become photosensitive, and can cause skin lesions if left unchecked. Therefore, stockpiling is only recommended when a hybrid bermudagrass can be used.

Expectations

Fescue and bermudagrass can provide substantial stockpiled forage, when conditions are favorable. Stockpiled tall fescue generally will produce 2000-3000 lbs of standing dry matter (DM) per acre. Hybrid bermudagrasses have a bit more range, with most varieties producing 1500-2500 lbs DM per acre and Tifton 85 capable of producing 3000+ lbs DM per acre. Both species are also capable of maintaining high digestibility, palatability, and crude protein. Despite frost and damp conditions, tall fescue leaves do not deteriorate as quickly as one might imagine. The total digestible nutrient (TDN) and crude protein (CP) content in stockpiled tall fescue is more than sufficient for dry cows all winter long and usually sufficient for lactating beef cows until late January or early February (Fig. 1). Similarly, stockpiled bermudagrass generally provides enough nutritive value in most years to winter a dry cow and to carry a lactating cow through December with no additional supplementation (Fig. 2). In general, one should expect to get 30-60 days of grazing per cow per acre out of either stockpiled fescue or bermudagrass (Table 1).

Table 1. Number of grazing days (1 cow per acre per day) for different amounts of available forage when using continuous stocking, rotational stocking, or the frontal grazing method.

Available Forage <i>(lbs DM/acre)</i>	Continuous Stocking	Moderate Rotational Stocking	Frontal Grazing
1500	19-25	31-38	41-47
2000	25-33	42-50	54-63
2500	31-42	52-63	68-78

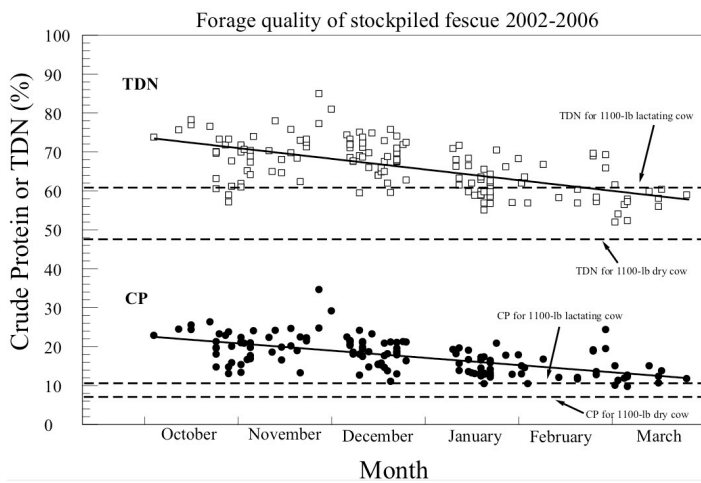


Figure 1. Forage quality of stockpiled tall fescue on farms in Arkansas during the fall and winter of 2002-2006 relative to the nutritional requirements of a lactating and dry beef cow. Figure courtesy of Dr. John Jennings, Univ. of Arkansas.

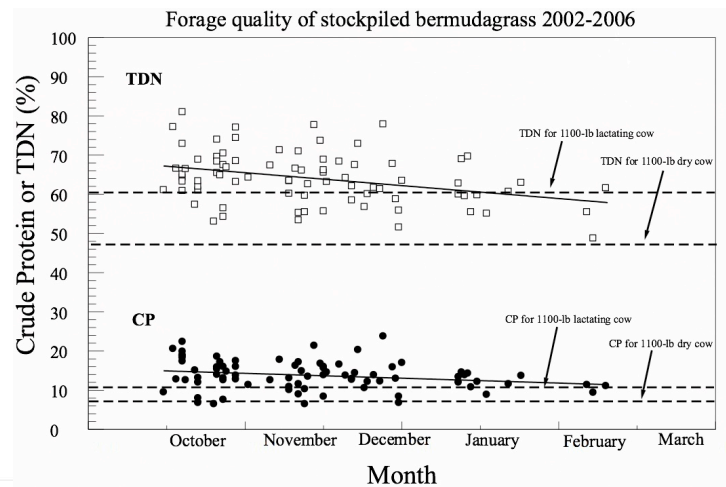


Figure 2. Forage quality of stockpiled bermudagrass on farms in Arkansas during the fall and winter of 2002-2006 relative to the nutritional requirements of a lactating and dry beef cow. Figure courtesy of Dr. John Jennings, Univ. of Arkansas.

If one simply uses the continuous stocking method (one large pasture and no rationing of the stockpiled forage with electric fencing), then the animals will quickly graze all of the best parts of the field. They will also soil or trod over what they do not eat, and this will lead to waste and inefficiency. The best way to stretch out the stockpiled forage is to ration it out, ideally by using frontal grazing. Frontal grazing is the method by which small strips of pasture are allocated at a time. One begins near the water source by allocated 1-3 days worth of forage in a narrow strip. After the animals have consumed their allocation, the front fence is moved back to allow another 1-3 days worth of forage. No back fence is necessary since stockpiled forage is not expected to regrow in the same season. Progressively, the grazing front moves across the field. This usually results in more than 75% of what was in the field will be consumed by the animal and the available forage is stretched to the max.

Most Common Problems

It is important to understand that stockpiling is NOT forcing animals to graze mature forage that they did not graze the last time they were in that pasture. To be successful, the stockpiled forage needs to be regrowth, not old growth. The crop has to be closely grazed or mowed off prior to being accumulated. It is like hitting the reset button.

In dry falls, stockpiling is unlikely to be successful. One can reduce the risk by checking the long-range forecast. Although long-range weather predictions are little more than a guess in the summer months, the accuracy of 1 to 3 month weather forecasts for the fall and early winter months are usually quite good. Before starting the stockpiling process, it would be wise to check the precipitation forecast for late August through October. On the front page of www.georgiaforages.com under “Quick Links”, there is a “Weather” link that provides the latest long-range forecasts from the National Weather Service.

Last, but not least, is the other major ingredient that is needed for stockpiling: N fertilizer. Prompting optimum forage growth will require fertilizer. Assuming lime, P, and K have been applied according to soil test recommendations, the addition of 40-60 lbs of N/acre on either the tall fescue or bermudagrass is recommended for best yields with minimal risk of high nitrates.

Stockpiling tall fescue or bermudagrass can greatly extend the grazing season and keep costs low. For more information, see the inset entitled “Recipe for Stockpiling Success” and the factsheets on stockpiling tall fescue and bermudagrass on www.georgiaforages.com. For more information on forage management, see our website or contact your local county Extension Office at 1-800-ASK-UGA1.

Recipe for Stockpiling Success

1. Closely graze or take a hay cutting to a stubble height of 2-3 in. so as to reset the crop
 - Early to mid-Sept. for tall fescue
 - 6-8 weeks prior to first anticipated frost for bermudagrass
2. Remove livestock from the area and try not to graze the area until after Thanksgiving (fescue) or the first killing frost (bermudagrass).
3. Apply 40-60 lbs of N per acre. Preferably, apply the fertilizer immediately prior to rain or use a non-volatile source of N.
4. Measure the amount of stockpiled forage available (e.g., grazing stick or rising plate meter).
5. Obtain a clipped sample for forage quality analysis and provide a supplement if needed.
6. Allow livestock to graze narrow strips (1-3 days worth) using frontal grazing if possible.