



Stockpile Savings

Stockpiled Tifton 85 provides alternative supplement strategy for fall-calving cows.

Story & photos by *Becky Mills*, field editor

It is a mighty satisfying feeling to go into the winter with a barn full of hay.

Unfortunately, hay production, as well as feeding it, are time-consuming and costly practices.

In an effort to help producers find ways to cut down on hay use, Auburn University (AU) researchers evaluated the use of stockpiled Tifton 85 Bermuda grass as a hay and supplement substitute for fall-calving cows.

“We were interested in extending the grazing season into fall and winter,” says Kim Mullenix, an AU extension beef specialist. “Usually there is a grazing gap in the fall. The warm-season grasses have gone dormant and the cool-season forages aren’t growing yet. Feeding hay can be an expensive practice. Stockpiling is a more economical alternative.”

Stockpiling, by definition, is allowing forage to accumulate for grazing at a later time. The simple version of this is standing hay.

Like making good hay, though, it takes more attention to detail than simply shutting the cows out of the field for a month or two.

Here are a few tips:

- ▶ If possible, start with Tifton 85 or another one of the high-quality hybrid Bermuda grasses. “Tifton 85 has been shown to have a higher yield potential and good nutritional value,” says

Mullenix. “It is slightly more digestible than older, less-improved varieties.”

Bahia grass isn’t one of the better options for stockpiling.

Mullenix says, “It doesn’t hold its quality and is not as high-yielding as the hybrid Bermudas.”

- ▶ In August, either let your cows graze or clip the field you intend to stockpile down to a stubble height of 2 to 3 inches (in.).

“Timing is very important,” stresses Mullenix.

- ▶ Apply 50 pounds (lb.) to 75 lb. of nitrogen (N) per acre. In a two-year trial conducted at the Wiregrass Research and Experiment Station in Headland, AU researchers used three different N rates — 50 lb., 100 lb. or 150 lb. The higher rates didn’t really increase the amount of forage, an average of 4,700 lb. of dry matter an

acre, or the digestibility and protein of the forage, which averaged 60% total digestible nutrients (TDN) and 12% crude protein (CP).

- ▶ Let the forage accumulate for six to eight weeks before grazing.

“Once it is ready for grazing, use some type of controlled grazing, such as frontal or strip grazing, to get high forage utilization and not waste forage that’s out there,” says Mullenix.

Practical application

When they did start grazing at the Wiregrass station, they stocked at the rate of two fall-calving Angus-Simmental cow-calf pairs per 2-acre pasture. The control group was also two cow-calf pairs, but they were stocked on 1 acre of dormant summer-cut pasture with free-choice August-cut Bermuda-grass hay plus 6 lb. of whole cottonseed per cow per day. At 51% TDN and 10% CP, the hay wasn’t nearly as high in quality as the stockpiled Bermuda grass.

Grazing started in late October or early November each year and ended on Feb. 14 in 2012 (116 days) and Feb. 1 in 2013 (83 days).

Workers used frontal grazing, or moving a temporary wire or tape and step posts



forward every three to four days, so the cows and calves could have a new strip of pasture.

To figure out how far to move the temporary fence, the station workers used the following formula: (animal body weight, lb. × 3% dry-matter intake, which included estimated loss to grazing and trampling) × (number of animals) × (days of grazing) ÷ (total available dry matter, lb. per acre) × (70% utilization).

For more information on how to estimate forage mass, see “How to Use a Grazing Stick for Pasture Evaluation” on www.alabamafortages.com.

When the trial was over, the news was good for the cows and calves grazed on stockpiled Tifton 85 Bermuda grass. Although all four groups lost a small amount of weight and body condition score (BCS), Mullenix says that is expected for lactating cows. All the cows stayed within the ideal BCS range with scores of 5.0 to 6.0 through the study. Milk production for all the groups averaged 20 lb. per cow per day. Their reproductive performance was not affected by their diet, with an average rebreeding rate of 88%. The calves in the stockpiled groups did just as well, too, and had weaning weights ranging from 550 lb. to 620 lb.

Benefits

The economic news was even better. The cost of wintering a cow-calf pair on stockpiled Tifton 85 Bermuda grass, fertilized with 50 lb. of N per acre, was \$174.18, compared to \$506.53 for the cow-calf pair wintered on hay and 6 lb. of whole cottonseed per day.

While the rebreeding rates for the cows on stockpiled Bermuda grass were comparable with those on hay and supplement, and BCS didn't slip past the 5.0 to 6.0 range, Mullenix says it is important to watch cow body condition while grazing stockpiled forage and supplement as needed.

Philip Brown, Natural Resources



► Auburn University researchers used stockpiled Tifton 85 Bermuda grass to cut down on hay feeding. These are Angus-Simmental-cross cows.



Conservation Service (NRCS) grassland conservationist, says a similar system can also work for spring-calving cows. After working with a Georgia producer, he says, “It seemed to work better for us with cows that were dry through December because the forage quality dropped faster than fescue.”

Brown says the TDN stayed around 57% to 59%, but the protein dropped to 9% on the stockpiled Bermuda grass. “Lactating cows need 12% protein,” he notes.

The Washington, Ga., conservationist agrees with Mullenix on the need for some type of controlled grazing with stockpiled Bermuda grass.

“To get really efficient use, use high-density grazing,” Brown says. “At 45,000 lb. per acre, the cows aren't too picky about anything.”

In addition to working for both lactating and dry cows, Mullenix says stockpiled Tifton 85 Bermuda grass can work for stocker calves as an alternative to feeding hay during the receiving period. However, they do need supplement in addition to the forage.

After placing purchased stocker calves on the stockpiled grass at the Headland station, Mullenix says, “We probably want to supplement at the rate of 1% of their body weight per head per day with a high-energy protein supplement. They didn't lose weight, but they didn't gain weight supplemented at the rate of 0.25% of their body weight per head per day.” She used a mixture of soybean hulls and cottonseed meal, either at a 50:50 mix or 75:25 mix.



Editor's Note: *Becky Mills is a freelance writer and cattlewoman from Cuthbert, Ga.*

Table 1: Concentration of crude protein and total digestible nutrients in stockpiled Tifton 85 Bermuda grass receiving different rates of nitrogen fertilization

Sampling date	CP, %	TDN, %
Early November	18	73
Late November	12	64
December	11	58
Early January	11	53
Late January	10	53
Average	12	60

Table 2: Estimated costs (\$ per cow) associated with stockpiled Tifton 85 Bermuda grass pastures or hay plus supplement

Input	50 lb. N per acre	100 lb. N per acre	150 lb. N per acre	Hay + 6 lb. whole cottonseed daily
N, lb.	\$23.91	\$47.81	\$71.72	0.00
Grazing costs	\$108.80	\$108.80	\$108.80	0.00
Hay	0.00	0.00	0.00	\$237.27
Labor	\$16.97	\$16.97	\$16.97	\$32.50
Supplement	0.00	0.00	0.00	\$146.16
Fixed machinery costs	\$24.50	\$24.50	\$24.50	\$90.63
Cost per cow	\$174.18	\$198.08	\$221.99	\$506.53