

Grazing evaluation of stockpiled Tifton 85 bermudagrass pastures for backgrounding stocker cattle in South Alabama

This information sheet highlights the results of a 2-yr stocker cattle grazing evaluation in South Alabama (2014-2015).

Why evaluate the use of stockpiled Tifton 85 bermudagrass for backgrounding stocker cattle?

In the Coastal Plain region of Alabama, stocker cattle are often bought in the fall and sold in the spring. During this time the quality of warm-season grasses declines in quantity and nutritive value, and cool-season annual grasses are not ready for grazing until late December to early January. This creates a forage production gap in which most producers use hay or hay plus supplement for backgrounding calves. This traditional solution can be costly. A potential way to cut costs during this time period is to stockpile forage. Bermudagrass is suitable for fall stockpiling in South Alabama and improved hybrids provide superior yield potential, persistence, and quality (Ball et al., 2015 and Hill et al., 2001). Tifton 85 (T85) is a commercially available hybrid bermudagrass that maintains good production potential and nutritive value when stockpiled. However, energy and protein needs of growing animals may exceed that provided by stockpiled warm-season forage alone and supplementation may be required to achieve gain. Thus, a two-year study (fall 2014 and 2015) was conducted to evaluate the use of stockpiled Tifton 85 with or without supplementation as an alternative to feeding hay during this time period.

What are the treatments being evaluated?

Treatments

- Stockpiled T85 bermudagrass control (no supplement)
- Stockpiled T85 + 50/50 Supplement:
1.0 lb soybean hulls and 1.0 lb cottonseed meal per head per day (hd/d)
- Stockpiled T85 + 75/25 Supplement:
1.5 lb soybean hulls and 0.5 lb cottonseed meal/hd/d

- T85 bermudagrass hay control (no supplement)
- T85 hay + 50/50 Supplement:
1.0 lb soybean hulls and 1.0 lb cottonseed meal/hd/d
- T85 hay + 75/25 Supplement:
1.5 lb soybean hulls and 0.5 lb cottonseed meal/hd/d

How were they managed?

Six paddocks of established Tifton 85 were used for stockpiled treatments (1.87 acres each), along with six dry lot paddocks for hay treatments. Beginning in August of each year, T85 paddocks were clipped and fertilized with 50 lb N/acre and allowed to stockpile according to Extension recommendations. Grazing was initiated in November 2014 and October 2015, respectively. Paddocks were stocked with five, ~580 lb steers during each year of the study and grazed for 50 to 60 days. Frontal grazing was used to manage stockpiled T85 pastures to provide steers with a 3 to 4 day supply of forage. Supplementation was received as 2.0 lb/hd/d based on expected quality

of the forage and animal requirements to achieve 2.0 lb/d gain. Prior to the experiment and every two weeks thereafter, stockpiled forage was sampled within each paddock to determine forage yield and quality. Initial steer test weights were measured at the beginning of the study and taken at 28-d intervals during the experimental period. Initial and final body weight along with average daily gain (ADG) were calculated.

What are the key conclusions?

As expected, each year stockpiled T85 nutritive quality tended to decline as the grazing season progressed from late October/November through early January. Forage alone did not meet the nutrient requirements of growing steers (Fig. 1 and 2). Steers in 2014 had slight weight loss and there were no differences observed among feeding strategies (mean ADG of -0.24 lb/d). In 2015, steers achieved marginal gain across all feeding systems (mean ADG 0.57 lb/d). Gains among the supplemented stockpiled vs. hay treatments were not different, but were greater than those from forage alone (average of 0.30 vs. 0.20 lb/d, respectively).

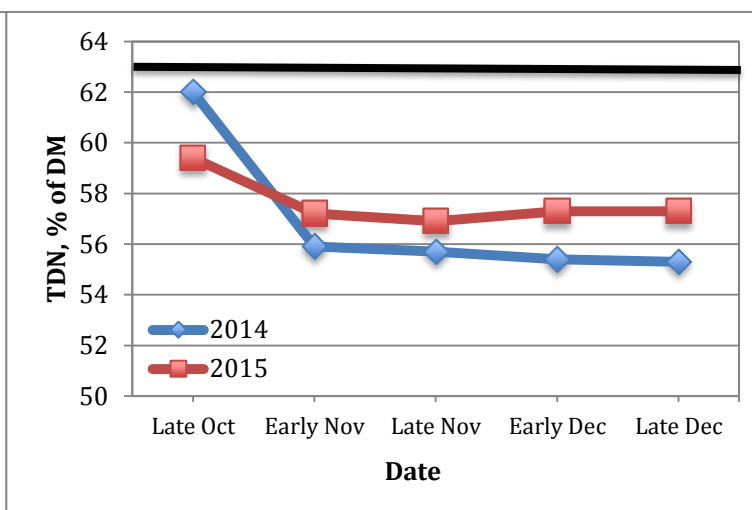
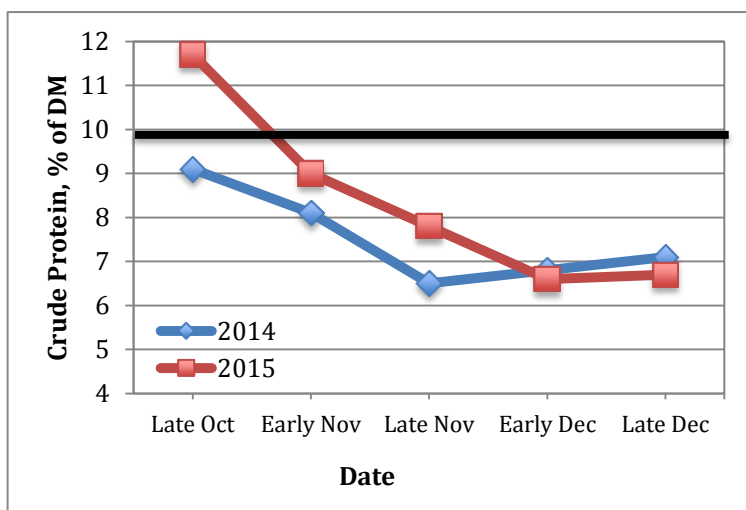


Figure 1. Crude protein (% DM) of stockpiled T85 pastures for 2014 and 2015 grazing periods and steer requirements to gain 2 lb/d.

Figure 2. Total digestible nutrients (% DM) concentrations of stockpiled T85 pastures for 2014 and 2015 grazing periods and steer requirements to gain 2 lb/d.

* ————— Represents needed level of CP and TDN

Producer Implications

Results suggest that to achieve the desired level of gain (2 lb/d), there must be a greater level of energy-protein supplement provided to steers grazing stockpiled T85 bermudagrass. A proper supplementation strategy must be designed to overcome the declining forage nutritive value of the stockpiled forage alone during the winter months. Stocker cattle may maintain similar weight in the absence of supplementation. When moved to cool-season annual forages, compensatory gain may occur. There were no significant differences between the stockpiled and hay-fed treatments; therefore, stockpiled Tifton 85 bermudagrass can be used to replace the use of hay to fill the fall-forage gap experienced in the Southeast.