

Evaluation of Varied Harvest Management Strategies of Alfalfa-Bermudagrass Mixtures on Animal & Stand Performance in the Southeastern U.S.

Justin Burt, University of Georgia

Liliane Silva, Clemson University

Carol Vasco, Auburn University

Kimberly Mullenix, Auburn University

Chris Prevatt, University of Florida

Lisa Baxter, University of Georgia

Jennifer Tucker, University of Georgia

Interseeding alfalfa (*Medicago sativa*) into an existing bermudagrass (*Cynodon dactylon*) sward has shown the potential to reduce reliance on synthetic N fertilization while also providing a high-quality forage for baleage production or grazing. However, data are limited on the best management practices for alfalfa interseeded into bermudagrass in the Southeastern US. Therefore, a two-year varied harvest evaluation was conducted in a randomized complete block design at two locations. The study was conducted from June-November 2020 (Y1) and April-December 2021 (Y2) in Tifton, Georgia, and June-November 2020 (Y1) and April-November 2021 (Y2) in Headland, Alabama. Three harvest strategies, Cut only (C), Graze only (G), or Cut and Graze (CG) management, were randomly assigned to 1 ha⁻¹ paddocks of Tifton-85 bermudagrass that was interseeded with Bulldog 805 alfalfa. The overall ADG was not different by location for the cut and graze treatments (0.85kg/d and 0.84kg/d, for the Georgia and Alabama locations, respectively). There was a slight variation in the overall graze ADG by location 0.81kg/d and 0.37kg/d for the Georgia and Alabama locations respectively. Within season differences were also observed by grazing cycle for nutritive value, with the early grazing cycles having a greater nutritive value, and then quality declines during the later portion of the grazing season. The overall average herbage accumulation in baleage treatments did not differ by either harvest type at either of the locations. However, within season differences were observed in the nutritive value of baleage such that material harvested earlier in the season was higher quality than later in the season, which can be attributed to the alfalfa dominance in Spring. Three-way comparisons to evaluate the total system performance by calculating predicted LWG by using the Beef Cattle Nutrient Requirements Model are in process. Implications from this study determined forage management decisions, seasonal fluctuations in nutritive value and botanical composition will influence stand performance, and strategic management in a dual-use (cut and graze) system may be best management practice for producers in the Southeast looking to use alfalfa-bermudagrass mixtures.