

Forage Management Research Projects

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‘Jiggs’ is a hybrid bermudagrass (*Cynodon dactylon*) released in Texas with greater tolerance to poorly drained soils, which makes Jiggs attractive to be planted in South Florida. Research projects have been conducted at Ona to evaluate the feasibility of using Jiggs as forage for grazing or silage. Jiggs pastures grazed at different stocking rates [2 (low), 4.5 (medium), and 7 (high) 1,000 lb liveweight/acre] had a linear decrease in herbage mass and forage height. On the other hand, no differences were found in forage nutritive value. There was a linear decrease in herbage allowance and heifer average daily gain and gain per acre. High stocking rates decreased Jiggs stand at the end of the experimental period. Jiggs can be used as forage for grazing in South Florida; however it should not be overgrazed. The nutritive value and fermentation parameters of Jiggs silage ensiled with different dry matter concentrations (25 and 50% dry matter) and inoculants (B500, Ecosyl, Molasses, and control) were evaluated. There were no effects of dry matter concentration or inoculants on crude protein concentrations. Forage with greater dry matter concentration had greater digestibility and the silage treated with molasses had greater digestibility than the other inoculant treatments. However, silage with greater dry matter concentrations had greater pH and decreased lactic acid concentrations. Silage treated with molasses had decreased pH, increased lactic acid concentrations when compared to forage treated with Ecosyl, B 500, and control. Using molasses as an additive may improve the nutritive value and fermentation characteristics of Jiggs silage.

Limpograss (*Hemarthria altissima*) can be used as stockpiled forage in South Florida because it maintains acceptable levels of digestibility at greater maturity. Three experiments were conducted to evaluate the response of different sources of rumen degradable protein (urea +

rumen-undegradable protein or cotton seed meal) on cow-calf pairs grazing stockpiled limpograss pastures. In experiment 1, twenty four cow-calf pairs grazed 8 stockpiled pastures (2.47 acre) from January to April of 2011 and 2012. The cows received the treatments added to a base molasses supplement (5 lb/d). In experiment 2, sixteen cow-calf pairs were allocated to eight drylot pens to evaluate the effects of the treatments on forage and total dry matter intake. In experiment 3, two rumen-fistulated steers were used to test the effects of the treatments on ruminal pH, ammonia, and volatile fatty acids concentrations. There were no differences in forage and animal response (experiment 1), dry matter intake (experiment 2), and ruminal parameters (experiment 3). Urea can be as effective as cotton seed meal as a source of rumen degradable protein to supplement lactating cows grazing limpograss pastures.

A creep-feeding study was conducted to test the effects of increasing levels of rumen-degradable protein supplementation on performance of calves three months before weaning. In year 1, calves were supplemented with 200 g soybean meal/d of soybean meal or control (no supplement). In year 2, a third treatment (400 g soybean meal/d) was added. In year 1, there was no difference in average daily gain of cows and calves. In year 2, there was a linear increase in calf average daily gain. This study provides evidence that limited amounts of rumen-degradable protein supplementation may improve performance of nursing beef calves grazing limpograss pastures in South Florida.