The Effect of Potassium on Sugars, Crude Protein, and Tonnage in Limpograss (*Hemarthria altissima*)

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Introduction

- Limpograss is a widely utilized forage in Central and South Florida.
- This project originated because a producer questioned whether increasing potassium (K) would increase the sugar content of the forage.
- The limpograss utilized was a mature stand of 'Floralta', at the UF/IFAS research and demo site in Kenansville, FL.

Methods

- This was a completely randomized block design with four treatments and three replications with each block representing 371 m^2
- Sugar was evaluated using crushed plant material and measured using Brix units.
- Crude Protein/TDN was measured by forage analysis of dry material.
- Green tonnage was weighed from round bales from each treatment and replication.

Discussion

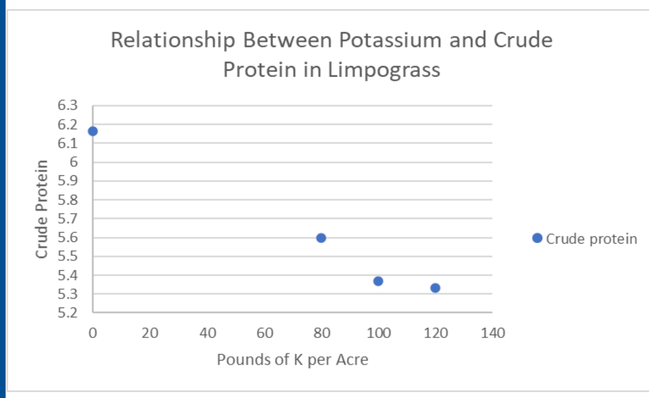
- Potassium is very important for root development and K recommendations should be followed according to soil test recommendations. (Keisling et al)
- Other work done by soil scientist suggest that inadequate levels of K lead to decline of forages over time.
- However, using K to increase sugar content of the forage appears to have the adverse effect.
- We will further refine the rates (with lower rates) to determine where the tonnage starts to increase significantly.

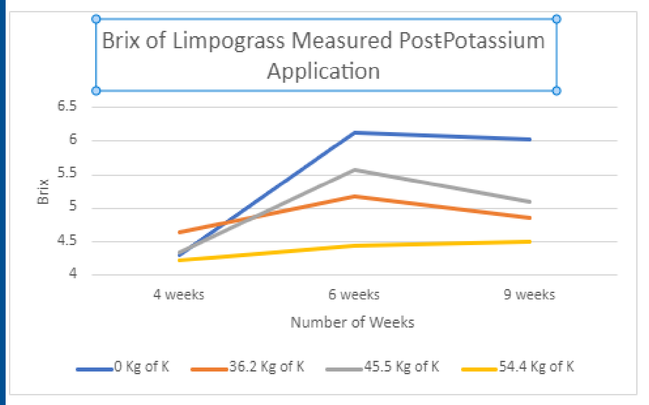
There was an inverse relationship between increasing potassium and crude protein as well as sugar content of Limpograss. The tonnage was significantly higher when compared to the control, but no significant difference between the K treatments.

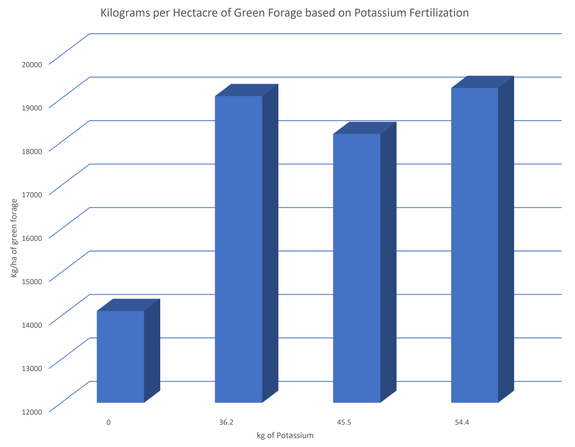
Figure 1: Harvesting the tonnage at the conclusion of this experiment

Figure 2: Aerial view of completely randomized block design of the experiment

Results







Citations

Keisling, T.C., F.M. Rouquette and J.E. Matocha. 1979. Potassium fertilization influences on Coastal bermudagrass rhizomes, roots, and stand. Agronomy Journal 71: 892-894.