



## **Soybean Research in Hopkins County**

**Texas AgriLife Extension Service**

**Hopkins County**

**Cooperator: Shannon Pickering**

**Author(s) Name(s): Dr. Mario Villarino, Dr. Vanessa Corriher and Dr. Curtis Jones.**

### **Summary**

Forage soybeans represent an interesting alternative as summer forage legumes. Since legumes are known to fix nutrient to the soil the use of a tandem crop system with one fertilization process using legume-small grain schemes might extend fertilizer applications and soil chemistry. We are testing the potential crop production of forage soybeans and its effect in soil fertility in Hopkins County.

### **Objective**

The objective of the project is to evaluate the adaptation capabilities of forage soybeans and the impact of the soybean in soil fertility.

### **Materials and Methods**

Two varieties of forage soybeans were planted in 85 acres in the southwest part of Hopkins County. The land, selected by the producers and investors, was ideal for planting the crop. Formerly a pasture, the plots were soil tested, pH corrected and planted. The seed were purchased from Eagle seeds. The soil tests were conducted by the Soil and Forage Laboratory in College Station, Texas. The soybeans were planted May 7-8, 2010. The soil was fertilized as per soil test recommendations. The seeds were inoculated and planted at a rate of 60 Lb per acre in 6 inch rows.

### **Results and Discussion**

Protein analysis at 52 days post planting was 33.7% (TDN 60.4%) with a protein drop to 15.9% (TDN 55.1%) at blooming (59 days). Protein increased to 18.6% (TDN 59%) at day 62 and slowly increased to 20.6% for day 69 and to 21.7% right before harvesting (day 76). Hay samples were 15.5% with a TDN of 59.1%. Protein levels at day 69 were 22.2% in leaves and 7.1% in stems. Crop was harvested and baled early August, 2010. An estimated yield was conducted before harvesting at 8.4 tons/acre with a final hay crop of 1.8 tons/acre. The crop was locally sold for \$135/ton.

### **Conclusion**

Soybeans can be a promising alternative for summer crops, however, the weather conditions suffered during the planting season of 2010 showed that the varieties selected did not tolerated heat stress as advertised by the seed producer. Also, because the conditions described

above the crop stand was not optimal. Ideally, planting should have started earlier and soil amendments should have been applied earlier. Due to weather conditions, the soybeans were harvested earlier than expected because heat stress caused premature defoliation.

### **Acknowledgements**

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