Because of high commercial fertilizer prices many producers have looked for lower-cost fertilizer alternatives. This has led to questions regarding the numerous liquid fertilizers that are on the market today. I have never had a response for those questions because I didn’t have any research based numbers to back myself up with until now.

I hope that by the end of this newsletter some of your questions will be answered. Because of the amount of data that was collected I can’t fit all of it in this newsletter. If you have any questions or would like to see the actual numbers please call me at the Lawrence County Extension Office. (870-886-3741)

Last summer, experiments were conducted at the Southwest Research and Extension Center (SWREC- Hope) and the Watershed Research and Extension Center (WREC-Fayetteville) to compare five different non-traditional liquid fertilizer products for effects on dry matter and nutritive value of stockpiled bermudagrass and stockpiled fescue. Each liquid fertilizer was applied alone and in combination with a commercial fertilizer. Pre-measured commercial fertilizer was applied by hand based on soil test recommendations. The plots were replicated four times to avoid biased results.

There were twelve treatments in these test plots including:


Both bermudagrass sites were treated in August and harvested in October. Treatments costs ranged from $11-$36 /ac for the liquid fertilizers and $93.63 (SWREC) and $66.47 (WREC) for commercial fertilizer.

The Fescue sites were treated during the last of August or the first of September and harvested in December. Treatment costs for the liquid fertilizers remained the same while the costs for commercial fertilizers were $70.23 (SWREC) and $23.25 (WREC).

RESULTS: SWREC BERMUDAGRASS

Commercial fertilizer produced a significant yield response compared to the unfertilized check (5,200 vs. 3,629 lbs. /a). DM for liquid fertilizers alone was not different that the unfertilized check and DM for liquid fertilizers combined with commercial fertilizer was significantly lower than commercial fertilizer alone. The reason for this is unknown.

At SWREC, no significant differences were measured in %CP or TDN due to application of commercial fertilizer, liquid fertilizer, or a combination of liquid fertilizer and commercial fertilizer to the unfertilized check.

WREC BERMUDAGRASS

Commercial fertilizer produced a significant yield response compared to the unfertilized check. No significant yield response was measured for any liquid fertilizer applied alone or in combination with commercial fertilizer.
Application of commercial fertilizer significantly increase %CP and TDN for bermudagrass as compared to the unfertilized check treatment. No significant response for CP was measured for liquid fertilizer compared to the unfertilized check or for liquid fertilizer combined with commercial fertilizer. The interaction of liquid commercial fertilizer tended toward significance. (Sea Mineral and Agrigro Foliar Blend) Bermudagrass TDN was significantly lower for Monty’s Plant Food, Royal Grow, and Grasshopper combined with commercial fertilizer than for commercial fertilizer alone.

**SWREC FESCUE**

Yield response for commercial fertilizer was not significantly different from the unfertilized check. Liquid fertilizer products alone didn’t significantly increase yield over the unfertilized check nor did they improve yields when combined with commercial fertilizer and compared to commercial fertilizer alone.

Application of commercial fertilizer significantly increased %CP and TDN for fescue at SWREC compared to the unfertilized check treatment. Liquid fertilizer alone did not increase CP or TDN compared to the unfertilized check and liquid fertilizer combined with commercial fertilizer did not increase CP or TDN compared to commercial fertilizer alone.

**WREC FESCUE**

Commercial Fertilizer produced a significant yield response compared to the unfertilized check. Liquid fertilizer products alone did not significantly increase yield over the check treatment and did not improve yield when combined with commercial fertilizer compared to commercial fertilizer alone.

Application of commercial fertilizer did not significantly increase %CP for fescue at WREC compared to the unfertilized check. Liquid fertilizer alone did not significantly increase CP compared to the unfertilized check and liquid fertilizer combined with commercial fertilizer did not significantly increase CP compared to commercial fertilizer alone.

Application of commercial fertilizer, liquid fertilizer, or a combination of liquid and commercial fertilizer did not significantly increase %TDN for fescue at WREC compared to the unfertilized check treatment. TDN for Sea Mineral was significantly lower that the unfertilized control. TDN for Royal Grow combined with commercial fertilizer was significantly higher than for commercial fertilizer.

**CONCLUSION**

Significant dry matter yield and forage quality increases were measured for commercial fertilizer at most, but not all species and locations. Liquid fertilizer products compared in this study had no significant effect on forage dry matter yield of stockpiled bermudagrass or stockpiled fescue at four locations. With few exceptions, liquid fertilizer products did not improve forage CP or TDN. Cost of liquid fertilizer products ranged from $11- $36 per acre. Results indicate that the liquid fertilizer products used in this study were not effective for improving forage yield or forage quality.

**ANNOUNCEMENTS**

**Dr. Loftin recently sent out an email urging producers to continually monitor their pastures for fall armyworms.** They are starting to receive calls from south Arkansas with fields that are above treatment levels. Remember to part the grass and look all the way to the ground. Pick about ten spots within each field and include areas of lush growth. Treatment levels are when there are three or more armyworms found per square foot.

**The Lawrence County Fair is scheduled for August 10-15.** All livestock must be in place by Wednesday August 12th at 5 PM. There will be an open cattle show Thursday August 13th starting a 6PM and the youth county livestock show will be on Friday August 14th starting at 10 AM. I would like to personally invite all of you to the Livestock Premium Auction that will be held on Saturday August 15th at 10 AM. This auction helps to increase the premiums that are received by youth who qualify for the sale and encourages continued participation.

Bryce Baldridge CES Agent
Agri/Livestock