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### **When is the Best time to Fertilize my Pastures**

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I always receive many phone calls this time of year asking about fertilizer recommendations and timing questions about fertilizers. My first reaction is generally, just because it is green does not mean that the grass is actively growing. Be cautious of spraying warm season grasses too early.

Warm season perennial grasses, such as bahiagrass or bermudagrass, green-up early when the sun comes out and the daytime temperatures reach about 60 degrees. But they do not actively start growing until the nighttime temperatures remain above 60 degrees F for seven to ten days in the spring and soil temperature reaches 65 degrees at the 4-inch depth. According to last month's weather records we did not have a single night temperature over 60 degrees. Looking at the upcoming forecast next week we should hit temperatures needed for warm season grasses to grow.

For bermudagrass or bahiagrass to utilize any fertilizer, it should be applied after green-up and as active growth begins. Applying any fertilizer prior to this, results in the utilization of nutrients by any volunteer ryegrass and/or any cool season broadleaf weeds (such as thistles, Texas groundsel, henbit, etc.).

Usually, the most limiting nutrient in bermudagrass production is nitrogen. Nitrogen is vital to plants for optimum growth. Deficiencies of nitrogen appear as pale green color in the plants, very poor growth and yield and low protein. The optimum nitrogen rate for a situation is dependent upon a producer's goals such as hay production or grazing.

Bermudagrass removes relatively large amounts of phosphate and potash when harvested for hay. Bermudagrass hay removes 14 lbs. of phosphate and 42 lbs. of potash per ton of hay. Phosphorus is vital in plants for developing a healthy root system and reaching optimum yield. Potassium is essential in plants to combat diseases and aid in water translocation. Deficiencies of potassium can cause both yield losses and stand losses. Bermudagrass can also be a luxury consumer of potassium. Meaning, bermudagrass will take in more potassium than it needs if an abundant supply is present. Therefore, if soil test recommendations call for more than 100 lbs. of potassium/acre the recommendation is to make split applications throughout the season.

First and foremost, soil test. If you have not done so for this year, please consider obtaining a soil test now. There is not much that can be done regarding the high cost of fertilizer, but there is

much we can do regarding how efficiently we use fertilizer. The soil test is the first step in efficient fertilizer use and improved forage production. Samples should be collected annually for hay meadows and every 2 to 3 years for pastures. For soil test forms and bags contact the Extension Office or visit <http://soiltesting.tamu.edu>.

Levels of nitrogen, phosphorus and potassium applied should be based on soil test recommendations to match the farm or ranch goals.