March 1, 2013

Dear Producer/Ag Industry Personnel,

We hope this letter contains information that may prove to be beneficial to you and your perspective operations.

**Corn**
Corn planting time is just around the corner. When preparing to plant, keep in mind that corn growth and development responds primarily to temperature and is not controlled by day length. Thus, the calendar date is not as important as soil temperature and air temperature when considering when to plant corn. Good germination and emergence are expected when the soil temperature at a 2-inch depth is 55°F by 9 a.m. for three consecutive days.

Seeding rates for corn should be set based on achieving a final plant population of 30,000-32,000 plants/acre. Most seed companies recommend a specific planting range for each hybrid, so check with the seed company for more information on the hybrids you are planting. Keep in mind, however, that higher plant populations may lead to lodging problems once the corn matures.

**Grain Sorghum**
Grain sorghum can be planted over a wide range of planting dates. However, in general it is recommended that it be planted as early as possible in the spring. Grain sorghum planting should be delayed until the soil temperature in the morning warms to 65°F at 2 inches below the soil surface.

When planting, the ultimate goal is to plant the seed as shallow as possible and still obtain good soil to seed contact. When planting early in the spring when soils are cool and wet and rainfall is likely to occur soon after planting, a planting depth of 0.75 to 1 inch is best.

Seeding rates depend on whether the field will be irrigated or not. Under irrigated circumstances, an ideal final plant population would be 80,000-100,000 plants/acre. Under dryland situations, a final plant population of approximately 50,000 plants/acre is recommended. When setting the planter to achieve the desired final plant population, assume 80% of the planted seeds will emerge.

**Rice**
Nitrogen fertilization account to close to 20% of variable production costs and the largest single expense for rice production. Reducing the expense of Nitrogen can and will have a strong positive impact in the county.

Soil testing is one of the major keys of in rice production. Soil guidelines tests can provide valuable information concerning nutrient status of the soil and provide and guidelines for how much fertilizer needs to be applied to optimize yields. A soil test to measure soil based nitrogen has been developed by the University Of Arkansas Division Of Agriculture (N*STAR) and proven in rice production. The benefits of this soil test are more than cutting cost of production but it also is a benefit to the environment.

The Nitrogen-Soil Test for Rice or N-ST*R is a newly developed soil-based N test that will be available to growers for rice produced on silt loam soils in Arkansas beginning in October 2011 and for clay soils within the next two to three years. What makes N-ST*R different is the ability to quantify a portion of the soil organic-N and NH₄-N contained in the soil, which will become available to the rice crop during the growing season. By providing an index of native soil N availability, N-ST*R was correlated and calibrated to predict the field-specific N rates required to maximize rice yield and producer profitability. In order to effectively use N-ST*R, farmers must continue to use best N management practices, such as use of a urease inhibitor on preflood N, rapidly flooding fields after preflood N is applied and maintaining the flood for at least 4 weeks following N fertilizer application to maximize crop use of soil and fertilizer N. N-ST*R has the potential to increase rice yields in some fields that are

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currently under- or over-fertilized and decrease N fertilizer use and costs in fields that are currently being over-fertilized. The goal of N-ST*R is to increase the productivity, profitability and long-term sustainability of Arkansas rice production by providing field-specific N fertilizer management recommendations. Please find the enclosed N*STAR Fact Sheet and N*STAR Protocols handouts.

Would like to also remind growers and consultants of the utility of the DD50 program. DD50 allows growers to plan ahead and it predicts timing of more than 25 production decisions. It acts as a tool to improve management for growers and consultants alike.

Learn more about DD50 in the publication FSA2124, “DD50 Computerized rice management program,” available online at: www.uaex.edu/Other_Areas/publications/PDF/FSA-2124.pdf.

Producers can enroll in the DD50 program online at http://dd50.uaex.edu/dd50Logon.asp or work with the county extension office to use it.

Cotton/Soybean Burndown Options
A good burndown program in the spring is a first step to good weed management. For cotton, there are several options available to prepare for planting. If you have horseweed in fields, the best practice is to treat those fields as if they contain glyphosate resistant horseweed. A tank-mix of glyphosate + 2,4-D or dicamba should do a good job of controlling all the cool-season weeds, including horseweed, that may give you problems. There must be at least 28 days between 2,4-D applications and cotton planting. Cotton can safely be planted following a dicamba application 21 days after the first 1” rainfall following the dicamba application. For soybeans these same options are available, and many others. Several different tank-mixes with residual herbicides for horseweed and other broadleaf weeds are labeled. If 2,4-D or dicamba is used for burndown prior to planting soybeans there must be 21 days following the first 1” rainfall after application before soybeans can be planted safely. If pigweeds are present at planting time, Gramoxone Inteon or other paraquat herbicides are very effective to remove existing vegetation.

Soybean Inoculation
In fields that have not been planted to soybeans in the last 3 years, we recommend inoculating the seed with quality Rhizobia bacteria prior to planting. The Rhizobia bacteria are the soil organisms that form a symbiotic relationship with the soybean plants’ roots to produce plant usable N from atmospheric N. These organisms are not native to Arkansas soils and must be introduced. The seed should be treated with the inoculant as close to planting time as possible, since any adverse environmental conditions that the inoculant (living organisms) may experience once applied to the seed may render some of the inoculant useless. Make sure the inoculant is fresh (it has a shelf life of about 6 months) and follow the label directions on how much to apply.

If you have questions, please feel free to call us at 870-265-8055 or email at gwilson@uaex.edu.

Sincerely,

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