Dunn Testing Urea Stabilizers At The Delta Center

Ammonium Nitrate Unavailability Creates Challenges

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Extension Rice Specialist, with the University of Missouri Delta Center, David Dunn, spoke recently about the wide variety of products that are available to stabilize nitrogen and keep it from being volatilized as ammonia or leaching out.

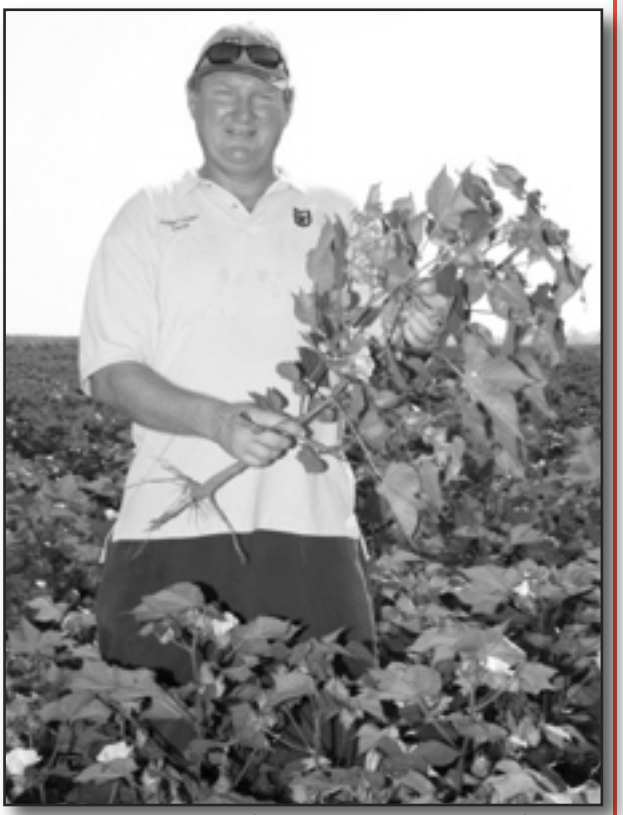
The increase interest in stabilizers is due to the unavailability of ammonium nitrate. Dunn said, "Ammonium nitrate might have been the fertilizer of choice but as terrorism and other things have come along, ammonium nitrate becomes less and less available to producers. Urea is the second fertilizer of choice. Urea has some problems in wet soils. It will be lost in the atmosphere through volatilization so more and more producers are looking for stabilizers."

Dunn explained he has been receiving numerous calls from producers. "I get a lot of phone calls asking, what do you think about this product or that product, I always say I've got plots out let's make an appointment and go out and look at the plots. They have little interest in actually doing that so we decided to have a field day."

Dunn is currently evaluating four products, Agrotain, Nutrisphere-N, Enzon and Upgrade. His test plots are five feet wide by 15 feet long. Dunn explained one difference in the products is mode of action. "They react different to the environment it just depends on which of those conditions are present this year. If you apply urea to wet soils you are going to lose a lot of the nitrogen to volatilization. If you apply urea to dry soils you are not going to have that problem. This year was very dry during the time period we were applying our nitrogen treatments so I don't suspect that we will have a lot of losses due to volatilization."

Dunn explained what he has seen this year in his test plots. "When I walked through the plots this morning to put out my stakes I could not see a lot of differences between the treatments. However, compared to the untreated there was quite a bit of difference out there."

Volatilization losses can be reduced with water. Dunn stated, "If you can move the urea below the soil surface either by tillage or by irrigation, adding water, the problem goes away once the urea goes below the soil surface. In rice the fertilization strategy is to apply urea and then immediately put water on it, moving the urea into the soil. The problem arises if you have a large field and a small crop or your crop breaks down and you cannot get water on your fields in an expeditious manner you might have nitrogen volatilization losses."



David Dunn, Extension Rice Specialist with the MU Delta Center at Portageville, Mo., describes the wide variety of products that are available to stabilize nitrogen. Photo by John LaRose, Jr.

"In other crops, say no-till cotton, no-till corn, where you don't have that opportunity to put water on it immediately or it is dry, it can be a problem." Δ

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