

One-Trip Nitrogen

Slow Release Nitrogen Can Cut Costs For Cotton Producers

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Controlled release nitrogen fertilizers for cotton production has the prospect of saving money by reducing labor costs while maintaining yields, according to David Dunn, manager of the soil testing lab at University of Missouri Delta Center.

"About two years ago Cotton Incorporated approached us to find new technologies and new programs to save on the soaring labor costs," Dunn said. "One thing we thought about was controlled release, slow release nitrogen products. The typical nitrogen fertilization program takes two trips over the field. With the controlled release you can put out all the nitrogen at one time and save a labor trip over the field. So we did some investigations on that."

In 2010 he started looking at some of the controlled release products. One of them is ESN, environment smart nitrogen, which is an encapsulated urea fertilizer produced by Agrium Advance Technologies. Another is a liquid slow release, Nfusion manufactured by Georgia Pacific.

"We looked at these on three different soil types," he continued. "Our goal was to figure out where they fit best. We made some significant discoveries about the places that they work best. One thing determined was that these products have a distinctive advantage where water stands in the field, particularly on heavier textured clay soils. It was determined that would be a good place to use them in the future."

"The second step of our project was to evaluate these on the farm with some farmers and real scale farm fields. So in 2011 we took this on a little bit larger scale and did some field scale evaluations on these products."

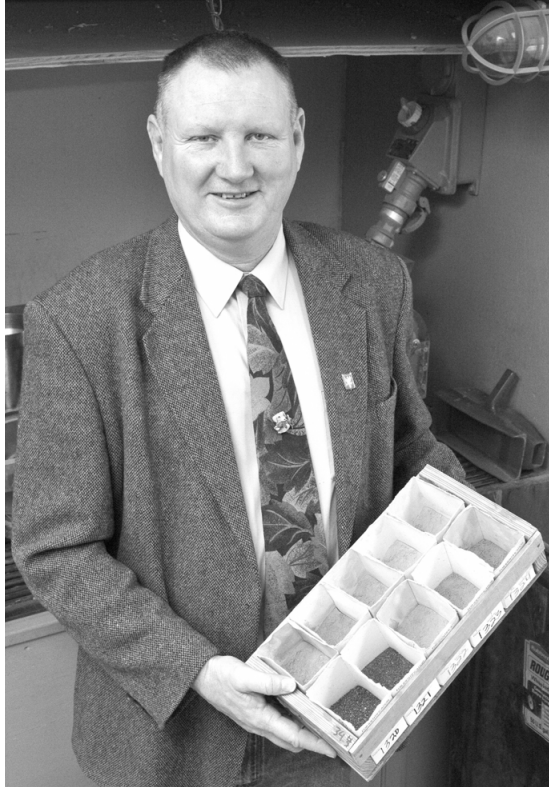
"Here the goal was to find what situations in the field, what soil types, and in what weather conditions these individual products work best," he said.

"We began that phase of the project last year with one of the products, ESN. We looked at that on three different farmers' fields. We did not find a yield advantage for it but we did not see a yield disadvantage either. We are hoping to take the information we gleaned from our small plot and field scale evaluations to develop a production system for Missouri cotton growers.

"Our ultimate goal is to get this into the hands

of more farmers," Dunn explained. "I feel this is a technology that farmers could use to save money. One effort is to get a Conservation Innovation Grant whereby the federal government pays part of the cost of implementing this technology and allows farmers to evaluate it on their farms without bearing all the cost risks themselves."

Whether it works on any particular farm operation is something that will become clear in time.



Using controlled release nitrogen fertilizers for cotton production is discussed by David Dunn, manager of the soil testing lab at University of Missouri Delta Center.

Photo by John LaRose Jr.

"These are new technologies," Dunn said, "and they may or may not have a place on your farm. We're evaluating them here at the Delta Center so that you can take that information home with you and maybe benefit from it in your situation." △

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