

New Technologies Could Help You Save

Nitrogen Management Is The Key

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Dr. Timothy Walker, Associate Professor of Rice Agronomy and Soil Fertility at the Delta Research and Extension Center in Stoneville, Mississippi, states that precision in nitrogen management could save you money when it comes down to the cost.

"There is definitely some promise in the area of nitrogen management. Being able to fine tune

said Walker, "and right now we are looking at those sensors for their effectiveness in rice. We are also doing some ground level work to see if there are other sensors that could be developed that would work better for rice crops."

"I think that one of the complexities that is apparent with the work on rice is being able to get the sensors with an active light source into a fixed wing aircraft as opposed to ground rigs that are used in wheat," said Walker, "ground rigs and flooded rice will not work on the ma-



Dr. Timothy Walker says being able to fine tune nitrogen applications by using sensor and soil based approaches is in the works and could save you money.

Photo by John LaRose

nitrogen applications by using sensor based approaches and soil based approaches is in the works," said Walker.

"The soil based nitrogen test is actually a project being led by the University of Arkansas. We are collaborating with them and it has been going on for several years now," said Walker.

"The sensor based approach is a project that we are leading here at Mississippi State. It is a canopy based approach where we are measuring both biomass as well as greenness," said Walker.

According to Walker, the remote sensing technologies have been delivered to a greater extent in wheat and corn crops. He says that with the complexities of a field being flooded such as in rice, it is a more difficult challenge.

"No recommendations can be made at this point," said Walker. Hopefully within the next few years we could be able to make some informed decisions."

"There are a lot of sensors already developed,"

majority of farms in the south."

Variable rate technology for airplanes is in the late stages of development with some prototypes already being experimented with. "The key to precision nitrogen management will be using the soil based and canopy based approaches in tandem to make informed decisions and recommendations," said Walker.

"Pre-flood nitrogen applications would be made based on providing only the amount of N fertilizer that the soil is not capable of supplying. Then we would use the sensor based approach to cover up any mistake and any inefficiencies that have occurred through the growing season," said Walker.

"I'm not sure how long this technology will take, we hope that within a few years we would be able to start making better informed decisions using the technologies," said Walker.

"It's something that's coming down the road," said Walker, "and I think that the price of the fertilizer could drive it even faster." Δ

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