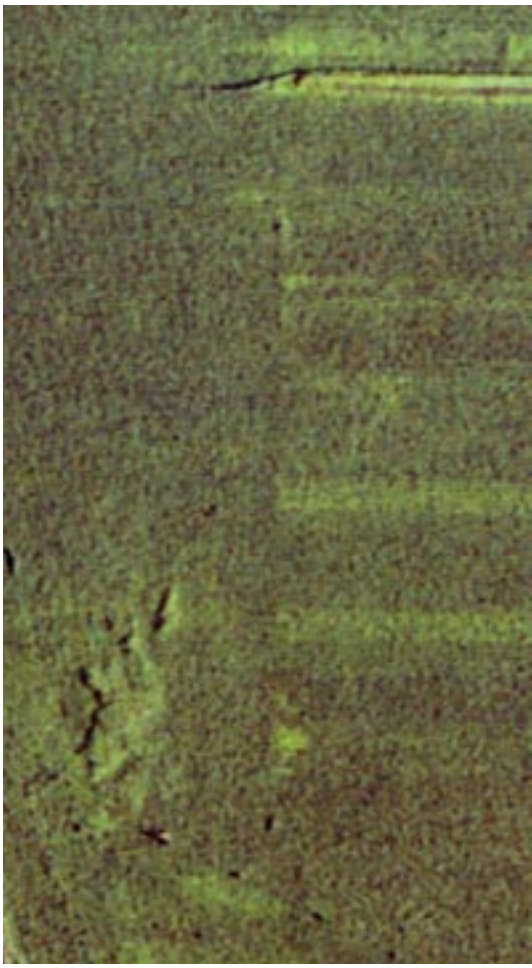
What's Coming at the Conference?



Finding the right nitrogen rate is the key reason growers have participated in the On-Farm Network™ for the past six years.

And while they have environmental concerns, the main reason most growers are conducting nitrogen rate strip trials is economic. Concerns over nitrogen prices may have tempered a little in the dead of winter, but they will come up again when the snow melts and the soil starts to dry – guaranteed.

As you consider what you'll do this spring, keep in mind that many of the growers involved in nitrogen rate studies are now comparing yields from a sidedressed application of 125 lbs. of nitrogen per acre with 75 lbs. (50 lbs. less).

"Early indications from the 2005 trials suggest that the optimal rate for corn after soybeans was usually somewhere between those two application rates," says Dr. Tracy Blackmer, Iowa Soybean Association director of research. "Average results to date show less difference in yield between those two rates than last year.

"There are some clear differences between yields at the two rates in some cases. We'll look into that more, and all the data will be available, at the Nitrogen Conference," Blackmer says.

"If I had to guess right now, it would be because of local heavier rainfall," he continues. "There was less incidence of heavy spring rain on already wet soils in 2005 than in 2004, but where this did happen, it looks like the optimum nitrogen rate was closer to 125 lbs. or even more.

"If you want a recommendation, right now the best advice I can give is, for corn after beans, 100 lbs. is probably sufficient for most farmers, if they are willing to sidedress," he says. (See story on pp. 6 & 7 regarding the 100 lb. or less project from 2005.)

In the six years of looking at nitrogen rates, most of the work has been done with spring or sidedress applications. To compare fall application of anhydrous with spring or sidedress applications, a number of cooperators put out anhydrous strips in the fall of 2004. In the untreated strips between fall-applied anhydrous, growers applied the same rate they'd applied in the fall as either pre-plant or sidedressed nitrogen, with their choice of the form.

"Early results from this depend on where the trials are located in the state," Blackmer says. "In a trial from southwest Iowa comparing nitrogen applied at 140 lbs. per acre, the strips with spring applied nitrogen yielded about 5 bu. more than strips where anhydrous was applied in the fall. A second comparison was made at the same time, this one with a spring application of just 100 lbs. It was interesting that the spring applied 100 lbs. and the fall applied 140 lbs. produced nearly identical yields."

What this suggests, he says, is that with the same rate, a spring application is better than a fall application. "What the data means, I'd say, is we lost the equivalent of 40 lbs. of nitrogen fertilizer between fall and spring," he adds.

Blackmer says a number of these trials appear to have very little difference between fall and spring applications at the same rate. "This may be due, at least in part, to the lower than normal losses from the fall application, given lower incidence of heavy spring rains last year," he adds.

Blackmer says that calculating actual economic returns from varied nitrogen rates has been difficult in the past. "We've been looking for a simpler, more accurate way to account for fertilizer and grain prices as we compare economic returns from two different nitrogen application rates," he says. "A former Iowa State University graduate student has come up with a way to do this, and we'll be presenting this at the Nitrogen Conference."

Manure trials

Manure continues to be one of the most debated crop production inputs in the state. Cooperators put out more manure strip trials in 2005 than we've had