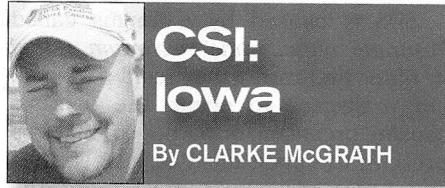


Don't go until it's 50 below!



CSI:
Iowa

By CLARKE McGRATH

Mind these matters during N application

AS you prepare for nitrogen application, whether it's in the fall or spring, bear in mind a few other important points.

- If you have the choice, get a monitor, NH₃ pump, cold-flow system or other equipment that will help keep your application rate on target. Many retailers have added equipment like this to their inventory.
- Keep up the good work on contouring your applications. Applying N on the contour in fields helps keep erosion down to a minimum.
- Remember to put safety first, always. It doesn't take much NH₃ to cause tremendous injury. I've seen it firsthand. Wear gloves and goggles every time you handle NH₃ period.

your options. Our ag retailers are trying to help manage risk (both yours and theirs) in a very volatile market!

Having sold and serviced tens of thousands of tons of both fall- and spring-applied nitrogen fertilizer, I still struggle with a definitive answer to the fall-vs.-spring debate.

Think before you apply

After the nitrogen losses during the 2010 growing season, it's likely many

of us will take a hard look at our fields. Ask yourself some important questions: How big were the yellow areas from nitrogen loss? What was the yield impact?

Can you wait and apply more nitrogen in the spring to reduce these losses, or does your acreage dictate a need for some fall application? Can custom application help with your spring applications? Should you use a nitrification inhibitor? What are the environmental impacts of your fall applications?

Each grower has to answer these questions. Whether we choose fall, spring or a combination of applications, we must focus on best-management practices. Work with your local agronomists to help answer these questions.

The Agribusiness Association of Iowa has established a policy statement, "Fall Application of Anhydrous Ammonia," which outlines management criteria that must be met before fall application can begin. Check it out. These criteria are the guidelines that Iowa fertilizer retailers post in their offices, share with their customers and implement to get the most efficient, cost-effective and environmentally sound application of fall NH₃.

Final note: Good luck, be safe. And hopefully as you are reading this article, harvest is going smoothly and it isn't 50 below.

McGrath is the partner program manager and Extension agronomist (or ISU's Com and Soybean Initiative.

For application rate information, [SU has developed a Corn Nitrogen Rate Calculator, which was recently updated with new data from recent trials. The calculator, which you can use to help figure out the right rate of N per acre to apply for your situation and field conditions, can be found online at extension.agron.iastate.edu/soilfertility/lnrate.aspx.

Following these suggestions can increase nitrogen use efficiency and corn production, and decrease nitrogen losses, including nitrate movement into surface and groundwaters.

Cost is another reason why fall is often preferred for anhydrous ammonia applications; NH₃ prices are traditionally more favorable in the fall than in spring. On the other hand, as I write this, the market has jumped up by around \$50 per ton in September.

Fall usually favors prices

The nitrogen market is complex, and price trend predictions - for both this fall and spring 2011 - have been murky at best. With the current instability in the market, some agronomists are telling me that if conditions are decent, they expect another flurry of fall NH₃ applications in case winter prepay and spring pricing heads higher.

Market forces are also putting pressure on supply and transportation of nitrogen. To ensure you are on top of market changes, brace yourself to be asked to pay for things never before associated with NH₃, such as "storage" or "carrying costs," and communicate often with your local dealers. Good communication can help your dealer keep product moving to your farm. Be patient and work together to understand

ALL right, so the real rule of thumb for fall application of nitrogen is "Don't go until it is 50 degrees or below," but hopefully the title on this column caught your attention and now maybe you will stick with me for the rest of the story.

As a former retail agronomy manager, I argue that fall application allows farmers and dealers more flexibility with equipment, generally lower nitrogen prices, less soil compaction, less seedling burn and more time for planting in the spring. As an ISU agronomist, I also argue that fall application of N absolutely must be managed correctly to even come close to the nitrogen use efficiency and economics of spring application. Anhydrous ammonia, or NH₃, is the only form of nitrogen that ISU agronomists recommend for application in the fall.

Tips for fall application

The single most important factor affecting good management of fall application is ensuring soils are the right temperature before applying NH₃. Wait until soils are at least 50 degrees F and trending downward - hence the catchy rule of thumb. Soils usually reach this around the first week of November.

To find soil temperatures by Iowa county, including both three-day histories and three-day forecasts, visit extension.agron.iastate.edu/NPKnowledge.

In addition, to be a good soil steward this fall, avoid fall application on soils prone to denitrification or excess leaching. Also, only use NH₃ for fall nitrogen applications, as other sources are highly prone to losses. Be sure applicators are properly calibrated, and run the knives at least 6 inches deep.

One of the most common problems I see with NH₃ applications is going too shallow. The NH₃ knife will be polished farther up than the depth we are running. Make sure of your depth by digging in the knife trench (you will be able to find the trench bottom easily) and actually measuring your depth.