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Fall Anhydrous Ammonia Applications

Corn fertility programs for 2022 have been shaping up to be a challenge all fall. With an inch and a half (give or take) of moisture received across much of the area over the last week, our fall application window shrunk just a little further. Anhydrous ammonia has long been a popular N option for area producers. When priced in comparison to other N sources, it will likely stay that way, even as increased fertility costs across the board require us to make sure we are making applications as efficient as possible. The following are three 'tips' to ensure you do so:

Start by understanding the role of temperature in the application process. Fifty-degree soil temperatures (at a four-inch depth) are the general recommendation when it comes to 'opening' the fall application window. The reason: ammonia – a N form with less potential for loss in soils – converts to nitrate (greater loss potential) whenever temperatures are above freezing, with the conversion rate decreasing when temperatures drop *consistently* below 50 degrees. Additionally, be sure soil temperatures are not only below the 50-degree threshold, but trending downward to best maintain anhydrous in the ammonia form. A great resource for soil temperatures can be found at: https://mesonet.k-state.edu/agriculture/soiltemp/ .

Second, consider a nitrification inhibitor. There are a number available, all designed to slow the microorganism activity that converts ammonia to nitrate-N, to reduce fall applied anhydrous losses. They won't last indefinitely, and length of effectiveness can vary with soil temperature. If conditions for N loss aren't favorable, you may see no benefit to them at all, but they do deserve a second look if you are applying in to conditions where N loss could occur.

When you're finally ready to run, be sure you are getting a good seal of the application slot. If you can smell ammonia, N is being lost. It's difficult to tell how much might be being lost, but the longer you can still smell ammonia in the field, the greater the potential for loss.

For more fall application information, check out our KSU Agronomy eUpdate at: https://eupdate.agronomy.ksu.edu/article_new/considerations-for-fall-applications-of-anhydrous-ammonia-467-1 .

Cool Season Turfgrass Nitrogen Applications

November is here and that means time for the last nitrogen application of the season for our cool season turfgrass stands. Grass growth has obviously slowed, but photosynthesis has not. November applications increase the rate of photosynthesis, increasing energy storage in crowns and roots that can help with earlier spring green up. In addition, fall applications enhance root growth over the excessive shoot growth often seen with early spring applications while improving winter hardiness, root growth and even shoot density.

Plan to apply a pound to a pound and a half of actual nitrogen (urea or ammonium sulfate sources are good options) per 1,000 square feet of lawn area. If a soil test warrants it, fall is a great time for phosphorous applications as well.

If application calculations are giving you fits, we can help guide you through calculations to aid in economical and environmentally friendly applications. For a helpful video, go to: https://kansashealthyyards.org/component/allvideoshare/video/fertilize-for-a-healthy-lawn?Itemid=101 and check out the many *Kansas Healthy Yards* program resources.