

When we think about Planter Applied N, the “Time” has already been set and the RIGHT “Rate” should be established by evaluating a grower’s “Placement” and “Source.” Understanding your planter’s ability to provide soil separation between the fertilizer and the seed will help you to make the RIGHT decisions when it comes to Planter Applied N.

RIGHT Place



Nitrogen is usually applied along with other nutrients through the planter. Due to the risk of injuring the germinating seed from salts or ammonia toxicity when using urea-containing fertilizers, it’s best to have soil separation between the fertilizer and the seed. Safe placement can be either in a surface band application (typically to the side of the row), 2X2 application or strip-till application 4-6 inches below the seed. These placements allow the grower to apply full rates of nitrogen safely without injuring the seedling. The limiting factor for applying full rates of nitrogen in these placements is the time it takes to refill the fertilizer hoppers. However, equipment and technologies are advancing and manufacturers have designed application systems that can help growers “speed up” down time.

If a grower wants to apply a starter fertilizer in furrow with the seed (pop-up), the risk of seedling injury is increased, and rate must be closely monitored. Injury can occur when applying more than 6-8 pounds per acre of nitrogen and potash combined in direct seed contact in a 30-inch row spacing.

RIGHT Source



Applying nitrogen with an EEF (Enhanced Efficiency Fertilizer) product can reduce the risk of injury and loss to the environment, and extend the amount of time the nitrogen is available for the crop. When surface applied, a urease inhibitor will reduce nitrogen loss due to volatilization. A nitrification inhibitor should be added with below ground placement of nitrogen to reduce the loss due to leaching and denitrification. All of these EEF’s need to be applied to the nitrogen at the fertilizer dealership or at the farm before application.

There are urease/nitrification combo products available to protect the nitrogen investment from loss to the environment and they can be used in the placements mentioned above. Most of these combo products need to be applied at the fertilizer dealership or at the farm before application.

Another nitrogen EEF is ESN, Environmentally Smart Nitrogen, which is a physical barrier (polymer coating) applied to urea to protect it against all 3 losses mentioned above. ESN comes ready to use and can be used in all placements as well. For those growers who apply N at planting, studies have shown ESN can be applied at up to three times the safe rate of urea and still be safe for the crop.



RIGHT Rate



RIGHT Source



RIGHT Time



RIGHT Place

Talk to your trusted CCA today to discuss **4R Nutrient Stewardship** on your farm!