Soil Stability

Optinyte® Technology (Nitrapyrin) vs. DCD (Dicyandiamide)

Stable

N-Serve® and Instinct NXTGEN® Nitrogen Stabilizers

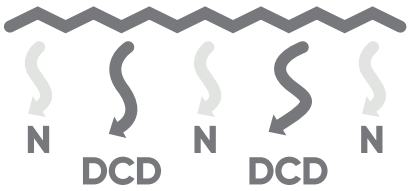
Results showed that on average, N leaching decreased by 16 percent and soil N retention increased by 28 percent. In more than 75 percent of individual comparisons, use of a nitrification inhibitor increased soil N retention and decreased N leaching and volatilization.

16% Less Leaching

28% Increase in Soil Retention

Source: Wolt, J. D. 2004. A meta-evaluation of nitrapyrin agronomic and environmental effectiveness with emphasis on corn production in the Midwestern USA.
Nutr. Cycl. Agroecosyst. 69: 23–41. doi:10.1023/B:FRES.0000025287.52565.99.

Susceptible to Leaching



DCD

DCD is water soluble and can leach away with the first significant rainfall event in contrast to Instinct and N-Serve, which remain in the root zone protecting your nitrogen from losses.

Source: Laboratory evaluation of dicyandiamide as a soil nitrification inhibitor | Communications in Soil

"DCD is readily leached, lowering its effectiveness."

Source: International Plant Nutrition Institute | Nitrification Inhibitors

McCarty G. W., and J. M. Bremner. 1989. Laboratory evaluation of dicyandiamide as a soil nitrification inhibitor. Comm Soil Sci Plant Anal. 20: 2049-2065.5

International Plant Nutrition Institute. Nitrification Inhibitors. http://www.ipni.net/publication/nss.nsf/0/21B8084A341C98E085257E3C0077595B/$FILE/NSS-26%20Nitrification%20Inhibitors.pdf

Inoue, K., T. Sakamato, J. Z. Min, K. Todoroki and T. Toyo'oka. 2014. Determination of dicyandiamide in infant formula by stable isotope dilution hydrophilic interaction liquid chromatography with tandem mass spectrometry. Food Chemistry 156: 390-393.

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