

Applying Anhydrous Ammonia In Wet Soils

URBANA, ILL.

Wet soil conditions are causing concern for anhydrous ammonia application this spring, said Fabian Fernandez, University of Illinois Extension specialist in soil fertility and plant nutrition.

Anhydrous ammonia is the most widely used nitrogen fertilizer source in Illinois. In order for this fertilizer to be effective, good soil moisture conditions are necessary, Fernandez said.

Ideal soil conditions are around 15 to 20 percent moisture. Within these moisture levels, a fine-textured soil, such as silty clay loam, feels slightly moist.

"If pressed in the palm of your hands, it will form a weak ball with rough surfaces that crumble under pressure," he said. "It will not leave water stains on your hands."

When soils are slightly above or below the ideal moisture conditions, increasing application depth can reduce the risk of ammonia loss, Fernandez said. An adequate application depth

under ideal moisture conditions is approximately 6 inches for fine-textured soils and 8 inches for coarser-textured soils or sandy soils.

For wet soils, increasing the application depth is not always sufficient to minimize ammonia losses, he said. When soils are too wet, the knife track might not seal properly, creating a direct conduit for ammonia to escape to the soil surface. Fernandez recommends using some type of device behind the knife to close the slot created by the knife.

"The best test to determine if a proper seal is obtained is to go back to the application zone and smell," he said. "If ammonia can be smelled for a while after the application, that's clear evidence that ammonia losses are occurring."

For more information on frequently asked questions about anhydrous ammonia, read the April 28 edition of The Bulletin at <http://bulletin.ipm.illinois.edu/>.

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