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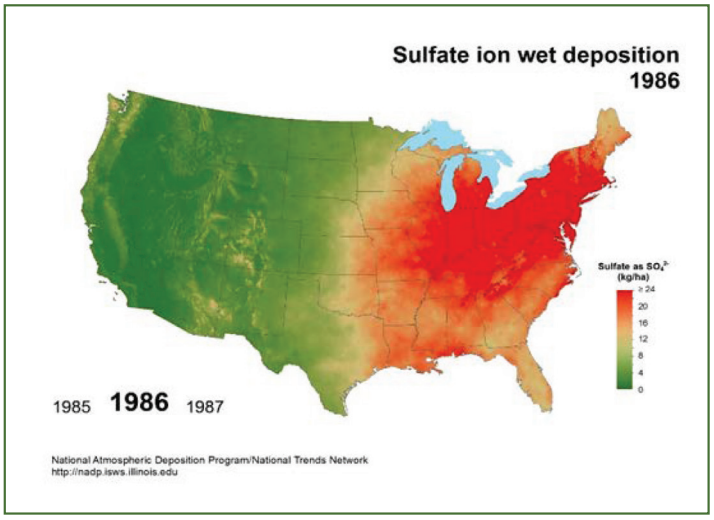
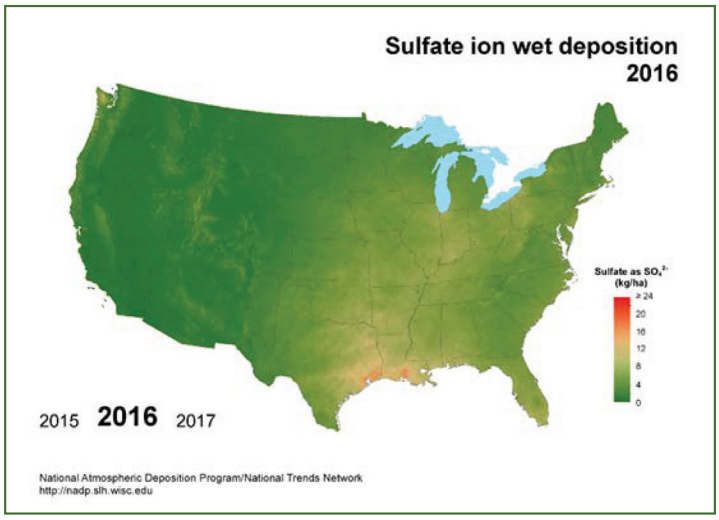
SULFUR DEPLETION AND WHAT IT MEANS TO YOU

Sulfur has become a major topic of conversation over the past several years.

For those of us old enough to remember, acid rain was in the headlines quite often in the 1970's and 80's. Acid rain was mostly produced from emissions from manufacturing plants. It caused our soils in the states and provinces to have very high sulfur levels.

When the Clean Air Act was introduced in 1970 and major amendments added in 1977, our quality of air improved greatly, acid rain events declined, and sulfur levels in our soils began to fall.





We now need to include sulfur in our fertilizer recommendations where we historically had not needed to add it. Our current yield levels have also pushed the levels of fertilizer needed so if we don't keep the sulfur in our soils at acceptable levels, we limit the crops ability to maximize yield.

One needs to understand the differences among sulfur sources to properly use them. Not all sulfur is plant available when applied or even still there when you need it. Since sulfate is the plant-available form, ammonium sulfate (AMS) is a great source for in season applications to supply a plant's needs. However, sulfate-sulfur is leachable, similar to nitrate-nitrogen, so rainfall events can put this sulfur availability at risk. Elemental sulfur must be oxidized to sulfate to become plant available. The oxidation rate of elemental sulfur is dependent on particle size and require warm active soils where microbes will oxidize the sulfur into sulfate. Elemental sulfur oxidation rates will be slower in cooler production areas and crops. For example, fall applications in winter wheat. Generally the large size particle in most elemental sulfur products will take many months to oxidize completely to sulfate so fall applications of elemental forms are generally needed to begin to have sulfur available during the next growing season.

The following crops may show a high response to a sulfur application: alfalfa, broccoli, cabbage, canola, cantaloupe, celery, corn, grass, sugar beets, and turnips. Other crops that have shown a response are: soybeans, tobacco, potatoes, watermelon, and tomatoes.

If sulfur is not a regular part of your crop nutrient plan, you could be missing some yield potential.

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