

## Nitrogen Stabilizers

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Nitrogen is an important component for growing our crops. It is responsible for generating photosynthesis, which is the process of creating light energy and using it as chemical energy. Nitrogen is critical to reach our yield goals for our crops. When you have more photosynthesis, you have a greener, therefore a healthier corn plant, which then leads to higher yields. Here at Linn Co-op, we offer many forms of nitrogen sources. We understand the importance of nitrogen and the need to sustain current ground levels for proper crop uptake.

Anhydrous ammonia (NH<sub>3</sub>) is a major source of nitrogen for the spring and fall seasons that our growers utilize. Proof that stabilizing nitrogen is effective, in the form of NH<sub>3</sub>, can be supported by observing data from our own fields.

Stabilizing the NH<sub>3</sub> in your field, has the following benefits:

- Inhibits major forms of nitrogen loss: volatilization, leaching, and denitrification
- Keeps nitrogen in the soil for longer periods of time
- Prevents greater loss of nitrogen due to weather extremes
- Less nitrates in water sources
- Increases yield potential
- Sustains soil health
- Investment protection

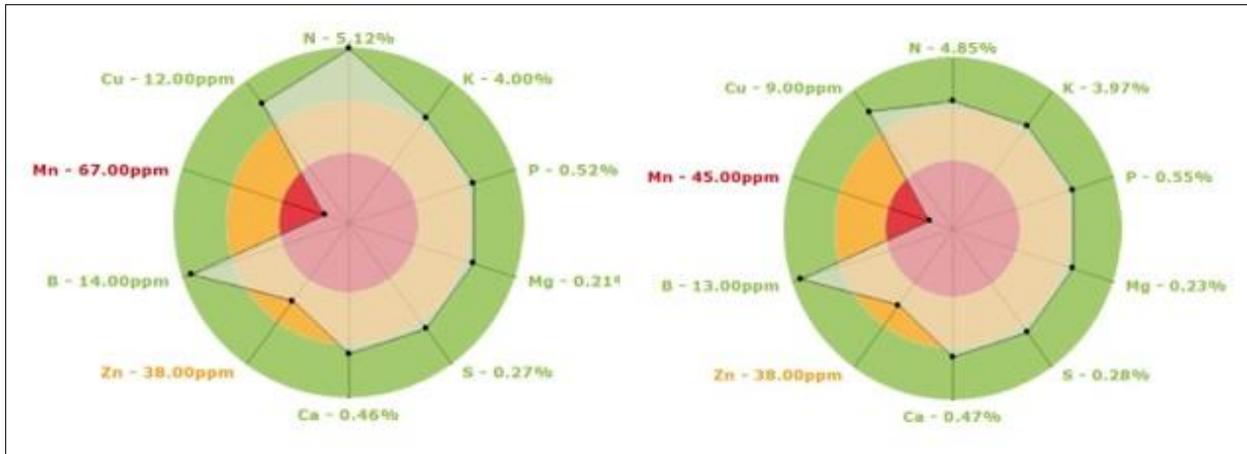
Stabilized NH<sub>3</sub> trials:

For the past several seasons, the agronomy department at Linn Co-op has performed several trials of stabilized NH<sub>3</sub>. We have a great team of applicators as well as sales agronomists, who work closely with growers to obtain reliable information, while keeping privacy a top priority.

Pictured below is an aerial view of a stabilized NH<sub>3</sub> vs. an unstabilized NH<sub>3</sub> field. Notice, where the NH<sub>3</sub> was stabilized the corn is greener. This was an application of NH<sub>3</sub> in the spring.



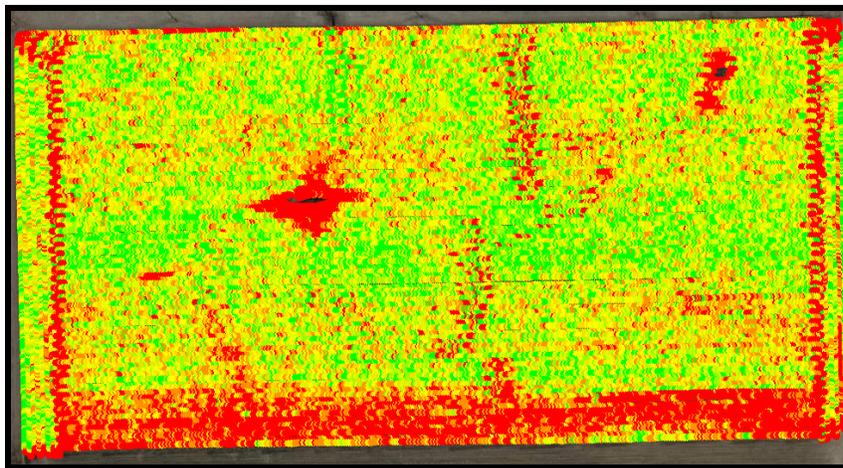
With visual evidence of the stabilizer working, we performed soil nitrate tests and tissue plant tests. We discovered that nitrates were higher in the stabilized NH3 soil, as well as in the plant tissue sample results. This demonstrates that more nitrates are remaining in the plant and soil, in an available form for the corn crop, even during mid-season. Shown below are lab results from V4 tissue samples, showing nitrogen in the current growing corn crop.



Stabilized NH3

Unstabilized NH3

The end product comes down to our yield increase. In this particular field, an average of 10 bushels was gained where the NH3 was stabilized.



*Unstabilized NH3*

**Stabilized NH3**

*Unstabilized NH3*

Protecting our nitrogen source is extremely important. There are environmental and economical benefits to doing so. Linn Co-op is a firm believer in keeping nitrogen where it is supposed to be, which is in the soil and available to the plant. We have a great lineup of nitrogen sources and stabilizers to protect your investment this growing season.

Contact our agronomy team and see what we can do for you to benefit your operation this year!