



Is it too Early to Apply Nitrogen this Month? As is so often the answer: it depends. On our podcast last week Jeff Vetsch shared with Ashley and I that ‘YES’ making applications of anhydrous ammonia under these conditions are hard to pass up. With far less risk of soil compaction. But ‘NO’ to urea or UAN applications this far ahead of planting.

To minimize risk loss incorporation the 2” depth would be required. And this far ahead of planting the risk of soil erosion due to wind or rain is just too great. The table below shows some guidance risk of volatilization losses with urea as a function of planting depth. Note too that minimum of 1/4 inch is needed to move urea. In fact, ANY LESS than that amount could lead to losses greater than leaving on the surface.)

Period – Days	Surface (% loss)	1 inch (% loss)	2 inch (% loss)	3 inch (% loss)
0 to 7	2.2	18.4	2.6	0
8 to 14	29.5	15.2	3.2	0.1
15-21	15.2	3.8	1.8	0.5
22-24	3.4	1	1	0
Total	50.3	38.4	8.6	0.4

*Slightly Acidic Silty Loam Soil. Losses increase with pH

Soybean Aphid Overwintering - Last week we talked about Corn Rootworm egg survival, realizing that unfortunately those eggs are likely surviving the winter JUST FINE! Although soybean aphids overwinter as eggs on buds of buckthorn plants, potentially more vulnerable than CRW eggs that have the benefit of soil or snow to insulate their risk. That fact is true, however air temperatures in this case were still not cold enough long enough to significantly impact soybean aphid mortality.



The critical temp for soybean aphids is -25 to -35 degree F. So far it's Insects 2 - Farmers 0. Think I'll stop for the week. Next week I'll talk about bean leaf beetle survival... might wanna pour yourself a stiff cocktail 🍹.

Fall Nitrogen Loss Potential with Mild Winter - On our podcast we also discussed the status of fall applied nitrogen with Jeff Vetsch of the Southern Research and Outreach Center at Waseca. He shared risks associated with several application windows of manure or anhydrous ammonia last fall. With nitrogen applied in early to mid October without a stabilizer when soils had not yet consistently dropped much below 50 are likely to have nitrified significantly. Meaning that ammonium nitrogen had converted over to nitrate the most vulnerable state of nitrogen. Nitrate N has a negative charge as do clay particles in the soil.



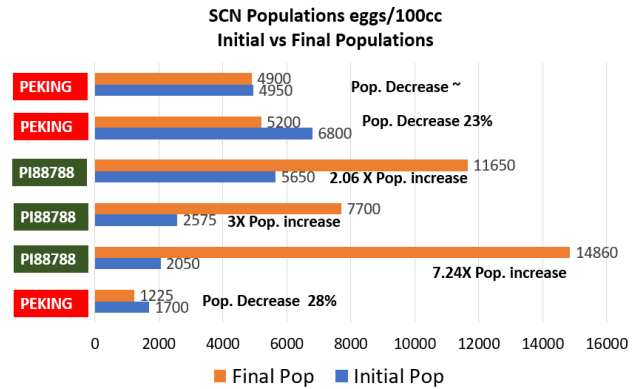
Fall Nitrogen Loss Potential (cont'd)

Just like magnets like charges repel meaning nitrate nitrogen is vulnerable to leaching OR denitrification (when soils are warm and saturated). With minimal precipitation thus far nitrified N likely hasn't moved far. However, heavy rains in spring could easily move that nitrified nitrogen. Stabilized nitrogen would not have nitrified last fall. But as soils warm this spring has the potential to nitrify. Meaning stabilized nitrogen is in a better spot at this time. I'll discuss fall urea next week.

Managing SCN Populations - For the past 24 years SCN resistant SCN varieties have been the best tool for managing SCN populations and protecting yield. However, the fact P188788 has been the predominant source present in 95%+ of varieties sold has diminished its efficacy. Just as prolonged use of a single mode of action herbicide would result in weed resistance or shifts in weed populations, so too is the case with SCN. Last season at three locations in south central Minnesota I positioned 88788 varieties next to PEKING then sampled initial and final SCN populations. At each location flags were placed every foot for 20 feet of row to mark where to pull soil core samples. Flags were left in the field to guide where fall samples were to be taken.



The results were compelling!!! PEKING held levels steady to reduced. Whereas 88788 allowed populations to increase significantly.



Other Studies - Fellow Pioneer Field Agronomist Eric Rice. Conducted a field scale study in 2023 with similar results. I have attached to this email a PDF version of an article that Eric wrote last fall. A rotation that includes PEKING and an SCN active seed treatment with both sources is an effective strategy.

Coming SOON Z-Series Soybeans - The good news is that high yielding agronomically sound varieties with the PEKING source of resistance are available. And in 2025 Pioneer will introduce Pioneer Z-Series Soybeans with 11 of 15 NEW varieties with PEKING resistance. Z-Series Soybeans as a group have shown a +2.7 bu/ac yield advantage vs. existing varieties.



In next week's update I'll discuss future tools for SCN management.

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Have an UNBELIEVABLE Week!!!

