

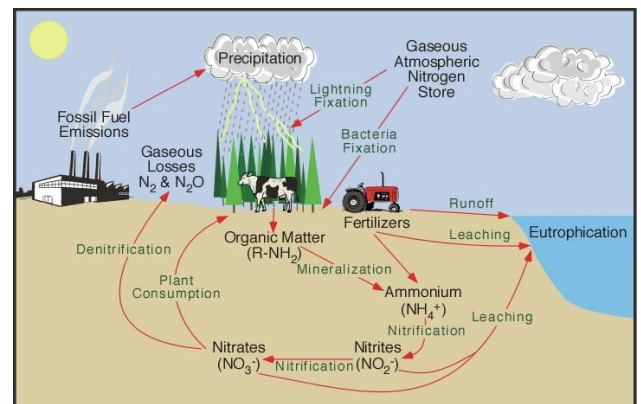


Field Notes for The Week Of 2-13-2023

Planning for Nitrogen Application This Spring

As I sat down to write this article I had to look at the calendar twice to make sure my eyes were correct, yes we are already halfway through February! The calendar might say February, but the weather feels more like March. In my travels and field work on the farm I can't help but take notice of nature as it begins to arise from its winter slumber. This week I scouted a few newly seeded alfalfa crops and to my amazement they were looking very strong and green. Winter annual weeds such as chickweed and purple deadnettle have also greened up and I expect will bloom earlier than normal this spring. Silver maples have begun to bud, and the autumn olive trees are beginning to bud as well. This is a good time to make basal bark treatments with crossbow or strait triclopyr. In reality not much either plants or animals really has much of a winter slumber! Winter 2023 has been one of the most mild winters in history with the average temperature hovering around 34°F but we still do have plenty of winter to go! Even though it has been a very mild winter it is not as mild as winter of 1931 and 1932 topping the 35.5°F average temperature. This past week was mild on temperature but not wind! Thursday February 9th the area saw wind gusts up around 50 mph. The high winds wreaked havoc on farm structures, trees, and powerlines but it did do wonders for drying the ground out! I and many other farmers managed to get some manure hauled, fence built, fence line cleaned, hay moved, and many other field work accomplished. I also had the pleasure to assist my counterpart in Highland co. with pesticide and fertilizer applicator recertification training. The main topic I covered was fertilizer application with a focus on Nitrogen. Nitrogen is one of grasses most yield limiting nutrients due to the plant inability to fix their own nitrogen like legume crops. Nitrogen has many challenges including, expense, volatility, and unpredictable uptake by plants. Nitrogen is all around us in the air, soil, and water. The goal is to have the nitrogen in your corn or grass hay crop to boost yields. Here are some key considerations to make this year as you plan your nitrogen applications.

- **Choose the right source for the right environment-** Many time farmers choose their source of nitrogen dictated by prices rather than effectiveness. Urea based fertilizers and urea (46-0-0) can be highly volatile when soils are wet and warm. Urea based fertilizers are better utilized when granules come in direct contact with the soil surface. Ammonium nitrate 34-0-0 sources are less volatile than urea but can be lost to volitation in hot and humid weather. Ammonium anhydrous (82-0-0) is readily available to the plant but best applied when injected into cool dry soils.
- **Teaspoon the crop-** No matter if you are growing corn or fescue, grasses better utilize nitrogen when they are actively growing and preparing for reproduction or seed set. For corn splitting nitrogen rates in 3 phases has seen great benefits to crop yields, one at planting, v5 stage and then at v12. For grass hay it is best to delay nitrogen application until later in growing season or after the first cutting depending on timing. Fescue based pastures can benefit from a nitrogen application in early august for grazing in the fall or even early winter.



- **Watch the weather-** Nitrogen is a tricky nutrient that can be highly effected by weather. The Nitrogen cycle and water cycle are very similar in nature. Making sure to avoid applications 48 hours or less before a heavy rain event, frozen ground, or hot and humid conditions is a must. Utilizing nitrogen stabilizing agents that coat the fertilizer or mixed in liquid N solutions can be highly effective in prevent N loss.