

# March '25 Monthly Crop Report

## “Poor Farmer’s Fertilizer”

Precipitation found in such form, snow, will help recharge moisture in soil profiles and adds a level of protection from detrimentally cold temperatures that could cause winterkill. While snow covered the vast majority of our direct area, it in turn gave producers a little fertility bump as well. Known to some as “Poor Farmer’s Fertilizer,” snow contains nitrogen and sulfur bringing a benefit to local wheat fields and pasture ground. Majority of the air we breathe is of nitrogen, but in an inert form that is not plant available. However, nitrogen compounds (nitrogen oxides) are also in the atmosphere. Snowflakes encase these compounds as they form into a crystalline structure. Wet, dense snow contain more moisture and less air, therefore less oxygen. The last winter event brought through a drier snow, meaning more air and in turn more nitrogen. Early winter and later spring snowfalls are most beneficial as the ground is not frozen. As the snow melts, they slowly release the trapped nitrogen where microbes can fix the nitrogen into ammonia or nitrates to then be taken up by the plant. Ron Gelderman, ex-South Dakota State Extension soil specialist, found that a 9-inch snowfall would equate to 2 inches of liquid water and 0.3 pounds per acre of available nitrogen. Annual deposits can range from about 5 pounds per acre on the western edge of the Corn Belt to 12 pounds in the Eastern Corn Belt. While not enough to change application rates, every little bit helps.



## Optimizing Wheat Top-Dress Applications

Moisture events have kept producers out of fields for much of February, so what does top-dress application planning for winter wheat look like in March? Adequate nitrogen availability to support spring tillering after dormancy is key, and to achieve such we need N to move into the root zone before jointing to be most efficiently utilized by the crop. With fine textured soils we operate on, spring green-up is a more optimal timing window than fall or early winter as there is significant risk of denitrification in those early apps. Waiting until spring to apply N will help minimize the potential for this type of loss. Typical N sources used are dry urea and Urea-Ammonium Nitrate, broadcasted. In high-residue or no-till situations, dry urea may provide more of an advantage compared to UAN as some pelletized urea will fall to the soil surface and be less affected by immobilization; UAN tends to get hung up on surface residues. If using straight UAN with no herbicides incorporated, surface banding applications would help avoid some of the surface residue tie-up. Looking at optimal rates, management strategies and intensification must be considered. How much N was fall/winter applied, was a profile N soil test taken, what is our tillage system, what is our yield goal? Recommendations will vary, but around 1.5 lbs of N per bushel per acre of yield goal should be considered, again crediting profile N, previous crop, etc. A wheat crop can also benefit from Sulfur and Chloride applications as these nutrients are mobile in the soil and pair well with N top-dress applications, considering a liquid or dry N source.



Tip burn/winter damage. Moisture is needed to make N available, greening up new growth.

***“Worry about your character, not your reputation. Your character is who you are. Your reputation is who people think you are.”***

**John Wooden**