Area Crop Report 10/7 – 10/11

Wheat Planting Tips for Good Stand Establishment

- **Uniform planting/seed depth:** Achieving a uniform seed depth will correlate to uniform emergence, increasing yield potential. In most instances, ideal planting depth is 1.5 inches. If planting early into warmer soils, planting shallower may be advised as coleoptile lengths become shorter under warm conditions. Inversely, producers sowing a later crop should also be cautious of planting too deep into cooler soils. Crop residue, especially if your rotation follows corn production, should also be considered.
- **Optimum Timing Window:** As talked about in a previous weeks' report, producers should look for the Best Pest Management Planting date range if grain production is the sole crop purpose. Crop insurance deadlines will also play a factor if choosing to plant after this range. In most cases, later planted wheat will not have a well-developed root system going into the winter months and fall tillers will be reduced.
- **Soil Fertility and Proper Application Rates:** In our area with heavier clay-based soils and higher Cation Exchange Capacity (CEC) levels, soil pH is typically low, or considered acidic. These lower pH soils can pose a problem, primarily earlier in the season, as root systems will be near the soil surface where lower pH range/area is typically found. Soil tests can determine where your pH sits, a recommended buffer pH, and liming requirements to obtain an optimum level. Looking at fertilization, split nitrogen applications are recommended with a fall application before or at planting and topdressing in the spring. Phosphorus and potassium are typically fall applied.

Crop Nutrient Removal Rates and Fertilizer Recommendations

Liebig's Law of the Minimum states that growth is limited by the scarcest resource, not total resources available. While macro sources (N, P, K, S, Mg, Ca) are thought of most, micronutrients (Fe, Mn, Cu, B, Zn, Mo, Cl) are equally important as well as temperature, light, water, CO2, and oxygen. This week will focus predominantly on macro and secondary macronutrients.

Whether your wheat rotation follows corn, early-planted soybeans, grain sorghum, cover crop, or fallow, recommended macronutrient values will be variant as each crop has a different nutrient removal rate based upon harvested/expected yield, organic matter, and what removal resource you are using. For example, if sowing wheat into acres that were previously in corn production and was harvested at 120 bushels per acre, the removal rates to consider are as follows: N = 108lbs/ac, P2O5 = 46lbs/ac, K2O = 32lbs/ac, S = 10lbs/ac, Mg = 6.3lbs/ac, and Ca = 11lbs/ac. Due to the geographic location our cooperative resides in, phosphorus and potassium applications are commonly done in the fall, with an adequate amount of nitrogen being found in our P fertilizer source. Our agronomy team also recommends 5-10 units of sulfur to help with fall tiller production.

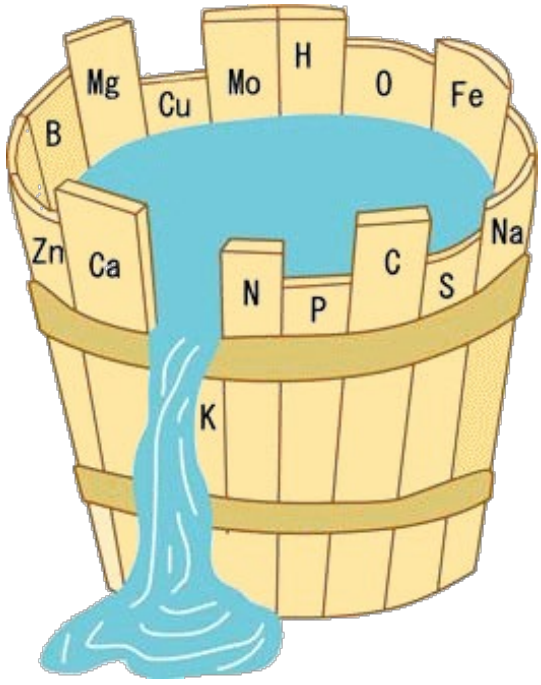

Image depicting Liebig's Law of the Minimum

"*The one who plants trees, knowing that he will never sit in their shade, has at least started to understand the meaning of life.*"

Rabindranath Tagore