LEGACY Seeds
Integrity. Performance. Solutions.

AGRONOMY NEWSLETTER

FEBRUARY 2020

WALKING FIELDS

WINTER MEETING SEASON

As the winter meeting season gets into full swing, this is a great opportunity to educate yourself on ways to improve your acres but how do you evalute data from 2019 ? Be cautious when making management decisions based off 2019, such an extraordinary year of uncharacteristic weather can easily skew data from multiple year studies and on farm trials. We all need to take all data from 2019 with a grain of salt and critically review the results. Understanding how 2019's planting, growing and harvest conditions changed the expected outcome of trials is important. Changes to fertility programs could have been affected by delayed application and excessive soil moisture ; Herbicide program trials may have been changed in response to the weather ; new corn hybrids may not have been planted in ideal soil conditions and the list goes on and on. Being able to identify trends in data, taking into account variability within the data and knowing the difference between marketing and research will help growers sort through material to find valuable information.

Take away a couple lessons learned in 2019 but stick to "normal" best management practices for your acres in 2020. Drastic adjustments to crop management decisions based off of reactions to 2019 could leave a lot of yield on the table 2020.

POTASSIUM FERTILIZER

HOW K EFFECTS YOUR CROPS

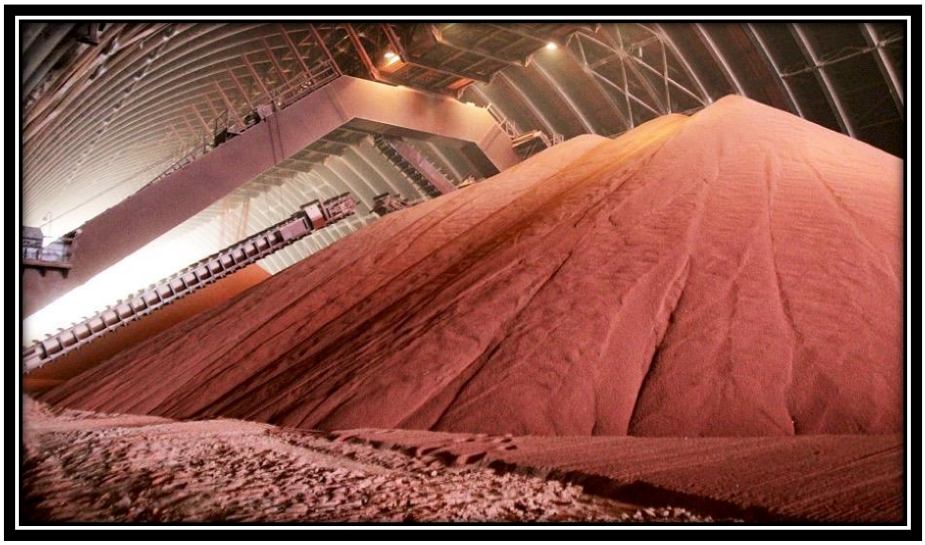
Potassium (K) is classified as a macronutrient because plants take up large amounts of K throughout their life cycle. Potassium has been described as the "forklifts" within the plant because it helps move water, carbohydrates and other essential nutrients like Nitrogen within the plant. Along with doing some heavy lifting, K aids in the production of protein and starch in crops. Potassium levels also helps to regulate the rate of photosynthesis and the opening and closing of the stomata which controls the exchange rate of water vapor, oxygen and carbon dioxide.

Many soil types can supply a portion of the needed K to grow crops. Potassium is held in three different portions within the soil: Primary Minerals, which is unavailable to plants; Secondary Minerals, which will slowly become available to plants; and Solution, which is readily available to plants. This makes K relatively stable within the soil profile. There are certain factors that affect a soil's ability to hold Potassium but Cation Exchange Capacity is often the best way to predict the soil's capacity.

Soil texture, soil mineralogy and soil organic matter all determine the K buffering capacity which is the amount of fertilizer required to change soil test levels by 1ppm.

The University of Wisconsin has classified many common crops into Crop Demand Classes for soil nutrients. Corn for grain, soybeans and small grains fall into Demand Level 1 crops requiring 101-130ppm of soil test K within the optimum production level on loamy soil types. Alfalfa, corn silage and wheat are classified as Demand Level 2 crops which require 111-140ppm of soil test K within the optimum production level on loamy soils. Soil moisture, soil aeration, soil temperature and soil structure are factors affect K uptake into the plant.

Fertilizer application recommendations are often made in pounds of K_2O which is the plant available form. The most common fertilizer is Potash which can vary from 60 to 62% K_2O depending on the source. Potassium can quickly become a yield limiting factor in high yielding crops and on soils with low soil test levels.



SB CHEM CONFUSION

HERBICIDE REVIEW-ENLIST E3 SOYBEANS

The Enlist weed control system is made up of three parts, traits in soybeans and corn, Enlist branded herbicides and stewardship or management resources for the technologies. Enlist E3 soybeans, developed by MS Technologies and Corteva were commercialized in 2019. E3 soybeans have herbicide tolerance to glyphosate, 2,4-D Choline and glufosinate. In the 2020 growing season E3 soybean acres are expected to reach at least 10% of the US soybean crop, at about 9 million acres. Like all other platforms, residual herbicide programs that were used with RR2 Yield soybean varieties can still be utilized. Corteva has two products that registered for use on E3 Soybeans : Enlist One (2,4-D Choline straight goods) and Enlist Duo (2,4-D Choline and glyphosate pre-mix). The new Choline formulation of 2,4-D helps reduce drift and volatilization. These Enlist herbicide options can be applied through the R2 or full flowering stage. Enlist E3 soybeans do require a specific tank clean-out processes, tank mix partners and buffer set backs when applying the approved 2,4-D Choline products. Continue to read herbicide labels to stay in compliance. Legacy Seeds has a full line-up of Enlist E3 soybeans for the 2020 growing season in from 0.8 to 2.4RM. For more information on the Enlist Weed Control System go to : Enlist.com

TAR SPOT UPDATE

A LOOK AT THE IMPACT OF TARSPOT IN THE MIDWEST

The large outbreak of Tar Spot throughout the Midwest in 2018 brought the disease into the spotlight. Up to this point very little field screening or genetic selection was done in the US for hybrids resistant to Tar Spot. In 2018 many land grant universities including those in Illinois, Indiana, Michigan and Wisconsin collected Tar Spot disease resistance ratings at R6 from field sites of state hybrid trials. The observations in Wisconsin ranged from minor infections of 9% to severe infections of 50% of leaf surfaces infected. Where infections increased the green canopy decreased resulting in rapid drydown and yield loss. Results found that for every 1% increase in Tar Spot severity on the ear leaves yield decreased by 0.79 bushels per acre for 98-106RM hybrids and 1.36 bushels per acre for 104-113RM hybrids. These rating showed an overall yield loss of 40-60 bushels per acre. With such a significant impact on yield, more evaluations of control methods are being done. However, many plots were lost in 2019 because of the unfavorable planting and harvest conditions. In 2018 the University of Wisconsin did a Fungicide Evaluation Trial at the Lancaster site which showed effectiveness rating against Tar Spot.

ALFALFA HERBICIDE OPTIONS

"IT HAS TO BE ROUNDUP READY." OR DOES IT?

Many conversations about alfalfa variety selection begin with "It has to be Roundup Ready." What if the best suited variety for your farm is not Roundup Ready? There are many management and herbicide options that offer control of weeds in conventional alfalfa. Legacy Seeds has a "Weed Management in Alfalfa Production" document that has a lot of useful information. Many herbicide options, such as Buctril, 2,4-DB, clethodim and Raptor, have been around for many years and still show effective control. Recently, Warrant was granted a supplementary label for alfalfa. This will be a key tool in controlling waterhemp in seeding year and established alfalfa. Proper weed management practices, like starting weed-free along with establishing and maintaining a vigorous healthy alfalfa stand, will aid in keeping control of weeds. Please contact your DSM for a copy of "Weed Management in Alfalfa Production".

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