



WALKING FIELDS

CLIMATE FIELDVIEW

Technology continues to be a huge part of the agricultural industry. When it comes to agronomic decisions there are technologies out there to help evaluate and measure success. With razor thin margins and a lot on the line in 2020 now is great time to take advantage of a technology that gives you more insight into crop performance, crop environments and management decisions. Legacy Seeds has been working with Climate FieldView from Bayer for some time. Climate FieldView has multiple platforms, including web based and mobile app based software and a device that allows you to gather data from equipment. Climate allows a grower to consolidate planting and harvest data in one program. The program also allows growers to track crop progress and nutrient availability through satellite imagery and the nitrogen management tool. Soil maps and program generated variable seeding help to make the right decisions when placing corn hybrids and soybean varieties. Climate FieldView brings a lot of other features to the tips of the growers fingers.

The program will only share farm data with anyone the grower classifies as a « trusted advisor ». Heading into an important growing season being armed with the proper data to make informed and profitable decisions could help your growers harvest some of their best performing crops.

WHAT THE PHOS?

THE ROLE OF PHOSPHORUS IN CROP PRODUCTION

Phosphorus is the last of the macronutrients that we will discuss before moving on to some important micro nutrients. The role of Phosphorus within the plant is very well known and critical to maximizing crop performance. Phosphorus is key in converting sunlight into plant material. It also is critical in metabolism of sugars, energy transfer and storage, cell growth and the transfer of genetic information. The most important of these functions being nutrient transfer and the role phosphorus plays in photosynthesis. Phosphorus is very immobile in the soil profile and is taken up by the root hairs and tips. Soil compaction, root growth and fertilizer positioning can drastically limit P uptake. Mycorrhizal fungi can help make phosphorus uptake more efficient by increasing the surface area of the root mass. Uptake of Phosphorus increases as soil temperatures increase. Deficiencies typically show up in young plants early in the growing season as purpling in the leaf margins and towards the leaf tips. Some plants such as corn can grow out of this seedling purpling

once root growth can reach phosphorus rich areas of the soil or once environmental conditions allow for more rapid uptake of available P. Phosphorus is readily mobilized and translocated in the plant so deficiencies are not as easy to identify in older plants. Deficient older plants are smaller and grow slower than plants with sufficient P.

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 16-20ppm of soil test P within the optimum production level on loamy soil types. Alfalfa, corn silage and wheat are classified as Demand Level 2 crops which require 18-25ppm of soil test P within the optimum production level on loamy soils. Soil moisture, soil aeration, soil temperature and soil structure are factors affect Phosphorus uptake into the plant.

Phosphorus' available form is P_2O_5 . Common Phosphorus fertilizer sources in the Midwest include DAP (18-46-0), MAP (11-48-0) and Ammonium Polyphosphate (Liquid 10-34-0).



SB CHEM CONFUSION

HERBICIDE REVIEW – LLGT27 SOYBEANS

The LLGT27 trait platform was developed in collaboration by Bayer and MS Technologies but now is a part of the BASF portfolio. This trait has herbicide tolerance to Glyphosate, Glufosinate and a new HPPD/Group 27 herbicide. The HPPD/Group 27 herbicide portion would give growers another option for burndown and pre-emerge control of glyphosate resistant weeds. The HPPD/Group 27 portion is not approved by the EPA as of yet and will most likely not be approved for use in most of the state of Wisconsin because of other herbicide restrictions. The LLGT27 soybeans do not contain the Roundup Ready (Bayer/Monsanto owned trait) but they are glyphosate tolerant by utilizing a different glyphosate-tolerant trait. Pre-emerge residual herbicides and overlapping residual control is still recommended as the best management practices for this trait package. The LLGT27 platform is offered in maturity groups ranging from Group 0 to mid-Group 4's targeting the Midwest and the Corn Belt. Much of the germplasm used for this trait platform has been proven in trials as being high yielding, consistent performers and disease tolerant. Legacy Seeds has LLGT27 soybean varieties ranging from a 0.7 maturity to 2.0 maturity for the 2020 growing season.



CORN AFTER CORN THOUGHTS

MANAGEMENT CONSIDERATIONS FOR CORN ON CORN

Some soybean market uncertainty may have growers looking to increase corn on corn acres. Fields with better drainage should be growers' first choice for going corn on corn because of the response to more intense management and the ability to avoid wet, delayed planting. Fields with better fertility make for better corn on corn environments since there is an elevated demand of Nitrogen by 30 to 50 pounds per acre. Select a hybrid that has very good emergence and early season vigor scores. Hybrid disease resistance is also very important; especially against diseases that can overwinter in corn residue. Because of the increased amount of residue, residue management is critical to avoid increased disease pressure. Foliar fungicide applications and seed treatments will also help to manage disease pressure. Residue can also house more pests; be sure to select the appropriate trait packages to manage the pest spectrum and pressure. Planting conditions and seeding rates can affect the success of corn following corn. A slight seeding rate increase of 10% will mitigate any establishment problems. Because of the harsh environment, target planting times when soil temperatures are at a continuous 55°.

PHYTOPHTHORA IN SOYBEANS

PRR RESISTANCE GENES IN SOYBEAN

Phytophthora root rot is a fungal disease that can affect soybeans at any stage of growth. PRR pressure has been on the increase because the increase in soybean acres and the shortened intervals between soybean crops. Saturated, warm soils and poorly drained fields are the first spots where PRR will decrease yields. Once infected, young plant leaves become water-soaked, wilt, yellow and eventually die. Older plants may not die but productivity will be dramatically decreased. Varietal selection is the best management tool against PRR. Varieties of soybeans can either have Field Tolerance or a race specific resistance gene. Race specific genes are most effective against the selected races of PRR with some of the most common genes being Rps 1c (effective in 75% of WI fields) and Rps 1k (effective in 99% of WI fields). Field Tolerance presents a lower level of resistance to all races of PRR and can often times have acceptable control of the disease except in high pressure areas where the tolerance is overcome by the disease.

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