



WALKING FIELDS

SOYBEAN CHEM CONFUSION

It is very possible to see up to six different soybean herbicide tolerance traits in the same geographic area. This will and has created many logistical challenges from tank clean out, record keeping, drift control and tank mix partners among other application technology challenges. There are new pre-mixed products being introduced in 2020 that include the trait specific herbicides. Syngenta's Tavium Plus VaporGrip Technology which will contain dicamba and S-metolachlor will be available. FMC is expanding their Authority line of herbicides, pending EPA and state approval, to help simplify control of resistant weeds. Corteva's Enlist Duo and Enlist One will become more widely used as about 10% of U.S. soybean production in 2020 is expected to be planted to Enlist traited soybeans.

There is still wide spread confusion and lack of knowledge of these trait and herbicide options at the grower level as well as the seed seller level. A lack of knowledge on the grower, seed seller and/or the applicators part could easily turn into a very costly mistake. Legacy Seeds will continue to bring useful and timely information on these trait options in the coming months. With resistant weed pressure increasing and spreading throughout the Midwest understanding the challenges your farm or your customers are facing will determine the most profitable control options.

NITROGEN FERTILIZERS

THE IMPORTANCE OF N IN CORN PRODUCTION

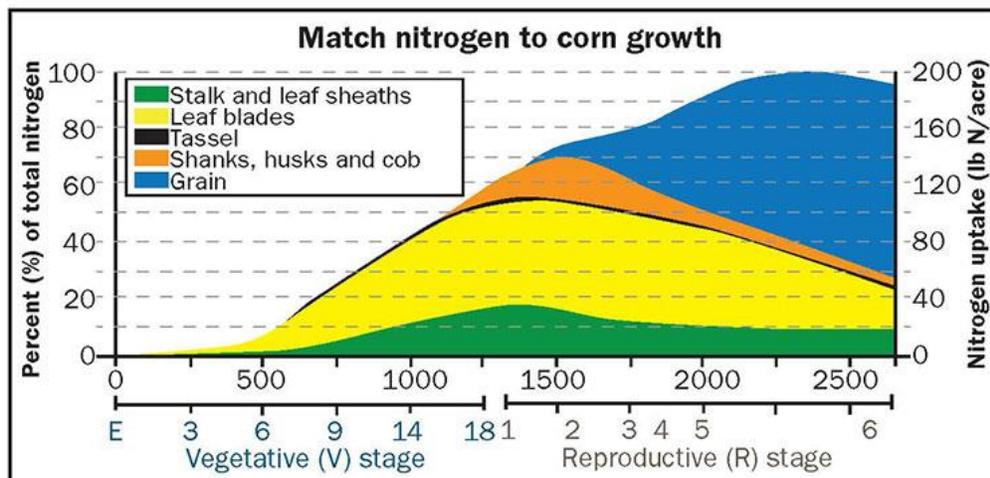
Nitrogen is one of the largest corn fertilization expenses and often times is the most limiting nutrient to corn. The management of Nitrogen is critical because it significantly impacts the production of corn in almost all crop rotations and environments. Typically, one pound of Nitrogen taken up by the corn plant will result in about one bushel of grain produced. To maximize the economical return on this relationship a grower must understand how a corn plant utilizes Nitrogen.

A corn plant will not utilize much N before the V4 growth stage. The next six weeks or so from the V4 growth stage to tasseling will account for nearly 70% of the total Nitrogen that the corn plant will take up. From silking to the blister stage of the kernels N accumulation or uptake in the plant slows dramatically. Between the blister and dent kernel stage, as the kernels are being filled with Nitrogen being remobilized from other areas of the plant, uptake increases again. Just over half of the N accumulated during the growing season is held in the grain. Nitrogen that has

accumulated in the leaves and stalk is later released back into the soil as the crop residue decomposes.

Because of the extended periods of time that N is taken up by the plant it is important to make sure the nutrient is available when needed. This can be difficult to manage because some forms of the nutrient are more leachable in the soil than others. To mitigate the risk of leaching, growers should apply Nitrogen multiple times throughout the growing season targeting when the plants' uptake is highest. Utilizing Nitrogen Stabilizers, either biological or physical, can also reduce the risk of losing Nitrogen to leaching.

Many different N fertilizers are used throughout the trade area including urea (46-0-0), UAN (28% and 32%), Ammonium Nitrate (36-0-0), Ammonium Sulfate (21-0-0-24S), Diammonium Phosphate (18-46-0), and Anhydrous Ammonia (82-0-0). Often times cost per unit of N and logistics of handling the products determine the fertilizer source used on a farm.

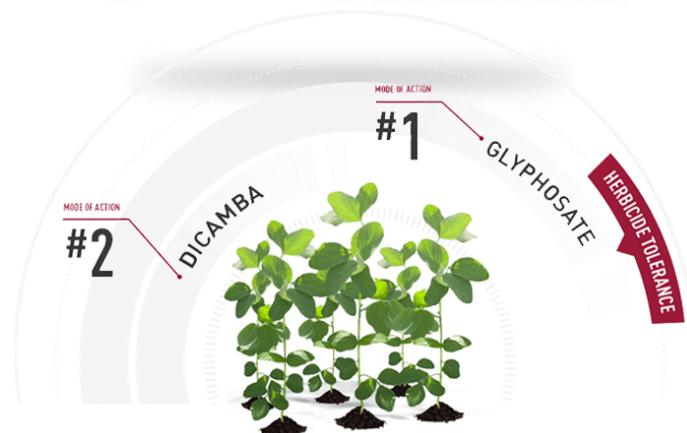


SB CHEM CONFUSION

HERBICIDE REVIEW - XTEND SOYBEANS

RR2 Xtend soybeans were planted on about 60% of soybean acres in the U.S. in 2019. These soybeans are tolerant to glyphosate and dicamba herbicides. Residual herbicides that were used on RR2 Yield varieties can still be utilized with RR2 Xtend varieties. Limited approved restricted use pesticide dicamba herbicide options can be used with this trait ; they include Xtendimax from Bayer, Engenia from BASF, FeXapan from Corteva, and Tavium Plus from Syngenta. The application of these dicamba herbicides can be more restrictive than label requirements with some states implementing application cut-off dates, temperature and application hours restrictions. The approved dicamba based herbicides provide good control of waterhemp and other glyphosate resistant weeds. They also provide about 14 days of soil residual control of unemerged weeds. New approved premixed herbicides with dicamba and other active ingredients will be available in 2020. Performance throughout Legacy's RR2 Xtend lineup has again been very strong in 2019.

ROUNDUP READY 2
XTEND
SOYBEANS



ONE YEAR'S SEEDLINGS...

MANAGING 2019'S PREVENT PLANT ACRES IN 2020

There is an old weed management adage that goes "one year's seedlings will equal seven years weeding." This makes reference to the increased weed seed bank from a field being out of managed production for one year. Ideally all prevent plant acres would be managed by planting a cover crop, regular mowing, herbicide applications or even tillage but the reality of 2019 was that many of those acres were not able to be managed because of the weather. Moving into 2020 some considerations should be made to manage for elevated weed pressure from a newly revived weed seed bank. Using a preplant or pre-emerge burndown herbicide application will help to start clean in these fields and terminate any cover crops that may have overwintered. Take some time to scout these acres before the burndown application as there may be winter annual weeds in the reproductive phase that will be tough to control with only glyphosate. Be sure to use residual chemistry because with the added weed seeds and species from sitting idle there will be more pressure throughout the season. Checking fertility levels and fertilizing to get to crop canopy quickly will also help control weeds throughout the season.

ANY VOLUNTEERS?

MANAGING VOLUNTEER WEEDS

With the harvest challenges of 2019 it is inevitable that volunteer weed pressure will be increased in 2020. Volunteer corn in soybeans is easily controlled with grass selective herbicide options (Fusilade, Assure, Poast, Select, etc.) applied according to the label. Clethodim has been a very popular and affordable option throughout the trade area. Glyphosate or Glufosinate could be used if the previous corn crop was not tolerant but the current soybean crop is tolerant to the herbicide applied. Volunteer soybeans in corn are easily controlled with broadleaf selective herbicides used in corn production. Volunteer corn in corn poses little concern unless at high pressures. Glyphosate or Glufosinate can be used if the previous crop was not tolerant and the current crop is tolerant to the herbicide applied. Assure II and other «*fo*» chemistries can be used to control volunteer corn in Enlist traited corn fields.



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