



Since 1992

Pioneer Agronomy Update 7-15-2024



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Area Update... It's Official – Last week I jokingly referred to the fact that the 2020 growing season was worthy of it's own emoji. After another challenging week where un-forecasted rains made an appearance further delaying field activities including replanting, spraying and nitrogen applications.



July Soybean Scouting Focus – My apologies for starting off on a negative foot with this week's update, because if there is a bright spot it may be that *'in general'* the common opinion is that soybeans have fared better thus far than corn. Although, as mentioned in my last update root and stem diseases are common in some fields. My explanation as we look at relative comparisons is that many of the corn issues are related to nitrogen losses and nitrogen availability. On the other hand soybeans fix their own nitrogen and although saturated soils may impact the ability of the rhizobium bacteria to fix nitrogen; once soils begin to dry out efficiency of nitrogen fixation improves. TOTALLY my theory but it seems to make sense given the conditions.

July Soybean Scouting Focus Cont'd ...

Soybean Aphids – Mild winter weather likely led to improved survival of soybean aphids. I heard my first report of soybean aphids last week. Levels reported were quite low yet, not anywhere near approaching economic levels. Although some non science, non-research based thresholds well below 200-250 aphid per plant established threshold get tossed around. The majority of agronomists adhere to the established thresholds.

Additional thoughts on Soybean Aphids

- **Fungicide/Insecticide Timing** – In a perfect world aphid populations would reach threshold at R3 growth stage and a tank mix application of fungicide and insecticide would be 'lights out' for both. My experience in "Soybean Aphid Years" pre-threshold insecticide applications made prior to the last week of July often result in the need for a second application. It's your money, but that is my opinion. Premature applications impact potentially beneficially insects that could otherwise keep aphid populations in check.
- **Soybean Planting Dates and Soybean Aphids** – This year's wide planting window may add another dynamic to aphid scouting. Oftentimes soybean aphids tend to be particularly attracted to younger more succulent soybean plants. So don't be surprised if your latest planted soybean fields have heavier aphid pressure.



Soybean Reproductive Stages R2 & R3 (adapted from A visual Guide to Soybean Growth Stages UW Wisconsin Extension) - R2 Reproductive Stage 2 described as Open flower at one of the two uppermost nodes on the main stem with a fully developed leaf.

- Flowering will continue for 3-5 weeks.
- 20-80% of flowers produced will be aborted
- 50% defoliation can reduce yield by 6%
- 100% defoliation can reduce yield between 23-40%

R3 Reproductive Stage 3 Pod is 3/16 inch long at one of the four uppermost nodes on the main stem with a fully developed leaf 3/16 inch bottom portion R3 plant top portion

- R3 plant can have all of the following:
 - developing pods, withering flowers, new open flowers and flower buds.
- Potassium uptake rates peak shortly after R2, ranging between 3.5-5.2 lb K2 O /acre/day.
- Last growth stage to treat for white mold



Fungicide Application Timing in Soybeans - As mid- July arrives, thoughts go towards fungicide application timing. Fields that were planted the first 10 days of May soybeans will likely be at or nearing late R2 or R3 growth stage by the end of this week. Reports last week suggested that April planted soybeans have reached R3 the optimum timing for fungicide applications As in the past I have attached a picture to help guide you as you stage your soybeans. REMEMBER to start from the top of the plant locating the first fully expanded trifoliolate. Then, including the node it is attached to count the top four nodes looking for a tiny pod that is 3/16 inch in length.

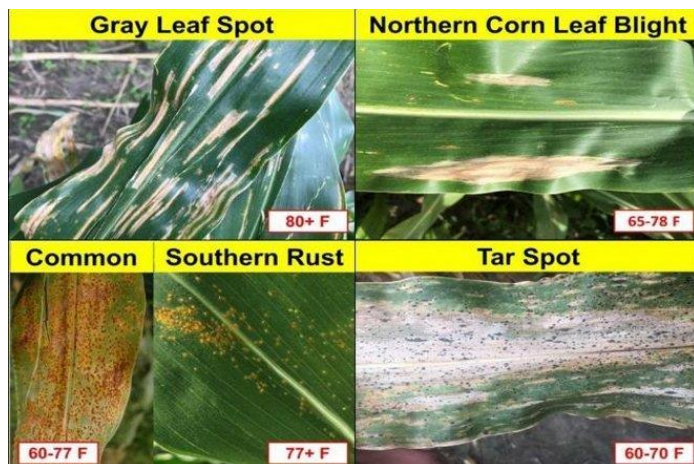


Application Timing	Number of Comparisons	Yield Response (bu/acre)
R1	40	2.3
R3	100	3.7
R5	48	2.7

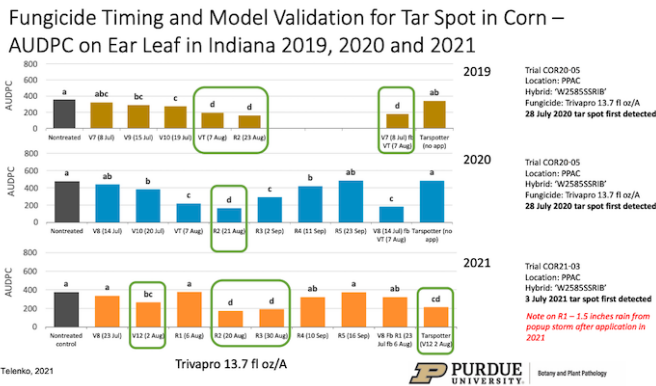
Tar Spot UPDATE – In my last update I mentioned that tar spot had been positively identified as near to our area as Durand, WI. Last week I received the first Minnesota reports from Pioneer Sales Rep Jason Garvick in Faribault county. And another report from Goodhue county.



It's time to begin scouting for tar spot and other foliar diseases in corn including: grey leaf spot, northern corn leaf blight and common rust.



Tar Spot & Fungicide Application Timing in Corn
 - Scouting and timely fungicide applications in corn can be effective in managing each of the diseases mentioned. Generally, the optimum timing for tar spot has been VT to R2. The chart below from Purdue University illustrates Fungicide Application Timing in corn for Tar Spot at various application timings. Note that disease infestation timing of occurrence can vary from one year to the next, and hybrids vary in their susceptibility to tar spot. Over the three years researched the VT – R2 timing appeared to deliver the most consistent results.

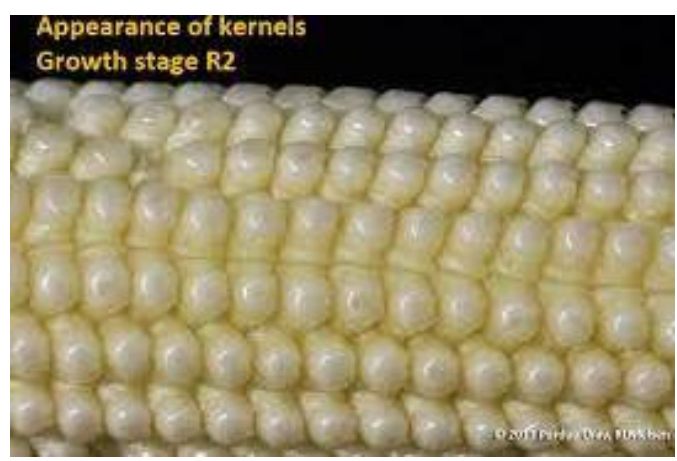


VT & R2 Growth Stages– As agronomists we throw growth stages around left and right, just assuming that everyone knows and that everyone remembers from one year to the next. EVEN I gotta refresh my memory every year! Below are the reproductive growth stages defined:

- **VT - VT stage** arrives when the last branch of the tassel is completely visible. VT begins about 2 to 3 days before silk emergence.
- **R1/silking** - Silks are first visible outside the husks. Silks emerge at the base growing towards the tip of the developing ear in two to five days
- **R2/Blister** - 10 - 14 days after silking. R2 kernels are white on the outside and resemble a blister.



- Field variability could make precisely timed fungicide application timing challenging. Especially this year. A couple thoughts:
- Time Application to the growth stage of the majority of the field.
 - Pre-Tassel applications can result in arrested ear syndrome in corn. To minimize risks spray fungicide and water only. Adding micronutrients, surfactants and other additives only increases the risk of arrested ears. Especially in fields with highly variable growth stages.
 - DOES ARRESTED ear syndrome occur often? NO. But when it occurs it can be quite devastating. You will hear arguments that: ‘this or that’ additive or surfactant may be safe. Just know that I have even seen arrested ears with such ‘safe’ applications... end of lecture!



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Have an UNBELIEVABLE Week!!!

Your Field is Our Office

AGRONOMY PODCAST
 With Jay Zielske & Ashley Storby

2024 Show me your Corn Gallery – MY thanks to those who have consistently shared their ‘Show Me Your Corn’ photos over the years. Rain or shine, through thick or thin they have shared their corn pictures. In a year with many challenges it is encouraging to that our ‘loyal’s have still come through with their corn pictures. Although the number of entries are ‘down’ compared to other years the quality of fields remains high. My thanks to all who participated. To those who took a year off: We look forward to seeing your pictures NEXT July 4th!!

Show Me Your Corn 2024



P9955V - Near Henderson, MN



P05737AM - Near Waverly, MN



P9492AM - Near LeSueur, MN



- Near Norwood, MN



P0404AM - Near Lakefield, MN



JZ - Near Webb Lake, WI