



Upcoming Dates

October 28th, 2022
Early Commitment Bonus
Deadline

November 28th-30th, 2022
Annual Open House—
Please look for a letter in the
mail with details

December 1st, 2022
Deadline to pay Deferred
Pay Loans for 2022 seed

December 2nd, 2022
1st Cash Payment Discount
Deadline for 2023 seed

February 24th, 2023

- 2nd Cash Payment Discount Deadline for 2023 seed
- Deadline to fund Corteva TruChoice chemical account for Early Pay Savings

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SEED PLANNING FOR 2023

We've had several customers meet with us already for seed orders for the 2023 crop year. The sooner we know the demand, the better off we will be in attaining supply of the leading hybrids. Year in and year out, the early orders have a better chance at the hybrids, varieties, and quantities wanted vs. later orders. Please let us know if you have interest in getting an additional 2% seed discount by committing to an order by October 28th, 2022. The first cash payment discount is December 2nd. Please see the column on the left for other important upcoming dates.

TAR SPOT UPDATE

In Mid-September, tar spot was confirmed on corn leaf samples collected in Harrison, Carroll, and Marion counties. Many questions still remain regarding tar spot of corn. It was first confirmed in the U.S. in 2015, which makes it a relatively new threat, especially in Missouri, where it was first confirmed in 2019. Infected plants can rapidly blight and are associated with reduced grain fill and significant yield losses. Corn yield losses due to tar spot in 2021 were estimated at 205.4 million bushels. At current disease pressures, a well-timed VT or R1 application when tar spot lesions are present seems to be as effective as an early fungicide application to corn that has low to no incidences of tar spot. An early application is more likely to require a second pass if the pathogen is present. There is still not a lot of information on the effectiveness of R4 or R5 fungicide applications. This is problematic in a year when the disease shows up late, such as this year in 2022. Research out of Purdue in 2020 and 2021 did not show benefit from the later applications. In addition, the fungus that causes tar spot, *Phyllachora maydis*, overwinters on corn residues. Confirmations in Carroll and Harrison County suggest that the pathogen is likely present in much of northern Missouri (Figure 1). Moving forward, here are a few thoughts for 2023:

- **Knowledge** | Farmers must learn how it spreads, what it looks like, and where it comes from. Leaf wetness is an important factor. Even in dry years such as the majority of 2022, dew forms on leaf surfaces during the majority of Missouri mornings, due to common temperature inversions.
- **Hybrid Selection** | Pioneer is continuing to screen corn varieties with tolerance to tar spot, and they recently launched tar spot ratings for our corn lineup. There are no tar spot-resistant hybrids available, but some are more tolerant of the pathogen than others.
- **Management & Fungicide** | Choosing and applying fungicides will become more commonplace to battle tar spot. Consider residue management and crop rotation to reduce the amount of pathogen inoculum available to infect corn.

Figure 1. Red Stars indicate counties where tar spot of corn has been confirmed one or more times between 2019 and 2022.



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PRODUCT SPOTLIGHT

P1164AM

P1164AM is a new 111 day corn hybrid suitable for those “in-between” acres. It’s a great workhorse hybrid that combines good agronomics with a good disease package, and exhibits above average drought tolerance.

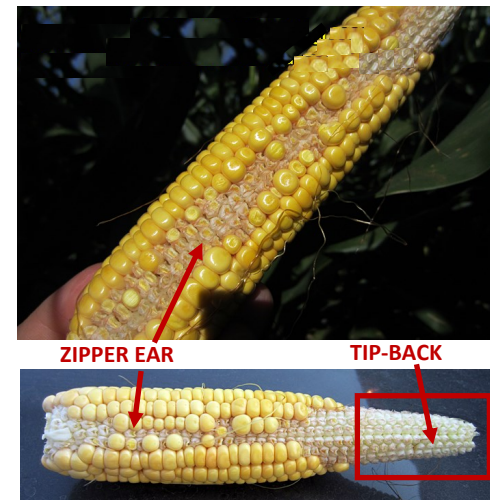
P37A18E

P37A18E is a group 3.7 maturity A-Series Enlist soybean. It’s a leader product for high yielding acres in the mid- to late- group 3 range. It has great standability and works well in both bottoms and highly productive soil types where lodging is a concern. It also has excellent SDS tolerance.

Growing Season Recap & Harvest Evaluation

Obviously, the biggest issue of the 2022 growing season in our area was the drought and the stress it caused for the crops. We experienced weather conditions this year that many of us have not seen since 2012. Overall, planting went smoothly and most guys started the season with good stands of both corn and soybeans. Crops looked great until mid-June, when the rain shut off. Unfortunately, our growing area along the I-70 corridor (+/- 10 miles North and South) was one of the worst areas in the state all season long. For the rest of the summer, any rain that came was sparse and variable. In some parts of our area, we had customers who went 45 days (June 9th to July 25th) without **ANY** rain. In other areas, customers received just enough rain to limp the crop along until the next minimal rainfall event. This was an extremely critical time for our corn crop. It was in the V14 to R3 stage, where it’s most vulnerable to drought stress and the yield impacts are greatest. Unfortunately, the effects from inadequate moisture that occur surrounding R1 are not reversible. When drought prevents kernel fertilization or stops kernel growth, the results cannot be reversed, even with plentiful rainfall later. Silk and pollen tubes are highly vulnerable to lack of available water. We saw a lot of “tip-back” or “nosed-back” ears this season from poor pollination and/or kernel abortion. The ovules at the tip of the ear are the last to be pollinated, and under stress, only a limited amount of pollen may be available to pollinate late emerging silks. Pollen shed was either complete or nearly complete before the silks associated with the tip ovules emerged. As a result, no kernels were evident on the last two or more inches of the ear tip. “Zipper ears” were another ear development problem evident in most fields in the most drought prone areas. Zipper ears are often associated with corn plants that have experienced drought stress during early grain fill. They exhibit missing kernel rows (often on the side of the cob away from the stalk that give a “zippering look on the ears”). The zippering is due to kernels that are poorly developed and/or ovules that have aborted and/or not pollinated. Zippering often extends most of the cob’s length and is often associated with a curvature of the cob, to such an extent that zipper ears are also referred to as “banana ears”. Kernel abortion may be distinguished from poor pollination by color. Aborted kernels and ovules not fertilized will both appear dried up and shrunken, however, aborted kernels often have a slight yellowish color.

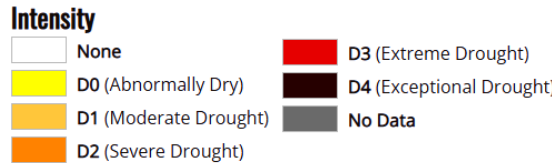
Figure 2. The “Zipper” and “Tip-Back” patterns of poor kernel set from stress due to excessive heat and inadequate soil moisture.



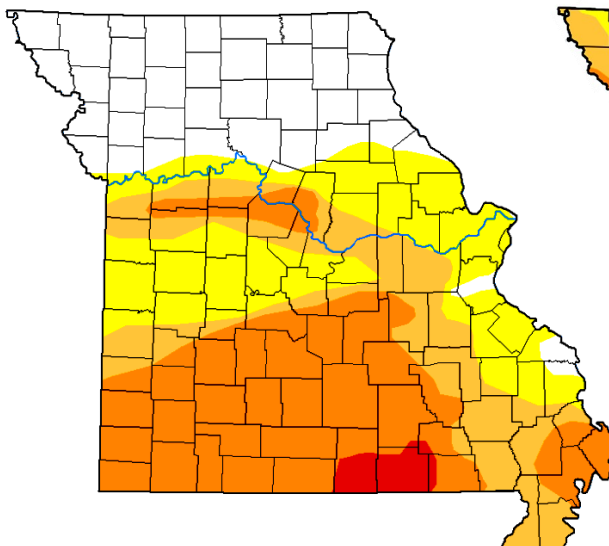
Not surprisingly, corn yields have been extremely variable this year. It hasn’t been uncommon this year to see yields range from 0-200 bu/ac in the *SAME* field. We’ve even seen differences with fields and/or slopes that are north-facing vs. south-facing due to south-facing slopes becoming more stressed from the direct afternoon heat and sunlight. In the last 4-5 years our racehorse hybrids have out-performed some of the more drought tolerant hybrids because we’ve had adequate moisture. It’s been no surprise this year that the drought tolerant hybrids have outpaced the truly offensive hybrids. Soybeans have been a pleasant surprise for most, with yields being better than anticipated. It appears in the more drought prone areas (I-70 corridor),

The mid group 4 maturity soybeans have been better than the late group 3 soybeans, as they may have benefitted from our late rains in July/August. It will be critical to get adequate rain late this fall or plentiful snow this winter to replenish much of the subsoil moisture that’s been lost this year. In summary, it’s been a tough year for us here in central Missouri, but as farmers do best, we look towards next year with hopes that it will be a better season.

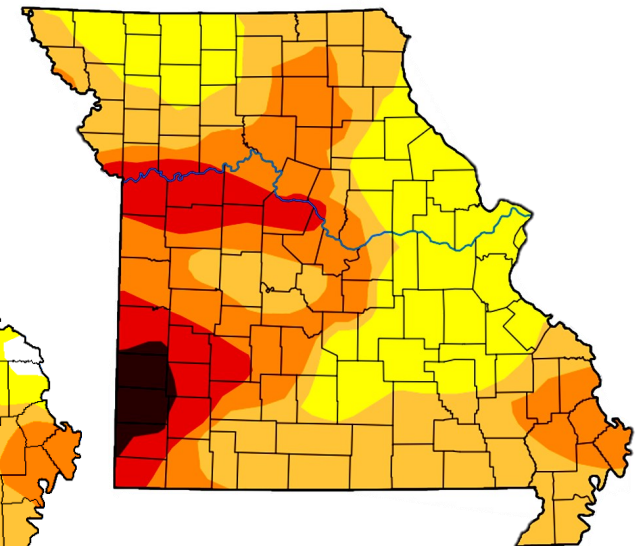
Figure 1. Missouri Drought Maps for July and October of 2022, showing our area in the worst of the drought



Missouri Drought Map Released July 19, 2022



Missouri Drought Map Released October 13, 2022



LOCAL PLOT RESULTS

To view our local plot data or download results to your phone or computer, visit our website: KnipmeyerSeed.com/PlotData

CORN			
Product	Yield Rank	Yield (bu/ac)	Moisture (pct)
P1027AM	1	191.1	12.4
P0953AM	2	187.6	13.4
P1164AM	3	187.1	13.0
P1170AM	4	185.6	13.1
P0859AM	5	184.7	12.4
P1413AM	6	183.5	13.2
P1197AM	7	183.4	13.1
P1222AM	8	176.2	13.0
P1718AML	9	168.8	13.8
P1511AM	10	166.2	15.1
P1359AM	11	156.2*	14.1
P1608AM	12	148.5*	15.3
PLOT AVERAGE		176.6	

Location: Concordia, MO — Hwy 23
Planted: 4/21/22 **Harvested:** 9/28/22
Pop: 31K **Fung.:** No **Tillage:** No-Till
**Planter issues resulting in reduced final population*

CORN			
Product	Yield	Yield (bu/ac)	Moisture (pct)
P1548AM	1	110.3	17.9
P1164AM	2	90.5	17.5
P1413AM	3	84.8	18.2
P0859AM	4	82.0	16.3
P0995AM	5	76.1*	16.3
PLOT AVERAGE		88.4	

Location: Concordia, MO — Hwy EE
Planted: 4/27/22 **Harvested:** 9/21/22
Pop: 31.5K **Fung.:** Yes **Tillage:** Conservation
**Deer damage in this hybrid*

SOYBEANS			
Product	Yield Rank	Yield (bu/ac)	Moisture (pct)
P37A18E	1	72.9	10.0
P42A84E	2	71.7	10.3
P35T15E	3	71.4	10.9
P40A23E	4	70.1	9.4
P44A91E	5	69.6	8.9
P46A09E	6	66.3	10.3
P38A54E	7	65.6	9.2
P38T05E	8	62.7	9.6
PLOT AVERAGE		68.8	

Location: Alma, MO — Hwy 20
Planted: 5/10/22 **Harvested:** 10/1/22
Pop: 146K **Fung./Insect.:** Yes **Tillage:** No-Till

SOYBEANS			
Product	Yield Rank	Yield (bu/ac)	Moisture (pct)
P44A91E	1	64.9	8.6
P42A84E	2	62.8	8.7
P40A23E	3	62.6	8.1
P38A54E	4	61.2	8.0
P37A18E	5	60.7	8.4
P35T15E	6	57.6	8.5
PLOT AVERAGE		61.6	

Location: Concordia, MO — Hwy YY
Planted: 6/11/22 **Harvested:** 10/13/22
Pop: 160K **Fung./Insect.:** Yes **Tillage:** No-Till

SOYBEANS			
Product	Yield Rank	Yield (bu/ac)	Moisture (pct)
P44A91E	1	69.4	11.3
P42A84E	2	67.6	10.8
P40A23E	3	64.7	8.8
P38A54E	4	60.4	8.5
P37A18E	5	59.1	8.6
P35T15E	6	58.8	9.2
PLOT AVERAGE		63.3	

Location: Concordia, MO — Hwy AA
Planted: 5/10/22 **Harvested:** 9/27/22
Pop: 155K **Fung./Insect.:** Yes **Tillage:** Conv.

SOYBEANS			
Product	Yield Rank	Yield (bu/ac)	Moisture (pct)
P37A18E	1	75.9	8.3
P42A84E	2	73.8	8.4
P40A23E	3	72.1	8.4
P38A54E	4	71.1	8.2
P35T15E	5	69.3	8.6
P46A09E	6	68.5	7.7
P44A91E	7	66.8*	7.8
PLOT AVERAGE		71.1	

Location: Concordia, MO — Old Hwy 40
Planted: 5/13/22 **Harvested:** 10/14/22
Pop: 155K **Fung./Insect.:** No **Tillage:** No-Till
**Sprayer tracks in this variety*

Agronomist Q&A

Answered by Pioneer Field Agronomist, Jaime Farmer

Question: Will there be any risk for herbicide carryover due to the dry conditions this growing season?

Answer: Herbicide carryover risk following drought is something that should be considered now as we plan for next year's crop. The potential for this carryover risk is driven by 2 factors:

- Concentration of available herbicide remaining in the soil at the time of the rotational crop planting
- Susceptibility to the rotational crop to the herbicide

The best resource for you to consult is the herbicide labels for what you sprayed, particularly POST-applied, this past growing season. Herbicides degrade in the soil primarily by soil microbes. Certain chemicals also degrade via soil water or direct exposure to sun light. These chemical variables as well as rates, soil type, and application timing should be considered to determine the potential risk to a particular subsequent rotational crop being planted next season. The biggest carryover risk we tend to see is with fomesafen (active in Prefix, Warrant Ultra, Reflex, Flexstar, etc.) sprayed later in the season over-the-top of soybeans. This particular active ingredient has a 10 month rotational window to corn and is a common carryover injury observed in years following a drought with cold/dry falls and winters. The reason I bring it up now is to make sure and include this carryover consideration in your crop management and placement plans for next season.



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