
PRAIRIE HYBRID SEEDS
NON-GMO | ORGANIC
Welcome!
To The
34th Annual
Prairie Hybrids Field Day


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HYBRID
SEEDS
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Building a Profitable Crop
-Gilbert Hostetler

Things I learned in 2025 production year

- Seed radicle determines your ear size
- In-furrow N, P, or K: if it burns your radicle, you are already behind in yield
- I prefer biology only in-furrow
- NPK 2x3 or other forms of application
- Phos in-furrow can make your roots lazy

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Hope for ROI in 2026 crop plan

- **Skip your dap and map–use biology–someone you trust–📖**
- Make sure your manure has some ammonia nitrogen in it
- Wet manure is nitrate dominate (tall corn)
- **Manage nitrogen more efficiently**
- **You have to use biology to help you become more efficient**
- Or am I in the Non-profit kingdom- just NPK

6436 Yield Data

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6436 Versus	Yld (Bu/A)	% Mst	Y/M Ratio	% SL	% RL	Test Wgt	# of Locs	Years
6854 Traited Version	4.7	0.7	-0.4	0.5	0.7	0.9	121	2023-2024
Dekalb DKC110-41	4.4	0.5	-0.1	0.4	0.6	-0.4	60	2024
7265	7.6	-0.2	0.7	-0.6	0.0	0.4	156	2023-2024
Dekalb DKC111-33	14.8	-0.2	1.0	0.8	1.0	-1.9	96	2023-2024
Pioneer P1170AM	4.2	-0.2	0.4	0.0	-0.5	-0.4	121	2023-2024
Pioneer P14830AML	2.3	-0.7	0.9	0.2	0.7	0.5	77	2024
8864 Traited Version	9.8	-1.2	1.3	0.8	-0.1	1.1	129	2023-2024
Traited Competitor	4.4	-1.5	1.2	0.0	0.3	-1.4	113	2023-2024

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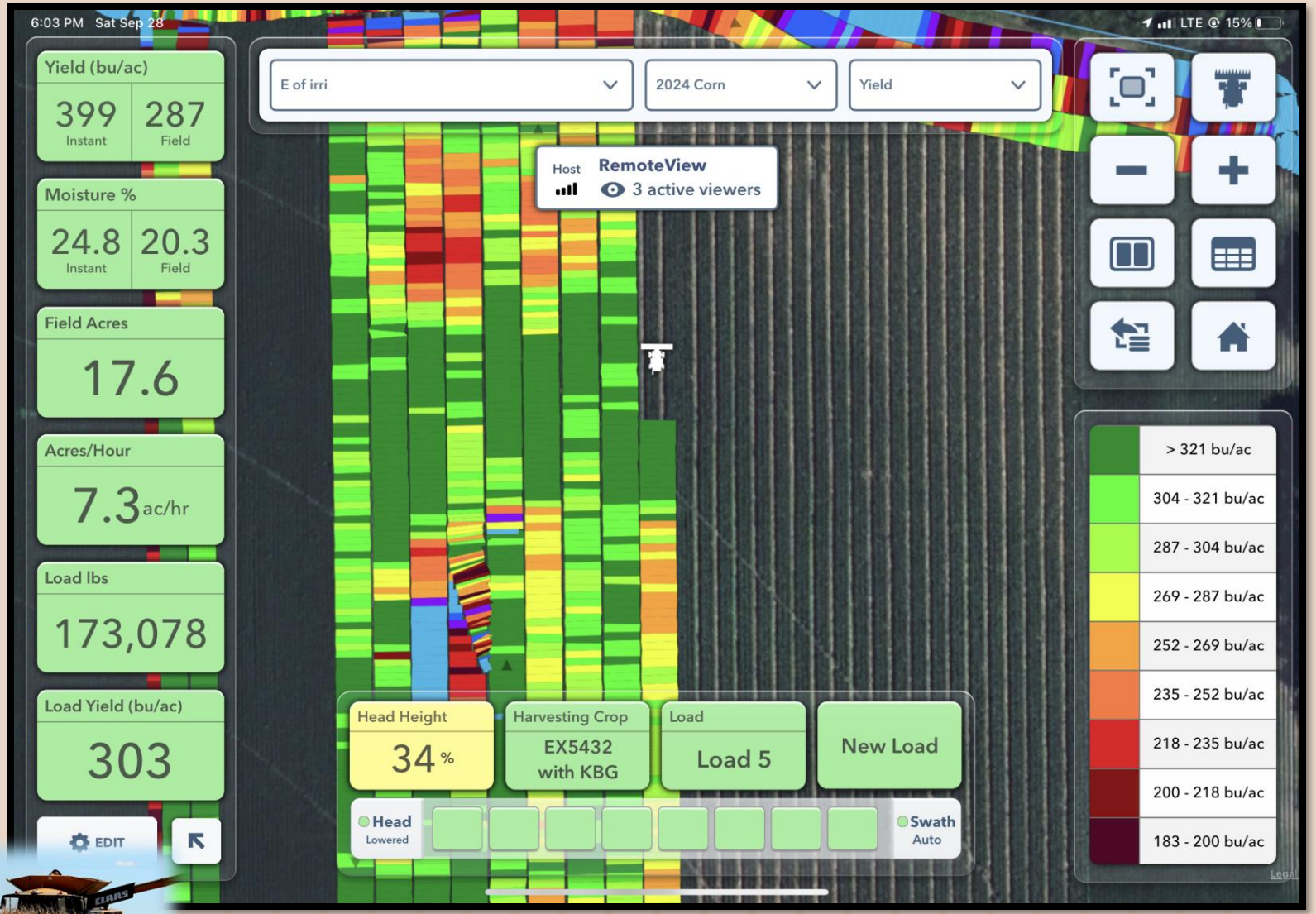
7445 Yield Data

Yield Trial Data 2024										
Fields: 51										
Entry #	Pedigree	RM	Yield Mea	Yield Differenc	Yield %Mea	%Moisture Mea	y/m Mea	%StalkLodging Mean	%RootLodging Mean	TW Mean
28	7445	112	269.7	10.76	104.16%	18.4	14.82	1.9	2.4	58.0
24	7261	111	269.0	10.02	103.87%	17.6	15.60	0.6	1.1	59.1
30	7445 Traited Version	112	266.4	7.48	102.89%	17.9	15.21	1.0	2.5	57.4
2	DKC111-35RIB	111	265.9	6.99	102.70%	17.8	15.22	0.6	0.7	60.1
4	6755 Traited Version	110	262.4	3.47	101.34%	17.5	15.27	0.4	3.8	57.9
3	P1185AM	111	261.6	2.70	101.04%	18.1	14.75	0.2	1.2	59.8
21	DKC62-70RIB	112	260.0	1.08	100.42%	17.9	14.74	0.8	0.9	59.7
23	P1222AM	112	258.7	-0.25	99.90%	17.4	15.24	0.2	1.1	58.9
1	DKC59-82RIB	109	257.0	-1.95	99.25%	17.0	15.44	0.7	1.1	58.0
41	P1136AM	111	254.9	-4.07	98.43%	17.9	14.59	0.4	0.7	58.8
20	DKC62-53RIB	112	253.1	-5.87	97.73%	17.5	14.79	1.0	0.6	58.7
50	P1359AM	113	253.0	-5.95	97.70%	18.2	14.30	0.0	2.8	58.8
22	DKC62-89RIB	112	247.9	-11.02	95.74%	18.0	14.15	1.1	1.6	58.5
*		Mn	258.2			17.9	14.71	0.7	1.6	58.5
*		#Locs	50			50	50	30	26	48


6:03 PM Sat Sep 28
LTE 15%
Yield (bu/ac)
399 Instant
287 Field
Moisture %
24.8 Instant
20.3 Field
Field Acres
17.6
Acres/Hour
7.3 ac/hr
Load lbs
173,078
Load Yield (bu/ac)
303
EDIT
E of irri
2024 Corn
Yield
Host
RemoteView
3 active viewers
Head Height
34 %
Harvesting Crop
EX5432 with KBG
Load
Load 5
New Load
Head Lowered
Swath Auto
> 321 bu/ac
304 - 321 bu/ac
287 - 304 bu/ac
269 - 287 bu/ac
252 - 269 bu/ac
235 - 252 bu/ac
218 - 235 bu/ac
200 - 218 bu/ac
183 - 200 bu/ac
Legal

TOPICS FOR TODAY

- What makes kernel flex to .75 inches long
- Germination facts (why cold germ)
- Prairie team efforts on research and development
- Nitrate nitrogen impact on growing crop
- Microbials, the values–the platform is changing

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FACTS ABOUT FLEX HYBRIDS

- Some hybrids flex-others don't flex

- I prefer hybrids that have kernel flex
  - Correct form N makes flex

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KERNEL FLEX

- **Kernel flex comes from the correct form of nitrogen (amine, ammonium) after v10**
- Organic forms of nitrogen are these amine/ammonium forms (fertilizer/dead microbes)
- **What about phosphorus this late? Stimulates energy manufacturing to fill kernels**
- **Too much nitrate N encourages disease-stalk cannibalism resulting in smaller density kernel**

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Kernel Flex

- Urea liquor, 21-0-0 as a foliar is ammonium N. Add 1 lb. sugar/gal, up to 4 gal/acre (v5)
- .50-inch-long kernel: 225 bu./ac range; .75-inch-long kernel: 300 bu./ac range
- **Need to be using genetics that allow kernel flex,**
  - 7445
  - 6878
  - 6755
  - 8864
  - 6436

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How do I get kernel flex?

- **Must have amine/ammonium to go to kernels. Stabilize N and apply more 12-0-0-26**
- Apply kelp if you have applied a lot of 28/32 with no sulfur and it's been wet. Kelp helps convert nitrate back into ammonium during wet summers. (**Nitrate stuck in the stalks)**
- **Ammonium N and sulfur helps build thicker, wider leaves to collect more sunlight**

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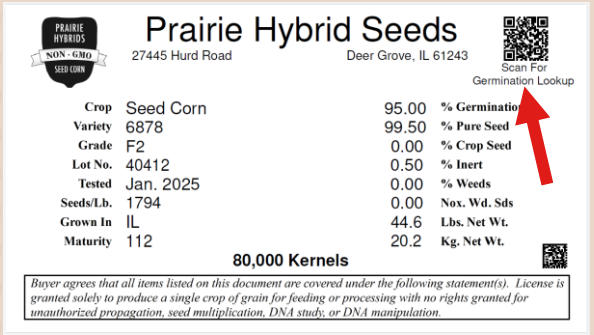
How do I get kernel flex

- Use N Gauge probiotic N stabilizer at 1 qt/25 gal of N solutions to improve N forms
- Use a minimum of 75%/25% - **28%/thiosulfate blend, preferably 50%/50% or 25%/75%**
- **Typically, you need less total units of N to increase the yield when using correct forms**
- **Don't buy anything with nitrate in it for late side dressing or Y-drop unless you have to**

Cold germs 2024-2025

- Cold germ average last year: 96.2%
- Cold germ average this year: 96.7%



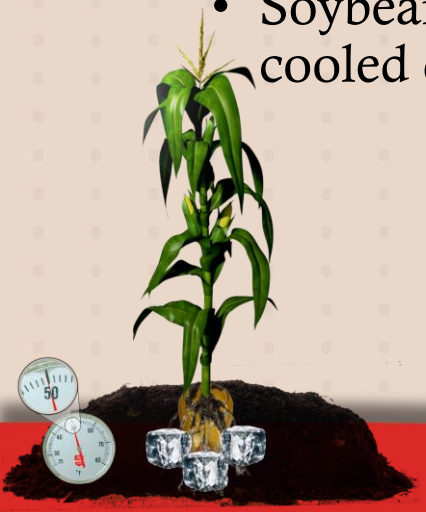
Prairie Hybrid Seeds
27445 Hurd Road
Deer Grove, IL 61243
Scan For Germination Lookup

Crop	Seed Corn	95.00	% Germinatio
Variety	6878	99.50	% Pure Seed
Grade	F2	0.00	% Crop Seed
Lot No.	40412	0.50	% Inert
Tested	Jan. 2025	0.00	% Weeds
Seeds/Lb.	1794	0.00	Nox. Wd. Sds
Grown In	IL	44.6	Lbs. Net Wt.
Maturity	112	20.2	Kg. Net Wt.

80,000 Kernels

Buyer agrees that all items listed on this document are covered under the following statement(s). License is granted solely to produce a single crop of grain for feeding or processing with no rights granted for unauthorized propagation, seed multiplication, DNA study, or DNA manipulation.

- Soybean seed after harvest, is cooled immediately
  - Soybean seed ages in the bin when it's not cooled down



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Prairie R & D Team Values

- **We look at most research sites; versus look at computer models only**
- **Our team monitors conventional hybrids only; this is our total focus for the conventional and organic farmer**
- We ask ourselves the question, "Do I want 1600 acres of this hybrid? Is it too risky?"
- **Their job is to get the correct hybrid designated to each sales area**
  - **A 20-75 bu per ac value**

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Prairie Team efforts: Seed Purity

- **Dribble sample system: continuous, representative sample of each lot**
- **All seed lots are tested twice for GMO contamination (PCR and grow-out test)**
- Seed samples are sent to Hawaii in the winter to check purity (for selfs and outcrosses)
- **All seedstock is tested for GMO contamination**

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Nitrate nitrogen

- Corn needs nitrate form **early in season**
- **Nitrate makes stalks, not grain**
- **Too much irrigation makes all N go to nitrate (after flowering); not good**
- If irrigating excessively, add 1-2 pints of kelp per acre to the plants or through the pivot irrigation, at pollination and during grain fill

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Nitrate Nitrogen

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VALUE OF AMMONIA NITROGEN

- **Corn yields lots more when the soil converts nitrate to ammonium 🕮–never do nitrate late**
- **Higher yields**
- Shorter stalk height, less stalk lodging
- Bigger ears
- **Longer** kernel depth
- Better stalk integrity
- **Less disease and insect pressure**

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Value of Ammonia Nitrogen

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CORN YIELD IS HINDERED OR REDUCED WHEN,

- Too much nitrate N versus ammonia N
  - **Nitrate N does not move in the corn plant; it goes to the top and stays there**
  - **Kernel fill and test weight are determined by ammonia form of N available late after v10**
- **Biology is not converting nitrate to ammonia N**
- **Nitrate N is applied late season Y-drop**
- **Wet manure is only source of nitrogen (needs to be treated)**

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AMMONIA NITROGEN WITH A MANURE PROGRAM

- Wet manure is nitrate dominate
- **Lagoon manure needs to be treated with Bio Chop and Magneto to stabilize N**
- **Dry manure needs to be inoculated with Bio Chop and Magneto**
- This makes your manure more efficient:
  - So, you don't get tall corn problem

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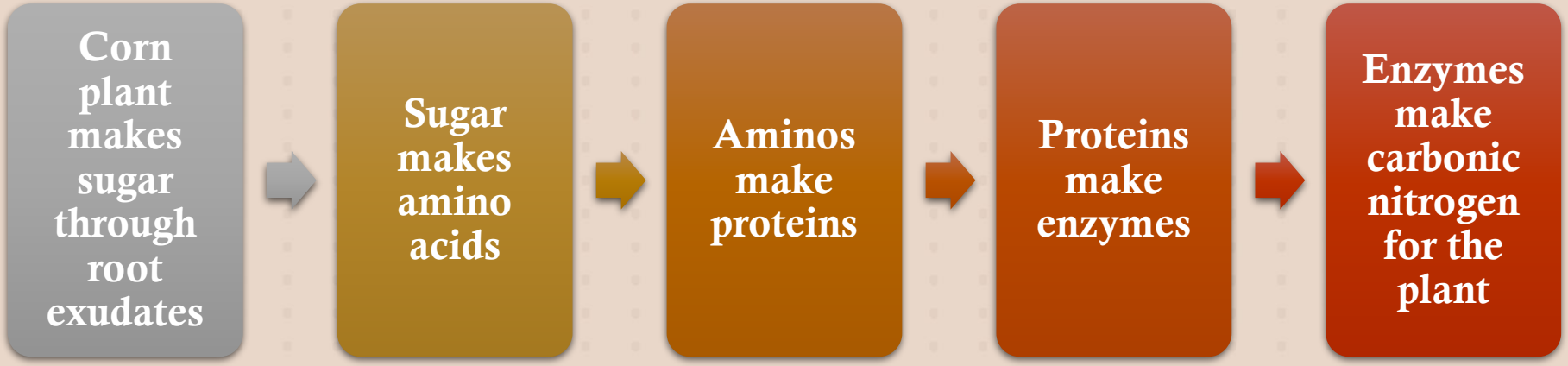
CORN PLANT TO SOIL- HOW DOES IT WORK?



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CARBON TO NITROGEN RATIO

- **Ideal ratio is 14 parts carbon–1 part nitrogen (you release lots of N to corn plant)**

  Non-GMO corn fodder digests easier, takes less N

- **18 to 1 ratio and higher, you tie up lots of your N**

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MICROBES…WHAT DO THEY DO

- Microbes truck nutrients and make minerals available to the plant
- Corn plants give signals to microbes on what they need
- They respond to signals given off by plants

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MICROBES…

- **Microbes breathe in oxygen/give off carbon dioxide, feed corn plants**
- Sunlight striking the leaf in combination with carbon dioxide, gas, & water vapor generates sugar in plant cells. It feeds plant biology at roots and signals plant needs to soil biology
- **Manure feeds microbes, stimulating carbon dioxide/nutrient release, which creates food and nutrition for the plant encouraging much healthier and higher yielding plants**

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VALUE OF MICROBES

- **Microbes help you get to a .50 nitrogen to bu. ratio (farmers be more efficient)**
- Microbes need to eat N to break down the complex load of old fodder and plant stuff
- **If you have too much carbon, microbes eat up N and plants can't get any. Microbes eat first at the table of the soil and plants get the leftovers.**

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VALUE OF MICROBES

- **Once microbes die, they release their N as amino acids and proteins. The more cycles of life and death, rainfall events, or cycles or periods of days where microbes die and other microbes eat them up, the more N you get. And it's mostly organic N**
- That's a probiotic approach. Eat up all the N and release as organic aminos. (N Gauge)

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BIOLOGY

- **Sleeping farm performance–biology needs sulfur - molasses**
- Biology's enemy is hard pan
- **Plants are designed to feed soils as much as soils are designed to feed plants**
- **If P1-P2 ratio is 1-1, your soil biology is asleep and not doing its job. (Microbes are sleeping)**

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SULFUR–BIOLOGY

- Sulfur is the glue to bond biology to nutrients
- **Sulfur helps biology communicate to root exudates, essential amino acids and proteins that make up enzymes which do the heavy lifting in real life, biochemical reactions**
- Hydrogen high? (soil test) Potentially need in line ripping to allow water to wash away

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A NEGLECTED MICRO–COPPER SULFATE

- Copper sulfate–**be careful on applied rates, 7# per year–max**
  - Only for soils and ruminate animals (not humans)

The values

- **Increases yield levels (high iron soil ties up manganese)**
- **Helps to mobilize the excess iron in our soils**
- **Helps to make nitrogen convert to ammonia form**
- **Makes so corn has less green snap**
- **Fights off fungus and disease and insects**
- **Fights off stalk rot in fall**

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WHY STALK ROT HAPPENS

Pep-carboxylase enzyme

- When not enough ammonia nitrogen is available to fill kernels, the corn plant realizes there is a problem
- It forms this enzyme–pep-carboxylase–**to cannibalize the stalk. That breaks down sugar in base of stalk to fill kernels and degrades the stalk**
- **When this happens, the chemistry is set up to bring stalk rots into the plant; Fusarium, Gibberella, etc.**
- Corn plant says, "Not the right tools, let's start over."

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PYTHIUM

- Swims in soil moisture
- Seed treatment helps to hold it off
- Pythium feeds on phosphorus
- **In-furrow remedy:**
  1. **Magneto (biological) from SPNC protects the seed radicle root and helps new roots continue to grow**
  2. **Defender from SPNC starves the pythium for oxygen PO3 instead of PO4**

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Leaf Diseases

Southern Rust–from the southwest

Northern Leaf Blight–happens 10 days after first cool night

Tar Spot–cool, damp, high humidity conditions

Highest yield potential hybrids

- 8864/8861
- 7445
- 6436
- 6755
- 4991
- 3054/3051
- 2311
- 581
- 1320
- 321

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YIELD CAPS

- Nitrate nitrogen–applied late–stops kernels from growing in length
- Too much irrigation makes nitrogen in soil convert to nitrate, starving the plant for the ammonium form
- Kernel fill is determined by the amount of ammonia nitrogen available or applied at V10
- Race horse hybrids feed 6 weeks post tassel on ammonium N

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Thank you for Coming!