

OWNERS ACRES

RESEARCH & DEVELOPMENT

2024

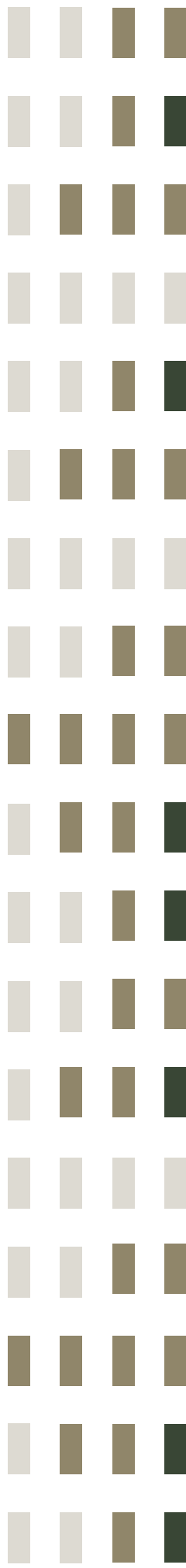




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THE 5 STEP PROCESS

- # 1

Foundation
- # 2

Emergence
- # 3

Enhance
- # 4

Energy Management
- # 5

Finish

WHO WE ARE.

WHAT WE DO.

Owners Acres is more than just a farming operation; it's a hub of research and development that employs advanced technology and precise management techniques to consistently increase crop yields year after year. This initiative was born out of a desire to walk in the shoes of a farmer, to understand the challenges they face, and to find solutions that can help them thrive. Through grid soil samples, tissue samples, data analysis, different management practices, and lots of trial and error, we've gained invaluable knowledge through Owners Acres. Our mission is straightforward: to help farmers thrive, one step at a time.

Owners Acres was established in 2017 with 64 acres in Aurora, NE and 26 acres in David City, NE. Initially we were on the quest for a "silver bullet" solution. We soon discovered that enhancing a farm's productivity requires more than a quick fix. We returned to the basics of farming that have sustained farms for generations. We focused on soil fertility, managing variability, and making informed decisions based on grid soil sampling data. This helped us identify our limiting factors on yield.



In 2018, we expanded our farm to include 202 acres in Hastings, NE. Then in 2020 and 2021, we added 67.5 acres in Central City, NE. This gave us a total of 359.5 acres of variable farm ground. In Hastings we had challenges of low pH levels on the dryland and weed pressure. Then by adding Central City, we had the opportunity to farm in a sandy loam and high pH environment.

WHAT WE LEARNED.

Every year in agriculture presents its own unique challenges and learning opportunities. This year, we saw a significant shift in our planting window weather pattern as the drought gave way to rain during our planting season. An early planting window allowed us to plant our dryland corn and soybeans before several weeks of wet weather set in. Timely rain led to excellent pre-emergent herbicide performance, serving as a reminder to activate herbicides with pivots in future years when we don't receive timely rains. The most significant event of the year was the early arrival of southern rust and the continued spread of tar spot. Not only did we see our traditional plant health benefits, but we also witnessed significant yield protection from multiple timely fungicide applications. While we didn't experience the pressures of spider mites or Japanese beetles, we faced significant pressure from western bean cutworm in corn and dectes stem borer in soybeans. The late heat throughout September and October rapidly finished the crops, and late irrigation management and timely harvest were highlighted this year.

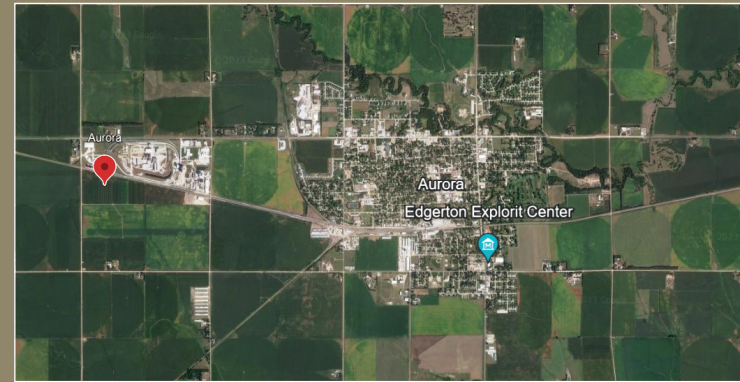
The main takeaway from this year wasn't a new product or idea, but rather the importance of executing the process and steps laid out in this book. 2024 was a year where skipping or missing the timing of a step had the potential to significantly impact yields.

AURORA

64 acres - - - - -

Hastings silt loam soil
52 acres sprinkler irrigation (linear)
12 acres dryland

- 2017 - Started farm - Historical APH
153 bu/ac
- 2018 - High management block 272.5 bu/ac
- 2019 - Intercrop corn yield of 303 bu/ac
- 2020 - April 10th planted soybeans
100.6 bu/ac
- 2020 - High management plot average
302 bu/ac
- 2021 - Corn/Milo Intercrop yields 40 ft. corn
309 bu/ac and milo 175 bu/acre
- 2022 - Whole field irrigated average of
306 bu/ac
- 2023 - Whole field irrigated average of
276.6 bu/ac

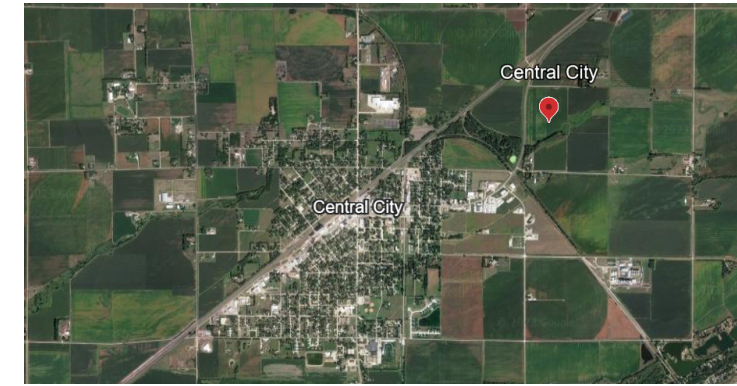
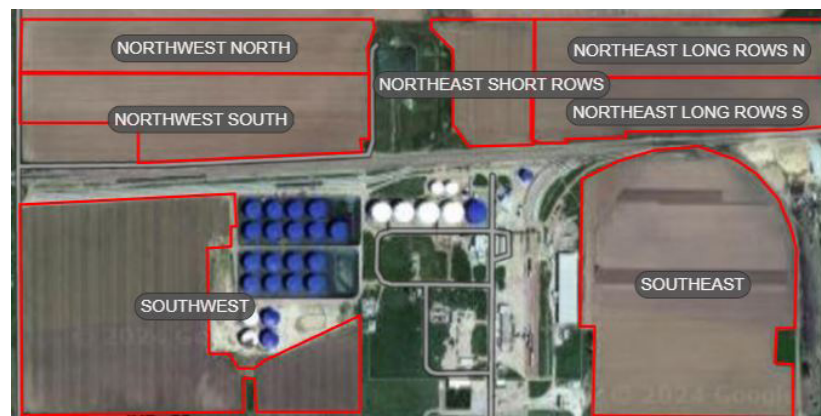
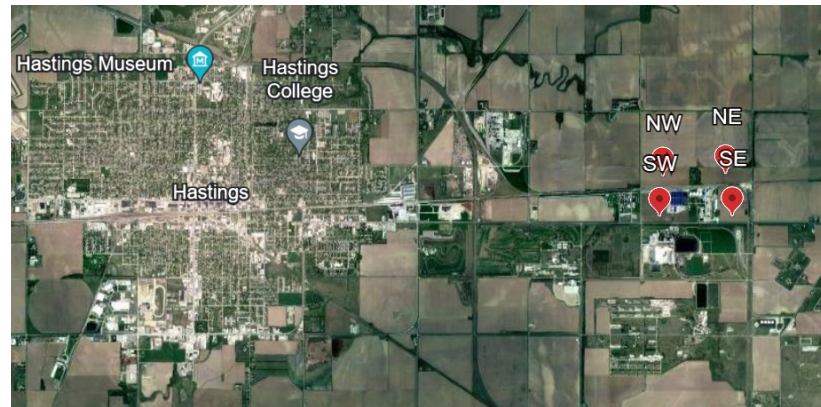


HASTINGS

202 acres - - - - -

Hastings and Crete silt loam soils
150 acres furrow irrigation
52 acres dryland

- 2018 - Irrigated average 246.5 bu/ac
- 2019 - Irrigated plot average 232 bu/ac
(severe wind damage)
- 2020 - Dryland plot average 135 bu/ac
- 2020 - Irrigated plot average 257 bu/ac
- 2021 - Dryland plot average 242 bu/ac
- 2021 - Irrigated plot average 283 bu/ac
- 2021 - 3 acre trial average 372 bu/ac
(NE field PV114-R50 @ 3 populations)
- 2022 - Replant on 6/18/2022 yield 229 bu/ac
(105 & 106 day maturity)
- 2023 - Corn-Soybeans plot average of 269.9
bu/ac & Corn-Corn plot average of 283.1 bu/
ac & Soybean plot average of 87.4 bu/ac

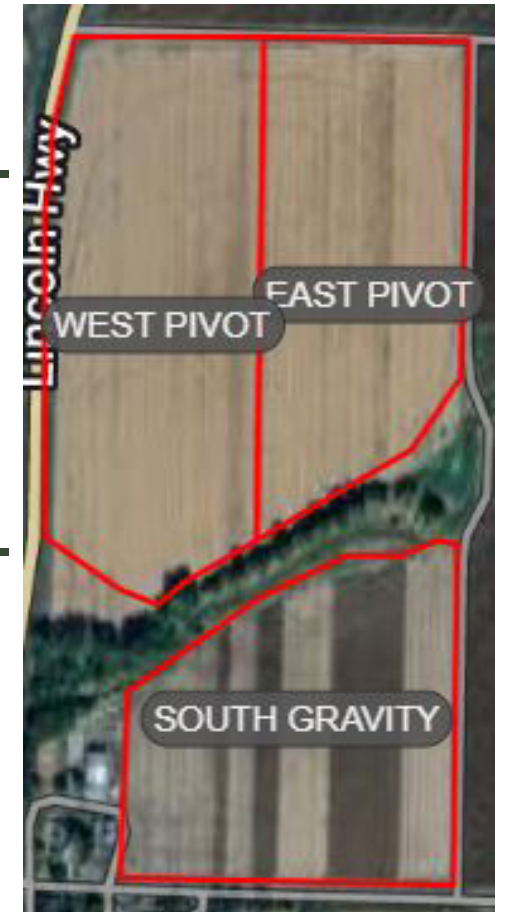


CENTRAL CITY

67.5 acres - - - - -

Primarily Cozad loam soil - Pivot soil pH of 8.0 with a high of 8.6
21 acres furrow irrigation
45 acres pivot irrigation
1.5 acres dryland

- 2020 - Plot average of 290 bu/ac
- 2021 - Plot average of 265 bu/ac
- 2022 - Plot average of 279 bu/acre with 13 entries over 300 bu/ac
- 2023 - Corn plot average of 277.2 bu/acre & Soybean plot average
of 90.7 bu/ac

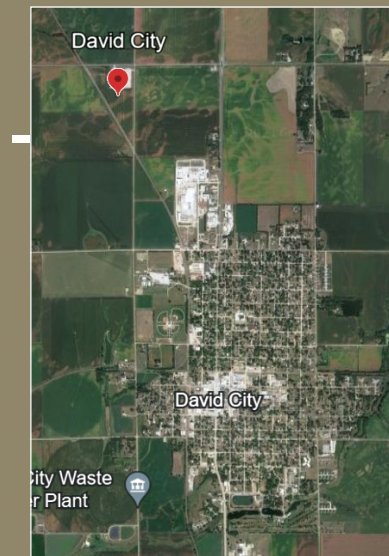


DAVID CITY

26 acres - - - - -

Butler silt loam soil
26 acres dryland/sub-irrigated
(high water table)

- 2018 - 16.9 bu/ac advantage to
AgPro/Pro-Lock
- 2018 - Field average 198.6 bu/ac
- 2019 - June 14th planted soybean
average 62 bu/acre (wet soil)
- 2020 - Field average 237 bu/ac
- 2021 - Field average 182 bu/ac
- 2022 - Field average 48 bu/ac
(Drought)



The 5 Step Process

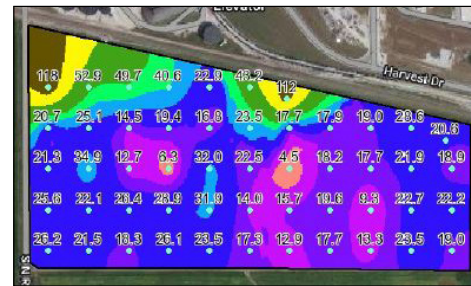


STEP 1

FOUNDATION

ANALYZE Grid Soil Sampling

- It all starts with a grid soil sample
- This is the first step to building your foundation for the upcoming year
- Identify limiting factors to understand and utilize the nutrients available in the soil



SELECT Hybrid & Population Selection

- Match hybrids to pH, fertility, and watering capacity
- Consider yield goals and bu/1000 when deciding to raise or lower populations
- Select proper traits packages to address specific issues with insects or weeds
- Seed treatments and Hustle are the first step on the path to good emergence



MANAGE Nitrogen & Phosphorus Management



- Nitrogen and phosphorus management starts with a plan
- N-Stat or stabilizers prevent unnecessary nitrogen loss
- Understand how much residual N you have with a grid sample
- Consider split and in-season applications
- Avoid letting surface applied nitrogen to volatilize with N-Shield



PLAN Crop Protection Plan

- Start with a clean field through fall or spring burndown
- Use full rates of residuals up front
- Overlap residuals approximately 21 days apart
- Irrigate to activate residual herbicides



THINGS TO CONSIDER:

- Grid sample every year for better nutrient management
- Adjust planting populations based on fertility and yield goals
- Take a step to improve your nitrogen efficiency
- Start with a clean field to preserve nutrients and moisture in the spring
- A good plan leads to success



STEP 2

EMERGENCE

PREPARE

Planter Preparation & Technology

- Review planter checklist
- Attend planter clinic in the early spring
- Check in-furrow and fertilizer systems
- Consider adding DeltaForce and speed tubes



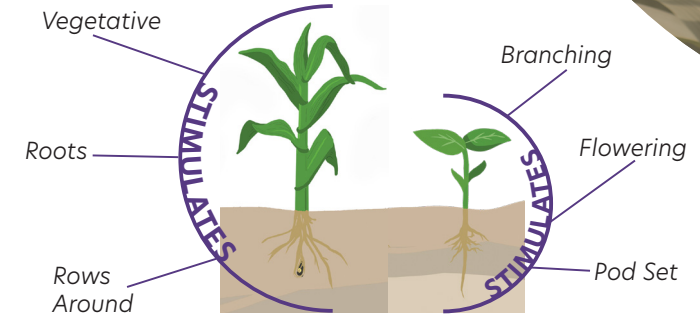
STEP 3

ENHANCE

STIMULATE

Realize™

Combination of 3 key ingredients at the right ratio to stimulate the overall health and growth of the crop



BOOST

Seed Treatment & In-Furrow

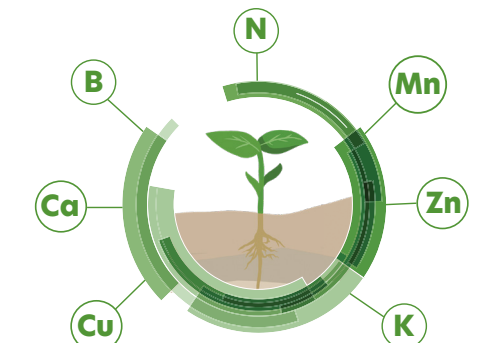
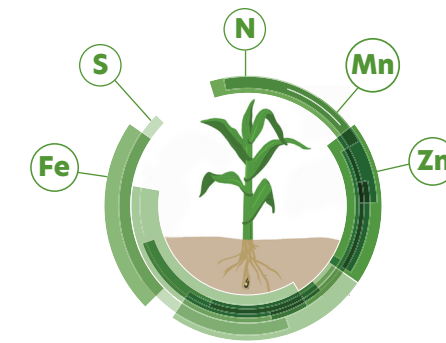
- Protect against early diseases and insects
- PGR on seed to promote early emergence and growth
- AgPro for a safe, low-salt in-furrow fertilizer that won't delay emergence
- Pro-Lock to protect early phosphorus availability for the seedling



FEED



Micronutrient blends that are designed to feed crop growth, enhance plant health, and improve nutrient uptake



EVALUATE

Seed Bed Preparation

- Fall or spring burndown to control winter annual weeds
- Pre-water if the soil moisture conditions are dry or non-uniform
- Manage residue through tillage or strip tillage
- Terminate cover crops based on capability of planter to achieve uniform emergence

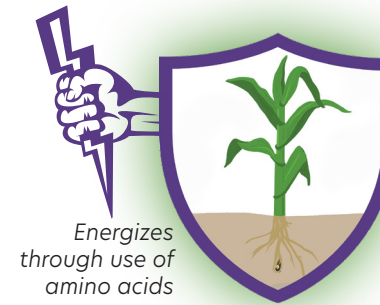
THINGS TO CONSIDER:

- Scout seed bed conditions prior to planting
- Base in-furrow fertilizer rates off of overall fertility levels
- Track field histories of SDS, white mold, and other soil diseases and address with seed treatments
- Plant soybeans or marginal corn acres if conditions are less than ideal

ENERGIZE



Provides fuel and energy to keep the plant focused on yield



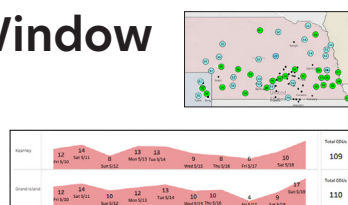
THINGS TO CONSIDER:

- Yield Enhancement Program
- Overlap residual herbicides 21-28 days after first residual
- All post applications applied before V4 corn
- Early water if necessary to keep residual herbicides active
- Early water if necessary to help nodal root development

TIMING

The Right Planting Window

- Monitor soil temperatures, ideally greater than 50 degrees
- Avoid planting before sharp temperature drops
- Ensure soil conditions have adequate moisture





STEP 4

ENERGY MANAGEMENT

PRESERVE

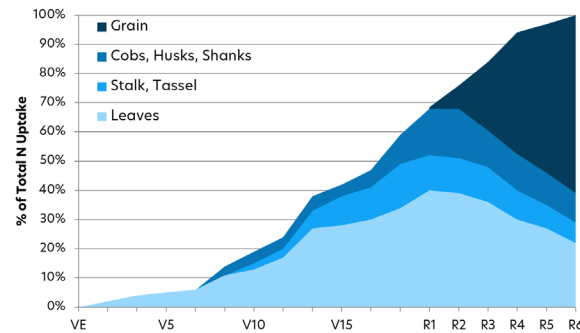
Fungicide Application

- Reduces energy spent by allowing respiration and rest
- Protects ear leaf with V12 or VT applications
- High yield goals, overlap fungicide applications
- Water usage efficiency is increased with applications

UTILIZE



- Keep nitrogen in ammonium (NH4+) form with N-Stat
- Avoid leaching forms of N (NO3-)
- The closer to the surface roots are the less energy spent



Why do you need to keep nitrogen in the root zone longer? The plant uses 80% of the nitrogen from July to September. (See chart to the left)

PREVENT

Insecticide Application

- It's not the economic threshold of one insect but all combined

Kernels	Rows	Population	Total Loss	Kernels/ Bushel	Bu/ Acre
2	18	33,000	1,188,000	80,000	14.85
Pods Lost/ Plant	Beans/ Pod	Population	Total Loss	Beans/ Pound	Bu/ Acre
5	3	140,000	210,000	3,000	1.167

MONITOR

AquaSpy® Tissue Sampling

- Know where roots are and where they are taking up water
- Understand water infiltration rate (vary by field)
- What nutrients applied are getting in the plant?
- "You can only improve what you can measure."



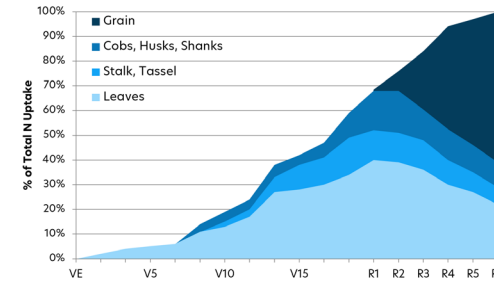
STEP 5

FINISH

RETAIN

Nitrogen Availability

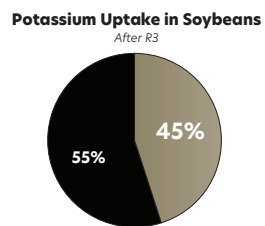
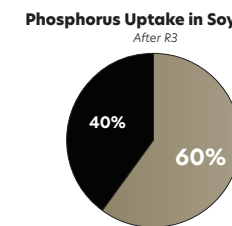
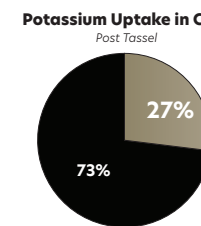
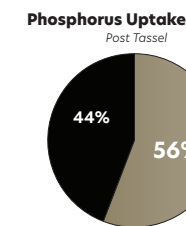
- Nitrogen is important to corn's test weight and soybean seed size



RESERVE

Phosphorus & Potassium Availability

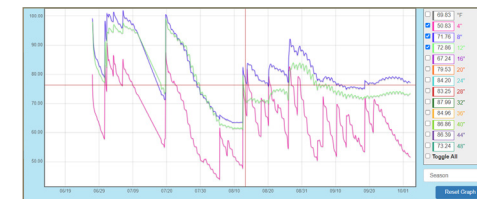
- Late phosphorus is critical for test weight accumulation in corn
- Late potassium can help maintain seed size which equals yield



ENDURE

Late Irrigation

- Microbial activity is dependent on moisture
- Majority of roots and uptake is in top 12" of the soil



Irrigated corn until 9/28/24 in Aurora.

COLLECT

Timely Harvest

- Avoid head shelling by harvesting early
- The longer a crop stands in the field, the longer "Mother Nature" can strike



Soybeans/sq. ft. Equivalent to 1 bu/ac	Kernels/sq. ft. Equivalent to 1 bu/ac
4	2.1

THINGS TO CONSIDER:

- Use tissue sampling to make sure nutrients are showing up when needed in plants
- Consider longer residual insecticides for rootworm beetle and Japanese beetle
- Understand where roots are and where irrigation is going with moisture probes
- Use a second fungicide application approach to save energy in higher yield situations

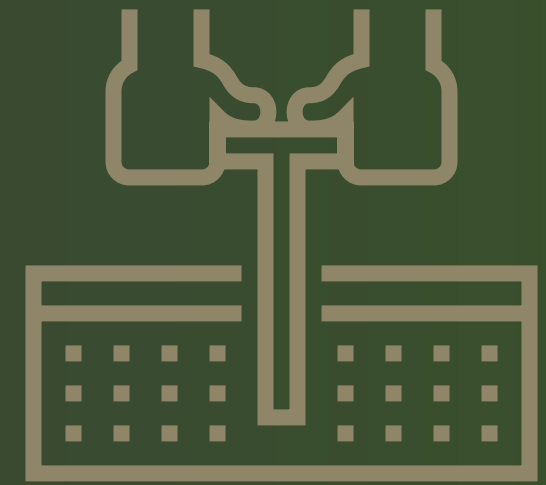
THINGS TO CONSIDER:

- Harvest fields at higher moistures to avoid field loss
- Keep moisture in the top 8-12 inches through R6 corn and R8 soybeans
- Later applications of N, P, and K through fertigation
- Avoid watering through active root zones to prevent leaching N



STEP

1



FOUNDATION

ANALYZE

Grid Soil Sampling

SELECT

Hybrid & Population Selection

MANAGE

Nitrogen Management

PLAN

Crop Protection Plan

Aurora | 63.14 acres

Year	2/16 2017	4/24 2017	10/16 2017	3/23 2018	10/19 2018	4/9 2019	10/29 2019	10/23 2020	10/21 2021	11/8 2022	10/12 2023	10/7 2024
P	4.9	34.3	44.5	53.6	50.5	59.5	60.1	55.9	66.7	70.4	76.9	76.8
K	379.1	430.5	418.2	445.2	452.1	439.7	387.8	368.2	358.4	377.1	443.0	510.2
Mg	248.8	304.2	304.2	301.5	310.2	305.3	242.0	257.0	217.5	207.7	211.9	227.3
Zn	1.6	2.7	3.5	3.9	4.9	5.2	4.0	4.6	5.9	4.7	5.5	5.8
pH	6.4	6.5	7.2	6.9	7.1	7.1	7.0	7.1	6.6	6.7	6.9	6.9
bpH		7.1	7.3	7.2	7.3	7.3	7.3	7.2	7.0	7.1	7.1	7.1
OM	2.5	2.4	2.5	2.4	2.4	2.5	2.5	2.8	3.7	3.5	3.3	3.5
CEC	15.9	17.8	16.9	18.0	19.0	17.6	15.2	13.6	13.1	12.2	13.5	14.1
NO3-N	13.4	31.9	4.1	20.6	5.6	4.3	10.0	12.9	20.3	38.0	26.1	13.4

Hastings SE | 50.5 acres

Year	1/1 2017	1/1 2018	1/1 2019	10/26 2020	9/29 2021	10/26 2022	10/9 2023	10/4 2024
P	14.9	15.3	75.4	80.4	72.7	83.8	107.4	118.1
K	415.3	330.8	387.2	260.8	299.0	335.4	374.4	392.8
Mg	230.6	221.4	223.0	161.8	198.4	186.8	213.5	264.0
Zn	1.3	1.5	1.6	1.5	2.0	1.7	3.0	2.3
pH	6.4	6.3	5.9	6.2	6.4	6.1	6.4	6.5
bpH	7.0	6.9	6.7	6.8	6.9	6.8	6.9	6.9
OM	2.3	2.3	2.4	3.4	3.6	3.3	3.5	3.6
CEC	16.7	16.6	17.6	12.2	13.9	13.5	14.6	17.0
NO3-N	7.0	5.3	6.5	21.2	25.0	21.0	40.4	13.4

Hastings NE | 45.04 acres

Year	1/1 2017	1/1 2018	1/1 2019	10/26 2020	9/29 2021	10/26 2022	10/9 2023	11/16 2024
P	21.1	13.3	92.6	53.4	55.4	72.2	83.2	76.2
K	439.0	329.8	377.9	357.9	325.5	320.1	325.9	401.6
Mg	233.0	239.3	227.0	224.1	227.4	174.1	200.4	249.2
Zn	1.6	1.1	2.2	2.4	2.3	1.6	2.7	3.1
pH	6.7	6.4	5.8	6.9	6.8	6.3	6.6	6.6
bpH	7.1	7.0	6.8	7.0	7.1	6.9	7.0	7.1
OM	2.4	2.3	2.4	3.5	3.7	3.6	3.7	2.2
CEC	16.5	16.6	17.8	14.0	14.3	12.6	13.6	18.1
NO3-N	4.9	4.3	7.0	7.2	24.7	21.4	29.7	14.3

ANALYZE

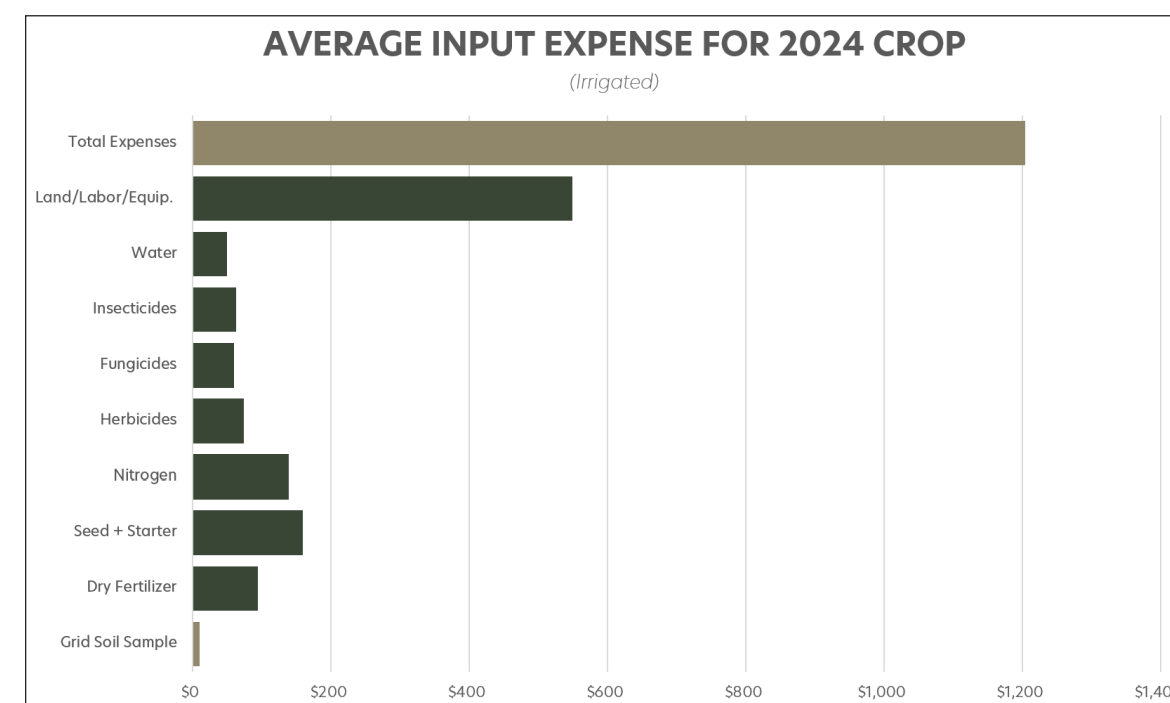
Grid Soil Sampling

Every year, we conduct grid sampling for every field to assess the effects of crop removal and progress on nutrient levels that we are addressing. Once again, we managed to increase our potassium level in Aurora after four years of application, and we feel that we have a good balance of macronutrients moving forward. Our grid sample histories underscore the importance of verifying and managing the foundation on which our crops will ultimately grow. We compare soil levels with our tissue samples to ensure nutrients are not becoming tied up and are being absorbed by the plant. It took some time to adjust soil levels and achieve balance, but we are now shifting our focus to micronutrient levels. We aim to continue managing potential deficiencies through soil vs. foliar applications.



WHY

Grid soil samples form the foundation for all planning and input expenditures on Owners Acres. Understanding what's beneath the ground and nutrient availability allows us to balance our soils for maximum yields and nutrient efficiency. Knowing your fertility/pH levels is an important factor in selecting hybrids/varieties and determining what populations can be planted. The effectiveness and crop safety of herbicides heavily depend on understanding soil pH, organic matter, and CEC's. Irrigation decisions can also be influenced by understanding cation levels and soil CEC. A grid sample every year is typically about **1%** of the total expenditures and can provide valuable guidance for a majority of the decisions made in a crop season.



When looking at your average expenses for the year, a grid soil sample is **less than 1%** of your total spend. A grid soil sample can affect some of the larger expense items including dry fertilizer, seed + starter, nitrogen needs, and your crop protection program.



PV111-L11 in Aurora



PV114-D44 in Aurora

SELECT — — — — — Hybrid & Population Selection

As we embarked on the 2024 growing season, the dryland subsoil moistures were depleted, mirroring the situation in 2023. In such scenarios, we reduced populations to compensate for potential lack of rainfall. We chose a mix of seven hybrids to plant on acres that are not designated for hybrid plots. Typically, we select five core hybrids that have consistently performed well over multiple years, and introduce two newer hybrids that have demonstrated good yield potential in pre-launch testing and their debut year. We made minor adjustments to the hybrid mix on our high pH fields and dryland acres. We were very pleased with our results and are confident in this strategy as we move forward. We continue to plant three populations on most fields so that we can observe the effect of our management on different populations and provide additional information to our seed partners. We also monitor our bushel per 1,000 plants to make slight changes based on our different yield potentials, which are driven by fertility and the ability to manage water and irrigation.

Population & Bushel Increase

POPULATION INCREASE	BUSHEL INCREASE
1,000	1.09
2,000	2.19
3,000	3.28
4,000	4.38
5,000	5.47
6,000	6.56
7,000	7.66
8,000	8.75
9,000	9.84
10,000	10.94
Formula used to determine bushel increase	
Price/Bag	\$350
\$\$/1000	4.375
\$/Bu Corn	\$4

When increasing population, you will need to aim for a bushel increase in order to achieve a return on increased seed expense.

Hastings Southeast



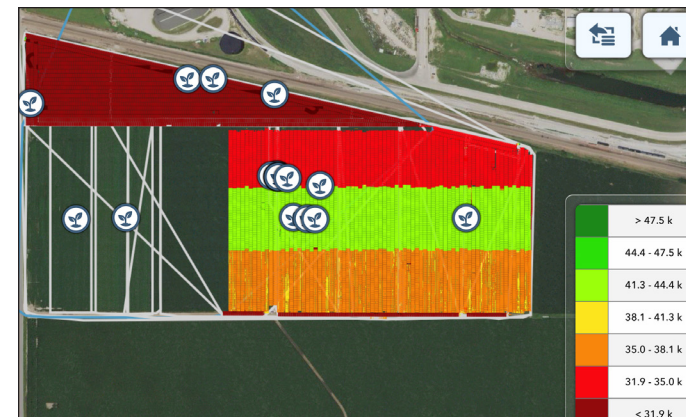
Hastings SE North Side Populations	Avg. Yield	Bu/1,000	\$/1000K	NET
33,000	260	7.86	144.38	
35,000	270	7.71	153.13	\$(8.06)
37,000	274	7.41	161.88	\$(6.81)

Hastings SE South Side Populations	Avg. Yield	Bu/1,000	\$/1000K	NET
33,000	270	8.17	144.38	
35,000	270	7.70	153.13	\$32.50
37,000	272	7.35	161.88	\$41.25

WHY

The focus at Owners Acres isn't solely on determining the best hybrid in any particular year, but how yields are impacted by management and populations. We have learned many valuable insights such as which hybrids perform on pH, the need for late irrigation on top-end hybrids, and which hybrids can handle high management and populations. Understanding what it takes to influence certain genetics and maximize each hybrid's potential is why we allocate over half of our acres to hybrid/variety trials and evaluate over 50 hybrids/varieties every year. Local testing with consistent management provides us the insight needed to help growers manage their seed investment.

Aurora



Aurora Populations	Avg. Yield	Bu/1,000	\$/1000K	NET
34,000	293.1	8.62	148.75	
38,000	299	7.87	166.25	\$5.78
42,000	298.9	7.12	183.75	\$(6.85)



Field	Crop	N-Credits	2x2x3		Y-Drop	Pivot 1	Pivot 2	Pivot 3	Total Applied	Total w/ Credits
		Soil + Previous Crop	Planting	Cultivation						
David City	Soybeans	50							0	50
CC South	Corn on Corn	15	40	175					215	230
CC West	Corn on SB	55	40		110	25	25		200	255
CC East	Soybeans	15				25			25	40
Hastings NW	Corn (Dryland)	90	40		40				80	170
Hastings NW	Soybeans (Dryland)	90							0	90
Hastings SE	Corn on Corn	96	40	115					155	251
Hastings NE	Corn	60	40	140					180	240
Hastings NE	Soybeans	50							0	50
Hastings SW	Corn on Soybeans	50	40	140					180	230
Aurora	Soybeans	50				20	10		30	80
Aurora	Corn on Corn	50	40		100	23	30	30	223	273
Aurora Dryland	Corn on Corn	120	40						40	160

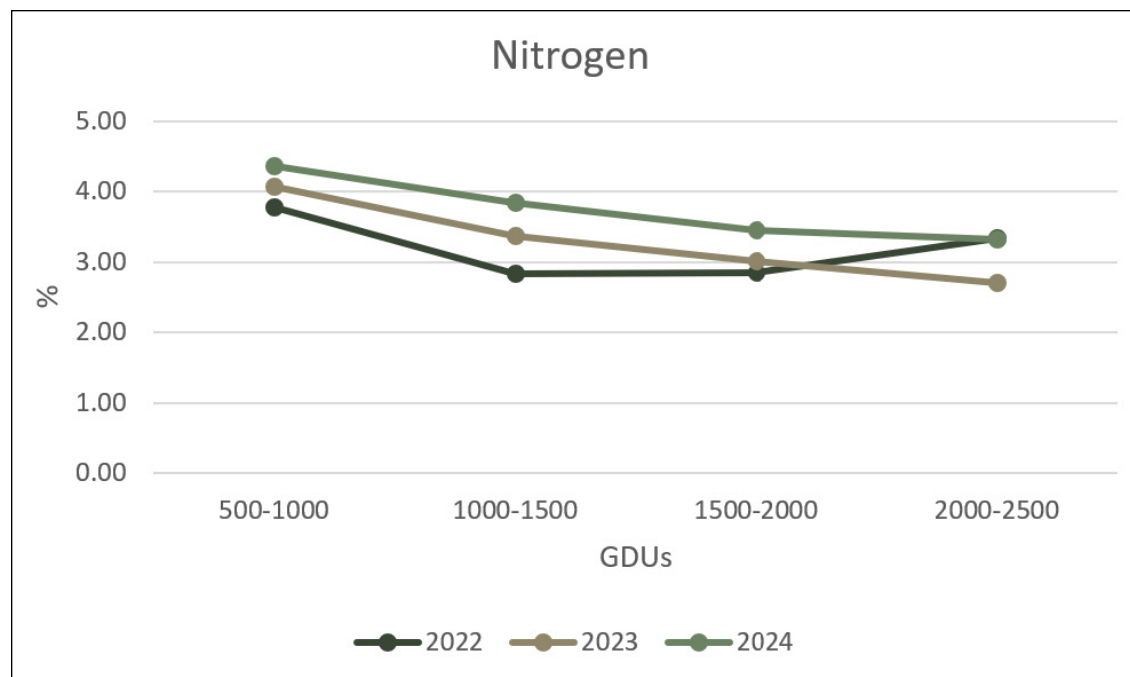
MANAGE — — — — —

Nitrogen Management

Nitrogen management remains a primary focus area of Owners Acres testing. Once again, we were able to demonstrate the value of a current grid soil test for soil nitrate, and taking credits allowed us to achieve a cost savings of \$50-\$100 per acre. Following a dry year in 2023, our dryland fields had enough residual nitrogen that we only applied nitrogen at planting time, relying on the residual nitrogen to meet our needs throughout the year. We applied our split applications and did not experience any significant weather events that limited yield potential. All applications on irrigated ground proceeded as planned, and an additional late fertigation application was added in Aurora due to the yield potentials appearing positive at the time of application.

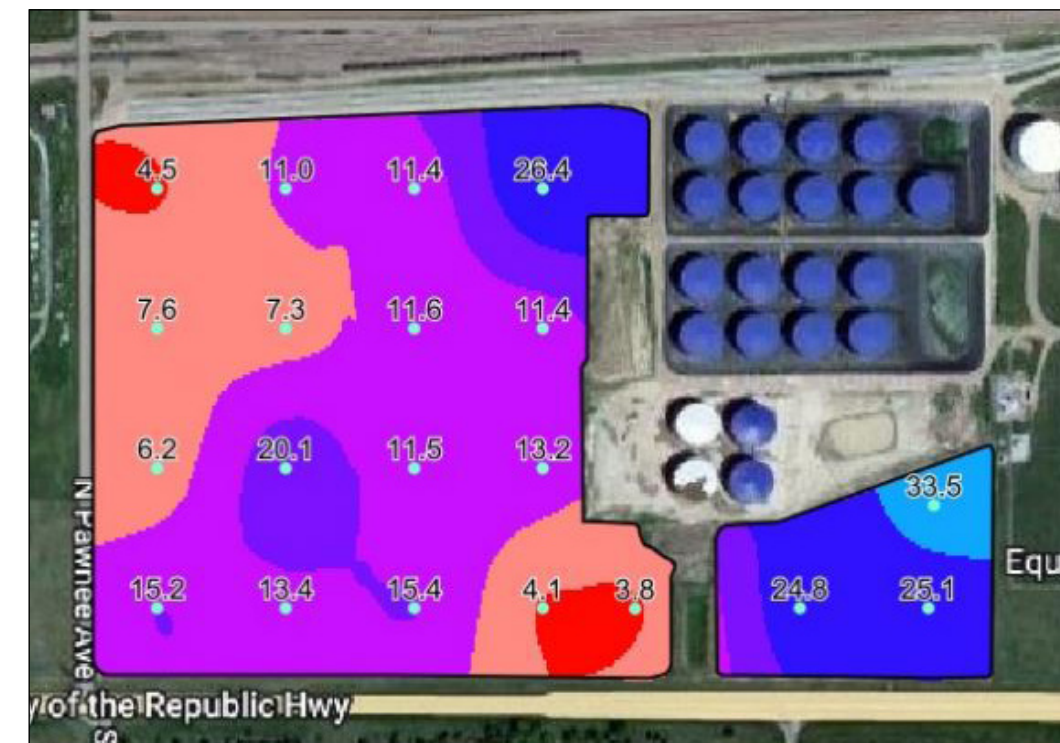
WHY

Nitrogen is one of the most important nutrients in corn production; it is also one of the most mobile and expensive nutrients. A nitrogen management plan should aim to meet yield goals while also minimizing over-application and nitrogen loss. There are many management tools to consider when building a management program. Timing, multiple applications, nitrogen placement, nitrogen form, soil type, irrigation practices, nitrogen stabilizers, and soil microbial management are all practices we take into account. One must also consider all credits, including organic matter, residual nitrogen, and previous crops, to name a few. A good nitrogen management plan will reduce loss and increase the efficiency of nitrogen per bushel produced.



Above is a historical nitrogen chart of tissue values by growth stage of corn throughout the growing season.

Fall 2024 Hastings SW Nitrate Map



2024 Crop Protection Application Dates



Planted: 5/10/24	
Pre: 5/15/24	Post: 6/6/24
Verdict: 13 oz.	Zidua SC: 2.5 oz.
Diflexx: 8 oz.	Status: 5 oz.
2,4-D LV6: 6 oz.	RoundUp PMAX3: 22 oz.
RoundUp PMAX3: 22 oz.	
GDU: 75	GDU: 405
22 days	



Planted: 5/10/24	
Pre: 5/15/24	Post: 6/6/24
Degree Xtra: 2 qt.	Degree Xtra: 1 qt.
Balance Flexx: 3 oz.	Diflexx: 8 oz.
Diflexx: 8 oz.	Buccaneer: 22 oz.
Buccaneer: 22 oz.	
GDU: 75	GDU: 405
22 days	



Planted: 5/10/24	
Pre: 5/15/24	Post: 6/6/24
Resicore: 1.5 qt.	Resicore: 1.5 qt.
Atrazine: 1 qt.	Atrazine: 0.5 qt.
Diflexx: 8 oz.	Buccaneer: 22 oz.
Buccaneer: 22 oz.	
GDU: 75	GDU: 405
22 days	



Planted: 5/10/24	
Pre: 5/15/24	Post: 6/6/24
Atrazine: .75 qt.	Bicep: 1.8 qt.
Storen: 2.4 qt.	Buccaneer: 22 oz.
Diflexx: 8 oz.	
Buccaneer: 22 oz.	
GDU: 75	GDU: 405
22 days	

PLAN — — — — —

Crop Protection Plan

This year, we learned a valuable lesson about the importance of moisture for the performance of residual herbicide programs. Timely rains led to the reactivation of our residual herbicide programs, resulting in very effective weed control. In most cases, we were able to avoid using dicamba-based post products in corn, which effects plant health causing brittleness and stress, but also provided significant cost savings. We did have a slightly wider window to apply our second post-residual applications, but we will still be prepared in the future to apply 21-28 days after the first applications. We followed the same strategy with soybeans, using overlapping residuals and reducing the pressure on our **Liberty** applications to control large weeds. Also, we showed that spraying residuals while they can reach the ground is more effective than waiting for a fuller canopy when product is held up in the soybean plants. We also continued to show that all the crop protection companies have effective weed control solutions when executed in a timely manner.

WHY

A well-executed herbicide program prevents weeds, yield loss, and potential resistance development in weed species. There are no easy buttons or one-pass programs now that many weeds, including Palmer Amaranth, have developed resistance. The best strategy to manage weeds is to prevent them from emerging or executing post herbicide applications while they are very small (<2-4"). Scouting fields and waiting to see weeds emerge can create compromising situations if the weather doesn't allow timely spraying. Additionally, a weed such as Palmer can grow very rapidly and on multiple growing points, which makes herbicide control of weeds more than 4" very difficult. Understanding when early residual herbicides will start to lose effectiveness and overlapping your second pre-emergent herbicide can greatly improve weed control.



Planted: 5/10/24	
Pre: 5/15/24	Post: 6/6/24
Anthem Max: 6.5oz.	Impact Core: 1qt.
Explorer: 3oz.	Impact: 0.25oz.
Atrazine: 1qt.	Buccaneer: 22oz.
Diflexx: 8oz.	
Buccaneer: 22oz.	
GDU: 75	GDU: 405
22 days	

Base Program Pre		Planting Date:	5/9/2024	4/24/2024 - 5/11/2024	5/16/2024	5/15/2024	4/24/2024
Acuron	3 qts.	Locations:	Central City West	Hastings SE	Hastings SW	Hastings NE	Hastings NW
Buccaneer	22 oz.	Pre-Application:	5/13/2024	5/12/2024	5/17/2024	5/17/2024	5/1/2024
Base Program Post		GDU Pre:	56	28	22	36	53
Buccaneer	22 oz.	Post-Application:	6/5/2024	6/6/2024	6/7/2024	6/7/2024	5/31/2024
Sequence	2.5 pts.	Days After Pre:	23	25	21	21	30
Prevail (if no Constrain XLT Plus)	1 qt.	GDU Post:	393	434	378	391	423
Constrain XLT Plus	8 oz.						



STEP

2



EMERGENCE

PREPARE

Planter Preparation & Technology

BOOST

Seed Treatment & In-Furrow

EVALUATE

Seed Bed Preparation

TIMING

The Right Planting Window

PREPARE — — — —

Planter Preparation & Technology

We continue to plant using our Harvest International planter with Precision Planting V-Set meters and speed tubes. Replacing worn parts is critical to achieving maximum performance on uniform spacing and depth. While planter preparation in the shop is important, we again made small adjustments once we got to the field and every time we moved to a new field and farming system. We were able to make a few practice rounds to ensure our planter performed well and was ready to operate efficiently in the field.

WHY

Flag tests and yield observations have shown the importance of uniform planting. Proper seed spacing ensures that plants do not compete with each other for water and nutrients, and develop properly. Making sure seed depth and soil conditions are uniform around the seed leads to uniform emergence, so plants grow at the same rate and do not lag behind, preventing yield loss.

Planter Set-Up Guide

Functional Areas & Parts to Check:

1. Seed Transmission System
2. Wheels & Tires
3. Fertilizer Transmission
4. Down Pressure Spring Assembly
5. Parallel Arm Linkage
6. Row Unit Sprockets
7. Drive Chains
8. Row Cleaners
9. No-Till Coulters
10. Gauge Wheel Assembly
11. Tru-Vee Openers/Disc Blades
12. Seed Tube & Tube Guard
13. Keeton Seed Firmers
14. Closing Wheel Assembly

15. Insecticide Assembly
16. Seed Meters

In-Field Adjustments to Check:

1. Planter Running Level
2. Planter Speed!!!
3. Row Cleaners Set at Correct Depth
4. Down Pressure at Proper Setting
5. Chains & Drive System
6. Use Graphite (on finger pickup) or Talc (on vac. planters)

Courtesy of Missy Bauer
www.bmcropconsulting.com



BOOST — — — —

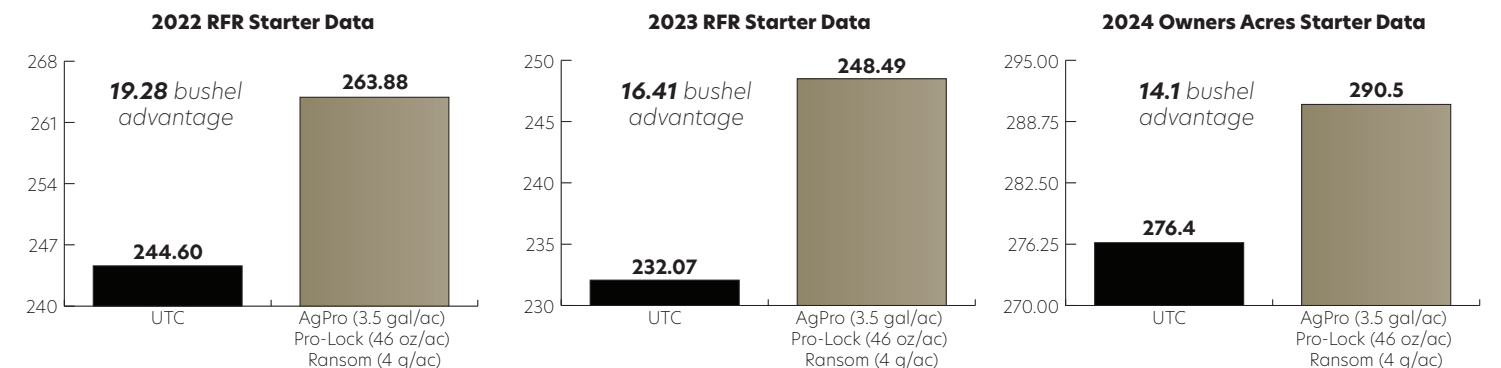
Seed Treatment & In-Furrow

This year, we didn't make any changes to our in-furrow program and continued with our **AgPro/Pro-Lock/Ransom** package on corn. We were excited to trial our new **Trailblazer** seed box treatment as a comparison for our growers who are not set up with in-furrow systems. The trials showed that we were able to achieve many of the same benefits. We are still able to provide more solutions with in-furrow such as adding **Index** insecticide and **Evito** or **Tepera** for crown and stalk rot prevention, which turned out to be a significant issue this year. We were glad to have the extra protection. In soybeans, we continued the use of **ABS (Aurora Bean Starter)** and added additional R2G calcium to all fields as well as iron to our higher pH fields.

WHY

The newest fungicide/insecticide seed treatments prevent early insect and disease damage while seedlings are in a vulnerable stage. We can never fully predict the moisture, temperature, and disease pressure in any given spring. Protecting seedlings with industry-leading seed treatments and adding Hustle will lead to more plants per acre and a more uniform emergence. When planting soybeans early, we have confidence that even if the weather doesn't cooperate, we can still achieve adequate stands and see the benefits of more nodal sites and shorter internodes obtained by earlier soybean planting.

Owners Acres 2024	Owners Acres 2024	Owners Acres Soybean	Owner Acres Corn	Owners Acre Corn	
Corn Seed Treatment	Soybean Seed Treatment	In-Furrow Treatment	In-Furrow Treatment	2x2x3	
Acceleron Elite	CruiserMaxx Apex	ABS (1 gal.)	Pro-Lock (46 oz.)	32-0-0	(8 gal.)
Poncho/VOTIVO	Hustle	Ransom (4 grams)	AgPro (1 gal.)	Thio	(2 gal.)
Hustle	Saltro	R2G Calcium (1 pt.)	Ransom (4 grams)	10-34-0	(8 gal.)
		Versa Iron - High pH (1 qt.)	Evito (2 oz.)	10% Zinc	(1 gal.)
			Index (12.5 oz.)	Humega	(1 gal.)
				N-Stat	(10 oz.)



EVALUATE

Seed Bed Preparation

This year presented some significant differences in seed bed preparation. The year began very dry, making spring field work somewhat challenging and providing a dry seedbed which required deeper planting to find moisture. However, after a rainy period, we had to exercise patience and wait for soil conditions to dry out enough to avoid sidewall and furrow compaction. Once again, we were prepared to run our pivots if necessary, but good soil moisture conditions and timely rains allowed us to avoid having to use them. Residue management was also a key factor, and tillage in our higher population fields that were previously corn helped to mitigate this concern.

WHY

A consistent seed bed that provides uniform moisture and an opportunity for good seed-to-soil contact is a very critical part of achieving uniform emergence. Residue in the furrow area can greatly reduce the number of plants emerging in the first window. Weed or residue pressure can also create dry or wet pockets that change the rate of water imbibition from seed to seed. Soil temperatures can also vary significantly, with high residue typically creating cooler soil temperatures that can delay emergence in those areas.

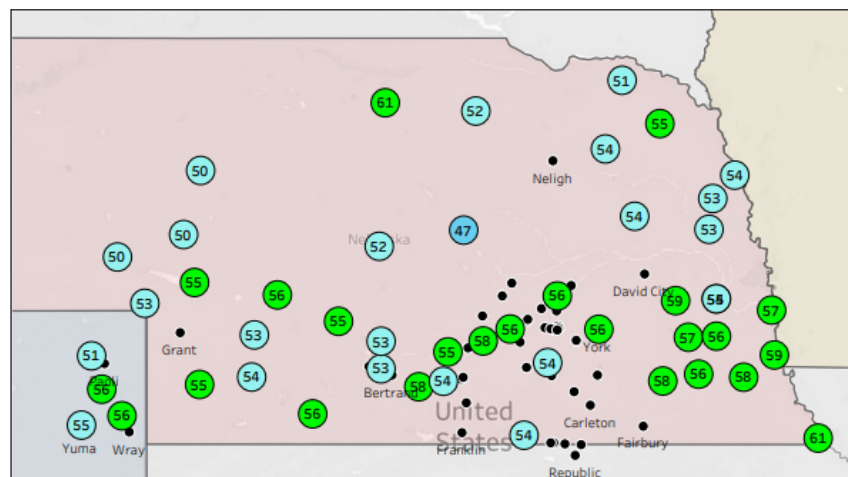
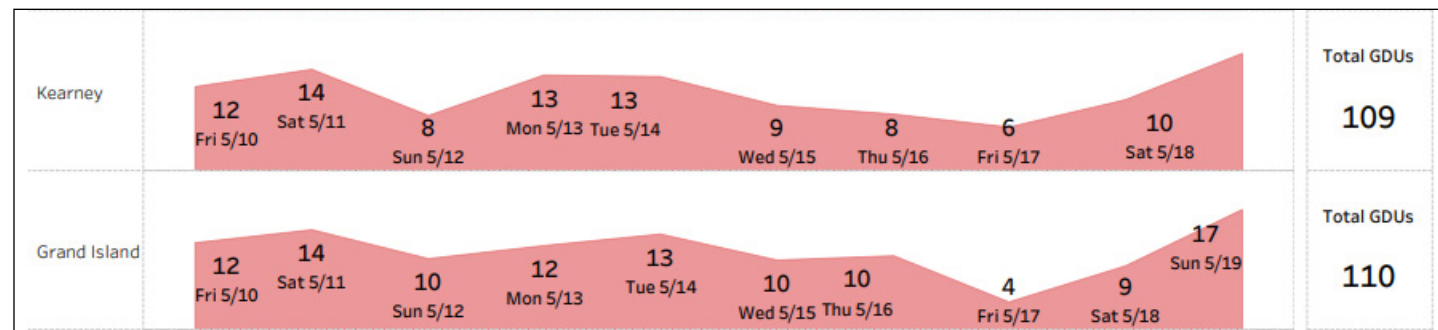
TIMING

The Right Planting Window

Our goal is to always be ready to hit the field once the calendar turns to April. We try to wait for a good planting window that will allow for soil warming and a forecast with 10-15 GDU's per day for 10 days. A favorable window didn't present itself, so we focused on planting soybeans, particularly in David City, while the soil conditions were favorable, beating the rainy spell. We also planted Hastings dryland corn with the hope of catching rain to assist with emergence. This was the second year where we waited for the right window for our higher-yielding corn fields, which ended up being the second week of May. Our highest yielding corn and best emergence scores have been achieved in these windows over the past two seasons.

WHY

Springtime temperatures in the western corn-belt can change rapidly. Corn will germinate at 50 degrees and typically needs 100-140 GDUs to emerge. Finding a consistent window to maintain these soil temperatures is one of the keys to achieving uniform emergence. Looking for consistent or warming soil temperatures and avoiding planting before temperatures that will cool soils has helped improve uniformity. Striving for soil temperatures of 50 degrees within 24-48 hrs after planting also avoids the risk of imbibitional chilling of seeds.



Since 2018, Aurora Cooperative has been publishing daily soil temperatures and GDU forecasts to help growers determine ideal planting conditions.

Ideal Planting Window - Aurora Planted 5/10/24

Date	Temperature (F)			Wind Speed (mph)		Rainfall (in.)		Growing Degree Days (F)	
	Max.	Min.	Norm.	Max.	Avg.	Daily	Accru.	Daily	Accru.
5/10/24	74.0	47.0	61.0	17.0	11.0	0.00	0.00	11.0	11.0
5/11/24	79.0	46.0	65.0	15.0	7.0	0.00	0.00	15.0	26.0
5/12/24	74.0	55.0	63.0	13.0	7.0	0.23	0.23	13.0	39.0
5/13/24	72.0	53.0	61.0	16.0	7.0	0.04	0.27	11.0	50.0
5/14/24	75.0	47.0	63.0	9.0	3.0	0.00	0.27	13.0	63.0
5/15/24	69.0	56.0	62.0	25.0	8.0	0.18	0.45	12.0	75.0
5/16/24	76.0	46.0	63.0	11.0	7.0	0.00	0.45	13.0	88.0
5/17/24	85.0	56.0	71.0	21.0	15.0	0.00	0.45	21.0	109.0
5/18/24	78.0	58.0	68.0	23.0	14.0	0.00	0.45	18.0	127.0
5/19/24	66.0	53.0	59.0	21.0	10.0	0.98	1.34	9.0	136.0
5/20/24	77.0	54.0	67.0	10.0	5.0	0.00	1.34	17.0	153.0
5/21/24	63.0	51.0	57.0	30.0	18.0	1.13	2.47	7.0	160.0
5/22/24	69.0	51.0	60.0	10.0	6.0	0.00	2.47	10.0	170.0



STEP

3



ENHANCE

STIMULATE

PGR Use

FEED

Micronutrient Needs

ENERGIZE

Amino Acid Use

PROTECT

Stress Reduction

STIMULATE

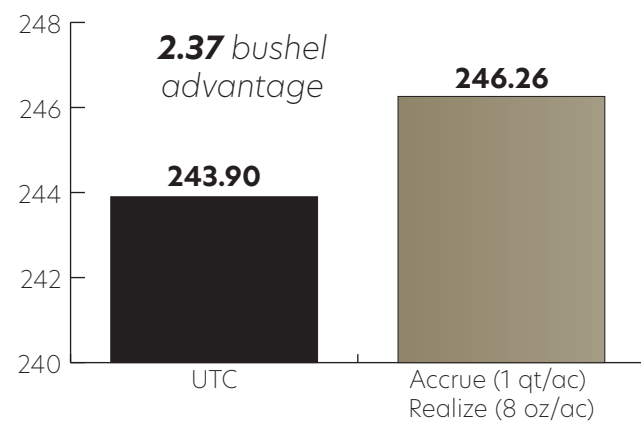
PGR Use

A standard program on Owners Acres involves the application of **Realize**, which provides three different PGRs to both corn and soybeans. This application is very time-sensitive, and we managed to apply all treatments in our ideal window for corn (prior to V6). For soybeans, we ensured that we used **Realize** on every trip across the field. We hit V3 and achieved good lateral branching, then tank mixed with our subsequent post herbicide and fungicide/insecticide applications. Aerial applications of PGRs and micronutrients have proven to be just as effective as traditional ground applications if you find yourself under pressure with timings.

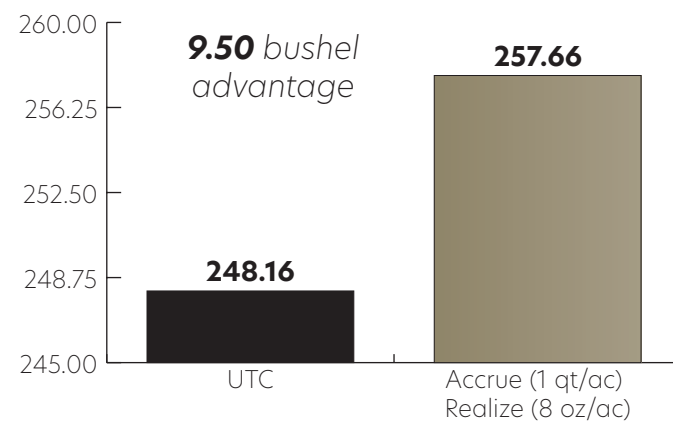
WHY

Biostimulants can positively promote growth and reproduction in both corn and soybean plants. One category of biostimulants is synthetic plant hormones, which can send chemical messages that trigger plant cellular growth. These tools allow for a larger leaf area to capture sunlight, increased root growth to intercept more nutrients and water, and increased seed and flower production. Proper ratios and timings are critical to stimulating plants and increasing yield potential.

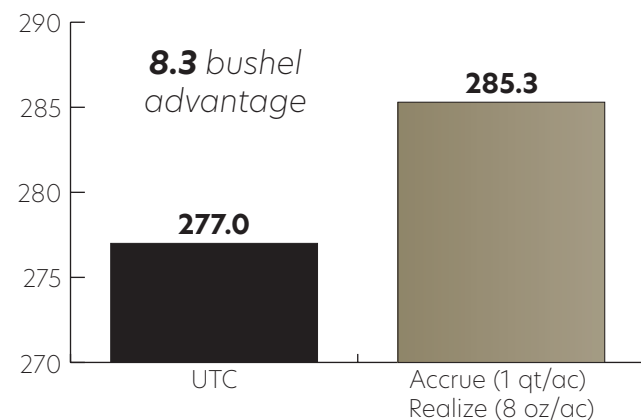
2022 RFR Accrue & Realize Data



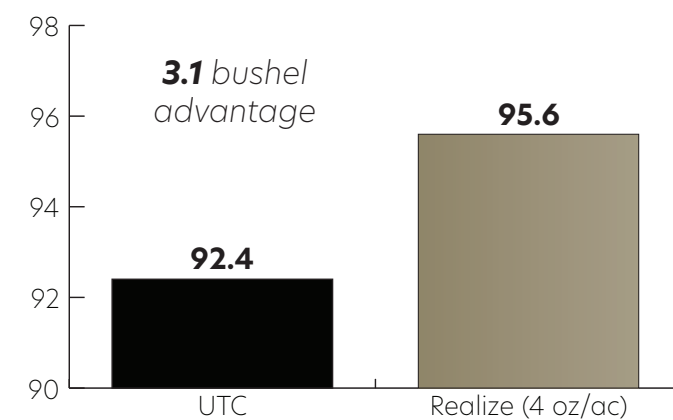
2023 RFR Accrue & Realize Data



2024 Owners Acres Accrue & Realize Data



2024 Owners Acres Realize Soybean Data



FEED

Micronutrient Needs

We continued the use of a micronutrient blend to cover potential crop needs early in the season. **Accrue**, used on corn and soybeans, provides a small dose of several nutrients to bridge the gap to nutrient uptake. Foliar feeding is usually not a cost-effective way to provide nutrients and although we see a response in our tissue tests, we try to limit applications to only key times where our data consistently shows a return on investment. We applied **BMO** at the tassel stage on corn and pod fill stage on soybeans to help with pollen viability in corn and nitrogen efficiency in both crops. If we identify a micronutrient deficiency in tissue or soil samples, we will work to correct our soil levels and nutrient balances.

WHY

Typically, plants rely on getting nutrients from the soil to their roots system through mass flow, diffusion, and root interception. While early root systems are developing, plants depend on the nutrients from their seeds and pop-up fertilizers. Around V3 to V5, plants transition to needing roots to provide all nutritional needs. This is a key time when plants are vulnerable to deficiencies if roots are slow to develop and root systems are still small. The tie-up of nutrients or poor mineralization can increase the likelihood of nutrient deficiencies showing up at this time.

Corn

Planting Date:	5/10/2024	5/9/2024	4/24/2024 - 5/11/2024	5/16/2024	5/15/2024	4/24/2024
	Aurora	Central City West	Hastings SE	Hastings SW	Hastings NE	Hastings NW
Yield Enhancements Realize (8 oz.) Accrue (1 qt.)	6/10/2024	6/6/2024	6/11/2024	6/11/2024	6/11/2024	6/5/2024
GDU	485	412	520	461	474	510

Soybeans

Planting Date:	4/22/2024	4/15/2024	4/18/2024	4/18/2024
	Aurora	Central City East	Hastings NE	Hastings NW
Yield Enhancements Realize (8 oz.) Accrue (1 qt.)	6/10/2024	6/6/2024	6/11/2024	6/11/2024
GDU	582	558	637	637

ENERGIZE

Amino Acid Use

This year, we continued our testing of amino acid products. A new solution that we have worked with is **Prevail** in soybeans. **Prevail** is a surfactant used when spraying our soybeans post-emergence that provides a full amino acid package similar to **Constrain XLT Plus**. This has given us more flexibility on timings and the ability to make multiple applications. We continue to test for ROI and the best timings of application, and we look forward to continuing our research using our amino acid portfolio.

WHY

Keeping plants actively growing and focused on yield production is the ultimate goal. Plants produce their own amino acids and typically do not require them unless the plants are under stress. Adding amino acids (synthetic and natural) ensures that plants have access to amino acids and aren't consuming energy to produce extra in times of stress.

Corn

Planting Date:	5/10/2024	5/9/2024	4/24/2024 - 5/11/2024	5/16/2024	5/15/2024	4/24/2024
	Aurora	Central City West	Hastings SE	Hastings SW	Hastings NE	Hastings NW
Yield Enhancements Constrain XLT Plus (8 oz.)	6/6/2024	6/5/2024	6/7/2024	6/7/2024	6/7/2024	5/31/2024
GDU	409	393	437	378	391	428

Soybeans

Planting Date:	4/22/2024	4/15/2024	4/18/2024	4/18/2024
	Aurora	Central City East	Hastings NE	Hastings NW
Yield Enhancements Constrain XLT Plus (8 oz.)	5/28/2024	5/27/2024	5/29/2024	5/29/2024
GDU	358	375	396	396

PROTECT

Stress Reduction

This year, we didn't experience the rapid growing conditions and heat like the previous year. Also, our pre-emergent herbicides held up well, so we only applied **Constrain XLT Plus** on corn where we had to use dicamba post products. These post-herbicide applications only resulted in minor brittleness and crop response. Minimizing recovery was important in our soybean applications as we aimed to achieve crop canopy as soon as possible.

WHY

Growing crops undergo many stresses, and one of the major stress events are herbicide applications. Even though plants are tolerant to applied herbicides, they still must metabolize these chemistries. Often, these stresses show up as phytotoxicity of leaf tissue, brittleness/roping of plants, or temporary wilting. These stress events require energy and crop recovery time that can impact yields and development.

Cupped Enlist soybeans due to herbicide stress.





STEP

4



ENERGY MANAGEMENT

PRESERVE

Fungicide Application

UTILIZE

Nitrogen & BMO Applications

PREVENT

Insecticide Application

MONITOR

Water Management & Tissue Sampling

Corn

Planting Date:	5/9/2024	4/24/2024 - 5/11/2024	5/16/2024	5/15/2024	4/24/2024
	Central City West	Hastings SE	Hastings SW	Hastings NE	Hastings NW
First Fungicide Application Miravis Neo (13.7 oz.)	6/29/2024	6/27/2024	6/27/2024	6/27/2024	6/27/2024
GDU	959	961	879	886	1060
Second Fungicide Application Miravis Neo (13.7 oz.) Aurora BMO (1 qt.)	7/18/2024	7/20/2024	7/20/2024	7/20/2024	7/20/2024
GDU	1368	1464	1376	1382	1552

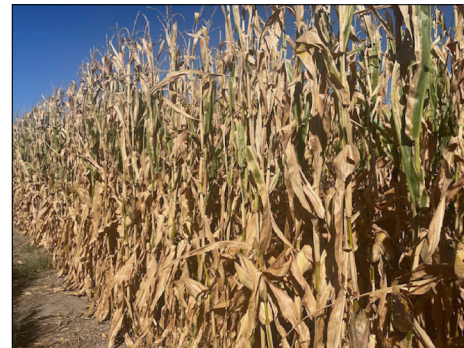
Soybeans

Planting Date:	4/15/2024	4/18/2024	4/18/2024
	Central City East	Hastings NE	Hastings NW
First Fungicide Application Miravis Neo (13.7 oz.)	6/19/2024	6/21/2024	6/21/2024
GDU	831	897	897
Second Fungicide Application Miravis Neo (13.7 oz.) Aurora BMO (1 qt.)	8/6/2024	8/4/2024	8/4/2024
GDU	1968	1992	1992

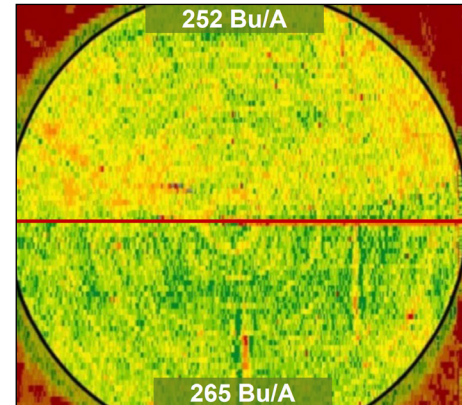
Two Pass Fungicide Performance in Clay Center, NE



Miravis Neo (13.7 oz./A) applied at V12 followed by Trivapro (13.7 oz./A) applied at VT/R1



Trivapro (13.7 oz./A) applied at VT/R1



265 Bu/A: Miravis Neo (13.7 oz./A) applied at V12 followed by Trivapro (13.7 oz./A) applied at VT/R1
252 Bu/A: Trivapro (13.7 oz./A) applied at VT/R1

PRESERVE — — — — —

Fungicide Application

What a difference a year can make. While last year we didn't see any significant disease pressure in corn, this year the early southeast winds and weather patterns led to us finding southern rust in corn fields very early on. A moderate weather pattern mid-summer slowed the progress of this devastating disease, but the late heat in September caused a significant flare-up, even in previously treated fields. Additionally, we saw some late crown and stalk rot issues due to the early rains and late-season plant stress. We are pleased with our approach of using **Evito/Tepera** in-furrow to protect against early disease entry that can lead to stalk and crown rots later in the year. We followed that up with a V12 application and a R1 application to provide plant health and disease protection throughout the year. Fortunately, southern rust does not overwinter, but we continued to see widespread progression of tar spot and are very concerned about the overwintering and prevalence of this disease moving forward. Untreated fields in our area saw significant yield losses. In soybeans, the dry weather and late heat kept white mold at bay, but we did find it in our fields and others in our trade area. This will be a disease that we will continue to manage in upcoming years.

WHY

Just like us, plants need to rest and respire to maximize their production. Heat and rapid growth spurts can put stress on plants and consume energy and resources just to survive. Many current fungicides can slow this process and control respiration and energy burn in both corn and soybeans. These plant health benefits can lead to protecting yield potential. When diseases infect plants, extra energy is spent fighting disease, and damaged leaf tissue reduces photosynthesis, a key process in providing energy to the plants.

Aurora Corn

Owners Acres	First Fungicide Application	Second Fungicide Application
Company	6/27/2024	7/25/2024
BASF	Veltyrna (7 oz.)	Veltyrna (7 oz.)
Bayer	Delaro Complete (8 oz.)	Delaro Complete (8 oz.)
Corteva	Approach (9 oz.)	Approach Prima (6.8 oz.)
Syngenta	Miravis Neo (13.7 oz.)	Miravis Neo (13.7 oz.)
AMVAC FMC	Adastrio (8 oz.)	Adastrio (8 oz.)
GDU	905	1526

Aurora Soybeans

Owners Acres	First Fungicide Application	Second Fungicide Application
Company	6/25/2024	8/2/2024
BASF	Endura (6 oz.)	Revytek (8 oz.) & Endura (6 oz.)
Bayer	Delaro Complete (8 oz.)	Delaro (8 oz.)
Corteva	Viatude (12 oz.)	Approach Prima (6.8 oz.) & Viatude (4 oz.)
Syngenta	Miravis Neo (13.7 oz.)	Miravis Neo (13.7 oz.)
AMVAC FMC	Lucento (5.5 oz.)	Lucento (5.5 oz.)
GDU	974	1788



UTILIZE

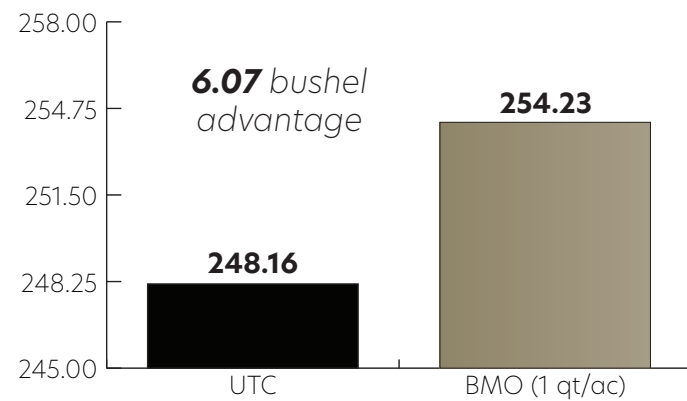
Nitrogen & BMO Applications

Once again, we delayed nitrogen applications as long as possible given our different farming practices. Where we have pivots, we use y-drop and fertigation. With under furrow irrigation, we apply at cultivation and ridging. Due to our high residual nitrogen on our dryland acres, we didn't apply nitrogen in-season this year. This flexibility saved money on unnecessary nitrogen as we took advantage of what was already in the soil profile. We applied **BMO** one time with our last fungicide applications on corn and soybeans and continue to see a positive return when adding this to the tank mix.

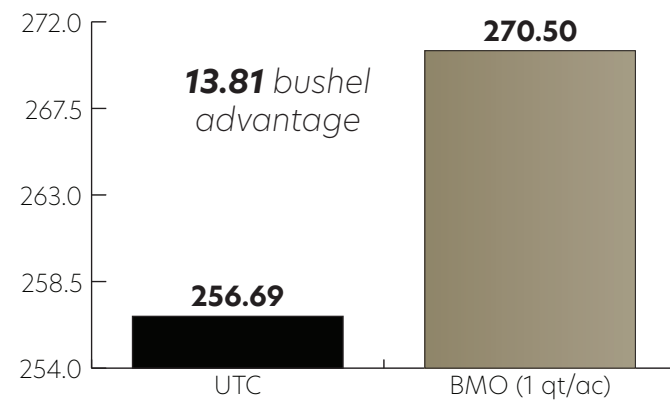
WHY

Nitrogen utilization is critically important for grain-fill in corn and soybeans. Making nitrogen readily available to plants minimizes the work they have to exert to pull it from the soil. Keeping nitrogen in the right form and in the upper root zone helps accomplish this. In addition, boron is a key nutrient to help move sugars efficiently in the plant which reduces energy consumption as well.

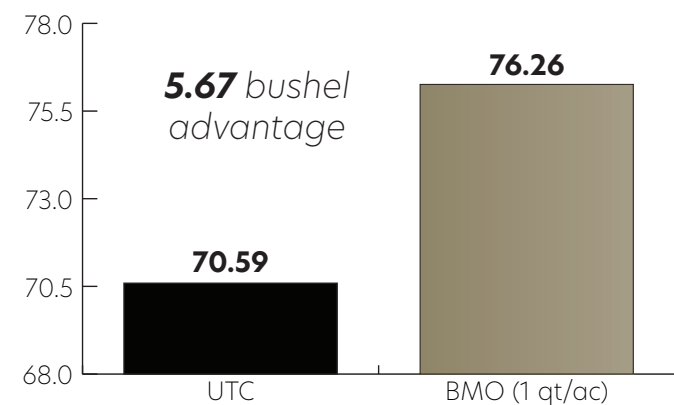
2023 RFR BMO Data



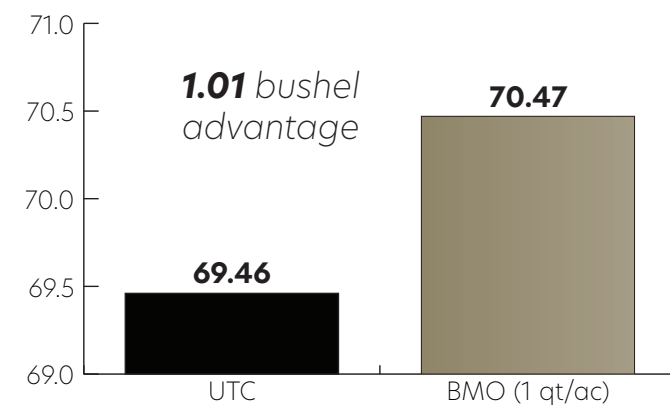
2024 RFR BMO Data



2023 RFR BMO Soybean Data



2024 RFR BMO Soybean Data



Corn

Planting Date:	5/10/2024	5/9/2024	4/24/2024 - 5/11/2024	5/16/2024	5/15/2024	4/24/2024
	Aurora	Central City West	Hastings SE	Hastings SW	Hastings NE	Hastings NW
Yield Enhancements Aurora BMO (1 qt)	7/25/2024	7/18/2024	7/20/2024	7/20/2024	7/20/2024	7/13/2024
GDU	1526	1368	1464	1376	1382	1385

Soybeans

Planting Date:	4/22/2024	4/15/2024	4/18/2024	4/18/2024
	Aurora	Central City East	Hastings NE	Hastings NW
Yield Enhancements Aurora BMO (1 qt)	8/2/2024	8/6/2024	8/4/2024	8/4/2024
GDU	1788	1968	1992	1992

Corn

Planting Date:	5/9/2024	4/24/2024 - 5/11/2024	5/16/2024	5/15/2024	4/24/2024
	Central City West	Hastings SE	Hastings SW	Hastings NE	Hastings NW
Insecticide Application	7/18/2024 Steward (8 oz.)	7/22/2024 Steward (8 oz.) & Frenzy (4 oz.)	7/22/2024 Steward (8 oz.) & Frenzy (4 oz.)	7/22/2024 Steward (8 oz.) & Frenzy (4 oz.)	7/12/2024 Steward (8 oz.)
GDU	1368	1547	1418	1424	1375

Soybeans

Planting Date:	4/22/2024	4/15/2024	4/18/2024	4/18/2024
	Aurora	Central City East	Hastings NE	Hastings NW
First Insecticide Application Frenzy Veloz (4 oz.) & Midash Forte (1.5 oz.)	6/27/2024	6/27/2024	6/28/2024	6/28/2024
GDU	1020	1052	1101	1101
Second Insecticide Application Baythroid (2.8 oz.), Liberty (29 oz.) & Midash Forte (1.5 oz.)	7/11/2024	7/11/2024	7/12/2024	7/12/2024
GDU	1284	1332	1392	1392
Third Insecticide Application	7/25/2024 Baythroid (2.8 oz.)	8/4/2024 Frenzy (5 oz.)	8/4/2024 Frenzy (5 oz.)	8/4/2024 Frenzy (5 oz.)
GDU	1579	1921	1992	1992



Aurora Corn

Planting Date:	5/10/2024
	Aurora
First Insecticide Application	7/12/2024 Baythroid (2.8 oz.)
GDU	1190
Second Insecticide Application	7/19/2024 Steward (8 oz.)
GDU	1359
Third Insecticide Application	7/25/2024 Baythroid (2.8 oz.)
GDU	1469

PREVENT

Insecticide Application

Corn rootworm, western bean cutworm, earworm, and Japanese beetles are all significant insects that we encounter throughout our farming area. We have had good results by timing our insecticide application around full silk to prevent silk clipping and early ear infestations of kernel feeders. Longer residual products are providing us with flexibility to manage the extended life cycles and our wide range of hybrid maturities across our fields. On soybeans, we observed heavy defoliation stem borer pressure and timed a treatment when we observed a peak in adults. We also experimented with some systemic insecticides on later applications to see if we could achieve additional control of this pest.

WHY

Typically, insects cause the greatest yield losses in crop production in most years. Below ground, we need to protect roots so plants can efficiently take up water and nutrients. At planting time, seedlings are vulnerable to insect feeding and stand losses. Above ground, the loss of a few kernels/pods can add up to significant bushels. Long emergence windows and multiple species of insects in fields continue to challenge producers, so timing and scouting become critical to protect crop yields.



Kernels	Rows	Population	Total Loss	Kernels/Bushel	Bu/Acre
2	18	33,000	1,188,000	80,000	14.85
Pods Lost/Plant	Beans/Pod	Population	Total Loss	Beans/Pound	Bu/Acre
5	3	140,000	210,000	3,000	1.167



MONITOR

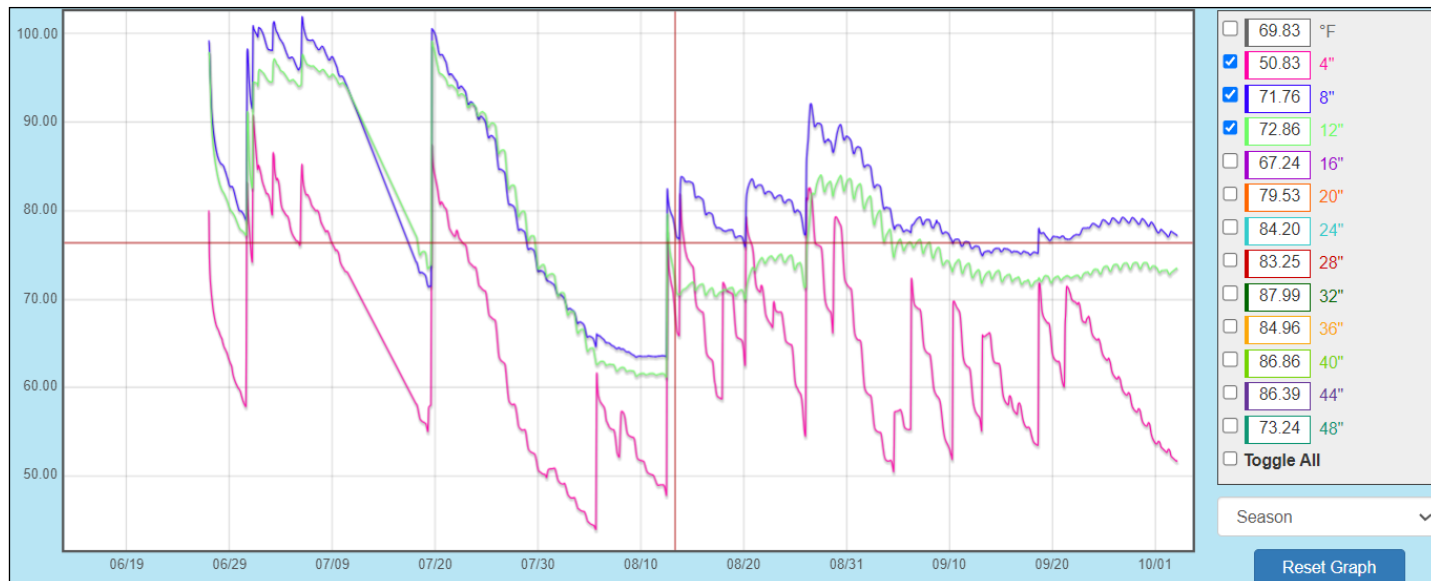
Water Management & Tissue Sampling

Having a good plan is our starting point at Owners Acres, but we understand that every year is unique. We rely on our **AquaSpy** moisture probes to help us determine our current root depth and the depth to which water is infiltrating. The early rains did move through the root zone, but we managed irrigation in a way that retained as much water and nitrogen in the active root profile as possible. Our weekly tissue tests showed that we were able to stay ahead of the key nutrient uptake times for our main nutrients. We did make one additional boron application through our pivot in Aurora due to some lower than desired tissue test levels.

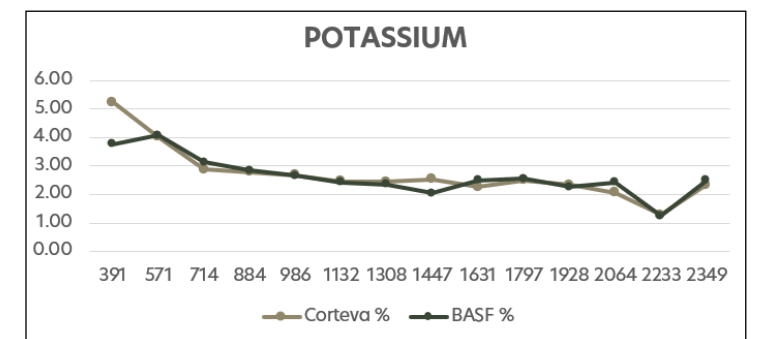
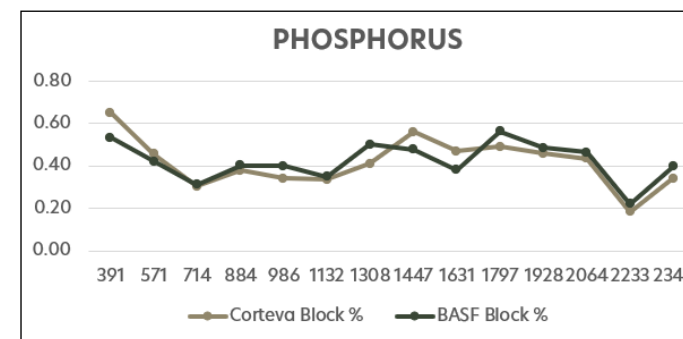
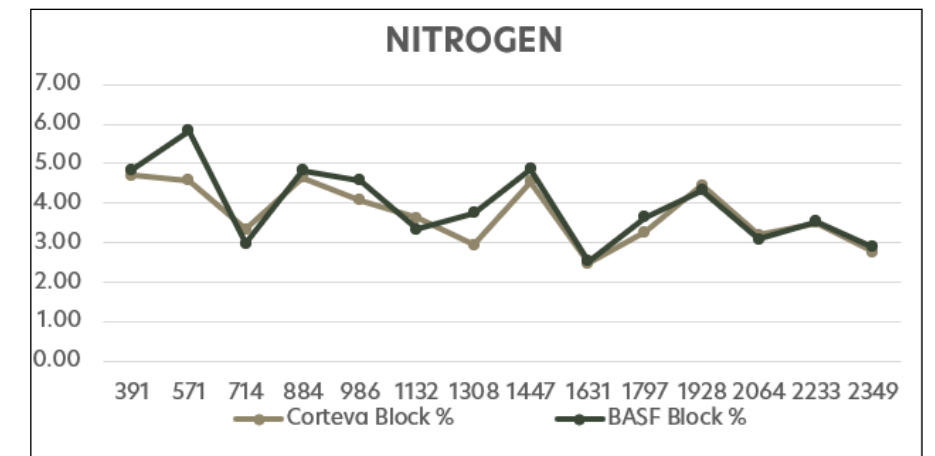
WHY

Why guess when you have tools to measure the most important factors in crop production? Our moisture probes inform us of moisture levels, how deep irrigation or rainfall is moving in the soil, and most importantly, how far roots have developed. Tissue sampling shows us if nutrients are being taken up by the plant at adequate levels. This serves as a good report card on whether our soil and applied fertility programs are meeting the plant's need and being taken up as expected.

Aurora AquaSpy Moisture Probe



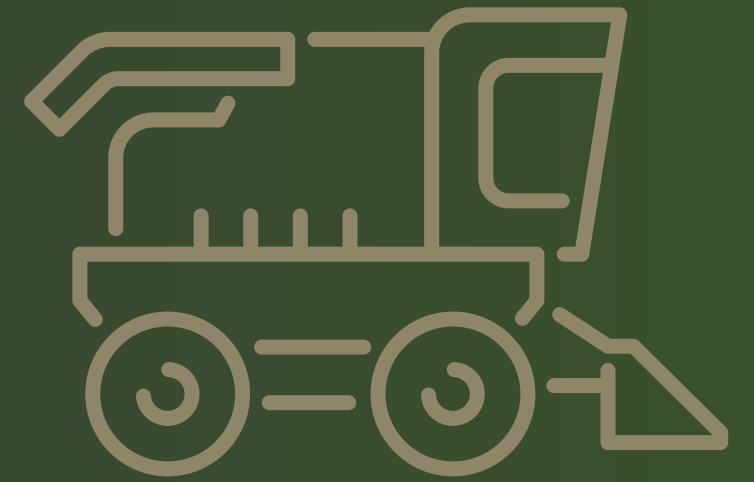
NRD Water Usage: Aurora	
YEAR	INCHES
2017	8.56
2018	6.13
2019	1.44
2020	9.87
2021	6.93
2022	12.34
2023	12.01
2024	6.62
AVERAGE	7.99





STEP

5



FINISH

RETAIN

Nitrogen Availability

RESERVE

Phosphorus & Potassium Availability

ENDURE

Late Irrigation

COLLECT

Timely Harvest

RETAIN

Nitrogen Availability

We continue to explore ways to increase our nitrogen efficiency while maintaining adequate nitrogen in our tissue samples throughout the growing season. Our focus this year was on the nitrogen form in our applications. We continue to gather data on using more urea and ammonium forms of nitrogen to increase efficiency and the absorption of nitrogen into the plant. We also continue to work with **N-Stat** nitrogen stabilizer to delay the conversion of nitrogen to the NO₃⁻ form, which is subject to leaching through the soil and root zone. On soybeans, we continued our research on in-season nitrogen applications, timings, forms, and rates.

WHY

Both corn and soybeans require a majority of their nitrogen during the grain-filling process. Running out of nitrogen before full maturity could result in yield loss and overall test-weight/seed size loss. Making plants scavenge for nitrogen can use energy that could be going into the filling process as well, so having nitrogen available in the active root zone in the proper forms is also critical.

RESERVE

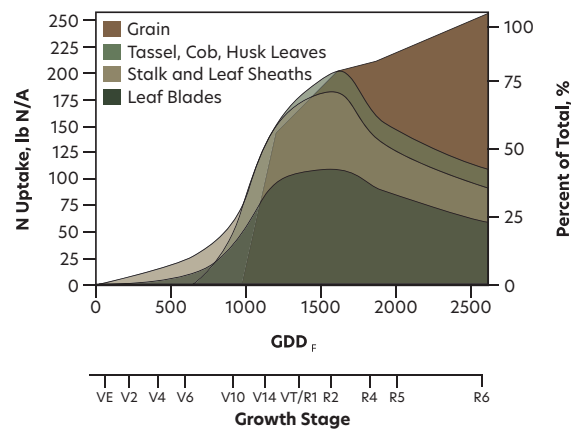
Phosphorus & Potassium Availability

This year, we continued to see good late-season tissue sample values for phosphorus and potassium, but we are constantly looking for ways to improve those values. The introduction of biologicals and the management of nutrient mineralization are aiding our progress. Our overall soil fertility program has corrected many of the late-season levels that we saw in the first few years of Owners Acres. We continue to see the value of applying **Pivot Maxx** through fertigation on our pivot-irrigated fields. 2024 offered good yield potential, so we again applied **Pivot Maxx** at R2-R3 and R4 on corn and R3 and R5 on soybeans with split applications totalling 4 gallons per acre.

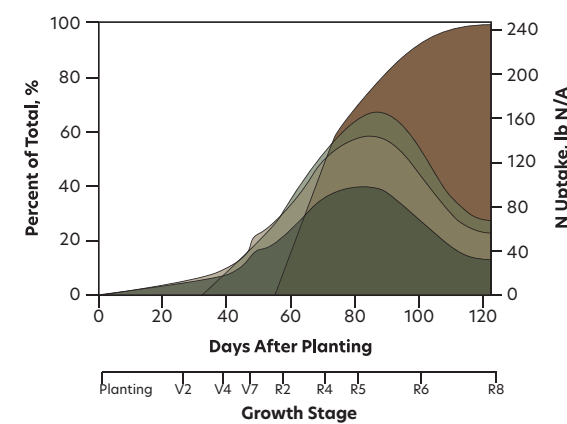
WHY

Nutrient uptake charts on corn and soybeans show the importance of having available nutrition for the reproductive and kernel/seed formation stages. Phosphorus on corn and potassium on soybeans are needed in large quantities to help add test weight and seed size. Available soil fertility is the most economical approach, as well as timing available sources of nutrients closely ahead of the crop's need.

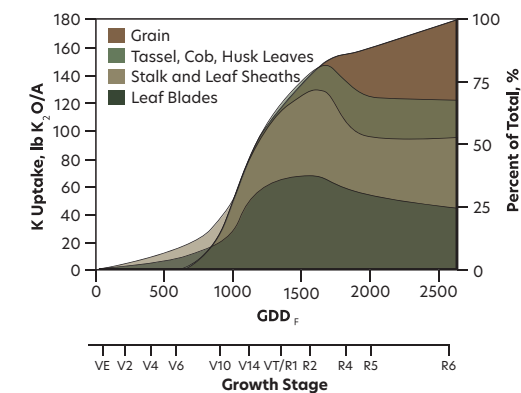
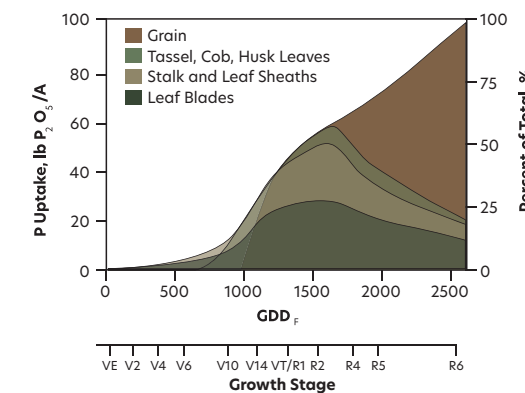
Corn



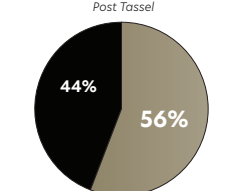
Soybeans



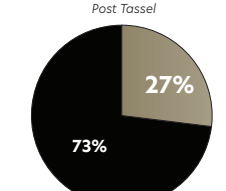
Corn



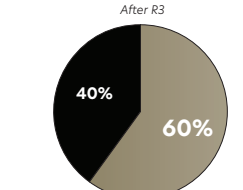
Phosphorus Uptake in Corn



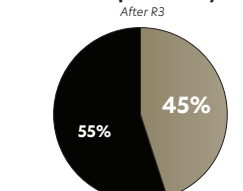
Potassium Uptake in Corn



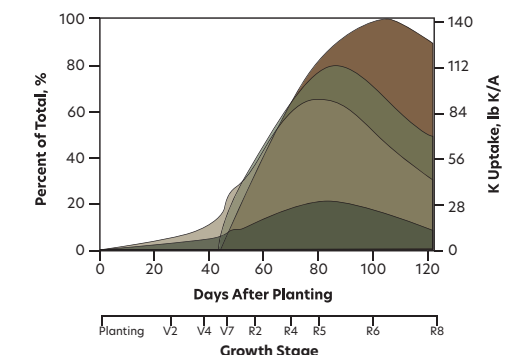
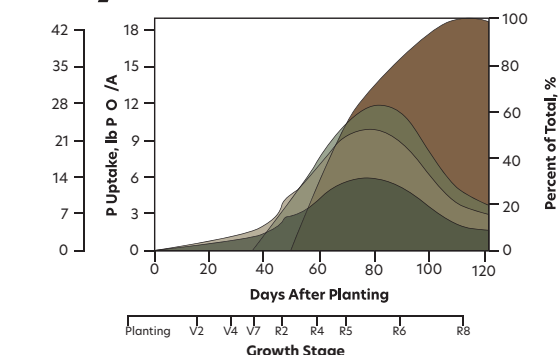
Phosphorus Uptake in Soybeans



Potassium Uptake in Soybeans



Soybeans



ENDURE

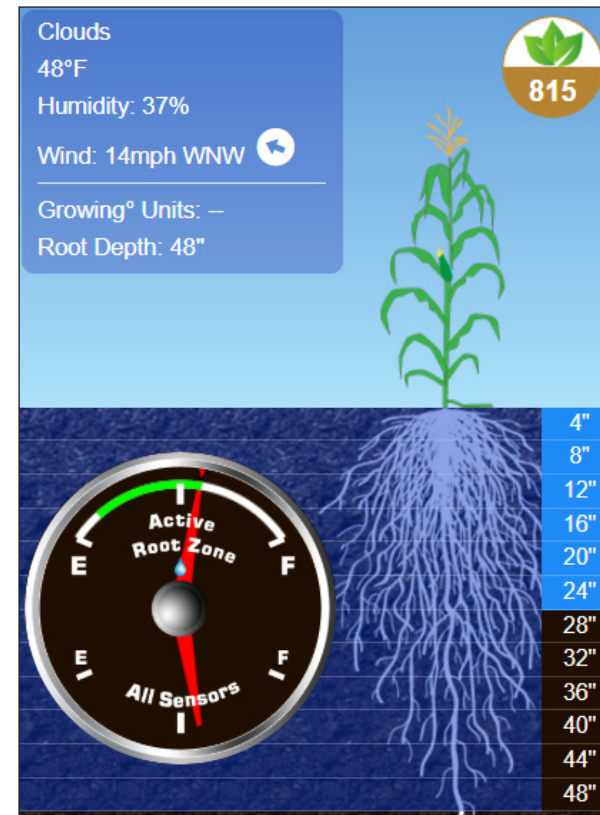
Late Irrigation

This growing season tested our willingness to irrigate late in the growing season. While the early rains allowed us to delay the start of irrigation, the rain stopped at our Hastings and Aurora farms once July arrived. For the year in Aurora, we actually had half the water usage that we did in 2023, but we had to really push irrigations late as we experienced an abnormally hot and dry September. We focused on keeping plants alive as long as possible to finish well, especially given the disease pressure that was trying to shut down plants early. The same applied to soybeans, where we focused on keeping plants alive to maintain soybean seed size. Our **AquaSpy** moisture probes continue to provide great value when determining how much, how early, and how late we need to irrigate.

WHY

Often times, a long summer of irrigation has us longing to shut off and finish irrigation as soon as possible. While it is important to understand crop usage and profile moisture, it is also important to remember that microbial activity and nutrient uptake are crucial to putting the finishing bushels on a crop. Most of this late nutrient uptake comes from the top 8" of soil, and it is important not to let this zone completely dry out. Many of the top-yielding corn hybrids also pack on yield very late in the form of kernel depth and test weight. High-yielding soybeans are often obtained by keeping a large soybean seed size and not allowing them to shrink down.

LOCATION	FINAL IRRIGATION
Aurora Corn	9/28/2024
Aurora Soybeans	9/22/2024
Central City Corn	9/28/2024
Central City Soybeans	9/18/2024
Hastings SE	9/3/2024



COLLECT

Timely Harvest

This year again provided a nearly uninterrupted and early harvest with no significant delays. This allowed us to achieve our ideal harvest timings for corn at 18-22% moisture. A month of significant heat and a wind event at the end of September caused rapid dry-down of both corn and soybeans. Just like last year, we were unable to catch all our soybeans in the 13-15% moisture range. The extreme plant disease pressure this year added extra urgency to harvest as we anticipated that any significant wind event could cause substantial standability issues. We did notice that plants with good late plant health scores were still greener at harvest and, in many cases, showed some yield advantage even under a two-pass fungicide program.

WHY

The only yield that counts is what you can haul off the field. The longer the crop waits to be harvested, the greater the risk for loss due to unfavourable weather events. While there is a lot of debate about "phantom" yield loss, our main concern is avoiding wind or late hail events. All our input dollars have been spent, and we want to make sure to collect every bushel possible. With our combine set up, we also experience less head shelling and field loss if we can hit our ideal moisture ranges.



LOCATION	HARVEST DATE
Aurora Corn/Soybeans	10/5/2024
Central City Soybeans	10/9/2024
Central City Corn	10/10/2024
David City	10/24/2024
Hastings NW Corn	9/6/2024 - 9/14/2024
Hastings NW Soybeans	9/21/2024
Hastings NE Corn	10/12/2024
Hastings NE Soybeans	9/28/2024 - 10/2/2024
Hastings SE	10/3/2024
Hasting SW	10/12/2024

SOYBEAN YIELD LOSS			CORN YIELD LOSS		
Soybean Size	Weight/Bushel at 13% Moisture	Grains/sq. ft. Equivalent to 1 bu/ac	Kernel Size	Weight/Bushel at 15.5% Moisture	Kernels/sq. ft. Equivalent to 1 bu/ac
Small	60 lbs	5	Small	56 lbs	2.5
Medium	60 lbs	4	Medium	56 lbs	2.1
Large	60 lbs	3	Large	56 lbs	1.6



YIELD DATA

 **AURORA**

 **CENTRAL CITY**

 **HASTINGS**



City: Aurora **Crop:** Corn **Irrigation:** Pivot
County: Hamilton **Seeding Rate:** 34K/38K/42K **Previous Crop:** Corn
Started Plot On: West **Planting Depth (in.):** 2.0 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Delaro Complete **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/5/2024 **Herbicide:** Diflexx/Degree Xtra
Planting Date: 5/10/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
Prairie Valley	PV107-T43 SSRIB	790	6020	16.2	8	294.09	102.7%	3	1
Prairie Valley	PV109-C34 VT2PRIB	790	5960	19.5	8	279.46	97.6%	12	8
Prairie Valley	PV110-J85 PWC	870	7080	19.5	8	301.45	105.3%	2	2
Prairie Valley	PV110-E54 VT2PRIB	870	5630	17.6	8	245.40	85.7%	14	14
Prairie Valley	PV111-L11 SSRIB	870	7010	20.8	8	293.72	102.6%	4	4
Prairie Valley	PV112-X63 VT2PRIB	870	6710	20.1	8	283.64	99.1%	10	7
Prairie Valley	PV113-Z83 SSRIB	870	6620	21.8	8	274.02	95.7%	13	13
Prairie Valley	PV113-V89 VT2PRIB	870	7140	22.5	8	292.67	102.2%	6	6
Prairie Valley	PV114-D44 TRERIB	870	7010	23.2	8	284.93	99.5%	9	12
Prairie Valley	PV114-R50 SSRIB	870	6830	21.9	8	282.39	98.7%	11	11
Prairie Valley	PV115-D59 VT2PRIB	870	7080	23.0	8	288.38	100.7%	8	10
Prairie Valley	PV116-G64 SSRIB	870	7240	23.6	8	292.83	102.3%	5	9
Prairie Valley	PV111-L11 SSRIB	870	7070	22.0	8	291.86	102.0%	7	5
Prairie Valley	PV114-D44 TRERIB	870	7260	21.2	8	302.66	105.7%	1	3



City: Aurora **Crop:** Corn **Irrigation:** Pivot
County: Hamilton **Seeding Rate:** 34K/38K/42K **Previous Crop:** Corn
Started Plot On: West **Planting Depth (in.):** 2.0 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/5/2024 **Herbicide:** Storen
Planting Date: 5/10/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
NK	NK 1056 V	870	13640	20.8	16	285.83	97.8%	4	4
NK	NK 1307 DV	870	13850	22.7	16	283.16	96.9%	6	6
NK	NK 1386 VZ	870	13020	21.1	16	271.64	92.9%	7	7
NK	NK 1523 V	870	15510	25.8	16	304.47	104.2%	2	3
Prairie Valley	PV111-L11 SSRIB	870	14710	22.4	16	302.03	103.3%	3	2
Prairie Valley	PV113-Z83 SSRIB	870	14010	23.0	16	285.32	97.6%	5	5
Prairie Valley	PV114-D44 TRERIB	870	15740	24.7	16	313.64	107.3%	1	1



City: Aurora **Crop:** Corn **Irrigation:** Pivot
County: Hamilton **Seeding Rate:** 34K/38K/42K **Previous Crop:** Corn
Started Plot On: West **Planting Depth (in.):** 2.0 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Approach Prima **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/5/2024 **Herbicide:** Resicore
Planting Date: 5/10/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
Brevant	BREV 09C43 V	870	13080	19.16	16	279.70	92.7%	7	7
Brevant	BREV 11M47 V	870	14550	21.86	16	300.75	99.7%	6	5
Brevant	BREV 12H48 PCE	870	15170	22.6	16	310.59	103.0%	1	1
Brevant	BREV 13C49 V	870	14920	22.57	16	305.59	101.3%	3	2
Brevant	BREV 16K30 V	870	15220	25.03	16	301.83	100.1%	5	6
Prairie Valley	PV111-L11 SSRIB	870	14790	22.3	16	303.99	100.8%	4	3
Prairie Valley	PV114-D44 TRERIB	870	15400	24.08	16	309.27	102.5%	2	4



Aurora

City: Aurora **Crop:** Corn **Irrigation:** Pivot
County: Hamilton **Seeding Rate:** 38K/42K/47K **Previous Crop:** Corn
Started Plot On: West **Planting Depth (in.):** 2.25 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Veltyma **Row Width:** 30 **Insecticide:** Force
Harvest Date: 10/11/2024 **Herbicide:** Verdict/Zidua
Planting Date: 5/9/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
Prairie Valley	PV111-L11 SSRIB	870	14070	21.8	16	290.94	98.8%	4	3
Prairie Valley	PV112-X63 VT2PRIB	870	14650	22.5	16	300.45	102.0%	2	1
Prairie Valley	PV113-Z83 SSRIB	870	14330	23.4	16	290.29	98.6%	5	4
Prairie Valley	PV114-R50 SSRIB	870	14380	24.3	16	287.99	97.8%	6	6
Prairie Valley	PV114-D44 TRERIB	855	15100	24.5	16	306.74	104.1%	1	2
Prairie Valley	PV115-D59 VT2PRIB	840	13720	24.0	16	285.52	96.9%	7	7
Prairie Valley	PV116-G64 SSRIB	825	14720	27.0	16	299.87	101.8%	3	5



City: Aurora **Crop:** Corn **Irrigation:** Pivot
County: Hamilton **Seeding Rate:** 34K/38K/42K **Previous Crop:** Corn
Started Plot On: West **Planting Depth (in.):** 2.0 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Adastrio **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/5/2024 **Herbicide:** Anthem Max
Planting Date: 5/10/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
Prairie Valley	PV111-L11 SSRIB	810	14260	22.9	16	312.45	100.6%	3	2
Prairie Valley	PV112-X63 VT2PRIB	795	13380	23.8	16	295.29	95.1%	7	7
Prairie Valley	PV113-Z83 SSRIB	780	13320	23.9	16	299.23	96.4%	6	6
Prairie Valley	PV114-R50 SSRIB	765	13700	24.5	16	311.25	100.2%	4	4
Prairie Valley	PV114-D44 TRERIB	750	13830	24.6	16	320.14	103.1%	2	1
Prairie Valley	PV115-D59 VT2PRIB	735	12950	24.3	16	307.03	98.9%	5	5
Prairie Valley	PV116-G64 SSRIB	720	14030	26.9	16	328.04	105.7%	1	3

Aurora Soybeans

City: Aurora **Crop:** Soybeans **Irrigation:** Pivot
County: Hamilton **Seeding Rate:** 140,000 **Previous Crop:** Corn
Started Plot On: West **Planting Depth (in.):** 1.5 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/5/2024 **Herbicide:** Sequence
Planting Date: 4/22/2024 **Commodity Price:** \$10.00

Prairie Valley Variety	Trial	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average
PV3223 XF	Planted June 13th	870	1630	10.2	8	70.2	76.8%
PV3223 XF	Normal	870	2040	9.8	8	88.3	96.5%
PV2923 XF	No Prevail	870	1980	9.4	8	86.1	94.1%
PV2923 XF	No Prevail	870	1960	9.3	8	85.2	93.2%
PV2923 XF	Prevail	870	2140	9.4	8	93.0	101.7%
PV2923 XF	Prevail	870	2220	9.5	8	96.4	105.4%
PV3223 XF	Normal	870	2160	9.6	8	93.6	102.3%
PV2923 XF	1 gal ABS plus 1 pt. Calcium	870	2000	9.4	8	86.9	95.0%
PV2923 XF	1 gal ABS plus 1 qt. Calcium	870	2110	9.5	8	91.6	100.1%
PV2923 XF	2 gal ABS plus 1 qt. Calcium	870	2160	9.5	8	93.8	102.5%
PV3223 XF	No Utrisha	870	2110	9.6	8	91.5	100.0%
PV3223 XF	No Utrisha	870	1880	9.4	8	81.7	89.3%
PV3223 XF	With Utrisha	870	1940	9.3	8	84.4	92.2%
PV3223 XF	With Utrisha	870	2180	9.5	8	94.6	103.4%
PV3223 XF	No Realize 1st Pass	870	2170	9.6	8	94.1	102.9%
PV3223 XF	No Realize 1st Pass	870	2090	9.4	8	90.8	99.2%
PV3223 XF	Realize 1st Pass	870	2180	9.6	8	94.6	103.4%
PV3223 XF	Realize 1st Pass	870	2230	9.7	8	96.5	105.5%
PV2923 XF	ABS	870	2080	9.4	8	90.4	98.8%
PV2923 XF	ABS plus 1 qt. Calcium	870	2300	9.4	8	99.9	109.2%
PV2923 XF	ABS plus 1 pt. Calcium	870	2100	9.4	8	91.2	99.7%
PV2923 XF	ABS plus 1 qt. Calcium	870	2330	9.4	8	101.2	110.7%
PV3223 XF	140K	870	2170	9.7	8	93.9	102.7%
PV3223 XF	180K	870	2210	9.8	8	95.6	104.5%
PV3223 XF	80K	870	2120	9.8	8	91.7	100.2%
PV3223 XF	110K	870	2290	9.8	8	99.1	108.3%
PV2923 XF	140K	870	2180	9.6	8	94.6	103.3%
PV2923 XF	180K	870	2200	9.6	8	95.4	104.3%
PV2923 XF	80K	870	2100	9.7	8	91.0	99.4%
PV2923 XF	110K	870	2170	9.6	8	94.1	102.8%
PV3223 XF	Normal	870	2230	10.0	8	96.2	105.2%
PV3223 XF	Planted May 18th	870	3720	10.3	16	80.0	87.4%

Central City Corn

City: Central City **Crop:** Corn **Irrigation:** Pivot
County: Merrick **Seeding Rate:** 34,000 **Previous Crop:** Corn
Started Plot On: East **Planting Depth (in.):** 2 **Tillage System:** Cover Crop Ridge Plant
Flag Location: **Planter Type:** Row Planter **Soil Texture:** Sandy Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Force
Harvest Date: 10/2/2024 **Herbicide:** Acuron
Planting Date: 5/1/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
Prairie Valley	PV103-Y24 DGV2PRIB	1030	2938.1	15.0	4	223.12	81.1%	34	33
Prairie Valley	PV105-A21 SSRIB	1030	2838.2	15.1	4	215.41	78.3%	35	35
Prairie Valley	PV106-K51 Trecepta	1030	6782.5	14.6	8	258.84	94.1%	30	29
Prairie Valley	PV107-W53 VT2PRIB	1030	7061.2	15.1	8	267.86	97.4%	28	21
Prairie Valley	PV108-D61 VT2PRIB	1030	7120	16.0	8	267.29	97.2%	29	24
NK	NK 0880V	1030	3378.8	16.0	4	253.54	92.2%	31	31
Prairie Valley	PV110-J85 PWC	1030	4021.5	16.4	4	300.51	109.3%	3	3
Prairie Valley	PV109-C34 VT2PRIB	1030	7556.9	16.5	8	282.14	102.6%	13	8
Brevant	BREV 09C43V	1030	7923.3	15.9	8	297.80	108.3%	5	4
Prairie Valley	PV110-H20 SSRIB	1030	7697.5	17.7	8	283.16	103.0%	12	14
NK	NK 1040AA	1030	7443.1	16.9	8	276.33	100.5%	20	18
NK	NK 1056V	1030	7270	17.2	8	268.90	97.8%	26	27
Prairie Valley	PV111-L11 SSRIB	1030	8243.6	17.4	8	304.32	110.7%	2	2
Prairie Valley	PV112-X63 VT2PRIB	1030	7470.4	17.4	8	275.87	100.3%	21	20
Prairie Valley	PV113-Z83 SSRIB	1030	7618.6	18.0	8	279.03	101.5%	16	19
Brevant	BREV 12W45 V	1030	7641.9	17.5	8	281.69	102.4%	14	15
Prairie Valley	PV112EXP25-VT2P	1030	3685.8	17.1	4	273.11	99.3%	24	22
Prairie Valley	PV108EXP25-VT2P	1030	3679.5	15.5	4	277.74	101.0%	18	11
Prairie Valley	PV113-V89 VT2PRIB	1030	7838.5	18.1	8	286.74	104.3%	10	10
NK	NK 1307DV	1030	3656.7	17.5	4	269.49	98.0%	25	28
NK	NK 1386VZ	1030	3054.3	18.1	4	223.54	81.3%	33	34
Brevant	BREV 13C49V	1030	7564.2	17.6	8	278.70	101.3%	17	17
Prairie Valley	PV112EXP25-TRE	1030	3147.8	17.6	3	309.09	112.4%	1	1
Prairie Valley	PV114 EXP24 VT2PRIB	1030	4803.4	18.1	5	281.17	102.2%	15	16
Prairie Valley	PV114-D44 TRERIB	1030	8088.2	18.7	8	293.77	106.8%	7	7
Prairie Valley	PV114-R50 SSRIB	1030	7910.9	18.7	8	287.33	104.5%	9	13
Brevant	BREV 14R22V	1030	8042.7	17.7	8	295.97	107.6%	6	6
Prairie Valley	PV115-D59 VT2PRIB	1030	7725	17.6	8	284.38	103.4%	11	12
Brevant	BREV 15W41V	1030	3835.1	19.0	4	277.73	101.0%	19	23
Prairie Valley	PV114EXP25-TRE	1030	4088.2	18.1	4	299.13	108.8%	4	5
NK	NK 1523V	1030	7558.5	18.6	8	275.11	100.0%	23	25
Prairie Valley	PV116-G64 SSRIB	1030	8031.4	19.1	8	290.49	105.6%	8	9
Prairie Valley	PV116-H31 VT2PRIB	1030	7589	18.8	8	275.44	100.2%	22	26
Brevant	BREV 16K30V	1030	3353.2	19.0	4	242.63	88.2%	32	32
Brevant	BREV 18F48V	1030	3742.4	19.8	4	268.28	97.5%	27	30

Central City Soybeans

City: Central City **Crop:** Soybeans **Irrigation:** Pivot
County: Merrick **Seeding Rate:** 140,000 **Previous Crop:** Corn
Started Plot On: West **Planting Depth (in.):** 1.5 **Tillage System:** Ridge
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Sandy Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/9/2024 **Herbicide:** Sequence/Enlist
Planting Date: 4/15/2024 **Commodity Price:** \$10.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
Prairie Valley	PV2124E3	830	1933	9.2	8	88.2	93.2%	15	15
Brevant	B224E	830	2086	9.6	8	94.8	100.1%	10	10
Prairie Valley	PV2324E3	830	2101	9.5	8	95.6	100.9%	9	9
Xitavo	XO2444E	830	2115	9.6	8	96.1	101.5%	7	7
Brevant	B264E	830	1962	10.1	8	88.6	93.6%	14	14
NK	NK26-M6E3	830	2281	9.5	8	103.8	109.6%	2	2
Xitavo	XO2625E	830	1797	9.0	8	82.2	86.8%	16	16
Prairie Valley	PV2724E3	830	2322	9.2	8	105.9	111.9%	1	1
NK	NK27-J5E3	830	1787	9.3	8	81.5	86.0%	17	17
Brevant	B284E	830	2123	9.1	8	97.0	102.4%	6	6
Xitavo	XO2832E	830	2099	9.3	8	95.7	101.1%	8	8
Brevant	B294E	830	2035	9.3	8	92.8	98.0%	11	11
Pioneer	P31Z03E	830	2217	9.3	8	101.1	106.8%	5	5
Prairie Valley	PV3024E3	830	2002	9.4	8	91.2	96.3%	12	12
NK	NK30-A9E3	830	1979	9.5	8	90.0	95.0%	13	13
NK	NK30-B2E3	830	2228	9.3	8	101.6	107.3%	4	4
Xitavo	XO3014E	830	2274	9.3	8	103.7	109.5%	3	3

Hastings Southeast

Continuous Corn Plot

City: Hastings **Crop:** Corn **Irrigation:** Gravity
County: Adams **Seeding Rate:** 33K/35K/37K **Previous Crop:** Corn
Started Plot On: South **Planting Depth (in.):** 2.25 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:**
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/3/2024 **Herbicide:** Acuron
Planting Date: 4/24/2024 - 5/11/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/ Acre	% of Plot Average	Yield/ Acre Rank	\$/Acre Rank
Brevant	BREV 18F48 V	1240	9290	19.0	8	279.2	104.4%	11	11
Brevant	BREV 16K30 V	1240	9210	18.0	8	280.3	104.8%	10	8
Prairie Valley	PV116-H31 VT2PRIB	1240	6920	17.4	8	212.1	79.3%	39	39
Prairie Valley	PV116-G64 SSRIB	1240	8990	17.7	8	274.6	102.7%	15	12
NK	NK 1523 V	1240	9700	20.1	8	287.6	107.6%	7	7
Prairie Valley	PV115-EXP24B VT2PRIB	1240	8920	18.7	8	269.3	100.7%	23	19
Prairie Valley	PV115-D59 VT2PRIB	1240	8850	18.2	8	268.7	100.5%	24	17
Brevant	BREV 14R22 V	1240	9140	16.9	8	281.9	105.4%	9	6
Prairie Valley	PV114-EXP25 TRE	1240	4210	18.2	4	255.8	95.7%	29	28
Prairie Valley	PV114-EXP24 VT2PRIB	1240	4470	18.7	4	269.8	100.9%	21	18
Prairie Valley	PV114-R50 SSRIB	1240	8220	17.2	8	252.6	94.5%	30	29
Prairie Valley	PV114-D44 TRERIB	1240	8600	19.2	8	257.8	96.4%	28	31
NK	NK 1386 VZ	1240	9040	19.0	8	271.9	101.7%	19	16
NK	NK 1307 DV	1240	9110	19.3	8	273.1	102.1%	18	15
Brevant	BREV 13C49 V	1130	8750	17.9	8	292.5	109.4%	4	3
Prairie Valley	PV108-EXP25 VT2PRIB	1130	4150	17.6	4	278.6	104.2%	13	9
Prairie Valley	PV113-EXP24 TRE	1130	4390	18.6	4	291.1	108.9%	5	5
Prairie Valley	PV113-V89 VT2PRIB	1130	7560	18.4	8	251.3	94.0%	32	32
Prairie Valley	PV113-Z83 SSRIB	1130	8830	20.4	8	286.5	107.1%	8	10
Brevant	BREV 12H48 PWE	1130	9760	22.3	8	309.1	115.6%	1	2
Brevant	BREV 12W45 V	1130	9320	23.7	8	289.7	108.3%	6	14
Prairie Valley	PV112-X63 VT2PRIB	1130	8770	23.3	8	273.9	102.4%	16	26
Prairie Valley	PV112-EXP25 TRE	1130	4370	21.7	4	278.7	104.2%	12	20
Prairie Valley	PV112-EXP25 VT2PRIB	1130	4280	22.2	4	271.2	101.4%	20	25
Brevant	BREV 11M47 V	1130	9560	21.8	8	304.4	113.8%	2	4
Prairie Valley	PV111-L11 SSRIB	1130	8250	21.3	8	264.6	98.9%	27	30
NK	NK 1056 V	1130	8220	20.5	8	266.1	99.5%	26	24
NK	NK 1040 AA	1130	8250	20.6	8	266.7	99.7%	25	23
Prairie Valley	PV110-H20 SSRIB	1130	7690	20.8	8	248.2	92.8%	34	36
Prairie Valley	PV110-E54 VT2PRIB	1130	8340	18.9	8	275.5	103.0%	14	13
Brevant	BREV 09C43 V	1235	9880	19.0	8	298.1	111.5%	3	1
Prairie Valley	PV110-J85 PWE	1235	9220	20.5	8	273.2	102.2%	17	21
Prairie Valley	PV109-C34 VT2PRIB	1235	8050	20.3	8	239.3	89.5%	37	38

Hastings Southeast yield data continued on next page.

Hastings Southeast Continued

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/ Acre	% of Plot Average	Yield/ Acre Rank	\$/Acre Rank
NK	NK 0880 V	1235	9010	19.7	8	269.7	100.9%	22	22
Prairie Valley	PV108-D61 VT2PRIB	1235	8390	19.4	8	252.0	94.2%	31	34
Prairie Valley	PV107-W53 VT2PRIB	1235	7880	18.4	8	239.7	89.6%	36	37
Prairie Valley	PV106-K51 TRE	1235	6580	16.0	8	206.0	77.0%	40	40
Prairie Valley	PV105-A21 SSRIB	1235	7860	15.3	8	248.1	92.8%	35	27
Prairie Valley	PV103-Y24 DGVT2PRIB	1235	7560	15.9	8	236.8	88.6%	38	35

Hastings Northeast

City: Hastings **Crop:** Corn **Irrigation:** Gravity
County: Adams **Seeding Rate:** 33K & 36K **Previous Crop:** Corn
Started Plot On: North **Planting Depth (in.):** 2 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/12/2024 **Herbicide:** Sequence
Planting Date: 5/16/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/ Acre	% of Plot Average	Yield/ Acre Rank	\$/Acre Rank
Prairie Valley	PV 111-L11 SSRIB	1120	7640.8	17.8	8	258.1	97.7%	11	10
Prairie Valley	PV 113-Z83 SSRIB	1120	7651.8	18.6	8	255.9	96.9%	14	12
Prairie Valley	PV 116-G64 SSRIB	1120	7813.3	20.2	8	256.3	97.0%	13	14
Prairie Valley	PV 114-R50 SSRIB	1120	8263.8	19.2	8	274.4	103.9%	3	3
Prairie Valley	PV 111-L11 SSRIB	1120	7600.1	17.8	8	256.8	97.2%	12	11
Prairie Valley	PV 113-Z83 SSRIB	1120	7421	18.6	8	248.2	93.9%	16	16
Prairie Valley	PV 116-G64 SSRIB	1120	7936.4	20.2	8	260.3	98.6%	10	13
Prairie Valley	PV 114-R50 SSRIB	1120	8649.3	19.2	8	287.2	108.7%	1	1
Prairie Valley	PV 111-L11 SSRIB	1120	7841.3	17.8	8	264.9	100.3%	6	5
Prairie Valley	PV 113-Z83 SSRIB	1120	7831.6	18.6	8	261.9	99.1%	9	8
Prairie Valley	PV 116-G64 SSRIB	1120	7788.5	20.2	8	255.5	96.7%	15	15
Prairie Valley	PV 114-R50 SSRIB	1120	8571.2	19.2	8	284.6	107.7%	2	2
Prairie Valley	PV 111-L11 SSRIB	1120	7932.3	17.8	8	268.0	101.5%	5	4
Prairie Valley	PV 113-Z83 SSRIB	1120	7843.7	18.6	8	262.3	99.3%	8	7
Prairie Valley	PV 116-G64 SSRIB	1120	8205	20.2	8	269.1	101.9%	4	6
Prairie Valley	PV 114-R50 SSRIB	1120	7916.7	19.2	8	262.9	99.5%	7	9

Hastings Southeast

2024 Corn - 2023 Corn - 2022 Soybean Rotation Plot

City: Hastings **Crop:** Corn **Irrigation:** Gravity
County: Adams **Seeding Rate:** 33K/35K/37K **Previous Crop:** Corn
Started Plot On: South **Planting Depth (in.):** 2.25 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:**
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/3/2024 **Herbicide:** Acuron
Planting Date: 4/24/2024 - 5/11/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
Prairie Valley	PV116-H31 VT2PRIB	1235	6780	18.0	8	207.3	76.8%	34	34
Prairie Valley	PV116-G64 SSRIB	1235	8570	18.6	8	260.0	96.4%	24	25
NK	NK 1523 V	1235	9820	21.3	8	288.0	106.7%	6	6
Prairie Valley	PV 115-EXP24B VT2PRIB	1235	9230	19.2	8	277.9	103.0%	13	12
Prairie Valley	PV115-D59 VT2PRIB	1235	9140	18.7	8	276.9	102.6%	15	11
Brevant	BREV 14R22 V	1235	9140	17.4	8	281.5	104.3%	9	5
Prairie Valley	PV114-R50 SSRIB	1235	8280	17.0	8	256.0	94.9%	27	24
Prairie Valley	PV114-D44 TRERIB	1235	8380	19.9	8	250.1	92.7%	30	33
NK	NK 1386 VZ	1235	8900	19.1	8	268.4	99.5%	19	18
NK	NK 1307 DV	1235	9410	19.8	8	281.3	104.3%	10	9
Brevant	BREV 13C49 V	1235	9410	17.6	8	288.9	107.1%	5	2
Prairie Valley	PV113-V89 VT2PRIB	1235	8220	18.3	8	250.2	92.7%	29	30
Prairie Valley	PV113-Z83 SSRIB	1235	9290	20.0	8	276.9	102.6%	14	13
Brevant	BREV 12H48 PWE	1235	10080	20.5	8	298.5	110.6%	2	3
Brevant	BREV 12W45 V	1230	10350	23.7	8	295.5	109.5%	3	7
Prairie Valley	PV112-X63 VT2PRIB	1225	9900	23.1	8	285.9	106.0%	7	15
Prairie Valley	PV112-EXP25 VT2PRIB	755	2910	21.3	4	279.2	103.5%	12	16
Prairie Valley	PV112-EXP25 TRE	755	2850	21.0	4	274.5	101.7%	17	19
Brevant	BREV 11M47 V	1180	10100	21.3	8	309.9	114.8%	1	1
Prairie Valley	PV111-L11 SSRIB	1160	8530	20.8	8	268.2	99.4%	21	23
NK	NK 1056 V	1125	8250	20.0	8	269.9	100.0%	18	21
NK	NK 1040 AA	1100	7820	19.9	8	262.1	97.1%	22	26
Prairie Valley	PV110-H20 SSRIB	1070	8360	20.8	8	284.9	105.6%	8	8
Prairie Valley	PV110-E54 VT2PRIB	1040	6990	17.9	8	253.9	94.1%	28	27
Brevant	BREV 09C43 V	1020	7090	18.4	8	261.2	96.8%	23	22
Prairie Valley	PV110-J85 PWE	980	7850	20.1	8	294.7	109.2%	4	4
Prairie Valley	PV109-C34 VT2PRIB	950	7280	20.8	8	279.2	103.5%	11	14
NK	NK 0880 V	920	6510	20.3	8	259.7	96.2%	25	28
Prairie Valley	PV108-D61 VT2PRIB	900	6480	19.1	8	268.2	99.4%	20	20
Prairie Valley	PV107-W53 VT2PRIB	860	6290	18.1	8	275.7	102.2%	16	10
Prairie Valley	PV106-K51 TRE	830	5180	15.9	8	241.6	89.5%	32	32
Prairie Valley	PV105-A21 SSRIB	790	4800	14.7	8	238.6	88.4%	33	31
Prairie Valley	PV103-Y24 DGVT2PRIB	750	5010	15.6	8	259.5	96.2%	26	17

Hastings Southwest

City: Hastings **Crop:** Corn **Irrigation:** Gravity
County: Adams **Seeding Rate:** 36,000 **Previous Crop:** Corn
Started Plot On: West **Planting Depth (in.):** 2 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/12/2024 **Herbicide:** Sequence
Planting Date: 5/17/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average
PV 111-L11 SSRIB	30K	1310	8677.8	17.27	8	252.2	88.6%
PV 111-L11 SSRIB	32K	1311	9215.1	17.27	8	267.7	94.0%
PV 111-L11 SSRIB	34K	1312	9994.3	17.27	8	290.1	101.8%
PV112-X63 VT2PR	30K	1313	9763	19.87	8	274.2	96.3%
PV112-X63 VT2PR	32K	1314	10062	19.87	8	282.4	99.2%
PV112-X63 VT2PR	34K	1315	10138	19.87	8	284.3	99.8%
PV114-D44 TREC	30K	1316	10362	20.12	8	289.5	101.6%
PV114-D44 TREC	32K	1317	10593	20.12	8	295.7	103.8%
PV114-D44 TREC	34K	1318	10787	20.12	8	300.9	105.7%
PV115-D59 VT2PR	30K	1319	9842.8	19.93	8	275.0	96.6%
PV115-D59 VT2PR	32K	1320	10141	19.93	8	283.1	99.4%
PV115-D59 VT2PR	34K	1321	10246	19.93	8	285.8	100.4%
PV112-X63 VT2PR	AgPro, Prolock	1326	10352	20.16	8	286.9	100.7%
PV112-X63 VT2PR	AgPro, Prolock, Ransom	1327	10444	20.16	8	289.2	101.5%
PV114-D44 TREC	AgPro, Prolock, Ransom	1330	10874	20.27	8	300.0	105.3%
PV114-D44 TREC	Trailblazer	1331	10645	20.27	8	293.5	103.0%
PV114-D44 TREC	Trailblazer 2.0	1332	10788	20.27	8	297.2	104.4%
PV114-D44 TREC	BioWake Prime	1333	10693	20.27	8	294.4	103.4%
PV115-D59 VT2PR	Utrisha	1334	9946.4	19.49	8	276.3	97.0%
PV115-D59 VT2PR	Utrisha	1335	10072	19.49	8	279.6	98.2%
PV115-D59 VT2PR	No Utrisha	1336	9891.2	19.49	8	274.4	96.3%
PV115-D59 VT2PR	No Utrisha	1337	9957.5	19.49	8	276.0	96.9%
PV 111-L11 SSRIB	AgPro, Prolock	1338	9985	17.47	8	283.5	99.5%
PV 111-L11 SSRIB	AgPro, Prolock, Ransom	1339	10270	17.47	8	291.4	102.3%
PV 111-L11 SSRIB	AgPro, Prolock, Manuever	1340	10266	17.47	8	291.0	102.2%
PV112-X63 VT2PR	AgPro, Prolock	1342	10075	19.15	8	279.4	98.1%
PV112-X63 VT2PR	AgPro, Prolock, Ransom	1343	10174	19.15	8	281.9	99.0%
PV114-D44 TREC	AgPro, Prolock, Ransom	1330	10874	20.27	8	300.0	105.3%
PV114-D44 TREC	Trailblazer	1331	10645	20.27	8	293.5	103.0%
PV114-D44 TREC	Trailblazer 2.0	1332	10788	20.27	8	297.2	104.4%
PV114-D44 TREC	BioWake Prime	1333	10693	20.27	8	294.4	103.4%
PV115-D59 VT2PR	Utrisha	1334	9946.4	19.49	8	276.3	97.0%
PV115-D59 VT2PR	Utrisha	1335	10072	19.49	8	279.6	98.2%
PV115-D59 VT2PR	No Utrisha	1336	9891.2	19.49	8	274.4	96.3%
PV115-D59 VT2PR	No Utrisha	1337	9957.5	19.49	8	276.0	96.9%

Hastings Southwest Continued

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/ Acre	% of Plot Average
PV 111-L11 SSRIB	AgPro, Prolock	1338	9985	17.47	8	283.5	99.5%
PV 111-L11 SSRIB	AgPro, Prolock, Ransom	1339	10270	17.47	8	291.4	102.3%
PV 111-L11 SSRIB	AgPro, Prolock, Manuever	1340	10266	17.47	8	291.0	102.2%
PV112-X63 VT2PR	AgPro, Prolock	1342	10075	19.15	8	279.4	98.1%
PV112-X63 VT2PR	AgPro, Prolock, Ransom	1343	10174	19.15	8	281.9	99.0%
PV114-D44 TREC	AgPro, Prolock, Ransom	1346	10456	19.7	8	287.1	100.8%
PV114-D44 TREC	Trailblazer	1347	10425	19.7	8	286.0	100.4%
PV114-D44 TREC	Trailblazer 2.0	1348	10606	19.7	8	290.8	102.1%
PV114-D44 TREC	BioWake Prime	1349	10496	19.7	8	287.6	101.0%
PV113-V89 VT2PR	Untreated	1350	9755.3	17.87	8	273.2	95.9%
PV113-V89 VT2PR	Untreated	1351	10163	17.87	8	284.4	99.8%
PV113-V89 VT2PR	Realize/Accrue	1352	10176	17.87	8	284.5	99.9%
PV113-V89 VT2PR	Realize/Accrue	1353	10213	17.87	8	285.3	100.2%
PV 111-L11 SSRIB	Realize/Accrue	1354	10128	17.52	8	284.0	99.7%
PV 111-L11 SSRIB	Realize/Accrue	1355	10494	17.52	8	294.0	103.2%
PV 111-L11 SSRIB	Untreated	1356	10232	17.52	8	286.5	100.6%
PV 111-L11 SSRIB	Untreated	1357	10241	17.52	8	286.5	100.6%
PV112-X63 VT2PR	Realize/Accrue	1358	10386	19.77	8	282.4	99.2%
PV112-X63 VT2PR	Realize/Accrue	1359	10205	19.77	8	277.3	97.4%
PV112-X63 VT2PR	Untreated	1360	9704.5	19.77	8	263.5	92.5%
PV112-X63 VT2PR	Untreated	1361	9757.6	19.77	8	264.7	93.0%
PV114-D44 TREC	Realize/Accrue	1362	10535	19.54	8	286.5	100.6%
PV114-D44 TREC	Realize/Accrue	1363	10600	19.54	8	288.0	101.1%
PV114-D44 TREC	Untreated	1364	10244	19.54	8	278.1	97.7%
PV114-D44 TREC	Untreated	1365	10290	19.54	8	279.2	98.0%
PV113-V89 VT2PR	IN-FURROW	1366	9731.7	16.79	8	272.9	95.8%
PV113-V89 VT2PR	IN-FURROW	1367	9750.5	16.79	8	273.2	95.9%
PV113-V89 VT2PR	NO IF	1368	9433.2	16.79	8	264.1	92.7%
PV113-V89 VT2PR	NO IF	1369	8984.6	16.79	8	251.4	88.3%

Hastings XtendFlex® Soybeans

City: Hastings **Crop:** Soybeans **Irrigation:** Gravity
County: Adams **Seeding Rate:** 140,000 **Previous Crop:** Corn
Started Plot On: North **Planting Depth (in.):** 1.5 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Index
Harvest Date: 10/2/2024 **Herbicide:** Sequence
Planting Date: 4/18/2024 **Commodity Price:** \$10.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/ Acre	% of Plot Average	Yield/ Acre Rank	\$/Acre Rank
Prairie Valley	PV24-23XF	630	1420	8.3	8	86.3	105.7%	4	4
Prairie Valley	BCS 2909XF25	630	673	8.3	4	81.8	100.2%	11	11
Prairie Valley	BCS 2807XF24	630	708	8.4	4	85.9	105.2%	5	5
Prairie Valley	BCS 2612XF24	630	747	8.1	4	90.9	111.4%	2	2
Prairie Valley	PV22-24XF	630	1351	8.2	8	82.2	100.7%	10	10
Prairie Valley	PV24-23XF	630	1507	8.3	8	91.5	112.1%	1	1
Prairie Valley	PV27-23XF	630	1296	8.2	8	78.8	96.6%	15	15
NK	27-W8XF	630	1319	8.1	8	80.3	98.4%	13	13
Prairie Valley	PV29-23XF	630	1321	8.1	8	80.4	98.5%	12	12
NK	29-Q3XF	630	1353	8.1	8	82.3	100.9%	9	9
NK	30-U4XF	630	1496	8.3	8	90.9	111.3%	3	3
Prairie Valley	PV32-23XF	630	1359	8.3	8	82.5	101.1%	8	8
NK	32-C5XF	630	1362	8.4	8	82.6	101.2%	7	7
Prairie Valley	PV34-22XF	630	1315	8.5	8	79.7	97.6%	14	14
NK	34-D4XF	630	1389	8.6	8	84.1	103.0%	6	6
Prairie Valley	PV37-23XF	630	1200	10.9	8	70.8	86.8%	16	16
Prairie Valley	PV40-24XF	630	958	10.7	8	56.7	69.4%	17	17

Hastings Enlist E3[®] Soybeans

City: Hastings **Crop:** Soybeans **Irrigation:** Gravity
County: Adams **Seeding Rate:** 140,000 **Previous Crop:** Corn
Started Plot On: West **Planting Depth (in.):** 1.5 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Endigo
Harvest Date: 9/28/2024 - 10/2/2024 **Herbicide:** Sequence
Planting Date: 4/18/2024 **Commodity Price:** \$10.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/ Acre	% of Plot Average	Yield/ Acre Rank	\$/Acre Rank
Prairie Valley	PV21-24E3	630	1810	11.3	8	106.3	98.3%	12	12
Xitavo	XO2444E	630	1780	11.3	8	104.6	96.7%	13	13
NK	26-M6E3	630	1760	11.4	8	103.3	95.5%	14	14
Xitavo	XO2625E	630	1630	12.0	8	95.0	87.8%	17	17
Prairie Valley	PV27-24E3	630	1710	11.3	8	100.5	92.8%	16	16
NK	27-J5E3	630	2040	12.4	8	118.4	109.4%	3	3
Brevant	B284E	630	1590	12.9	8	91.7	84.8%	18	18
Xitavo	XO2832E	630	1850	9.2	8	111.2	102.8%	7	7
Prairie Valley	PV30-24E3	630	1830	10.0	8	109.1	100.8%	9	9
NK	30-A9E3	630	1890	9.4	8	113.4	104.8%	5	5
Xitavo	XO3014E	630	2000	9.9	8	119.3	110.2%	2	2
Brevant	B324E	630	1860	9.6	8	111.4	102.9%	6	6
NK	33-W2E3	630	1740	11.6	8	101.9	94.2%	15	15
Xitavo	XO3375E	630	1780	9.5	8	106.7	98.6%	11	11
Brevant	B344E	630	1960	11.3	8	115.1	106.4%	4	4
NK	34-Z8E3	630	1920	13.4	8	110.1	101.8%	8	8
Prairie Valley	PV30-24E3 ABS	630	2070	10.7	8	122.5	113.2%	1	1
Prairie Valley	PV30-24E3 NO ABS	630	1810	10.4	8	107.4	99.2%	10	10

Hastings Dryland

City: Hastings **Crop:** Corn **Irrigation:** None
County: Adams **Seeding Rate:** 30,000 **Previous Crop:** Corn
Started Plot On: South **Planting Depth (in.):** 2.25 **Tillage System:** Conventional
Flag Location: Left Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide:** Force 1.5 Simpass
Harvest Date: 9/6/2024 - 9/14/2024 **Herbicide:** Surtain
Planting Date: 4/24/2024 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Harvest Date	Yield/ Acre	% of Plot Average	Yield/ Acre Rank	\$/Acre Rank
NK	NK 0880 V	2170	3180	20.0	8	9/6/2024	54.0	47.1%	15	15
Prairie Valley	PV109-C34 VT2PRIB	2170	5940	18.3	8	9/6/2024	102.9	89.9%	14	14
NK	NK 1056 V	2170	8090	23.0	8	9/6/2024	132.1	115.3%	1	1
Prairie Valley	PV111-J21 VT2PRIB	2170	7450	21.8	8	9/6/2024	123.6	107.9%	4	7
Brevant	BREV 11V44 AM	2170	6870	20.2	8	9/6/2024	116.3	101.5%	10	10
Brevant	BREV 12W45 AML	2170	7290	19.0	8	9/14/2024	125.2	109.3%	3	3
Prairie Valley	PV113-V89 VT2PRIB	2170	7310	21.0	8	9/14/2024	122.5	106.9%	7	6
Brevant	BREV 13C49 AM	2170	7150	18.7	8	9/14/2024	123.3	107.6%	6	4
NK	NK 1307 DV	2170	7030	19.9	8	9/14/2024	119.4	104.2%	9	8
NK	NK 1386 VZ	2170	6540	20.1	8	9/14/2024	110.8	96.7%	11	11
Prairie Valley	PV114-D44 TREC	2170	7500	20.2	8	9/14/2024	127.0	110.8%	2	2
Prairie Valley	PV115-D59 VT2PRIB	2170	6670	22.9	8	9/14/2024	109.1	95.3%	12	13
Brevant	BREV 15W41 AM	2170	7150	21.0	8	9/14/2024	119.8	104.6%	8	9
Prairie Valley	PV116-G64 SSRIB	2170	7371	21.0	8	9/14/2024	123.5	107.8%	5	5
Prairie Valley	PV116-H31 VT2PRIB	2170	6570	21.9	8	9/14/2024	108.9	95.0%	13	12

Hastings Dryland — — — — —

City: Hastings	Crop: Soybeans	Irrigation: None
County: Adams	Seeding Rate: 140,000	Previous Crop: Corn
Started Plot On: South	Planting Depth (in.): 1.5	Tillage System: Conventional
Flag Location: Left Row	Planter Type: Row Planter	Soil Texture: Silt Loam
Fungicide: Miravis Neo	Row Width: 30	Insecticide: Endigo
Harvest Date: 9/21/2024	Herbicide: Sequence/ Liberty	
Planting Date: 4/18/2024	Commodity Price: \$10.00	

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
Prairie Valley	PV 2923 XF	1300	1827	9.5	8	53.1	105.1%	2	2
Prairie Valley	PV 2923 XF (NO ABS)	1300	1687	9.4	8	49.1	97.2%	6	6
Prairie Valley	PV 2224 XF	1300	2208	9.5	8	64.1	127.0%	1	1
Prairie Valley	PV2224XF	1300	1690	10.1	8	48.8	96.6%	7	7
Prairie Valley	PV 2723 XF	1300	1520	10.0	8	43.9	87.0%	8	8
Prairie Valley	PV 2923 XF	1300	1767	9.4	8	51.4	101.8%	4	4
Prairie Valley	PV 2923 XF (100k)	1300	1817	9.4	8	52.8	104.7%	3	3
Prairie Valley	PV 3223 XF	1300	1716	10.4	8	49.3	97.7%	5	5
Prairie Valley	PV 3422 XF	1300	1453	10.2	8	41.9	83.0%	9	9



OWNERS ACRES TOUR 2024

September 3rd & 4th



2022-2024 Owners Acres Corn

		2024	2024	2024	2024	2024	2024	2024	2023	2023
		CC	HASTINGS	AUR.	AUR.	AUR.	AUR.	AUR.	CC	HASTINGS
		CORN	CORN	BAYER	SYNG.	CORTEVA	BASF	AMV/FMC	CORN	CORN
Prairie Valley	103-Y24 DGV2PRIB	223.1	248.2						263.2	271.9
Prairie Valley	105-A21 SSRIB	215.4	243.2						268.4	268.7
Prairie Valley	106-K51 TREC	258.8	223.8						247.6	267.6
Prairie Valley	107-T43 SSRIB			294.1					265.5	272.2
Prairie Valley	107-W53 VT2PRIB	267.9	257.7						267.6	291.4
Prairie Valley	108-D61 VT2PRIB	267.3	260.1						255.6	281.0
Prairie Valley	109-C34 VT2PRIB	282.1	259.3	279.5					264.2	272.9
Prairie Valley	110-J85 PWE	300.5	284.0	301.5						
Prairie Valley	110-E54 VT2PRIB		264.7	245.4					264.8	271.9
Prairie Valley	110-H20 SSRIB	283.2	266.5							
Prairie Valley	110-H20 VT2PRIB								277.1	287.2
Prairie Valley	111-L11 TREC								285.4	292.7
Prairie Valley	111-L11 SSRIB	304.3	266.4	293.7	302.0	304.0	290.9	312.5		
Prairie Valley	112-X63 VT2PRIB	275.9	279.9	283.6			300.5	295.3	274.2	282.7
Prairie Valley	113-V89 VT2PRIB	286.7	250.7	292.7					293.1	279.5
Prairie Valley	113-Z83 SSRIB	279.0	281.7	274.0	285.3		290.3	299.2	289.1	291.5
Prairie Valley	114-D44 TRERIB	293.8	253.9	284.9	313.6	309.3	306.7	320.1	295.8	293.8
Prairie Valley	114-R50 SSRIB	287.3	254.3	282.4			288.0	311.2	281.4	292.1
Prairie Valley	115-D59 VT2PRIB	284.4	272.8	288.4			285.5	307.0	289.7	288.5
Prairie Valley	116-G64 SSRIB	290.5	267.3	292.8			299.9	328.0	289.5	288.9
Prairie Valley	116-H31 VT2PRIB	275.4	209.7						284.2	277.3
Brevant	09C43 V	297.8	279.7		279.7					
Brevant	10H24 AM								290.4	304.0
Brevant	11M47 V		307.1			300.7				
Brevant	12W45 V	281.7	292.6							
Brevant	12H48 PWE		303.8			310.6				
Brevant	13C49 V	278.7	290.7			305.6				
Brevant	14R22 Q								293.1	308.0
Brevant	14R22 V	296.0	281.7							
Brevant	15W41 V	277.7								
Brevant	16K30 AM								295.8	306.3
Brevant	16K30 V	242.6	280.3			301.8				
Brevant	18F48 V	268.3	279.2							
NK	0880 V	253.5	264.7							
NK	1040 AA	276.3	264.4						265.7	264.7
NK	1056 V	268.9	268.0		285.8					
NK	1082 DV								286.6	286.6
NK	1188 D								288.1	277.5
NK	1307 DV	269.5	277.2		283.2					
NK	1386 VZ	223.5	270.2		271.6					
NK	1523 V	275.1	287.8		304.5				309.7	284.0

Hybrid Plot Results

2023	2023	2023	2023	2023	2023	2023	2022	2022	2022	2022	2022	2022	2022
HASTINGS	3 PLOT	AUR.	AUR.	AUR.	AUR.	AUR.	AUR.	AUR.	AUR.	AUR.	AUR.	CC	CC
SOYBEANS	AVG.	BAYER	SYNG	CORT.	BASF	AMV/FMC	AUR.	BASF	BAYER	CORT.	SYNG.	CORN	SOY
222.7	252.6												
238.1	258.4											240.6	237.1
266.5	260.5											231.2	211.3
251.3	263.0											252.9	274.4
290.3	283.1												
270.0	268.8												
269.8	269.0	256.0											
268.4	268.4												
268.6	277.6	242.8				279.0	291.5	265.5	294.1				
258.6	278.9	281.9	291.0	301.9	291.9	300.3	339.1	320.9	323.1			303.7	332.3
240.6	265.8	289.3	281.9	297.8	285.9	292.7						287.0	325.4
258.7	277.1				290.6	242.3	315.5	306.6	304.6			286.0	308.3
283.3	288.0		268.7	224.1	262.7	284.8	326.7	313.0	317.7			270.2	305.5
319.2	302.9												
268.4	280.6	253.1	289.1		270.2	279.2	320.4	309.7	311.5			272.6	287.5
288.3	288.8	289.4			291.6	294.8	297.5	301.9	288.1			321.1	318.3
288.3	288.9	211.5											
256.8	272.8											273.9	310.9
286.9	293.8			294.8									
278.0	293.0			314.7									
311.9	304.7												
255.6	262.0		274.3										
264.2	279.1												
252.6	272.7										312.1	263.2	306.7
299.8	297.8		300.6								298.1	272.7	281.7



R2G PRODUCTS

Hustle

AgPro

Pro-Lock

Ransom

Trailblazer

Realize

Accrue

Heighten

Constrain XLT Plus

N-Stat

BMO

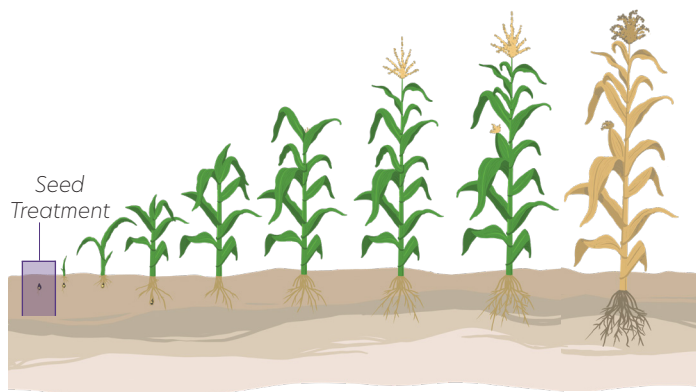


Hustle is a unique blend combining essential macro and micro nutrients and a proprietary blend of plant extracts to stimulate seed germination and to maximize early seedling growth and vigor. Hustle also includes a balanced ration of three hormones designed to work together to enhance seed germination and seedling establishment, provide stress reduction in cold soils, enhance cell elongation, and increase nutrient uptake for higher yield potentials.



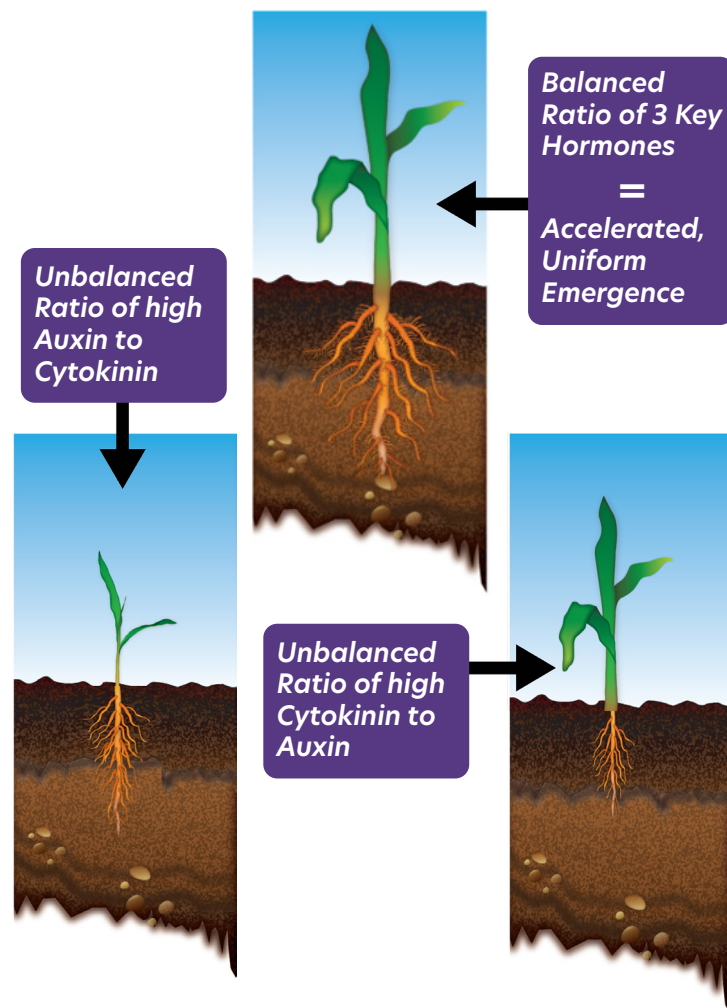
Application Method:

Use Rate: Corn - 2.4 oz/cwt
Soybeans - 1.2 oz/cwt



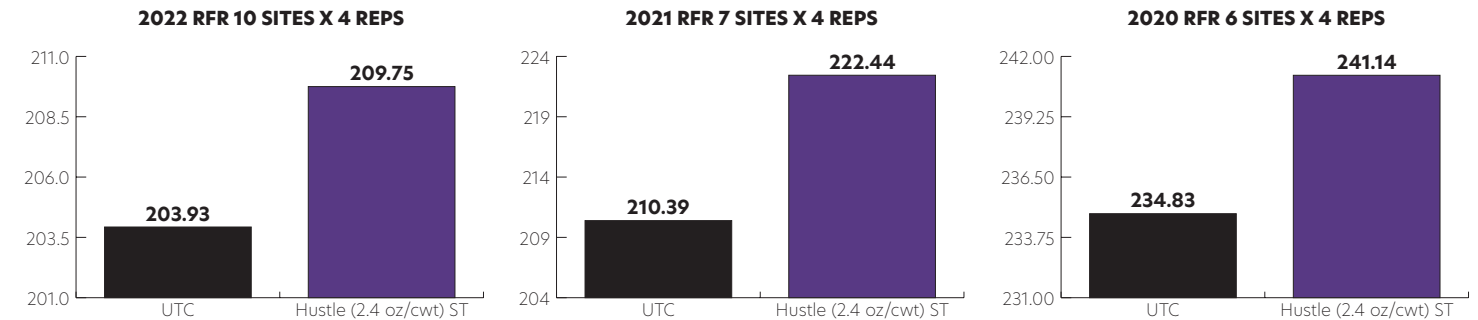
Why Hustle?

- Unique seed treatment offering multiple modes of action giving you a consistent emergence advantage
- Combined performance of proven components formulated into a convenient seed treatment
- Compatible with most other seed treatments and inoculants
- Every seed receives the same chemical message and same amount of food at the exact same time; producing the most even emergence possible



DATA & ROI by

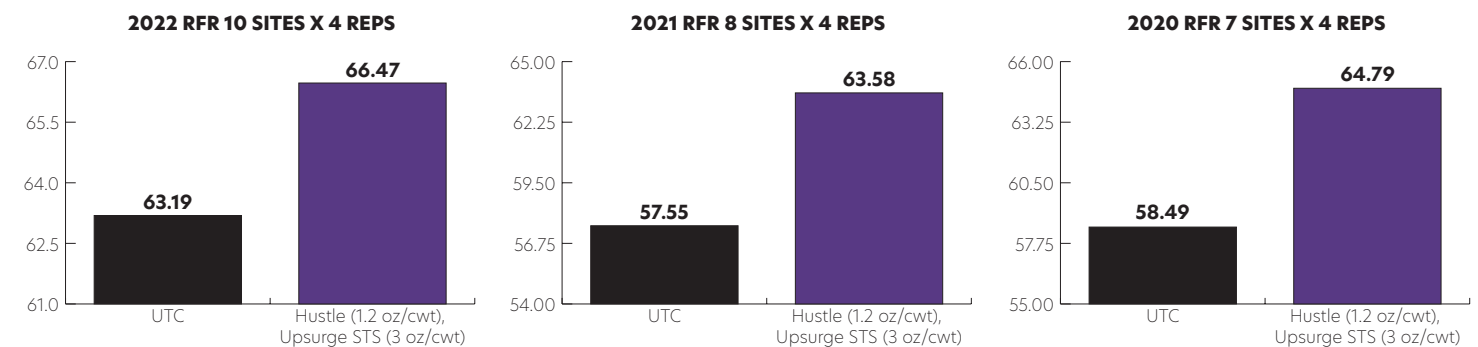
RFR



8.06

3-Year Average Bushel Advantage

	Yield	Commodity	Cost	Return	Net ROI
Hustle (2.4 oz/cwt)	+8.06 bushel advantage	\$5.25	\$8.50	\$42.32	\$33.82



5.2

3-Year Average Bushel Advantage

	Yield	Commodity	Cost	Return	Net ROI
Hustle (1.2 oz/cwt)	+5.2 bushel advantage	\$12.50	\$10.00	\$65.00	\$55.00


BIOSTIMULANT



AGPRO STARTER FERTILIZER

AgPro is a starter fertilizer that is formulated specifically with low salt index for increased seed safety and enhanced flowability while providing the seedling plants with the needed N-P-K for early vigor and stand establishment.



Application Method: 



Use Rate: 3-5 gallons/per acre

Why AgPro?

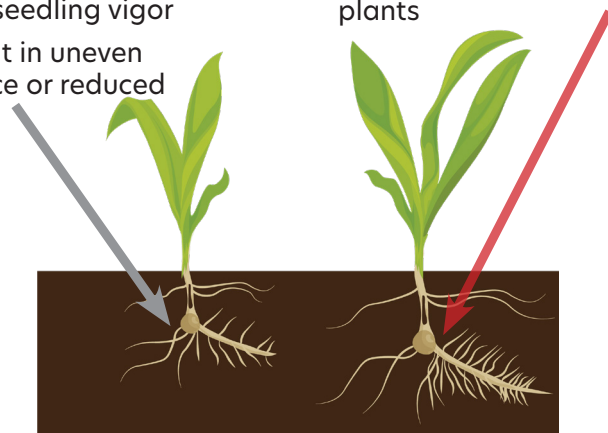
- Ortho-blend: Immediate availability to the plant
- Safer than 10-34-0 for in-furrow applications
- Less corrosive on equipment
- 100% water soluble
- Chloride free
- Compatible with Pro-Lock and other micro-nutrients

Standard Fertilizers

- High salt content
- Stress injury to seed and developing root system
- Reduces seedling vigor
- May result in uneven emergence or reduced stands

AGPRO STARTER FERTILIZER

- Low-salt starter fertilizer
- Improved seed safety
- Enhance emergence
- Healthier and stronger plants



START
AGPRO
STARTER FERTILIZER

Low-salt, seed safe starter
Improve emergence



ENHANCE
PRO-LOCK
STARTER FERTILIZER ENHANCER

Increases P availability
Stimulate root growth & microbial activity



GENERATE
Radson
BIOLOGICAL STIMULANT

Custom blend of bacteria that colonize plant roots
Solubilize minerals for season long nutrient-use-efficiency



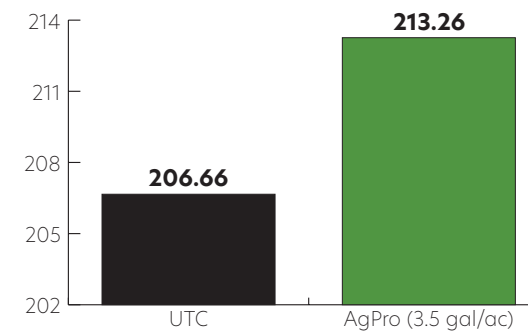
NUTRITIONAL

AGPRO STARTER FERTILIZER

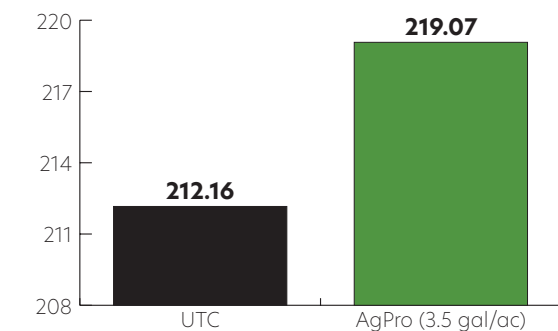
DATA & ROI by

RFR

2022 RFR 10 SITES X 4 REPS

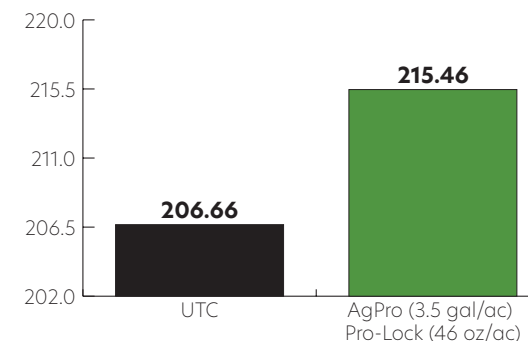


2021 RFR 7 SITES X 4 REPS

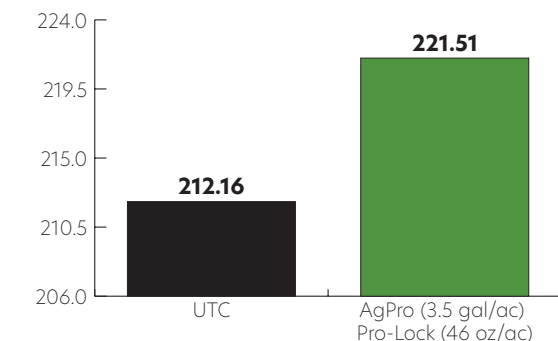


6.76
2-Year Average
Bushel Advantage

2022 RFR 10 SITES X 4 REPS

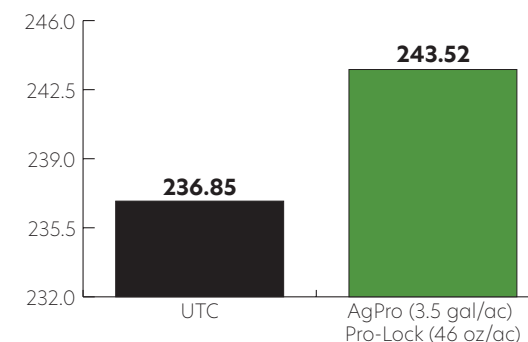


2021 RFR 7 SITES X 4 REPS



8.27
3-Year Average
Bushel Advantage

2020 RFR 6 SITES X 4 REPS

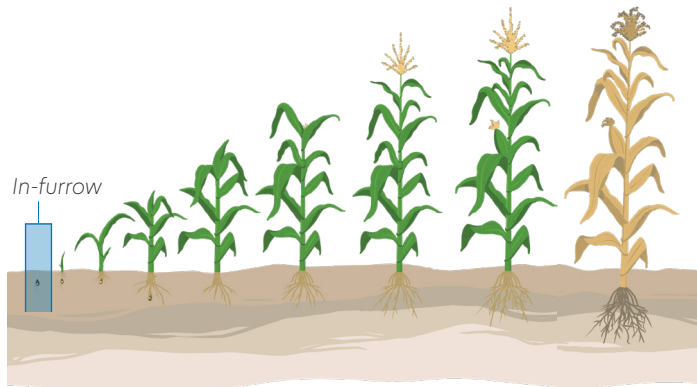


	Yield	Commodity	Cost	Return	Net ROI
AgPro (3.5 gal/ac)	+6.76 bushel advantage	\$5.25	\$11.50	\$36.49	\$23.99

PRO-LOCK[®]

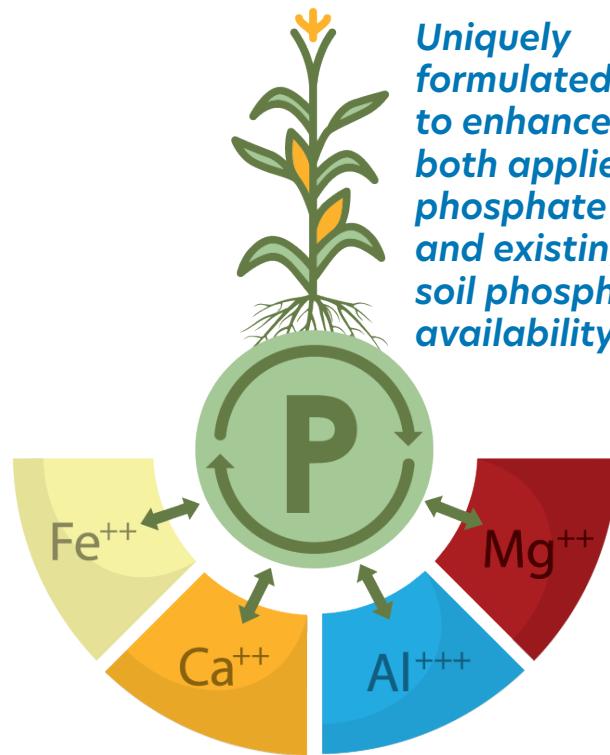
STARTER FERTILIZER ENHANCER

Pro-Lock is a proprietary product designed for use with starter fertilizers to protect and enhance the nutritional components of starter fertilizers, especially in combination with AgPro.



Use Rate: 46 oz/per acre

Uniquely formulated to enhance both applied phosphate and existing soil phosphate availability



Why Pro-Lock?

- Stimulates seed germination
- Enhances root development
- Protects phosphorus availability
- Enhances uniform stand establishment
- Works with any starter blend, especially AgPro



START
AGPRO
STARTER FERTILIZER
Low-salt, seed safe starter
Improve emergence



ENHANCE
PRO-LOCK
STARTER FERTILIZER ENHANCER
Increases P availability
Stimulate root growth &
microbial activity



GENERATE
R2G
BIOLOGICAL STIMULANT
Custom blend of bacteria that
colonize plant roots
Solubilize minerals for season
long nutrient-use-efficiency

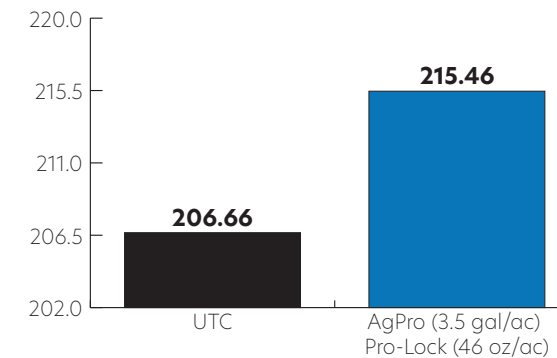
PRO-LOCK[®]

STARTER FERTILIZER ENHANCER

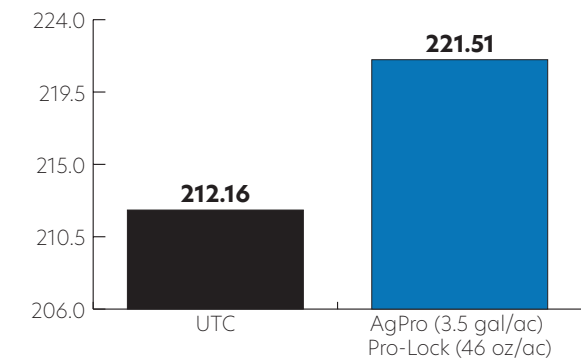
DATA & ROI by

RFR

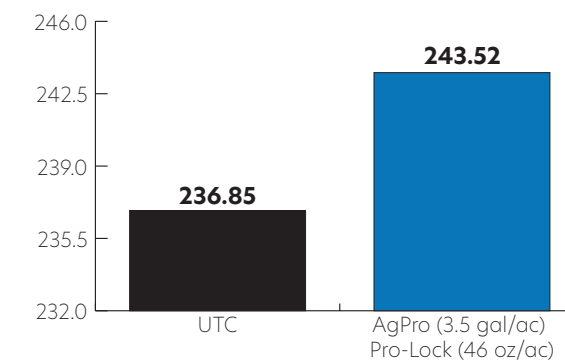
2022 RFR 10 SITES X 4 REPS



2021 RFR 7 SITES X 4 REPS



2020 RFR 6 SITES X 4 REPS

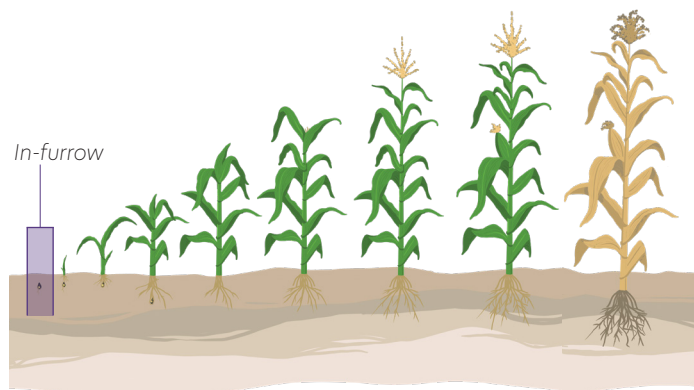


8.27
3-Year Average
Bushel Advantage

AgPro (3.5 gal/ac) & Pro-Lock (46 oz/ac)	Yield	Commodity	Cost	Return	Net ROI
	+8.27 bushel advantage	\$5.25	\$22.46	\$43.42	\$20.96



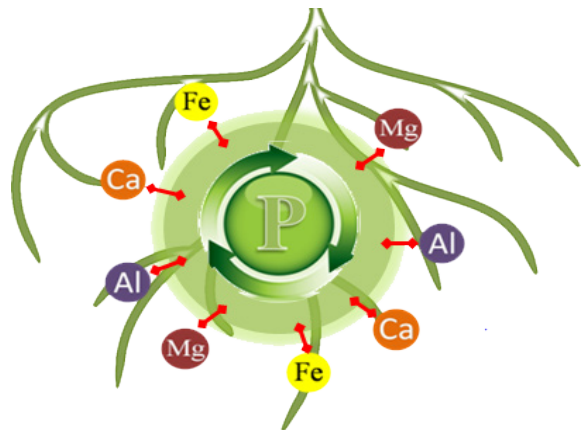
Ransom creates a more productive soil by improving microbial diversity, enhancing mineralization, nutrient uptake and plant vigor to optimize your overall yield potential.



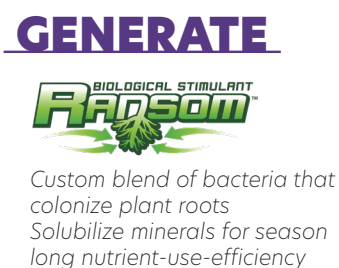
Use Rate: 4 grams/per acre
Technical Information
 1 case = 4 bottles = 160 acres
 1 bottle = 160 grams = 40 acres

Why Ransom?

- Custom blend of 8 microbial strains to solubilize key nutrients (N, P, K)
- Delivers powerful soil-based bacteria that contains a very high CFU count
- Promotes the propagation of beneficial microbes
- Ransom begins to sporulate and divide in as little as 3 days, matching up well with seed germination
- Offers exceptional tank-mixing compatibility with pesticides and a wide range of fertilizers



Phosphorus tie up with multivalent cations forms insoluble minerals. Nutrients in this form are unavailable for plant uptake.

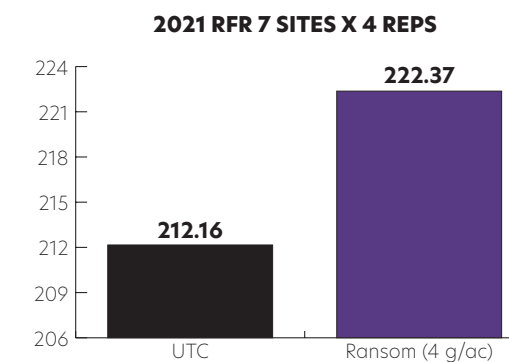
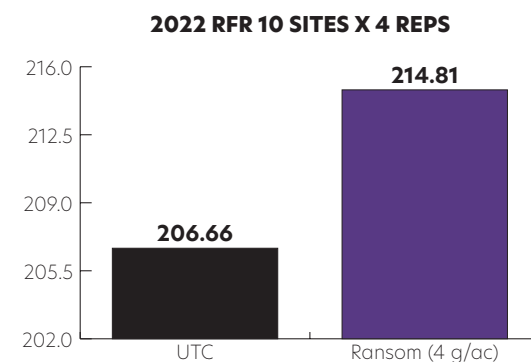


BIOSTIMULANT

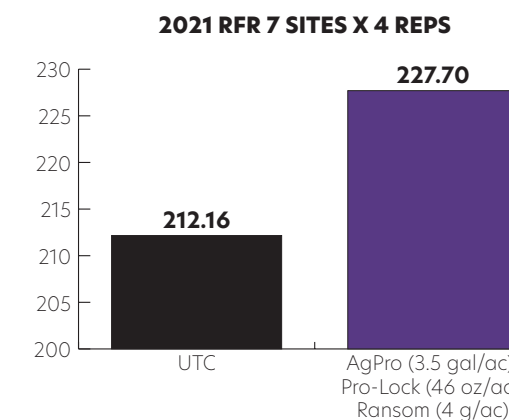
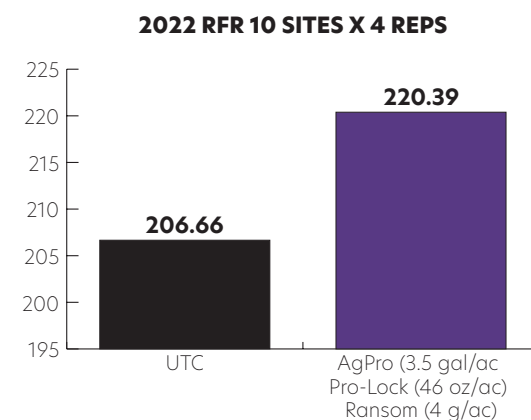


DATA & ROI by

RFR



9.18
2-Year Average
Bushel Advantage



14.64
2-Year Average
Bushel Advantage

	Yield	Commodity	Cost	Return	NET ROI
Ransom (4 grams/ac)	+9.18 bushel advantage	\$5.25	\$8.15	\$48.20	\$40.05
AgPro (3.5 gal/ac), Pro-Lock (46 oz/ac) & Ransom (4 grams/ac)	+14.64 bushel advantage	\$5.25	\$37.50	\$76.86	\$39.36

TRAILBLAZER


PLANTER BOX TREATMENT

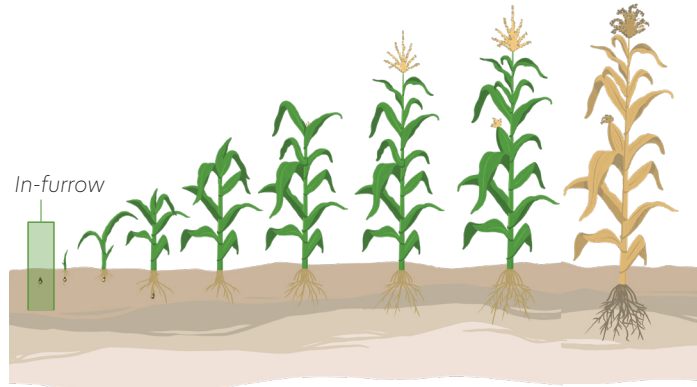
CORN

POWERED BY
BIO-CAPSULE TECHNOLOGY
PLANTER BOX INNOVATION DELIVERY SYSTEM

TRAILBLAZER™ CORN is a best-in-class 80/20 talc/graphite combination that ensures optimum performance in today's high-speed planters. It can take the place of any seed fluency agent.

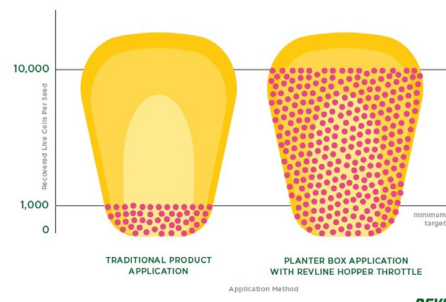


Application Method: 



Use Rate: Sold in 2-pail cases to treat 100 units of corn. Each pail is capable of treating 50 units of corn.

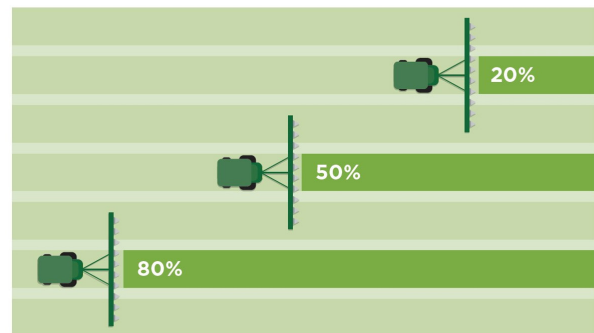
Consistent Seed Coverage



REVLINE™ HOPPER THROTTLE CORN

To confirm even product distribution, seed lubricant plus Terrasym biological was applied per grower standard practice and then AIP agronomist collected seed samples at a variety of progress points as trials were being planted. Seed samples were taken at 20%, 50%, and 80% planted and then sent to NewLeaf Symbiotics scientists to confirm that living microbes found in Terrasym products were being evenly distributed across large-scale commercial fields.

Planting Process



OVER 10,000 LIVE CELLS PER SEED AT EACH STAGE OF PLANTING

Progress Point	LIVE CELLS PER SEED WITH TERRASYM FOR CORN	LIVE CELLS PER SEED WITH TERRASYM FOR SOYBEAN
20% planted	= 40,228	= 39,914
50% planted	= 37,735	= 38,312
80% planted	= 40,212	= 38,591

Why Trailblazer?

- Most convenient method to deliver a high-volume load of zinc to the furrow
- Generates massive root structure
- Increases early-season iron, manganese and zinc uptake
- Puts corn plants in the position to manage season-long stressors and optimize genetic potential

NUTRITIONAL



TRAILBLAZER

PLANTER BOX TREATMENT

CORN

DATA & ROI by

MERISTEM
CROP PERFORMANCE

 **+6.6**

3-Year Bushel per Acre Advantage

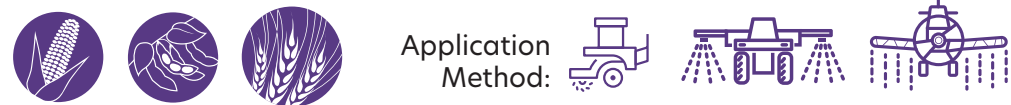
124 locations in 9 states

Strip trials, Large acreage split planter, Large acreage side by sides

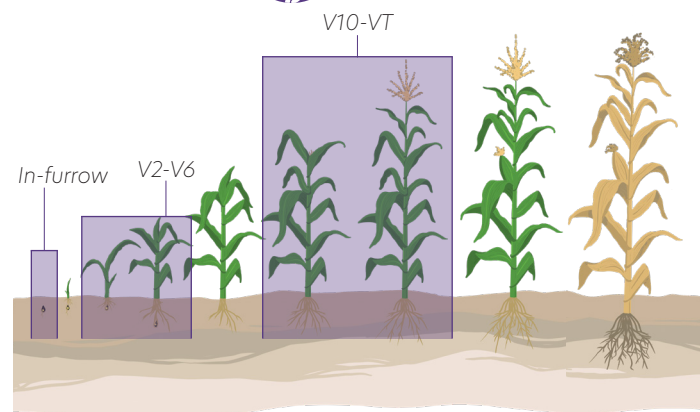


Realize™

Realize is a powerful hormone-based formulation designed to maximize yield. Realize combines the power of cytokinin (kinetin), gibberellic acid (GA), and indole-3-butyric acid (IBA) at the right ratio and right concentration to enhance the overall health and growth of the crop. The correct balance of these three hormones is critical for maximizing plant performance and yield potential.



Application Method:



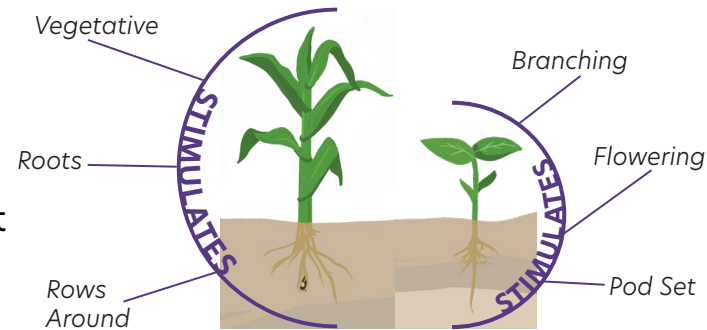
Use Rate: 4-8 oz/acre

In-furrow and Foliar
Can be added to:

- Liquid starter fertilizers
- Foliar fertilizers
- Pesticides

Why Realize?

- A proprietary product available only from Aurora Cooperative
- Boosts plant growth and development for higher yield potentials
- Enhances photosynthesis and respiration
- Excellent compatibility with row-starter fertilizers and pesticides



STIMULATE

Realize™ +

Combination of 3 key ingredients at the right ratio to stimulate the overall health and growth of the crop

FEED



Micronutrient blends that are designed to feed crop growth, enhance plant health, and improve nutrient uptake

ENERGIZE



Provides fuel and energy to keep the plant focused on yield

PROTECT

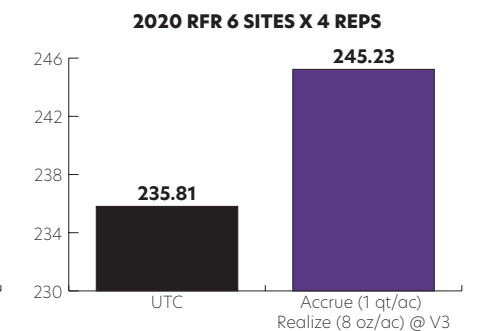
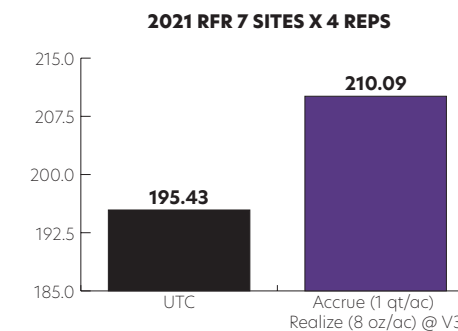
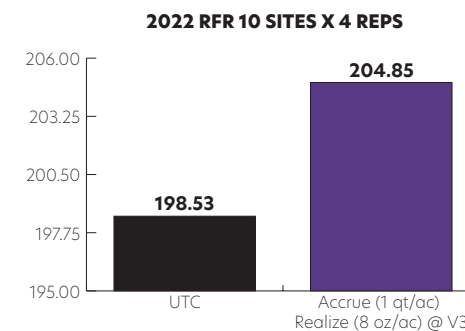


Mitigates herbicide stress protecting yield

Realize™

DATA & ROI by

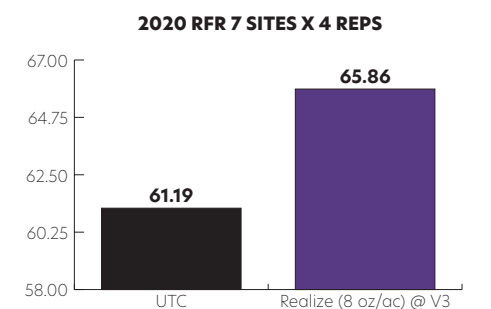
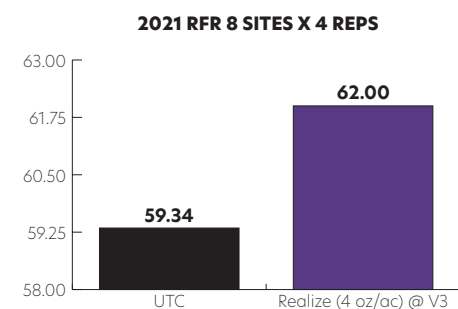
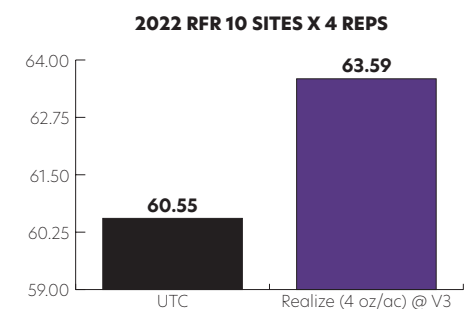
RFR



10.13

3-Year Average Bushel Advantage

Accrue (1qt/ac), Realize (8 oz/ac)	Yield	Commodity	Cost	Return	Net ROI
	+10.13 bushel advantage	\$5.25	\$15.04	\$53.18	\$38.14



3.46

3-Year Average Bushel Advantage

Realize (8 oz/ac)	Yield	Commodity	Cost	Return	Net ROI
	+3.46 bushel advantage	\$11.15	\$9.04	\$38.57	\$29.53

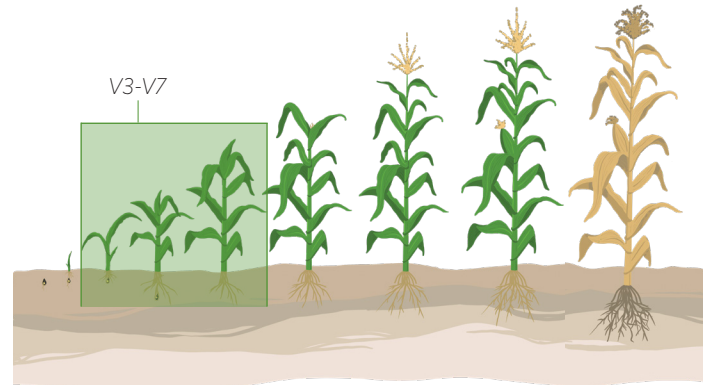
ACCURUE™

ENHANCED MICRONUTRIENT BLEND

Accrue is an enhanced micronutrient blend that is designed to optimize crop growth and enhance plant health. Accrue also includes an exclusive R2G additive that consistently improves nutrient uptake which creates a greater ROI for the grower.



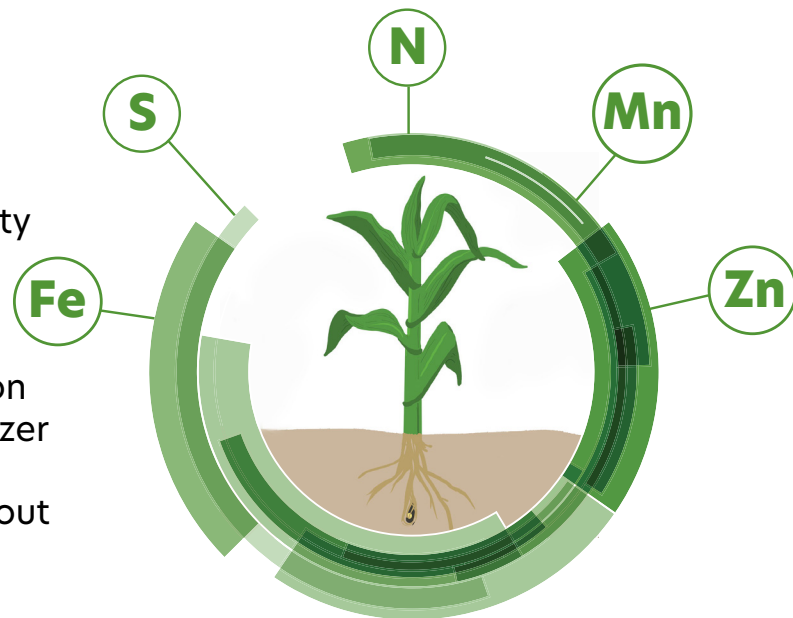
Application Method:



Use Rate: 1-2 qt/acre
Product Weight: 10.8 lbs/gal

Why Accrue?

- Helps the plant defend against early and mid-season stress
- Great application timing flexibility
- Excellent mixability and compatibility with tank-mix products
- Use as a preventative application at planting with your base fertilizer program to prevent deficiencies from occurring or apply throughout the growing season to correct early, mid, or late season deficiencies.



STIMULATE

Realize™

Combination of 3 key ingredients at the right ratio to stimulate the overall health and growth of the crop

FEED



Micronutrient blends that are designed to feed crop growth, enhance plant health, and improve nutrient uptake

ENERGIZE



Provides fuel and energy to keep the plant focused on yield

PROTECT



Mitigates herbicide stress protecting yield



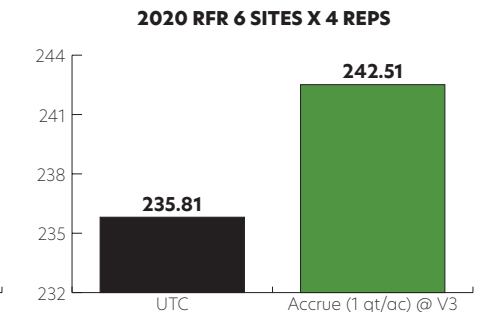
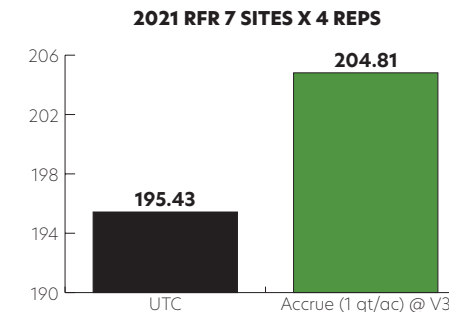
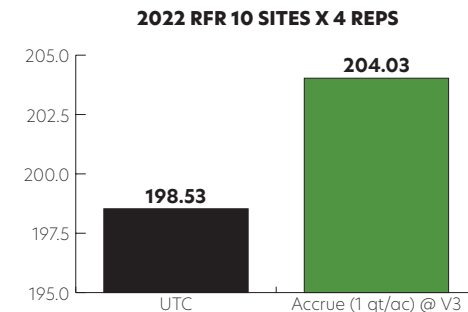
NUTRITIONAL

ACCURUE™

ENHANCED MICRONUTRIENT BLEND

DATA & ROI by

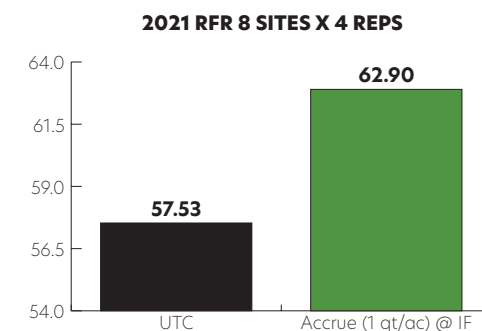
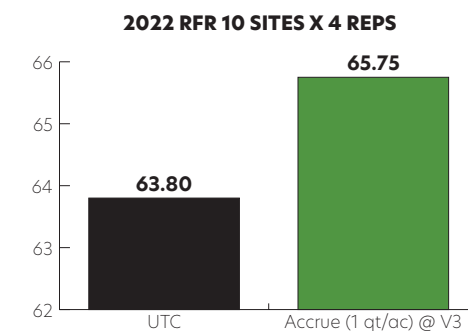
RFR



7.19

3-Year Average Bushel Advantage

	Yield	Commodity	Cost	Return	Net ROI
Accrue (1 qt/ac)	+7.19 bushel advantage	\$5.25	\$6.87	\$37.75	\$30.87



3.66

2-Year Average Bushel Advantage

	Yield	Commodity	Cost	Return	Net ROI
Accrue (1 qt/ac)	+3.66 bushel advantage	\$11.15	\$6.87	\$40.80	\$33.93



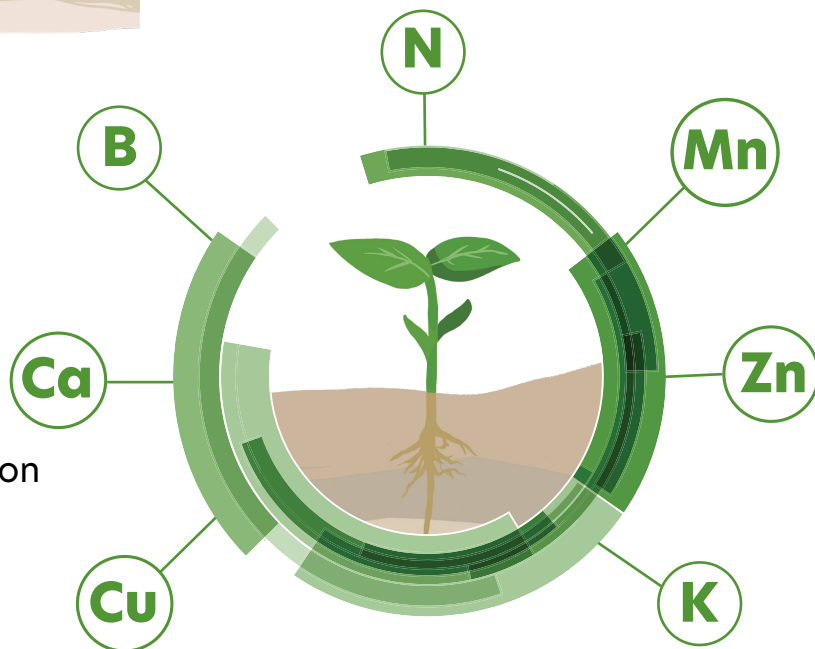
Heighten is an enhanced micronutrient blend that contains nutrients critical to obtaining optimum crop growth, and includes an exclusive R2G additive that improves nutrient uptake. Heighten is designed to increase growth, enhance plant health and maximize your return on investment on the Dicamba Tolerant acre.



Use Rate: 1-2 qt/acre
Product Weight: 10.2 lbs/gal

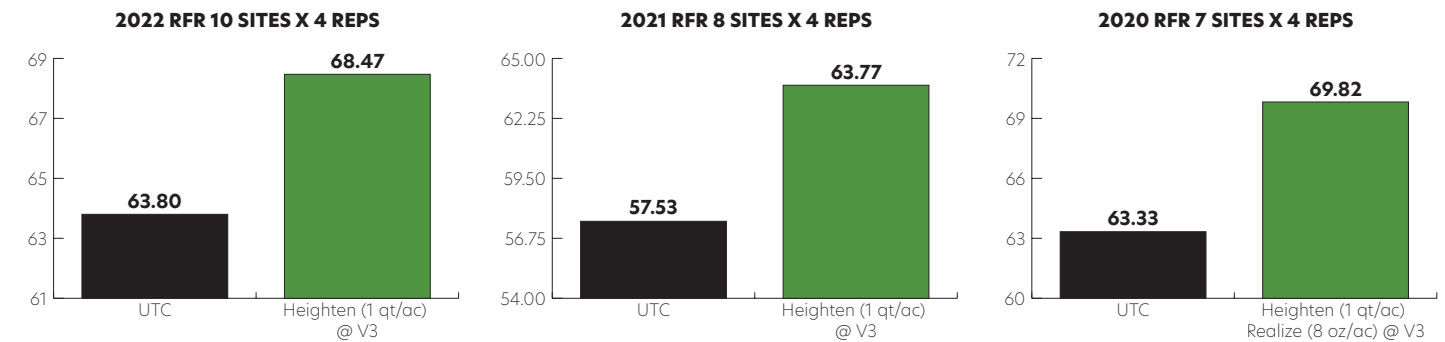
Why Heighten?

- Helps the plant defend against early and mid-season stress
- Designed to be used in tank-mixes with dicamba-based products -- **currently approved as a tank mix partner with Xtendimax® and Engenia®**
- Use as a preventative application at planting with your base fertilizer program to prevent deficiencies from occurring or apply throughout the growing season to correct early, mid, or late season deficiencies.



DATA & ROI by

RFR



5.8

3-Year Average Bushel Advantage

	Yield	Commodity	Cost	Return	Net ROI
Heighten (1 qt/ac)	+5.8 bushel advantage	\$11.15	\$7.00	\$64.67	\$57.67

STIMULATE

Realize™

Combination of 3 key ingredients at the right ratio to stimulate the overall health and growth of the crop

FEED



Micronutrient blends that are designed to feed crop growth, enhance plant health, and improve nutrient uptake

ENERGIZE



Provides fuel and energy to keep the plant focused on yield

PROTECT



Mitigates herbicide stress protecting yield

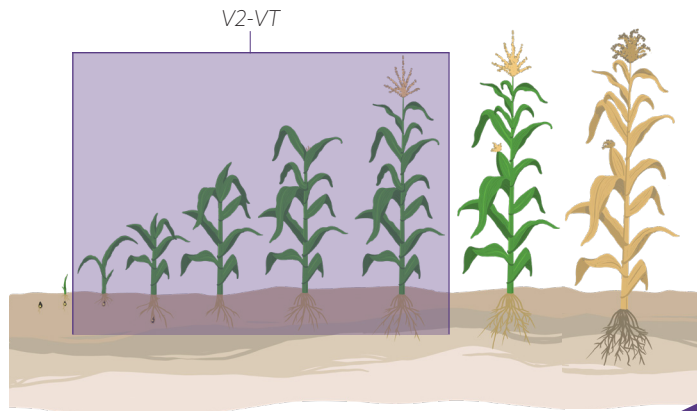




Constrain XLT Plus mitigates herbicide stress while providing fuel and energy to keep the plant focused on yield may be the single most advantageous way to increase yield.



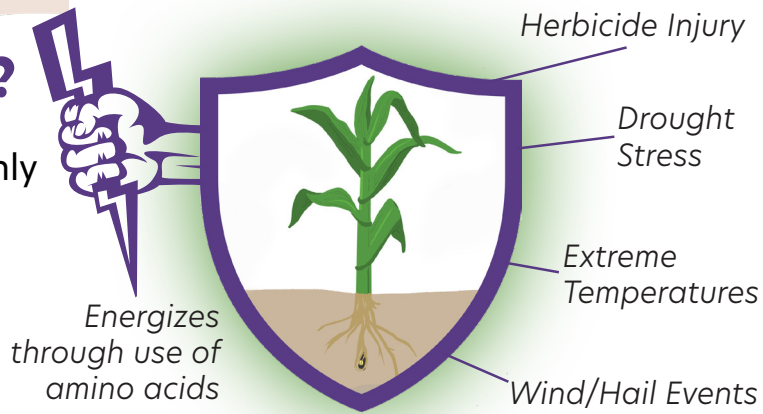
Application Method:



Use Rate: 8 oz/acre

Why Constrain XLT Plus?

- A proprietary product available only from Aurora Cooperative
- Boosts plant growth and development for higher yield potentials
- Enhances photosynthesis and respiration
- Excellent compatibility with row-starter fertilizers and pesticides



STIMULATE

Realize +

Combination of 3 key ingredients at the right ratio to stimulate the overall health and growth of the crop

FEED



Micronutrient blends that are designed to feed crop growth, enhance plant health, and improve nutrient uptake

ENERGIZE



Provides fuel and energy to keep the plant focused on yield

PROTECT



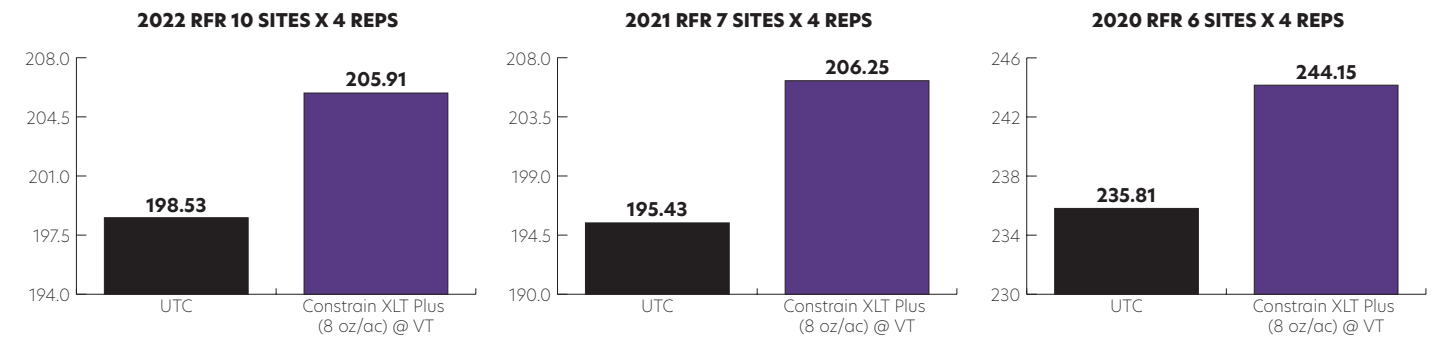
Mitigates herbicide stress protecting yield

BIOSTIMULANT



DATA & ROI by

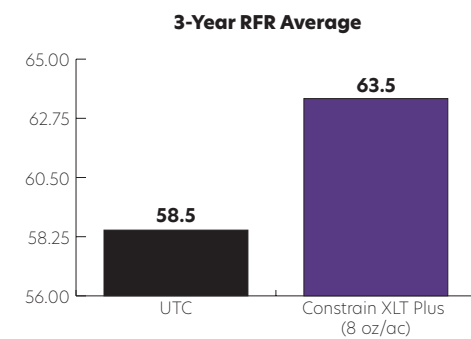
RFR



8.85

3-Year Average Bushel Advantage

	Yield	Commodity	Cost	Return	Net ROI
Constrain XLT Plus (8 oz/ac)	+8.85 bushel advantage	\$5.25	\$8.00	\$46.46	\$38.46



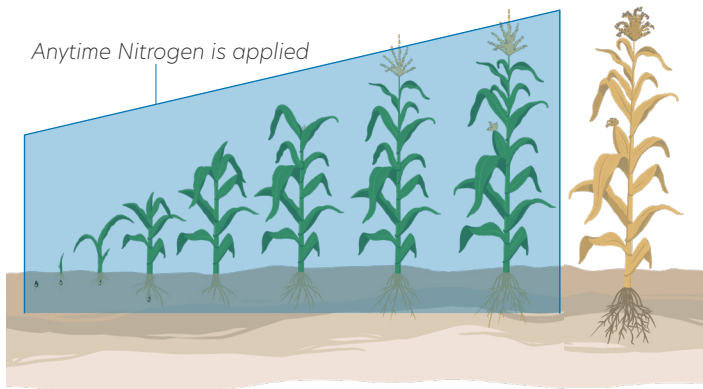
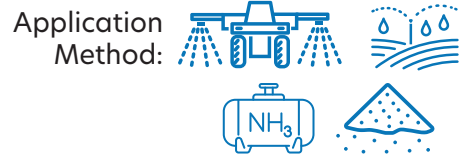
5.0

3-Year Average Bushel Advantage

	Yield	Commodity	Cost	Return	Net ROI
Constrain XLT Plus (8 oz/ac)	+5.0 bushel advantage	\$11.15	\$8.00	\$55.75	\$47.75

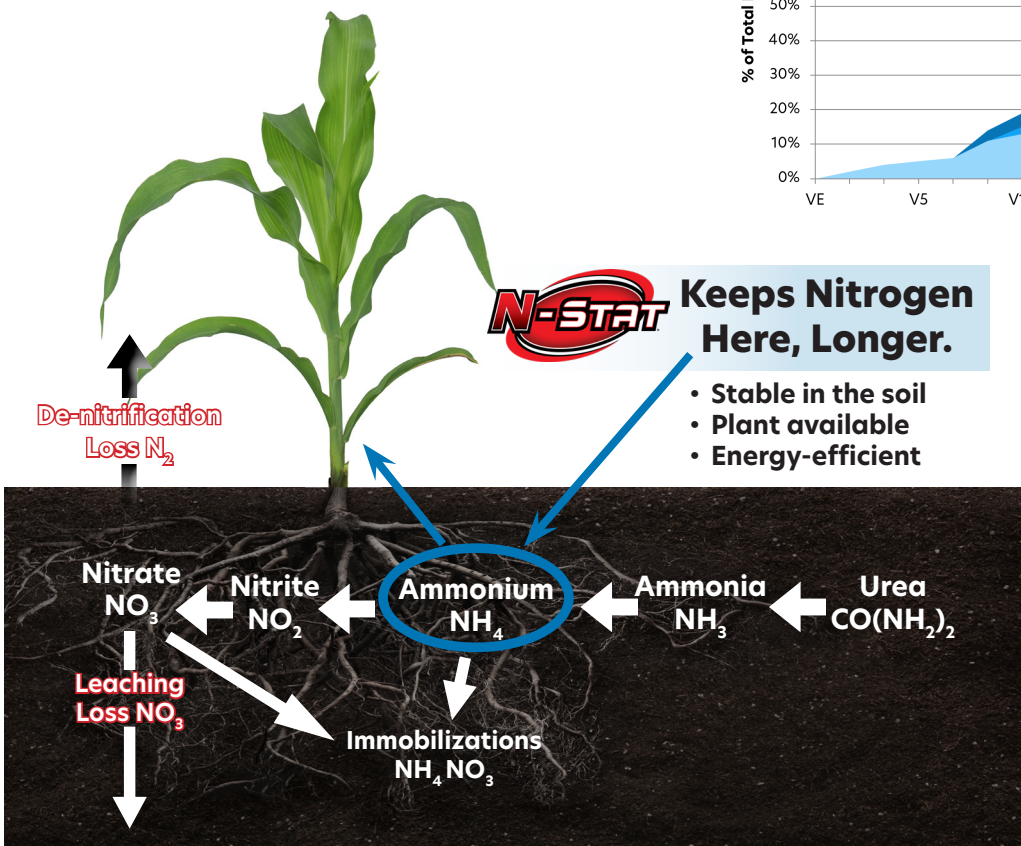
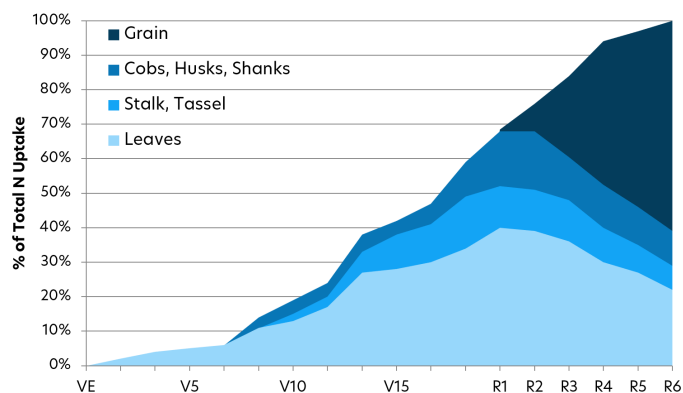


N-Stat improves nitrogen efficiency in all forms including UAN, Urea, and NH₃ from below ground nitrogen loss.



Use Rate: UAN: 1% v/v

Why do you need to keep nitrogen in the root zone longer? The plant uses 80% of the nitrogen from July to September (see chart below).



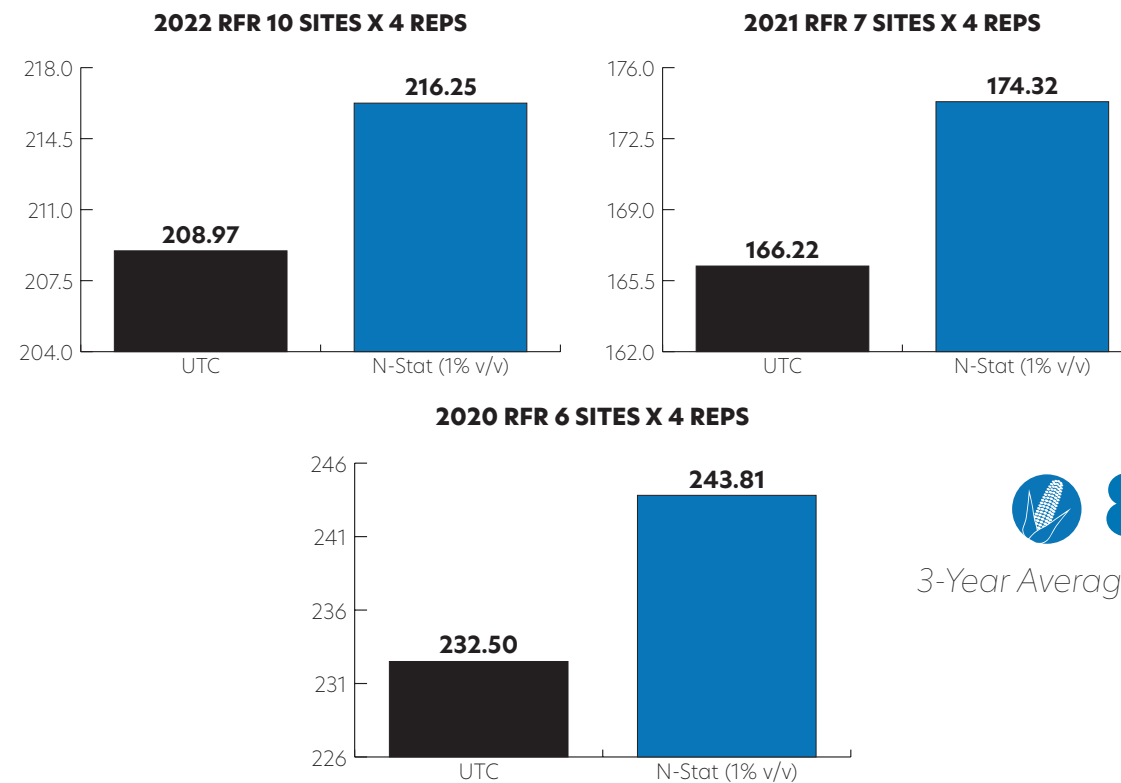
Why N-Stat?

- Variable use rate
- Non-corrosive
- Stable formulation to keep in solution
- Improves nitrogen efficiency by keeping it in the root zone



DATA & ROI by

RFR



8.9

3-Year Average Bushel Advantage

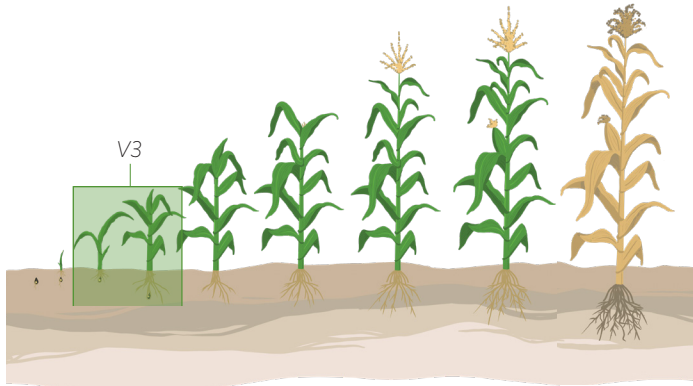
	Yield	Commodity	Cost	Return	Net ROI
N-Stat (1% v/v)	+8.9 bushel advantage	\$5.25	\$13.13	\$46.73	\$33.60

BMO

BMO is designed to optimize crop growth by supplying boron and molybdenum which are both critical to enhance crop growth. BMO also includes an exclusive R2G additive that consistently improves nutrient uptake, which creates a greater ROI for the grower.



Application Method:



Use Rate: 1-2 qt/acre
Product Weight: 9.8 lbs/gal

Why BMO?

- Helps with sugar translocation in plants
- Excellent way to prevent or correct boron or molybdenum deficiencies
- Aids in pollen development and seed set



PRESERVE
Fungicide Application

Reduces energy spent by allowing respiration and rest

UTILIZE



Keep nitrogen in ammonium (NH4+) form with N-stat

PREVENT
Insecticide Application

It's not the economic threshold of one insect but all combined

MONITOR

AquaSpy®
Tissue Sampling

Know where roots are and where they are taking up water

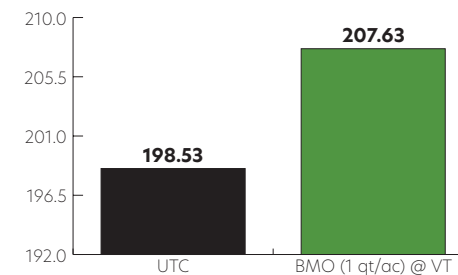


BMO

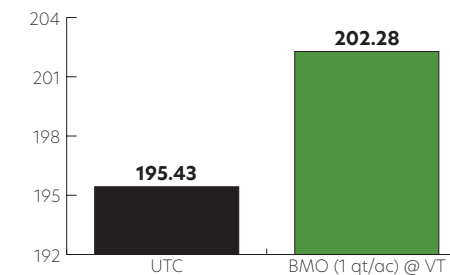
DATA & ROI by

RFR

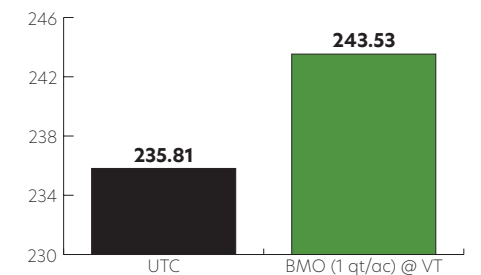
2022 RFR 10 SITES X 4 REPS



2021 RFR 7 SITES X 4 REPS



2020 RFR 6 SITES X 4 REPS

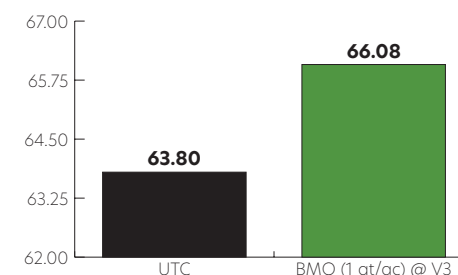


7.89

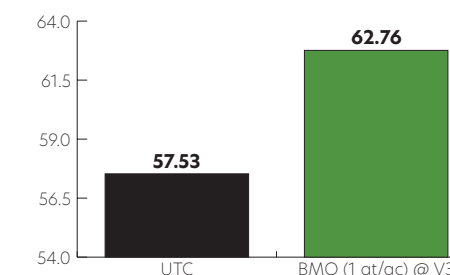
3-Year Average Bushel Advantage

	Yield	Commodity	Cost	Return	Net ROI
BMO (1 qt/ac)	+7.89 bushel advantage	\$5.25	\$9.00	\$41.42	\$32.42

2022 RFR 10 SITES X 4 REPS



2021 RFR 8 SITES X 4 REPS



3.76

2-Year Average Bushel Advantage

	Yield	Commodity	Cost	Return	Net ROI
BMO (1 qt/ac)	+3.76 bushel advantage	\$11.15	\$9.00	\$41.92	\$32.92



In the past 8 years, we have experimented with many different management systems and strategies. To keep bringing new ideas and concepts, some practices or trials are not repeated every year. If you ever have any questions on the topics below, please contact our Owners Acres team and we will be happy to pass along our results and knowledge gained.

Previous Trials at Owners Acres

- Gene Edited Soybeans
- Soil Health and Pathogen Testing
- Soybean Early and Late Plant Dates
- Soybean Planting Speed
- Soybean 15" vs. 30"
- Low Population Soybeans (50K up to 180K)
- Soybeans - late fertigation
- Soybeans - seed treatment trials
- Soybeans - PGR applications vs. check
- Soybeans - ABS applications post on High pH/chlorotic soybeans
- Intercropping Corn/Soybeans - 20 ft, 40 ft, 60 ft patterns
- Intercropping Corn/Milo - 20 ft, 40 ft patterns
- Short season corn hybrids with high mgmt. - 99 vs. 113 day hybrid
- Cover Crops - Various termination stages - emergence and yield
- Cover Crops - Nutrient value to be released testing
- Corn 15" vs. 30" spacing
- Corn Tillering - good or bad - Tissue testing of plants with/without/and tillers nutrient values
- Corn - double ears - good or bad
- Corn - Nitrogen w/ N-Stat vs. without
- Corn - In-furrow vs. No in-furrow vs. 5 gal. 10-34-0 / emergence and yield responses
- Corn - Yield on old corn ground vs. old soybean ground
- Corn - Y drop vs. traditional application for Nitrogen
- Corn - Y drop of 10-34-0 to see if we see a tissue or yield response.
- Corn - PGR + Micronutrient response
- Corn - Deep banding of potassium

ACKNOWLEDGEMENTS

Owners Acres is truly a team effort. Many people have played an important role over the past 8 years. We would like to thank all these individuals for their participation. In addition, we would like to thank all the producers who have attended our meetings and plot tours, asked questions, and challenged us with new ideas to try on the farm. We look forward to these interactions in the future and will continue to push the bar higher on both yields and input efficiencies.

Thanks to all who have contributed,
Brandon Hamer, Director of Research & Development

Advisors

Jason Throener
Kenton Schegg
Kevin Sagehorn
Bill Hunter
Real Farm Research

Interns

Molly Carraher
Haley Throener
Grant Nielsen
Caden Schuster
Andrew Stolpe

Hospitality

Cindy Schroeder
Team at the Aurora West Warehouse

Landlords

Cortney Brandes and Evan & Roxanne Brandes
Equalizer Midwest - Doug Stevens, Doug Koop, & Jason Stevens

Farm Managers

David L'Heureux
Steve Engel (Hastings Irrigation)
Doug Bedka
Noah Johnson
Levi Wofford

Marketing

Tessa Burgener
Maggie Preissler
Kim Reynolds
Brielle Hamer

Aurora Broken Risers Fixers (not a glamorous job!)

C.J. Rust
Jay Oswald

Industry Partners

Syngenta
Corteva
BASF
Bayer
Amvac
FMC
Rosens
BioFlora
Prairie Valley Seeds
NK Seeds
Brevant Seeds
SoilView
Agsourc Labs
Ward Labs
Aqua Spy Moisture Probes

Agronomists

Ron Jakubowski
Jon Simonson
Todd Nitsch
Steve McManaman

Trial and Data Support

Nicole Parker
Shelby Ferguson
Danielle Scheele
Garret Johns
Josh Floth
Stephanie Mayer

Speakers

Randy Dowdy
David Hula
Missy Bauer



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