

2023 Owners Acres

Research & Development





Table of Contents

Introduction	4-7
<hr/>	
The 5 Step Process	8-13
<hr/>	
Step 1 Foundation	14-23
<hr/>	
Step 2 Emergence	24-33
<hr/>	
Step 3 Enhance	34-39
<hr/>	
Step 4 Energy Management	40-49
<hr/>	
Step 5 Finish	50-55
<hr/>	
Yield Data	56-69
<hr/>	
R2G Products	70-91



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.

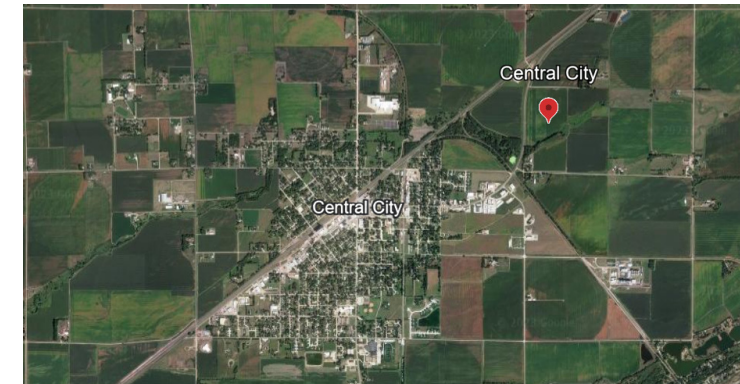
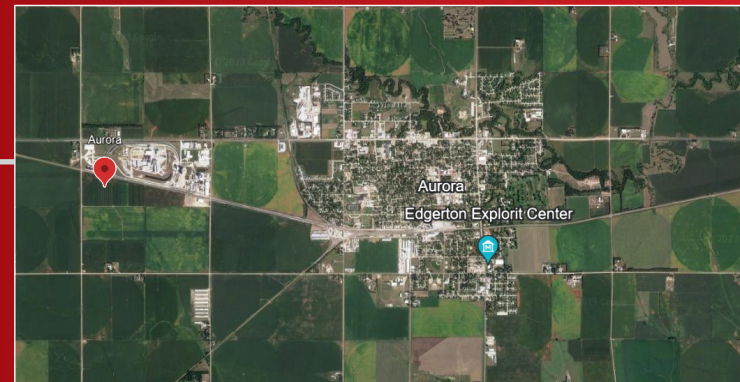
Every year is an opportunity to learn, and this year provided many opportunities to do just that. The biggest takeaway from this past year were the solutions that helped reduce crop stress. The lack of rainfall and several periods of heat kept pressure on all crops from start to finish. The biggest returns on investment were fungicide applications for plant health (13.5 bu/corn, 4.5 bu/soybeans). This didn't come as a surprise, as our past data shows plant health pays in more stressful years, and we saw that in our data and with standability at harvest throughout the area. Constrain XLT Plus also was a key contributor to yield as many post-herbicide applications were applied on rapidly growing corn. A big focus this year again was nitrogen management and making sure we utilize our credits, time our applications, and stabilize our applications. The past two years, our research has shown an increase of 15 bu/acre with N-Stat. Finally, we strive for consistency - we have laid out management steps in this book to walk you through a thorough process to guide your management process. Execution and timing are more important than throwing products out there and hoping for results. Grid soil sampling and fixing soil fertility/balance are where consistent performance starts, followed by good emergence. Hustle seed treatment, followed by AgPro, Pro-Lock, and Ransom, continues to get us off to a good start every year and provide us a 12 bu/acre advantage over traditional 10-34-0 applications.

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



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

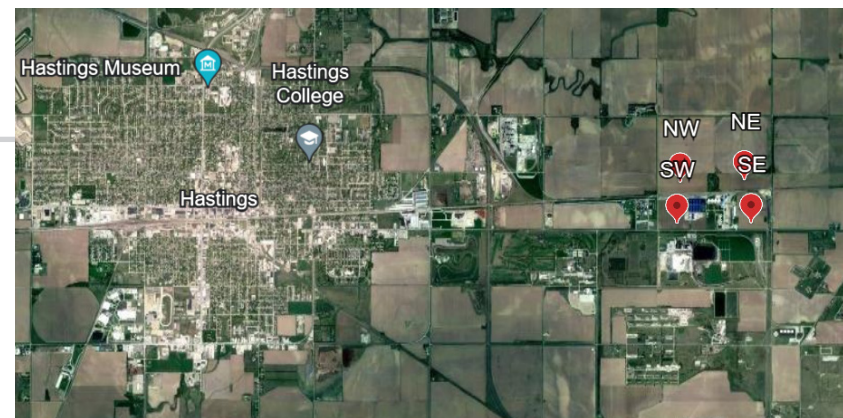


HASTINGS

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)

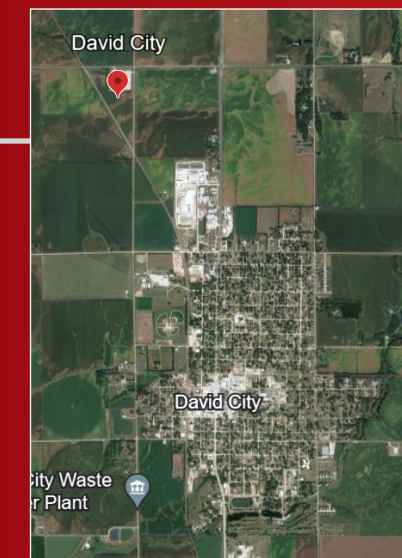


DAVID CITY

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

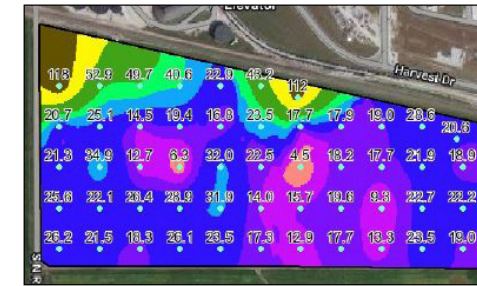


STEP
1

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

PHOS-SURE®

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



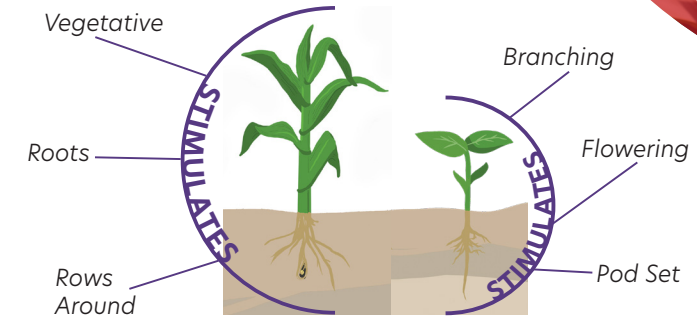
STEP 3

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

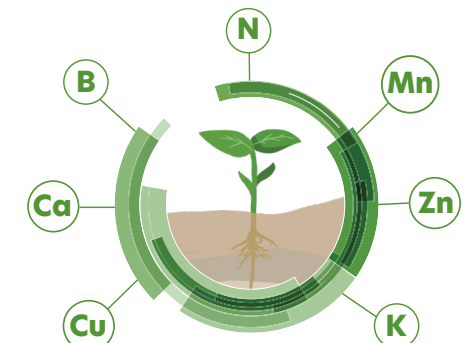
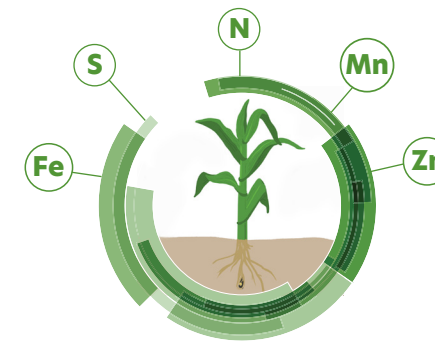
- Protect against early diseases and insects
- PGR on seed to promote early emergence and growth
- AgPro for a safe, low-salt in-furrow fertilizer that won't delay emergence
- Pro-Lock to protect early phosphorus availability for the seedling



FEED



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



EVALUATE

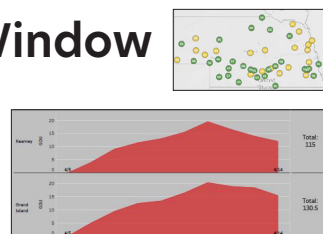
Seed Bed Preparation

- 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

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



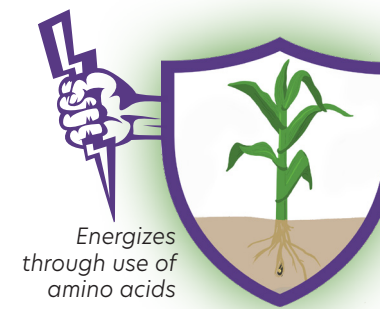
THINGS TO CONSIDER:

- 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



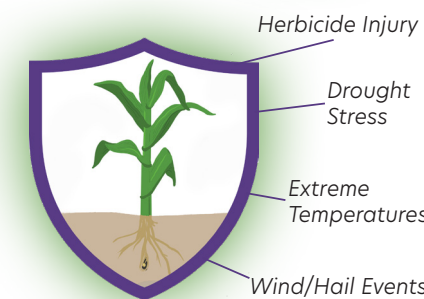
Provides fuel and energy to keep the plant focused on yield



PROTECT



Mitigates herbicide stress protecting 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



STEP 4

ENERGY MANAGEMENT

PRESERVE

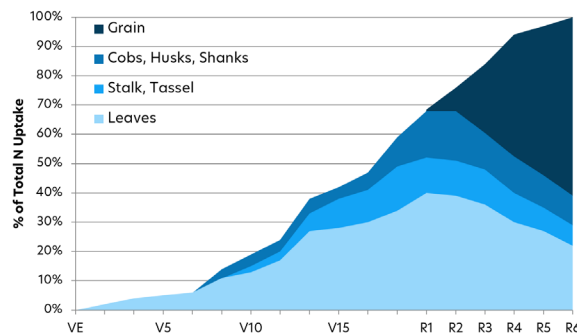
Fungicide Application

- 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)



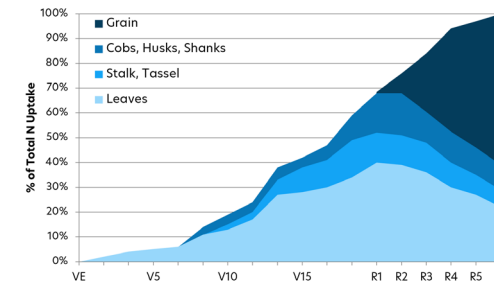
STEP 5

FINISH

RETAIN

Nitrogen Availability

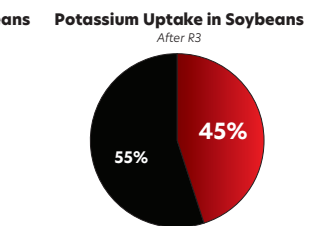
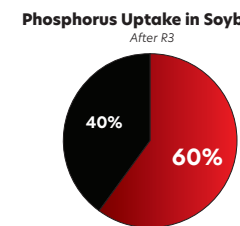
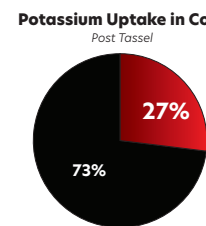
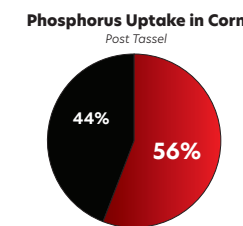
- Nitrogen is important to corn's test weight and soybean seed size



RESERVE

Phosphorus & Potassium Availability

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



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	14,000	210,000	3,000	1.167

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

MONITOR

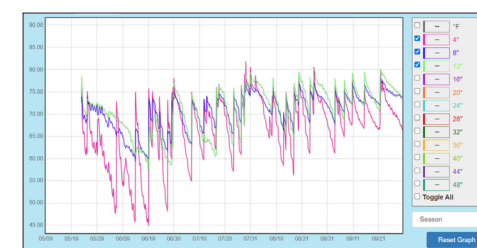
AquaSpy® Tissue Sampling

- 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."

ENDURE

Late Irrigation

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



Irrigated until 9/21/23 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:

- 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



ANALYZE

Grid Soil Sampling

Each year, we grid sample every field to see the impacts of crop removal and progress on nutrient levels that we are addressing. This year, we managed to increase our potassium level in Aurora after three years of application. We also expected and were able to take advantage of residual nitrogen following our hail events that limited yields the previous year. On our Aurora farm, we continue to see our organic matter (OM) climb and phosphorus become available, even though we have been applying less than half of our crop removal for the past four years. Focusing on micronutrients in our high yield fields is something we continue to manage based off our grid soil samples each season.



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.

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
P	4.9	34.3	44.5	53.6	50.5	59.5	60.1	55.9	66.7	70.4	76.9
K	379.1	430.5	418.2	445.2	452.1	439.7	387.8	368.2	358.4	377.1	443.0
Mg	248.8	304.2	304.2	301.5	310.2	305.3	242.0	257.0	217.5	207.7	211.9
Zn	1.6	2.7	3.5	3.9	4.9	5.2	4.0	4.6	5.9	4.7	5.5
pH	6.4	6.5	7.2	6.9	7.1	7.1	7.0	7.1	6.6	6.7	6.9
bpH		7.1	7.3	7.2	7.3	7.3	7.3	7.2	7.0	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
CEC	15.9	17.8	16.9	18.0	19.0	17.6	15.2	13.6	13.1	12.2	13.5
NO3-N	13.4	31.9	4.1	20.6	5.6	4.3	10.0	12.9	20.3	38.0	26.1

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
P	14.9	15.3	75.4	80.4	72.7	83.8	107.4
K	415.3	330.8	387.2	260.8	299.0	335.4	374.4
Mg	230.6	221.4	223.0	161.8	198.4	186.8	213.5
Zn	1.3	1.5	1.6	1.5	2.0	1.7	3.0
pH	6.4	6.3	5.9	6.2	6.4	6.1	6.4
bpH	7.0	6.9	6.7	6.8	6.9	6.8	6.9
OM	2.3	2.3	2.4	3.4	3.6	3.3	3.5
CEC	16.7	16.6	17.6	12.2	13.9	13.5	14.6
NO3-N	7.0	5.3	6.5	21.2	25.0	21.0	40.4

Hastings NE | 45.04 acres

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



SELECT

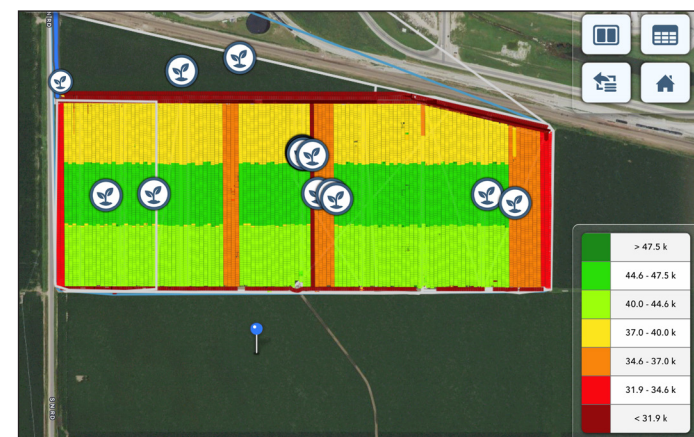
Hybrid & Population Selection

As we entered the 2023 growing season, dryland subsoil moistures were depleted. In these scenarios, we reduced populations to compensate in case we did not receive rainfall. We chose a mix of seven hybrids to plant on acres that are not hybrid plots. Our five core hybrids have consistently performed well over multiple years, and we introduced two newer hybrids on a smaller scale. This year yielded some interesting results based on planting dates, irrigation methods, and heat/stress tolerance. We continue to plant three populations on most fields and choose to push populations higher at Aurora to find the limitations of our management practices. As we see our bushels/1000 increase, we slowly increase populations on those fields with the goal of boosting yields.

WHY

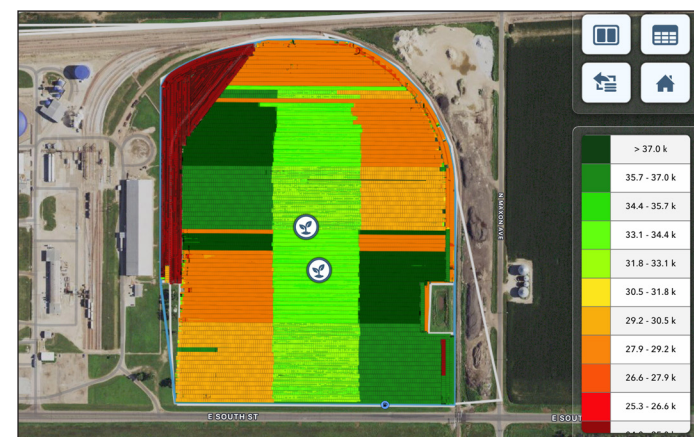
The focus at Owners Acres isn't solely on determining the best hybrid in any particular year, but how yields are impacted by management and populations. We have learned many valuable insights such as which hybrids perform on pH, the need for late irrigation on top-end hybrids, and which hybrids can handle 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
38,000	276	7.26
42,000	257	6.12
48,000	275	5.85

Hastings Southeast

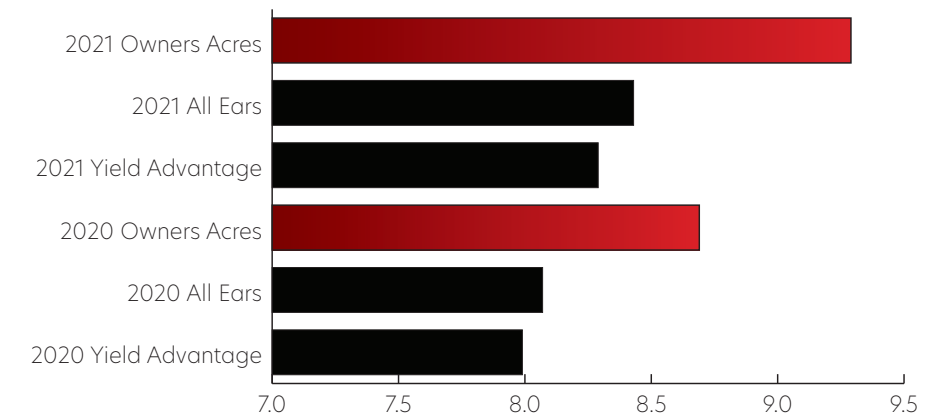


Hastings COC Populations	Avg. Yield	Bu/1,000
30,000	272	9.06
33,000	281	8.51
36,000	278	7.73

Hastings COS Populations	Avg. Yield	Bu/1,000
36,000	256	7.11
33,000	264	8.01
30,000	251	8.35



YIELD POPULATION EFFICIENCY
Bushels/1,000 Ears





MANAGE

Nitrogen Management

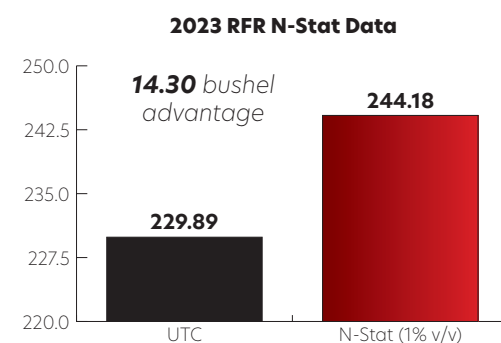
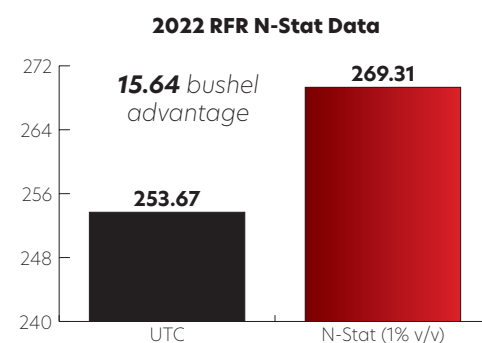
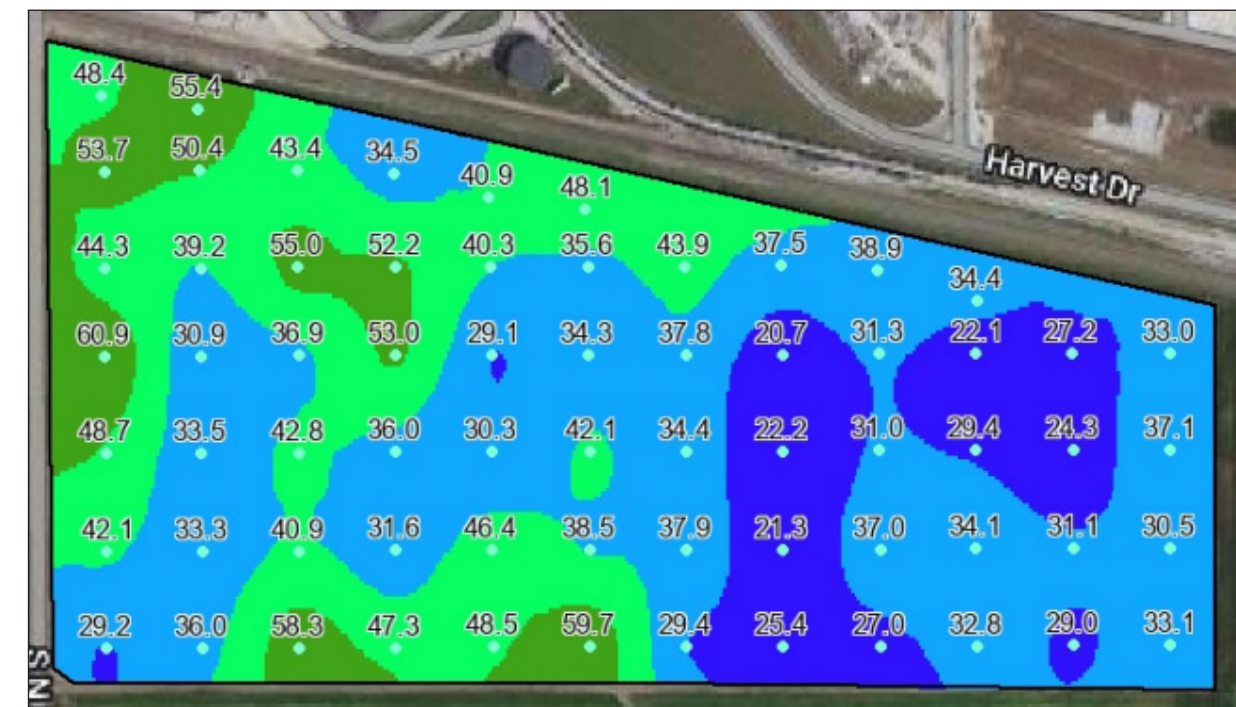
Our nitrogen management program for 2023 started by understanding just how much carry-over nitrogen we had from the previous year. The 2022 hail and subsequent replant in Hastings, along with very poor dryland yields, allowed us to take up to 100 pounds of credits and significantly reduce our nitrogen amounts and expenses. We scaled back the amount applied at planting and eliminated any in-season applications on dryland fields when the lack of rainfall made us adjust our yield goals. Our flexibility due to our planning of split applications, yearly grid sampling, and use of N-Stat allowed us to save \$50-\$100/acre without compromising yield.

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.

Field	Crop	N-Credits	2x2x3							
		Soil + Previous Crop	Planting	Cultivation	Hilling	Y-Drop	Pivot 1	Pivot 2	Total Applied	Total w/ Credits
David City	Corn (Dryland)	115	40						40	155
CC South	Corn on SB	70	40	100	50				190	260
CC East	Corn	30	40			100	30	30	200	230
Hastings NW	Corn (Dryland)	89	40						40	129
Hastings SE	Corn on SB	80	40	60	60				160	240
Hastings SE	Corn	60	40	90	60				190	250
Hastings NE	Corn	59	40	90	60				190	249
Aurora	Irrigated	95	40			100	25	25	190	285

Fall 2023 Aurora Nitrate Map





PLAN

Crop Protection Plan

This year provided several challenges to herbicide performance. Dry conditions and a lack of rainfall in most areas required us to turn on pivots where possible to activate our pre-emergent herbicides. Another challenge was the rapid accumulation of GDU's that pushed crop growth early. Normally, we can wait 21-28 days before applying post residuals to prevent additional weed flushes and maintain crop safety. This year, we had to shorten that window to 15-20 days to maximize crop safety and performance. Just as we did with pre-emergent herbicides, our post-emergent residuals also needed irrigation where possible for proper incorporation and activation. Our offensive approach led to excellent weed control in our corn fields across all companies' chemistries.

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 to kill them 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.

2023 Crop Protection Application Dates



	Pre	Product	Rate	Days	Post	Product	Rate
	5/17/23	Verdict	12 oz.	17	6/2/23	Zidua SC	2.5 oz.
Planted 5/9/23	GDU 123	RoundUp PMAX3	22 oz.		GDU 415	Outlook	6 oz.
						Status	5 oz.
						RoundUp PMAX3	20 oz.



	Pre	Product	Rate	Days	Post	Product	Rate
	5/17/23	Trivolt	12 oz.	17	6/2/23	Harness Max	45 oz.
Planted 5/9/23	GDU 123	Diflexx	8 oz.		GDU 415	Diflexx	10 oz.
		Aatrex	1.5 pt.			RoundUp PMAX3	20 oz.
		RoundUp PMAX3	22 oz.				



	Pre	Product	Rate	Days	Post	Product	Rate
	5/17/23	Resicore	1.5 qts.	17	6/3/23	Resicore	1.25 qts.
Planted 5/9/23	GDU 123	Staredown	7 oz.		GDU 415	Aatrex	1 pt.
		Aatrex	1 qt.			Diflexx	10 oz.
		Buccaneer Plus	22 oz.			RoundUp PMAX3	20 oz.



	Pre	Product	Rate	Days	Post	Product	Rate
	5/17/23	Acuron	3 qts.	17	6/3/23	Sequence	3 pt.
Planted 5/9/23	GDU 123	Buccaneer Plus	22 oz.		GDU 415	Diflexx	10 oz.
						RoundUp PMAX3	8 oz.



	Pre	Product	Rate	Days	Post	Product	Rate
	5/17/23	Acuron	3 qts.	17	6/3/23	Impact Core	30 oz.
Planted 5/9/23	GDU 123	Buccaneer Plus	22 oz.		GDU 415	Impact	.5 oz.
						Diflexx	10 oz.
						RoundUp PMAX3	20 oz.

Base Program Pre		Planting Date:	4/8/2023	5/1/2023	4/14/2023	5/4/2023	5/3/2023
Acuron	3 qts.	Locations:	David City	Central City	Hastings NW	Hastings NE	Hastings SE
RoundUp PMAX 3	30 oz.	Pre-Application:	4/26/2023	5/4/2023	4/26/2023	5/10/2023	5/9/2023
Base Program Post		GDU Pre:	132	41	39	128	101
Buccaneer Plus	10 oz.	Post-Application:	5/23/2023	5/22/2023	5/25/2023	5/26/2023	5/26/2023
Sequence	3 pts.	Days After Pre:	25	20	28	15	16
Diflexx	12 oz.	GDU Post:	430	261	373	347	355
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 have been very pleased with our overall planter performance the past several years and didn't make any changes other than going through and replacing worn parts in our speed tubes. Some product upgrades were made to our Simplass system that improved the performance as we continue to look forward to the flexibility of product applications that this technology will bring in the future. We were also able to go out and create a few practice passes in late March to ensure everything was ready to roll when it was time to hit the fields. Planter performance was good with the exception of plant spacing at higher populations.

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

- Clutch assembly
- Bearings/sprockets/idlers
- Chains

2. Wheels & Tires

- Lug-nuts/ bearings
- Tire air pressure

3. Fertilizer Transmission

- Openers & bearings/blades/shoes
- Fertilizer hoses
- Piston or squeeze pump

4. Down Pressure Spring Assembly

5. Parallel Arm Linkage

- Measurements between arms
- Bolts & bushings (Rocking Test)

- Shape of hole on parallel arms (circle or egg shape)

6. Row Unit Sprockets

- Meter Disconnect Lever (lines up correctly)
- Moving freely

7. Drive Chains

- Lubricated & in good condition
- Drive rollers/idlers/idler springs
- Check for grooves in rollers

8. Row Cleaners

- Bearings
- Free movement up and down

9. No-Till Coulters

- Bearings
- Cutting edge
- Centered on hub
- Check depth (must be 1/4"

- higher than opening discs)

10. Gauge Wheel Assembly

- Gauge wheel arm condition
- Walking gauge wheel attachments
- Rubber tire (good condition or runs true and has contact with disc blades)
- Bearings

11. Tru-Vee Openers/Disc Blades

- Measure blade point of contact (Most should be 2 to 2-1/2", Kinzie 3600 series & Great Plains 1 to 1-1/4" Case-IH only slight contact)
- Diameter of blades (Minimum of 14-1/2", except Case-IH minimum of 13-1/2")

- Bearings

- Scrapers

12. Seed Tube & Tube Guard

- Seed tube - worn edges or broken
- Seed tube guard (loose or broken rivets; width worn, too narrow - Minimum of 3/4" width, 1" new)

13. Keeton Seed Firmers

- Installed correctly
- Adjust tension
- Wear

14. Closing Wheel Assembly

- Tires & wheel bearings
- Centered over seed trench (scratch line test in shop)
- Staggered wheel set up

- Pivot assembly holes

15. Insecticide Assembly

- Box & feed roll condition
- Hose attachment clean
- Insecticide bander

16. Seed Meters

- Clean meters
- Have meters calibrated by local calibration specialist

In-Field Adjustments to Check:

1. Planter Running Level

- Frame level
- Parallel linkage level
- Adjust hitch height
- 20" from bottom of frame to planting surface

2. Planter Speed!!!

- Row units running smooth with no bounce or vibration
- 4.5 to 5.0 MPH

3. Row Cleaners Set at Correct Depth

4. Down Pressure at Proper Setting

5. Chains & Drive System

- Oil
- Running smooth

6. Use Graphite (on finger pickup) or Talc (on vac. planters)

Courtesy of Missy Bauer
www.bmcropconsulting.com



BOOST

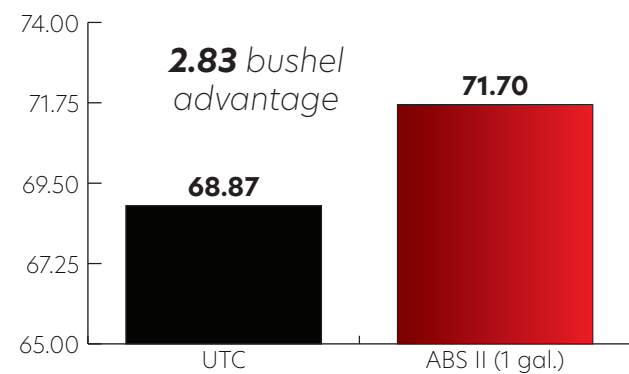
Seed Treatment & In-Furrow

This year provided some cold conditions early on, but we remained mostly dry, which allowed reasonably quick emergence and early growth. Hustle on the seed along with a seed treatment continues to provide uniform emergence and typically leads to emergence happening a day or two sooner than our untreated checks. We didn't make any changes to our in-furrow program and continued with our AgPro/Pro-Lock/Ransom package. We conducted some trials with microbial seed box treatments, and added some Fulvex and natural PGR's to see if we might add something new into the mix in the future.

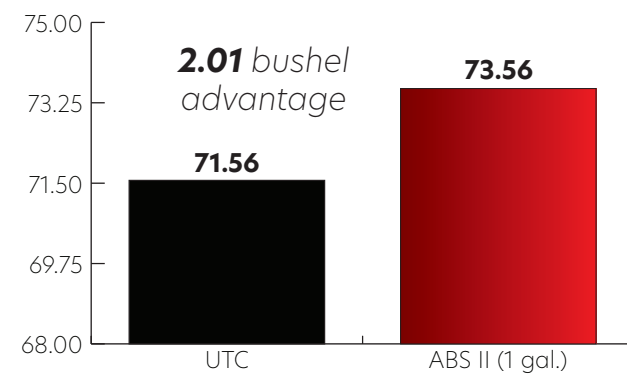
WHY

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.

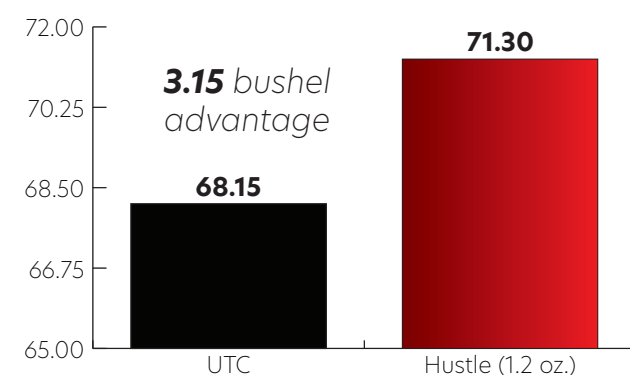
2022 RFR Soybean Seed Treatment Data



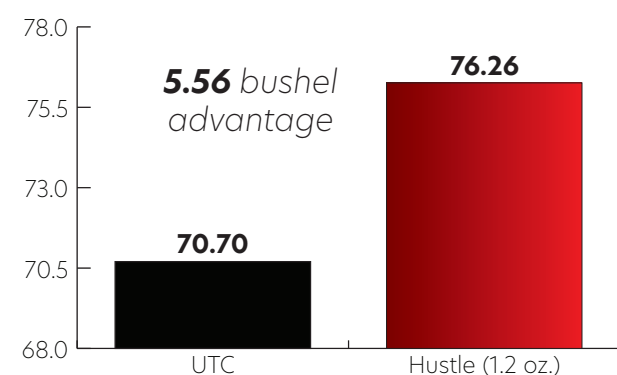
2023 RFR Soybean Seed Treatment Data



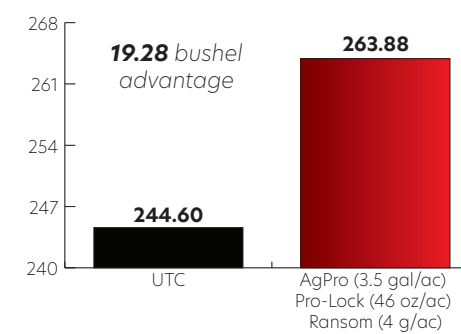
2022 RFR Soybean Hustle Data



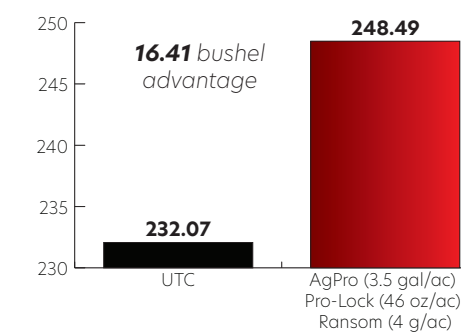
2023 RFR Soybean Hustle Data



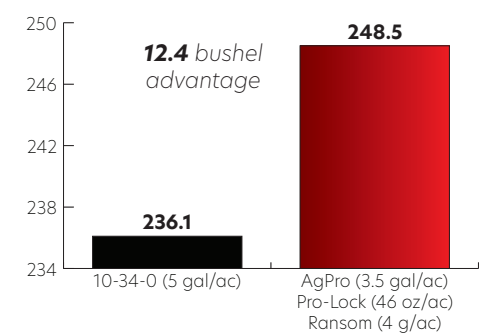
2022 RFR Starter Data



2023 RFR Starter Data



2023 RFR Starter Data



Owners Acres 2023	Owners Acres 2023	Owners Acres Soybean	Owner Acres Corn	Owners Acre Corn
Corn Seed Treatment	Soybean Seed Treatment	In-Furrow Treatment	In-Furrow Treatment	2x2x3
Acceleron Elite	Upsurge STS	ABS (1 gal.)	Pro-Lock (46 oz.)	32-0-0 (8 gal.)
Poncho/VOTIVO	CruiserMaxx Vibrance	Ransom (4 grams)	AgPro (1 gal.)	Thio (2 gal.)
Hustle	Hustle	Versa Iron - High pH (1 qt.)	Evito (2 oz.)	10-34-0 (8 gal.)
	Saltro		Ransom (4 grams)	10% Zinc (1 gal.)
				Humega (1 gal.)
				N-Stat (10 oz.)



EVALUATE

Seed Bed Preparation

Seed bed preparation required a little extra work this year. The lack of winter moisture and high residue conditions made us somewhat concerned about some “trash” pockets in the field. We disked the Aurora and Hastings corn fields and pre-watered Aurora to create a more uniform moisture profile for planting. In David City and Central City, our rye cover crop was still under 8” tall, and our planter was able to plant into the cover crop without having to terminate it before planting. Once planting was finished, we ran our pivots due to concern about the dry conditions and potential dry pockets still existing.

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.

Central City East Flag Test	
Planted: 5/1/23	
Date	5/10/23
GDU:	98
East Row:	26
West Row:	27
Flag Color:	Red

Central City South Flag Test	
Planted: 5/2/23	
Date	5/10/23
GDU:	98
East Row:	32
West Row:	33
Flag Color:	Red

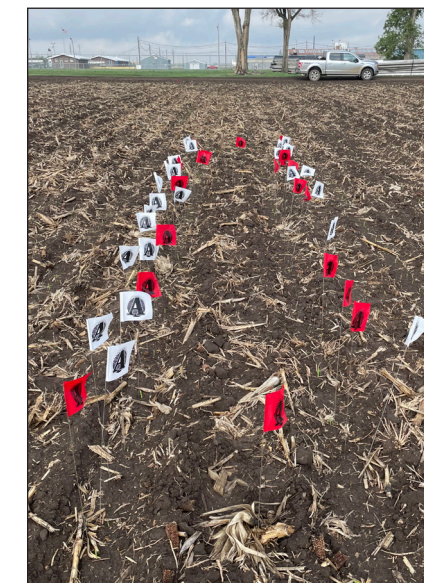
Hastings SE COS Flag Test		
Planted: 5/3/23		
Date	5/11/23	5/12/23
GDU:	120	144
North Row:	22	6
South Row:	30	3
Flag Color:	Red	White

Aurora Block 4 Flag Test 36K	
Planted: 5/9/23	
Date	5/18/23
GDU:	112
West Row:	30
East Row:	23
Flag Color:	Red

Aurora Block 4 Flag Test 42K	
Planted: 5/9/23	
Date	5/18/23
GDU:	112
West Row:	26
East Row:	32
Flag Color:	Red

Aurora Block 4 Flag Test 48K	
Planted: 5/9/23	
Date	5/18/23
GDU:	112
West Row:	35
East Row:	42
Flag Color:	Red

Hastings SE COC Flag Test		
Planted: 5/3/23		
Date	5/11/23	5/12/23
GDU:	120	144
North Row:	10	10
South Row:	8	16
Flag Color:	Red	White





TIMING

The Right Planting Window

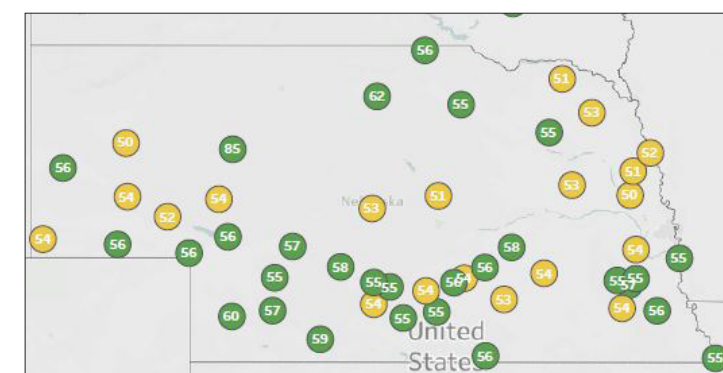
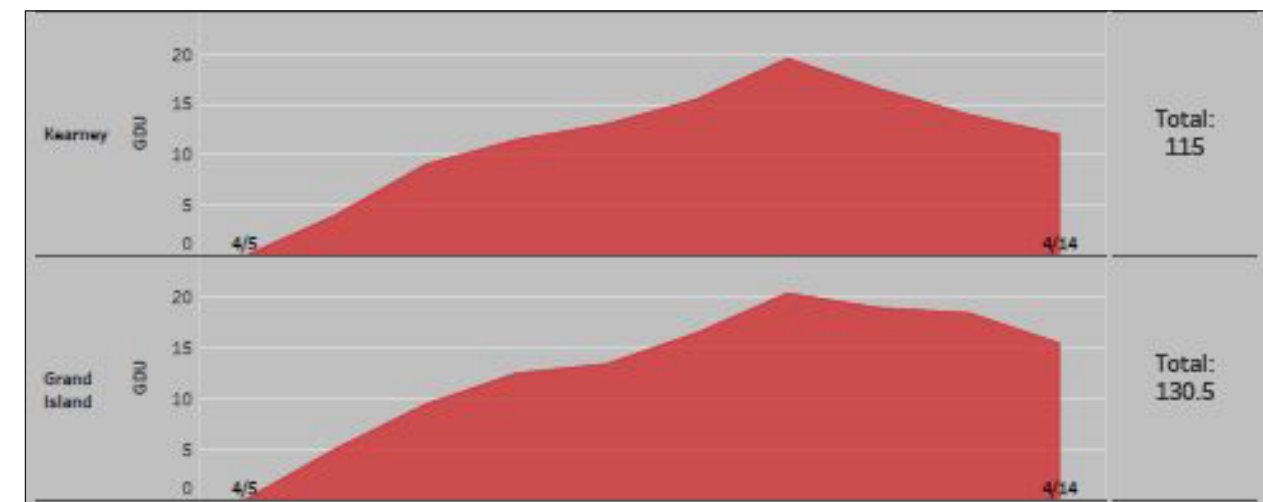
After a long winter, we were ready to hit the fields in early April. A very small window from April 8-14th presented itself, and we chose to plant our dryland corn fields in David City and Hastings, as well as our soybeans. This was followed by a very cool spell with only 30 GDUs accumulated from April 14th through May 2nd. The planter stayed parked until May 1st when we were finally able to see a warming trend on the horizon. This turned out to be a great window where we accumulated 15 to 20 GDUs a day for 10 straight days, resulting in our best emergence to date. Our flag tests on irrigated fields netted over 85% of our plants emerging within the first 24 hrs.

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.

Ideal Planting Window - Central City Planted 5/1/23

Date	Temperature (F)			Wind Speed (mph)		Rainfall (in.)		Growing Degree Days (F)	
	Max.	Min.	Norm.	Max.	Avg.	Daily	Accru.	Daily	Accru.
5/1/23	64.0	31.0	47.0	26.0	14.0	0.00	0.00	0.0	0.0
5/2/23	65.0	28.0	49.0	19.0	11.0	0.00	0.00	0.0	0.0
5/3/23	76.0	32.0	57.0	8.0	4.0	0.00	0.00	7.0	7.0
5/4/23	80.0	50.0	65.0	19.0	12.0	0.00	0.00	15.0	22.0
5/5/23	72.0	56.0	62.0	15.0	7.0	0.14	0.14	12.0	34.0
5/6/23	78.0	54.0	65.0	15.0	7.0	0.03	0.17	15.0	49.0
5/7/23	83.0	51.0	67.0	24.0	13.0	0.07	0.24	17.0	66.0
5/8/23	83.0	50.0	66.0	13.0	8.0	0.00	0.24	16.0	82.0
5/9/23	71.0	58.0	63.0	23.0	11.0	0.31	0.55	13.0	95.0
5/10/23	80.0	55.0	67.0	15.0	8.0	0.01	0.56	17.0	112.0
5/11/23	80.0	60.0	69.0	26.0	14.0	0.39	0.95	19.0	131.0



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



STEP

3

ENHANCE

STIMULATE

PGR Use

FEED

Micronutrient Needs

ENERGIZE

Amino Acid Use

PROTECT

Stress Reduction

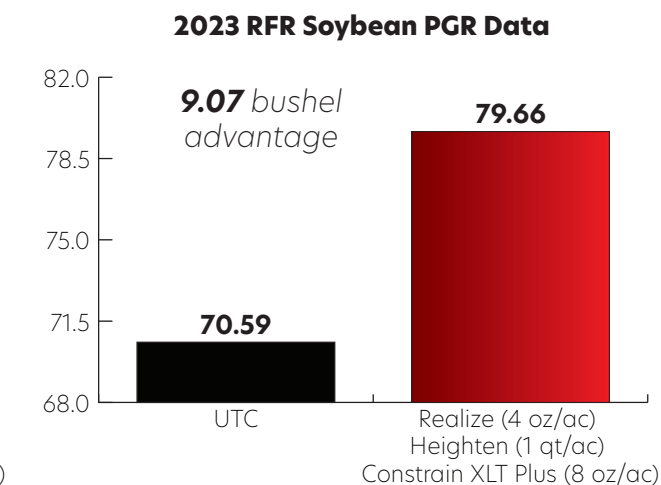
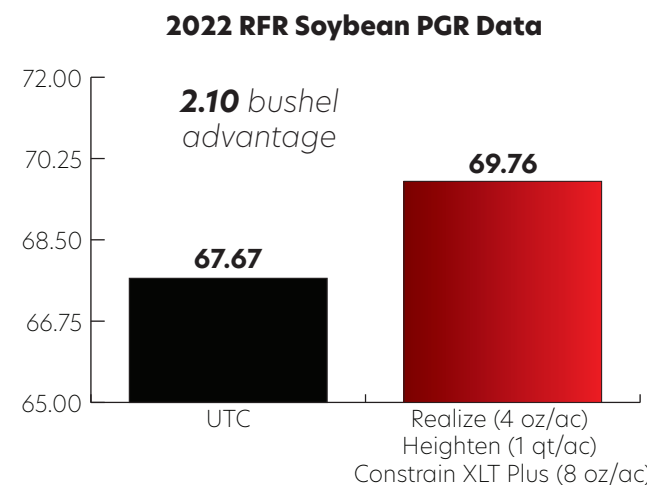
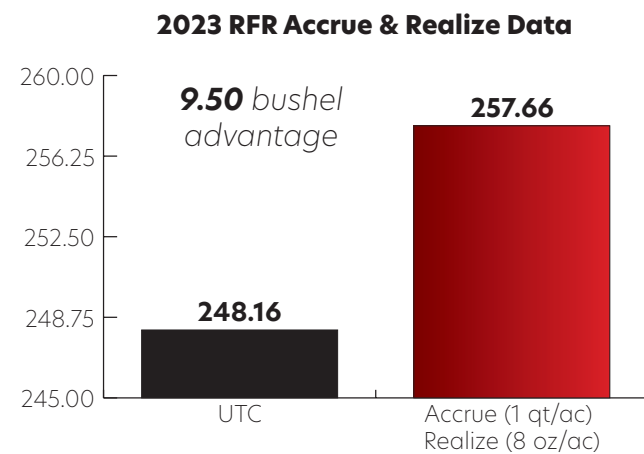
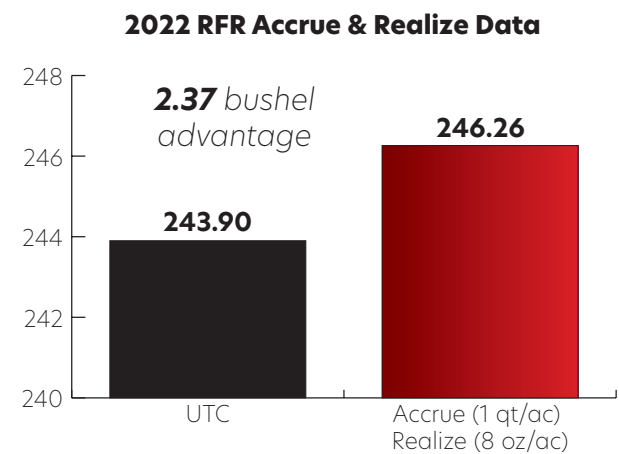
STIMULATE

PGR Use

A standard program on Owners Acres is the application of Realize, which provides three different PGRs to both corn and soybeans. This application is very time sensitive, and we were able to apply all treatments at the tail end of our ideal window due to the high GDU accumulation and rapid crop growth. It was a very challenging year to get all treatments accomplished, and we did turn to aerial applications to cover a couple of our fields. Aerial applications of PGRs and micronutrients have proven to be just as effective as traditional ground applications.

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.



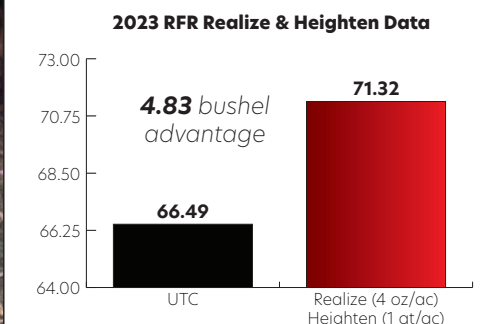
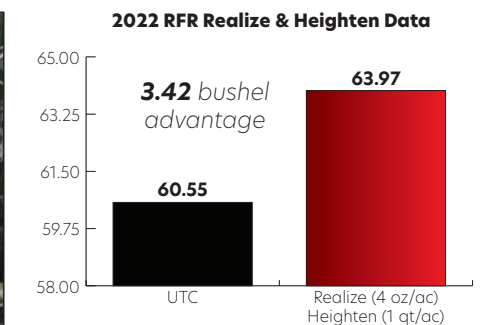
FEED

Micronutrient Needs

We continued the use of a micronutrient blend to cover potential crop needs early in the season. Accrue on corn and E3 soybeans provides a small dose of several nutrients to bridge the gap to nutrient uptake. We used Heighten on our Xtend platform to satisfy label requirements on nitrogen sources. Foliar feeding is usually not a cost-effective way to provide nutrients, so we try to limit applications to only key times where our data consistently shows a return on investment. We applied BMO at tassel on corn and pod fill on soybeans to help with pollen viability in corn and nitrogen efficiency in both crops.

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.



Planting Date:	4/8/2023	5/1/2023	4/14/2023	5/4/2023	5/3/2023	5/9/2023
	David City	Central City	Hastings NW	Hastings NE	Hastings SE	Aurora
Yield Enhancements Realize (8 oz.) Accrue (1 qt.)	5/21/2023	6/4/2023	5/31/2023	5/30/2023	5/30/2023	6/6/2023
GDU	391	492	505	434	442	480

ENERGIZE

Amino Acid Use

This year was a challenge on multiple fronts. Stress from heat, lack of water, and late herbicide applications all contributed to potential yield losses. While these stresses were mostly out of our control, biostimulant applications of Constrain XLT Plus provided amino acids, helping reduce energy consumption at a critical developmental time.

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.

PROTECT

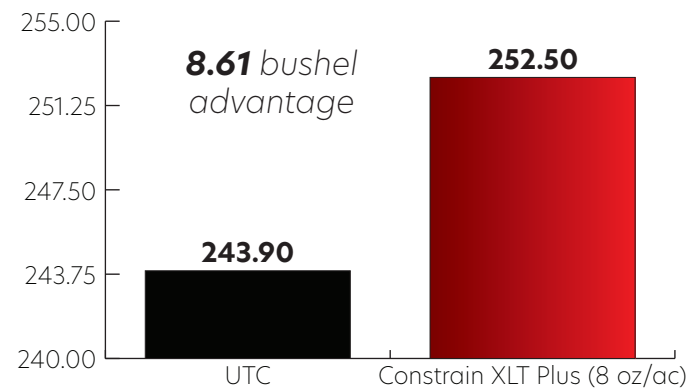
Stress Reduction

This year was truly a year of stress with drought and heat at critical times impacting yields. We applied Constrain XLT Plus on crops early on with our herbicides to mitigate as much stress as possible. Post-herbicide applications only produced minor brittleness and crop response. Minimizing recovery time was important this year since GDU's were accumulating at a rapid rate.

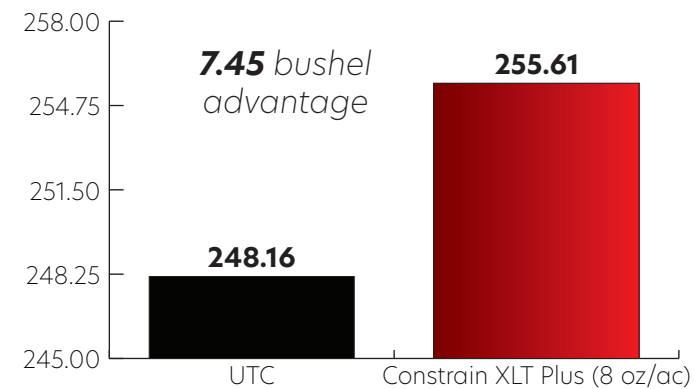
WHY

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.

2022 RFR Constrain XLT Plus Data



2023 RFR Constrain XLT Plus Data



Planting Date:	4/8/2023	5/1/2023	4/14/2023	5/4/2023	5/3/2023	5/9/2023
	David City	Central City	Hastings NW	Hastings NE	Hastings SE	Aurora
Yield Enhancements Constrain XLT Plus (8 oz.)	5/23/2023	5/22/2023	5/25/2023	5/26/2023	5/26/2023	6/3/2023
GDU	430	261	373	347	355	415

Heat & Drought Stressed Corn - Nebraska, 2022



Miravis Neo (13.7 oz/ac)
+
Constrain XLT Plus (8 oz/ac)



Untreated



STEP

4

**ENERGY
MANAGEMENT**

PRESERVE

Fungicide Application

UTILIZE

Nitrogen & BMO Applications

PREVENT

Insecticide Application

MONITOR

Water Management & Tissue Sampling



PRESERVE

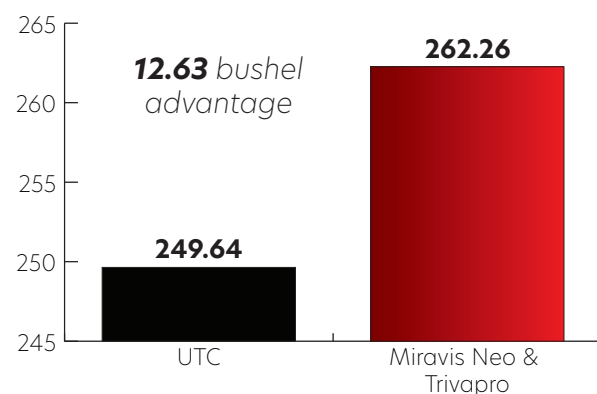
Fungicide Application

While we didn't see significant disease pressure in corn, we still followed our three-application approach on corn fungicides. This starts with 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 benefits throughout the year. This year, we also implemented a two-pass approach on soybeans. Our first application occurred once flowering was fully initiated, and a second application around the R3 timeframe. We avoided any issues with white mold and provided similar plant health benefits to our soybeans as well.

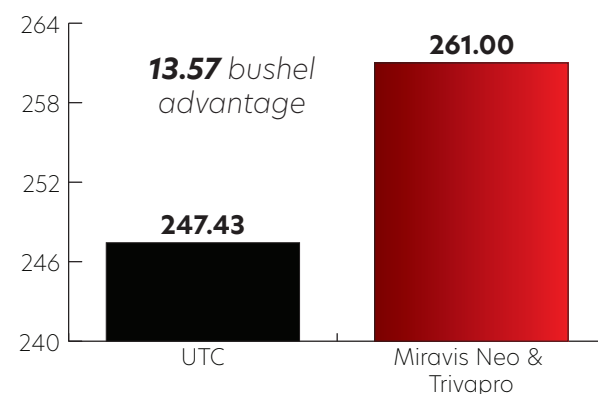
WHY

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.

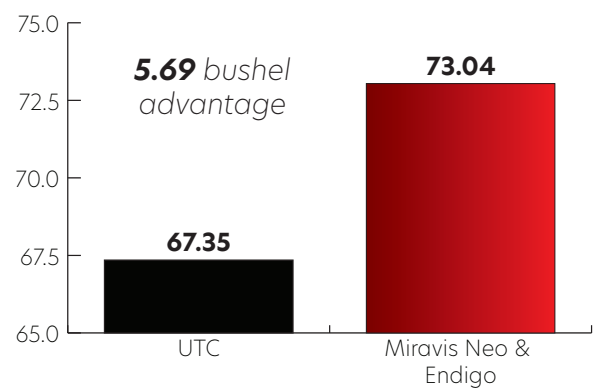
2022 RFR Corn Fungicide Data



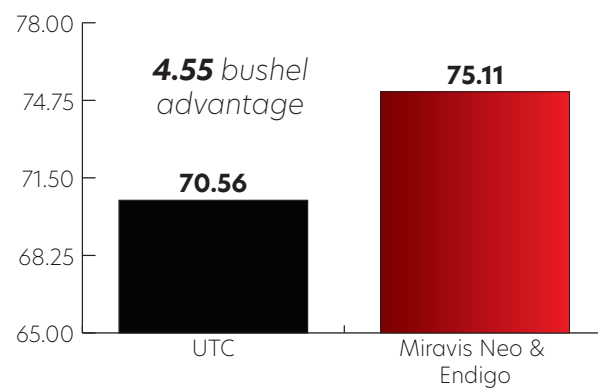
2023 RFR Corn Fungicide Data



2022 RFR Soybean Fungicide Data



2023 RFR Soybean Fungicide Data



Planting Date:	4/8/2023	5/1/2023	4/14/2023	5/4/2023	5/3/2023
	David City	Central City	Hastings NW	Hastings NE	Hastings SE
First Fungicide Application Miravis Neo (13.7 oz.)	6/23/2023		6/23/2023	6/23/2023	6/12/2023
GDU	1096		986	939	700
Second Fungicide Application Miravis Neo (13.7 oz.) Aurora BMO (1 qt.)	7/8/2023	7/8/2023	7/10/2023	7/10/2023	7/10/2023
GDU	1453	1235	1359	1295	1238

Aurora Owners Acres	First Fungicide Application	GDU	Second Fungicide Application	GDU
Company	6/19/2023	743	7/19/2023	1368
BASF	Veltyrna (10 oz.)		Veltyrna (10 oz.)	
Bayer	Delaro Complete (12 oz.)		Delaro Complete (12 oz.)	
Corteva	Approach (12 oz.)		Approach Prima (6.8 oz.)	
Syngenta	Miravis Neo (13.7 oz.)		Miravis Neo (13.7 oz.)	
FMC	Miravis Neo (13.7 oz.)		Adastrio (9 oz.)	



UTILIZE

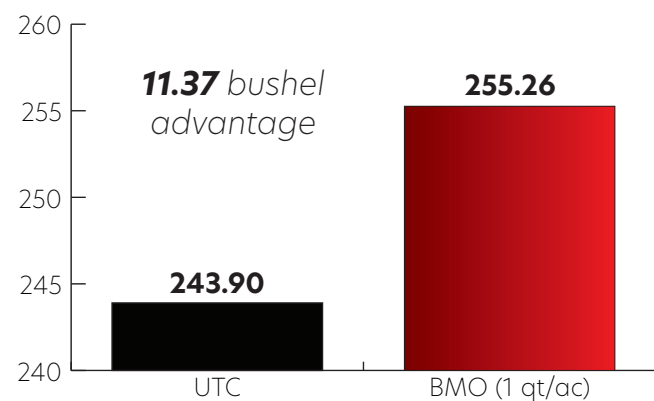
Nitrogen & BMO Applications

Once again, we delayed nitrogen applications as long as possible given our different farming practices. Where we have pivots, we y-drop and fertigate, and under furrow irrigation we apply at cultivation and ridging. Due to the extreme drought and conditions of our dryland acres, we didn't apply nitrogen this year. That flexibility saved lost dollars on unnecessary nitrogen as we readjusted yield goals and had enough already in the soil profile. Typically, our nitrogen applied to dryland would include N-Shield to prevent volatilization losses. The data on the benefits of N-Shield is shown below. We applied BMO one time with our last fungicide applications on corn and soybeans.

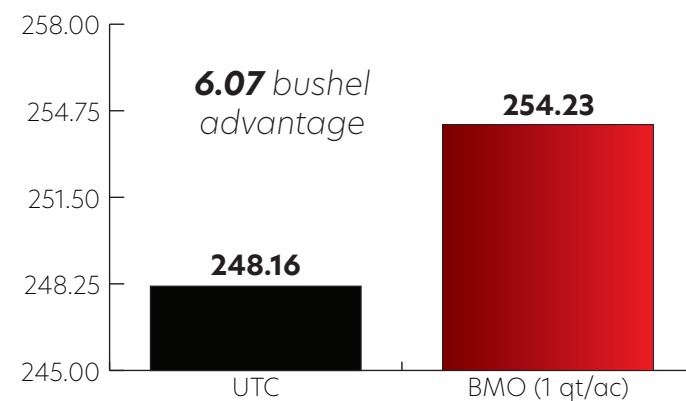
WHY

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.

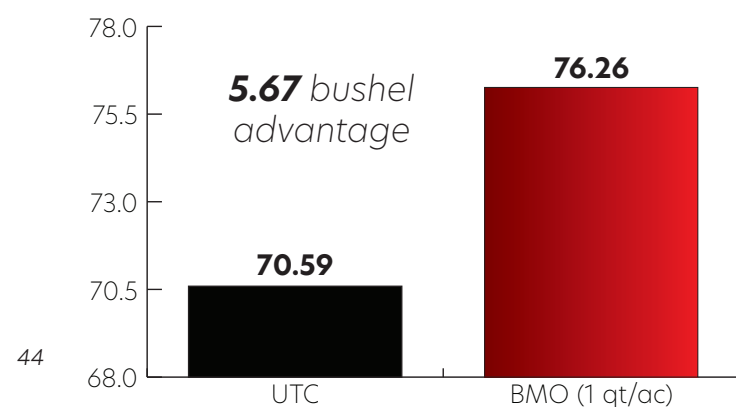
2022 RFR BMO Data



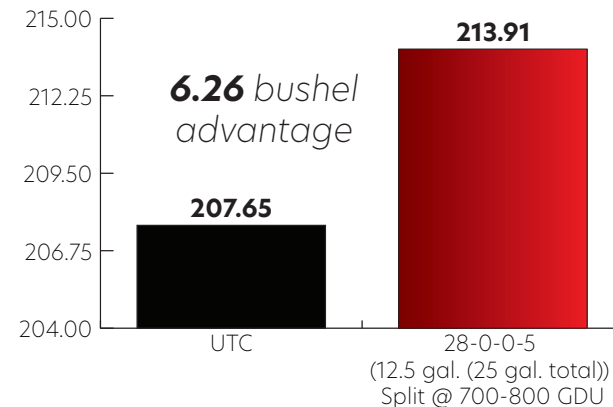
2023 RFR BMO Data



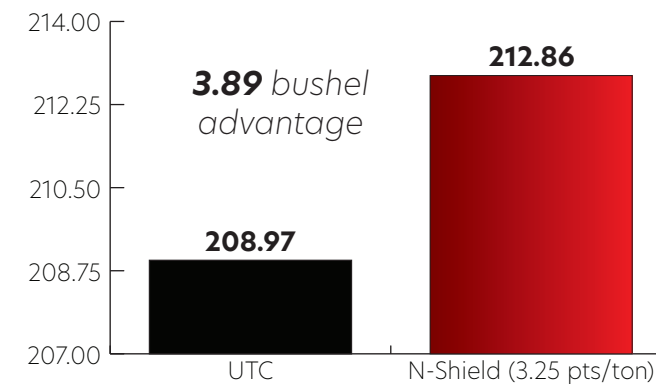
2023 RFR BMO Soybean Data



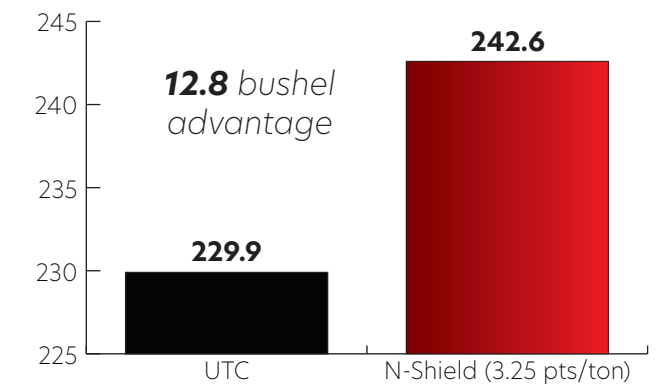
2022 Split Applied Nitrogen



2022 RFR N-Shield Data



2023 RFR N-Shield Data



Planting Date:	4/8/2023	5/1/2023	4/14/2023	5/4/2023	5/3/2023
	David City	Central City	Hastings NW	Hastings NE	Hastings SE
Yield Enhancements Aurora BMO (1 qt)	7/8/2023	7/8/2023	7/10/2023	7/10/2023	7/10/2023
GDU	1453	1235	1359	1295	1238



PREVENT

Insecticide Application

The year brought several insect challenges, and based on past years, we did change some things up this year. Our heavy corn rotation has caused some rootworm pressure to build in areas of fields. That, along with Japanese beetle pressure, prompted us to switch to a longer residual foliar insecticide at silking time and also in our soybeans. Spider mites were an issue as well due to the early heat and favorable development conditions in some of our fields.

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.

Planting Date:	4/8/2023	5/1/2023	4/14/2023	5/4/2023	5/3/2023	5/9/2023
	David City	Central City	Hastings NW	Hastings NE	Hastings SE	Aurora
First Insecticide Application Oberon (8 oz.)			6/23/2023	6/23/2023	6/12/2023	6/19/2023
GDU			986	939	700	743
Second Insecticide Application Steward (10 oz.)	7/8/2023	7/8/2023	7/10/2023	7/10/2023	7/10/2023	7/18/2023
GDU	1453	1235	1359	1295	1238	1368



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	14,000	210,000	3,000	1.167



MONITOR

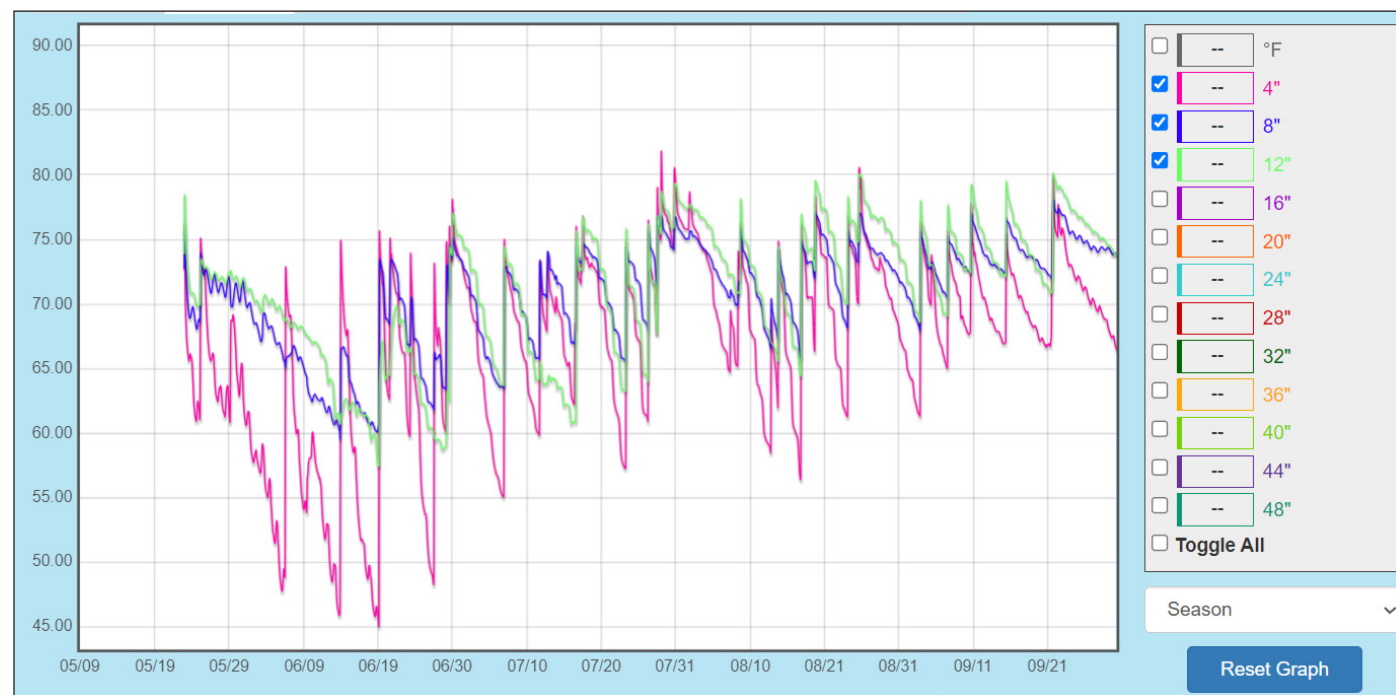
Water Management & Tissue Sampling

Water management was put to the test in 2023. Hastings and Aurora lacked any significant rainfall events, and subsoil moisture was depleted on dryland fields from the previous year. We gave up some bushels in Hastings where we use furrow irrigation. Areas where subsoil was depleted and the challenge of getting even water across furrow irrigation had a significant impact on yield. Having moisture probes allowed us to see where we had water, and on our dryland fields, that information impacted management decisions, as we eliminated in-season nitrogen and some foliar applications due to reduced yield expectations. Tissue samples were adequate, and no in-season corrections were needed. We will continue to use our tissue samples to tweak soil fertility and base nutrient programs for next year.

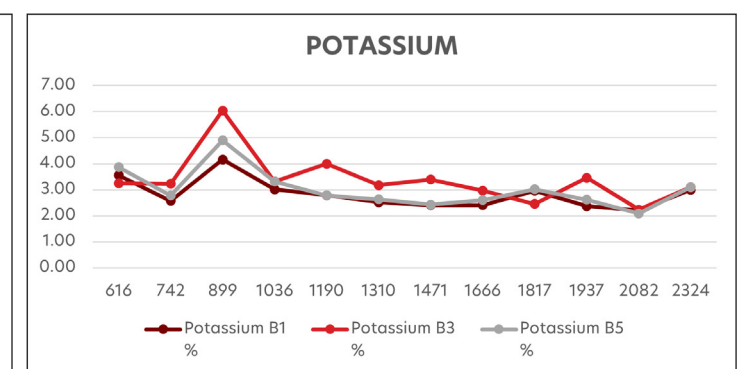
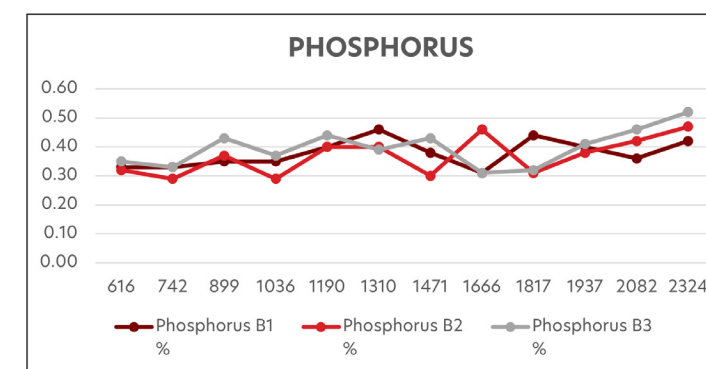
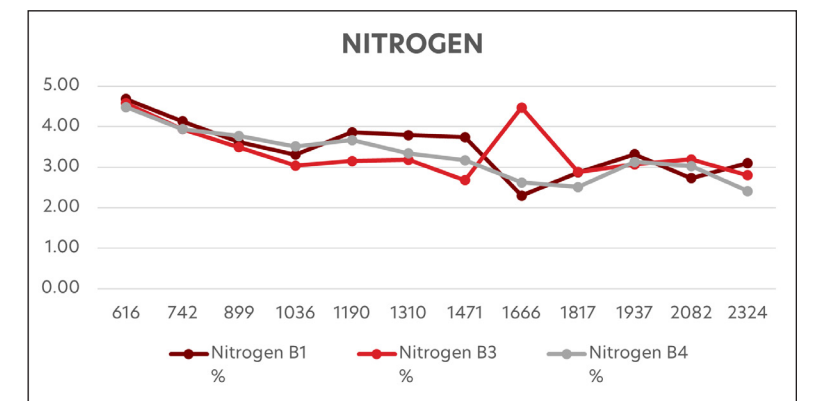
WHY

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
AVERAGE	8.18





STEP

5

FINISH

RETAIN

Nitrogen Availability

RESERVE

Phosphorus & Potassium Availability

ENDURE

Late Irrigation

COLLECT

Timely Harvest

RETAIN

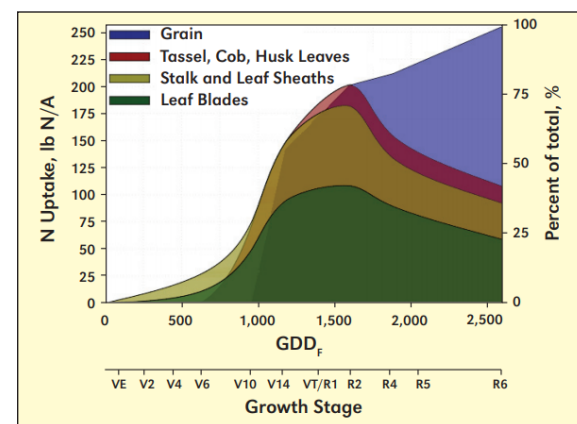
Nitrogen Availability

Our overall late-season nitrogen availability was good again this season, based on our tissue sample results. The lack of any large rainfall events allowed us to control any nitrogen leaching, and the use of N-Stat in every application helped to slow the conversion of our nitrogen applications to the N03 form. We fertigated pivot fields at R2 to also ensure that we had nitrogen available for late grain fill. On soybeans, we applied a late application of Pivot Maxx and nitrogen to assist soybeans in their late nitrogen needs.

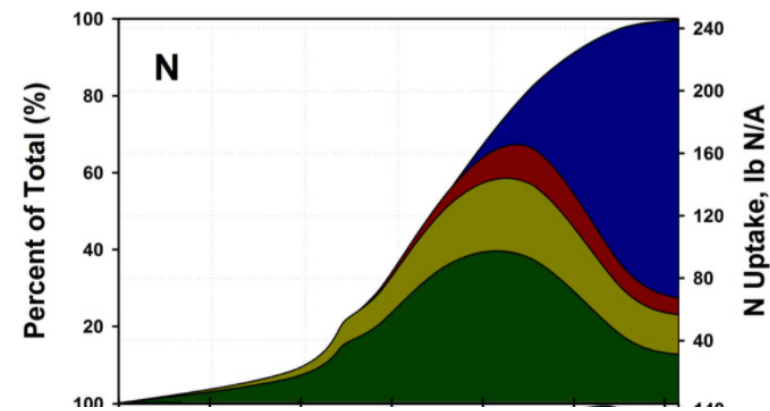
WHY

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.

Corn



Soybeans



RESERVE

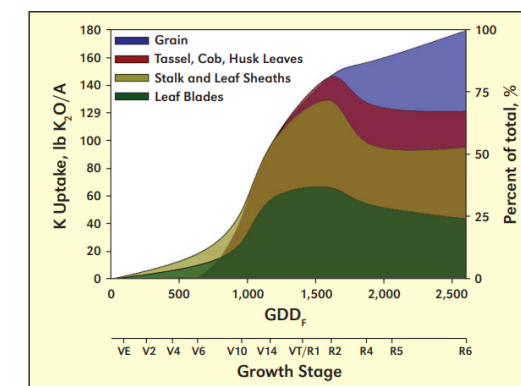
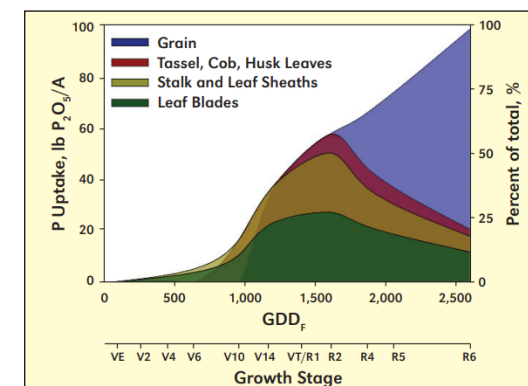
Phosphorus & Potassium Availability

We continued to see good late-season tissue sample values for phosphorus and potassium. Our overall soil fertility program has fixed 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. We felt yield potential was very good at R2-R3 and once again treated with two split applications totaling 4 gal/acre.

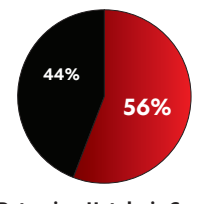
WHY

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.

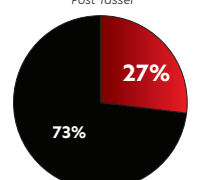
Corn



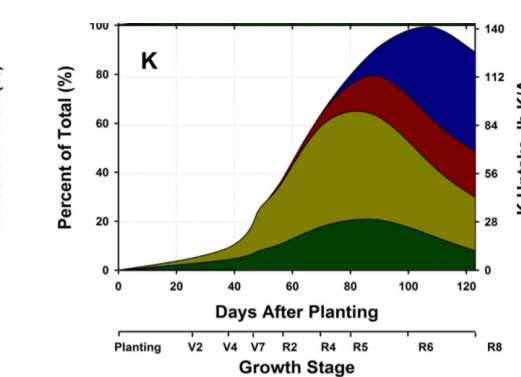
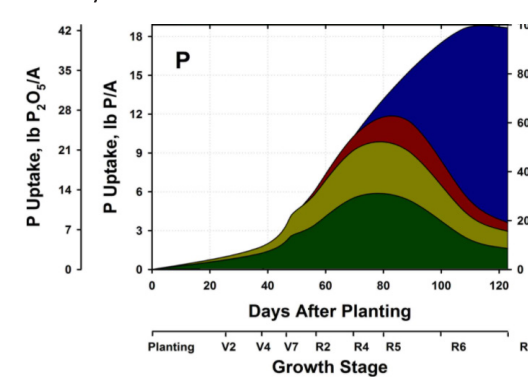
Phosphorus Uptake in Corn
Post Tassel



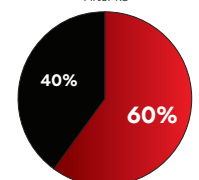
Potassium Uptake in Corn
Post Tassel



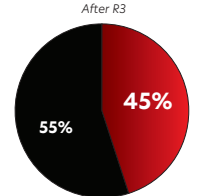
Soybeans



Phosphorus Uptake in Soybeans
After R3



Potassium Uptake in Soybeans
After R3



ENDURE

Late Irrigation

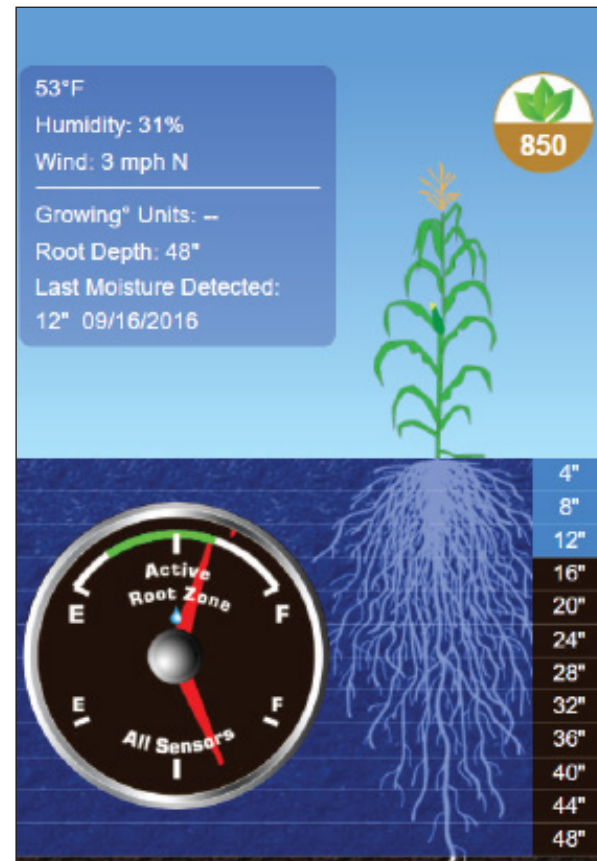
The lack of rainfall throughout the year, along with poor subsoil moisture, made late irrigation more important than ever before. Our AquaSpy moisture probes showed us all season long that getting ahead on irrigation was very difficult. In addition, the very late heat at the end of August added more moisture stress on crops as they were adding test weight and seed size. One thing that our moisture probes continue to show is just how late the crops really continue to take up moisture. We did catch one late rain on September 22nd that allowed us to avoid one final irrigation.

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	9/21/2023
Central City	9/20/2023
Hastings	9/10/2023



COLLECT

Timely Harvest

This year provided a nearly uninterrupted harvest with no significant delays. This allowed us to hit our ideal harvest timings of 18-22% moisture corn. A significant heat and wind event at the end of September caused rapid dry-down of both corn and soybeans, and we were unable to catch all our soybeans in the 13-15% moisture range. Late wind caused some plant lodging, but fortunately, our corn was still near 30% moisture and plant health was very good, leading to a very minimal yield loss.

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 unfavorable 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.



SOYBEAN YIELD LOSS		
Soybean Size	Weight/Bushel at 13% Moisture	Grains/sq. ft. Equivalent to 1 bu/ac
Small	60 lbs	5
Medium	60 lbs	4
Large	60 lbs	3

CORN YIELD LOSS		
Kernel Size	Weight/Bushel at 15.5% Moisture	Kernels/sq. ft. Equivalent to 1 bu/ac
Small	56 lbs	2.5
Medium	56 lbs	2.1
Large	56 lbs	1.6

LOCATION	HARVEST DATE
Aurora	10/10/23
Central City East	10/2/23
Central City West	10/2/23
Central City South	10/3/23
David City	10/17/23
Hastings NW	9/15/23
Hastings SW	9/28/23
Hastings SE	10/6/23
Hastings NE	10/7/23



YIELD DATA

AURORA

CENTRAL CITY

HASTINGS



Aurora Block 1

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: Delaro Complete **Row Width:** 30 **Insecticide/Rate:** Force
Harvest Date: 10/10/2023 **Herbicide:** Trivolt
Planting Date: 5/9/2023 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	S/Acre Rank
Prairie Valley	PV111-L11 Trecepta	825	11730	18.9	16	265.40	101.6%	8	8
Prairie Valley	PV112-X63 VT2PRIB	825	11770	18.6	16	267.29	102.4%	6	6
Prairie Valley	PV110-H20 VT2PRIB	825	10390	17.7	16	238.59	91.4%	13	13
Prairie Valley	PV114-R50 SSRIB	825	11229	19.2	16	253.06	96.9%	10	10
Prairie Valley	PV113-Z83 SSRIB	825	11918	20.0	16	265.86	101.8%	7	7
Prairie Valley	PV115-D59 VT2PRIB	825	12840	19.2	16	289.40	110.8%	1	1
Prairie Valley	PV111-L11 Trecepta	825	12459	18.9	16	281.93	108.0%	3	3
Prairie Valley	PV112-X63 VT2PRIB	825	12717	18.5	16	289.26	110.8%	2	2
Prairie Valley	PV109-C34 VT2PRIB	825	5585.9	17.8	8	256.04	98.1%	9	9
Prairie Valley	PV110-H20 VT2PRIB	825	5284.5	17.7	8	242.76	93.0%	12	12
Prairie Valley	PV114-R50 SSRIB	825	10986	19.1	16	247.89	94.9%	11	11
Prairie Valley	PV115-D59 VT2PRIB	825	6152.2	19.1	8	277.81	106.4%	4	4
Prairie Valley	PV114-EXP23 PWE	825	2993.2	19.6	4	268.59	102.9%	5	5
Prairie Valley	PV116-G64 SSRIB	825	2375	20.2	4	211.47	81.0%	14	14

syngenta Aurora Block 2

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: Miravis Neo **Row Width:** 30 **Insecticide/Rate:** Force
Harvest Date: 10/10/2023 **Herbicide:** Accuron
Planting Date: 5/9/2023 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	S/Acre Rank
NK	0922 V	825	5982.5	18.8	16	135.51	52.0%	16	16
NK	1040 AA	825	6536.5	19.1	16	147.51	56.6%	15	15
NK	1333 AA	825	11219	19.2	16	252.77	97.0%	14	14
NK	1523 V	825	12592	21.4	16	276.09	105.9%	7	7
NK	0922 V	825	12329	18.1	16	281.57	108.0%	6	6
NK	1040 AA	825	12184	19.3	16	274.25	105.2%	8	8
NK	1333 AA	825	12217	19.6	16	274.07	105.2%	9	9
NK	1523 V	825	13459	20.9	16	297.09	114.0%	2	2
NK	0922 V	825	5710	17.0	8	264.44	101.5%	13	13
NK	1040 AA	825	5860.8	18.4	8	266.85	102.4%	12	12
NK	1333 AA	825	5920.3	18.8	8	268.30	103.0%	11	11
NK	1523 V	825	6780.9	20.5	8	300.60	115.3%	1	1
Prairie Valley	PV111-L11 Trecepta	825	6464.3	19.3	8	291.04	111.7%	3	3
Prairie Valley	PV114-R50 SSRIB	825	6436.6	19.5	8	289.08	110.9%	4	4
Prairie Valley	PV112-X63 VT2PRIB	825	6197.8	18.5	8	281.88	108.2%	5	5
Prairie Valley	PV113-Z83 SSRIB	825	5996.1	19.7	8	268.66	103.1%	10	10



Aurora Block 3

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: Approach Prima **Row Width:** 30 **Insecticide/Rate:** Force
Harvest Date: 10/10/2023 **Herbicide:** Resicore
Planting Date: 5/9/2023 **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	10H24 AM	825	12279	19.2	16	276.76	97.1%	14	14
Brevant	14G14 AM	825	12251	20.1	16	273.09	95.8%	15	15
Brevant	14H38 AM	825	6837.2	19.7	8	306.30	107.4%	3	3
Brevant	14H38 AM NO UTRISHA	825	6716	19.7	8	300.80	105.5%	6	6
Brevant	14R22 Q	825	12580	19.5	16	282.53	99.1%	11	11
Brevant	10H24 AM	825	12386	19.1	16	279.69	98.1%	12	12
Pioneer	PIO 1082 AM	825	5981.1	19.1	8	269.85	94.6%	18	18
Pioneer	PIO 1563 Q	825	5917.3	20.7	8	261.82	91.8%	19	19
Prairie Valley	PV111-L11 Trecepta	825	6164.9	19.4	8	277.11	97.2%	13	13
Brevant	14R22 Q	825	6986.8	19.3	8	314.72	110.4%	1	1
Prairie Valley	PV111-L11 Trecepta (30K)	825	6031	18.9	8	272.88	95.7%	16	16
Prairie Valley	PV111-L11 Trecepta (36K)	825	6673	18.9	8	301.93	105.9%	5	5
Brevant	10H24 AM (36K)	825	6512.1	18.9	8	294.76	103.4%	8	8
Brevant	14G14 AM (36K)	825	6546.7	19.5	8	294.17	103.2%	9	9
Brevant	14H38 AM (36K)	825	6837.2	19.7	8	306.30	107.4%	3	3
Brevant	14R22 Q (36K)	825	6877.2	19.1	8	310.32	108.8%	2	2
Prairie Valley	PV111-L11 Trecepta	825	6338.8	19.3	8	285.39	100.1%	10	10
Prairie Valley	PV114-R50 SSRIB	825	5981.8	18.3	8	272.62	95.6%	17	17
Prairie Valley	PV112-X63 VT2PRIB	825	6607.1	19.2	8	297.84	104.4%	7	7
Prairie Valley	PV113-Z83 SSRIB	825	5017.5	19.9	8	224.11	78.6%	20	20



Aurora Block 4

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/Rate:** Force
Harvest Date: 10/11/2023 **Herbicide:** Verdict/Zidua
Planting Date: 5/9/2023 **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 Trecepta	825	12227	18.8	16	277.02	100.9%	7	6
Prairie Valley	PV112-X63 VT2PRIB	825	12580	18.5	16	285.86	104.1%	6	5
Prairie Valley	PV113-V89 VT2PRIB	825	12848	18.9	16	290.62	105.8%	3	3
Prairie Valley	PV114-R50 SSRIB	825	12045	19.6	16	270.24	98.4%	8	7
Prairie Valley	PV113-Z83 SSRIB	825	11382	20.1	16	253.62	92.3%	11	10
Prairie Valley	PV115-D59 VT2PRIB	825	12953	19.3	16	291.63	106.2%	2	2
Prairie Valley	PV111-L11 Trecepta	825	12961	19.3	16	291.92	106.3%	1	1
Prairie Valley	PV113-V89 VT2PRIB	825	10769	19.6	16	241.49	87.9%	12	11
Prairie Valley	PV114-R50 SSRIB	825	11382	19.3	16	256.26	93.3%	10	11
Prairie Valley	PV113-Z83 SSRIB	825	11785	20.1	16	262.73	95.7%	9	9
Prairie Valley	PV115-D59 VT2PRIB	800	6168.1	19.1	8	287.27	104.6%	4	8
Prairie Valley	PV115-D59 (NO Y-DROP)	790	6106.6	19.3	8	287.19	104.6%	5	4



FMC Aurora Block 5

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: Adastrio **Row Width:** 30 **Insecticide/Rate:** Force
Harvest Date: 10/11/2023 **Herbicide:** Accuron F/B
Planting Date: 5/9/2023 **Commodity Price:** \$4.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	S/Acre Rank
Prairie Valley	PV111-L11 Trecepta	780	11600	18.8	16	278.08	99.7%	8	8
Prairie Valley	PV112-X63 VT2PRIB	770	11919	18.5	16	290.33	104.1%	4	4
Prairie Valley	PV113-V89 VT2PRIB	760	9930.3	19.4	16	242.27	86.8%	12	12
Prairie Valley	PV114-R50 SSRIB	750	10744	18.6	16	268.49	96.2%	10	10
Prairie Valley	PV113-Z83 SSRIB	740	10362	19.2	16	260.48	93.4%	11	11
Prairie Valley	PV115-D59 VT2PRIB	730	11503	18.7	16	294.82	105.7%	2	2
Prairie Valley	PV111-L11 Trecepta	720	11529	18.5	16	300.26	107.6%	1	1
Prairie Valley	PV112-X63 VT2PRIB	710	11078	18.5	16	292.68	104.9%	3	3
Prairie Valley	PV110-H20 VT2PRIB	700	10385	18.3	16	278.98	100.0%	7	7
Prairie Valley	PV114-R50 SSRIB	690	10362	19.2	16	279.18	100.1%	6	6
Prairie Valley	PV113-Z83 SSRIB	680	10561.8	20.3	16	284.81	102.1%	5	5
Prairie Valley	PV115-D59 VT2PRIB	670	9970.1	19.1	16	277.19	99.4%	9	9

Central City Soybeans

City: Central City **Crop:** Soybeans **Irrigation:** Pivot
County: Merrick **Seeding Rate:** 120,000 **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/Rate:** Endigo
Harvest Date: 10/2/2023 **Herbicide:** Sequence **Drying Cost/Bu:** \$0.045
Planting Date: 5/1/2023 **Commodity Price:** \$11.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	S/Acre Rank
Prairie Valley	PV2124E3	1120	5510.3	10.4	16	91.975	101.4%	6	6
Prairie Valley	PV2324E3	1120	5131.4	10.2	16	85.842	94.7%	12	12
Prairie Valley	PV2419E3	1120	5172.7	10.2	16	86.552	95.4%	11	11
NK	24-A2E3S	1120	5603.3	10.1	16	93.872	103.5%	2	2
NK	26-M6E3	1120	5582.6	10.1	16	93.484	103.1%	3	3
Prairie Valley	PV2623E3	1120	5533	10.0	16	92.746	102.3%	4	5
Prairie Valley	PV2724E3	1120	5376	10.0	16	90.094	99.3%	7	7
NK	28-B9E3S	1120	5174.4	10.0	16	86.769	95.7%	10	10
Pioneer	P28-A65E3	1120	5360.7	10.0	16	89.912	99.1%	8	8
NK	29-Z4E3	1120	5290.2	9.9	16	88.773	97.9%	9	9
NK	30-B2E3	1120	5687.9	9.9	16	95.474	105.3%	1	1
Prairie Valley	PV3024E3	1120	5525.2	9.9	16	92.739	102.3%	5	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/Rate:** Force
Harvest Date: 10/2/2023 **Herbicide:** Acuron **Drying Cost/Bu:** \$0.045
Planting Date: 5/1/2023 **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	898	6009.4	14.5	8	263.2	95.0%	27	23
Prairie Valley	PV105-A21 SSRIB	908	6157.6	14.0	8	268.37	96.8%	21	19
Prairie Valley	PV106-K51 Trecepta	918	5733.2	13.9	8	247.55	89.3%	32	32
Prairie Valley	PV107-T43 SSRIB	928	6291.5	15.0	8	265.54	95.8%	24	22
Prairie Valley	PV107-W53 VT2PRIB	937	6402.2	14.9	8	267.63	96.6%	22	21
Brevant	08G23 AM	947	6948.6	15.1	8	286.66	103.4%	11	2
Prairie Valley	PV108-D61 VT2PRIB	957	6308.3	15.8	8	255.57	92.2%	31	30
Brevant	09G33 Q	966	6505	15.6	8	261.39	94.3%	30	28
Prairie Valley	PV109-C34 VT2PRIB	976	6682.8	16.2	8	264.22	95.3%	26	27
NK	0922 V	986	3149.5	16.4	4	245.98	88.7%	33	33
NK	1040 AA	986	3444.2	17.4	4	265.72	95.9%	23	29
Brevant	10H24 AM	995	7538.1	16.7	8	290.35	104.8%	6	4
Prairie Valley	PV110-E54 VT2PRIB	1005	6831.2	15.4	8	264.81	95.5%	25	24
Prairie Valley	PV110-H20 VT2PRIB	1015	7255.2	15.8	8	277.14	100.0%	18	15
NK	1082 DV	1025	3852	17.2	4	286.58	103.4%	12	11
NK	1188 D	1025	3890.6	17.6	4	288.05	103.9%	10	10
Prairie Valley	PV111-L11 Trecepta	1034	7697.5	16.7	8	285.37	103.0%	14	9
Prairie Valley	PV112-X63 VT2PRIB	1044	7427.1	16.3	8	274.19	98.9%	19	20
Corn States	NW5406CPKZ 500	1054	3841.5	18.8	4	272.6	98.4%	20	26
Corn States	NX6605CPKZ 1250	1054	3520.4	14.7	4	262.27	94.6%	29	25
Brevant	13J23 AM	1063	4010	18.4	4	283.15	102.2%	16	18
NK	1333 AA	1063	3708.9	18.3	4	262.4	94.7%	28	31
Prairie Valley	PV113-V89 VT2PRIB	1073	8314	17.8	8	293.08	105.7%	5	6
Prairie Valley	PV114-R50	1083	8040	17.7	8	281.43	101.5%	17	17
Brevant	14R22 AML	1092	8455.5	17.7	8	293.1	105.7%	4	5
Prairie Valley	PV114EXP23-PWE	1102	4195.5	18.2	4	286.55	103.4%	13	14
Prairie Valley	PV114-D44 Trecepta	1102	4356.6	18.7	4	295.81	106.7%	2	7
Prairie Valley	PV115-D59 VT2PRIB	1112	8425.3	16.9	8	289.71	104.5%	7	8
Prairie Valley	PV113-Z83 SSRIB	1122	8608.1	18.2	8	289.06	104.3%	9	12
NK	1523 V	1131	9346.6	18.6	8	309.68	111.7%	1	1
Brevant	16K30 AM	1141	8971.9	18.3	8	295.75	106.7%	3	3
Prairie Valley	PV116-G64 SSRIB	1151	8911.1	18.8	8	289.49	104.4%	8	13
Prairie Valley	PV116-H31 VT2PRIB	1160	8758.4	18.2	8	284.2	102.5%	15	16

Hastings Southeast

City: Hastings **Crop:** Corn **Irrigation:** Gravity
County: Adams **Seeding Rate:** 30K/33K/36K **Previous Crop:** Corn
Started Plot On: Southeast **Planting Depth (in.):** 2.25 **Tillage System:** Conventional
Flag Location: **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide/Rate:** Force
Harvest Date: 10/6/2023 **Herbicide:** Acuron
Planting Date: 5/3/2023 **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	PV115-D59 VT2PRIB	1140	8926.3	18.3	8	294.44	104.0%	6	6
Prairie Valley	PV103-Y24 DGV2PRIB	1140	8045.5	16.3	8	271.89	96.0%	28	28
Prairie Valley	PV105-A21 SSRIB	1140	7893.4	15.7	8	268.66	94.9%	31	31
Prairie Valley	PV106-K51 Trecepta	1140	7833.3	15.4	8	267.56	94.5%	32	32
Prairie Valley	PV107-T43 SSRIB	1140	8084.7	16.6	8	272.23	96.2%	27	27
Prairie Valley	PV107-W53 VT2PRIB	1140	8686.1	16.9	8	291.43	102.9%	12	12
Brevant	08G23 AM	1140	8979.4	16.8	8	301.63	106.5%	4	4
Prairie Valley	PV108-D61 VT2PRIB	1140	8404.2	17.2	8	280.95	99.2%	22	22
Brevant	09G 33Q	1140	8844.3	17.7	8	293.88	103.8%	7	7
Prairie Valley	PV109-C34 VT2PRIB	1140	8232.6	17.9	8	272.89	96.4%	26	26
DEKALB	DKC5982	1140	8739.8	17.6	8	290.76	102.7%	13	13
NK	0922 V	1140	8193.2	18.4	8	269.93	95.3%	30	30
NK	1040 AA	1140	7976.5	17.8	8	264.72	93.5%	34	34
Brevant	10H24 AM	1140	9083.4	17.1	8	304.03	107.4%	3	3
Prairie Valley	PV110-E54 VT2PRIB	1050	7526.9	17.6	8	271.87	96.0%	29	29
Prairie Valley	PV110-H20 VT2PRIB	1050	8048.1	18.6	8	287.17	101.4%	18	18
Pioneer	P1082 AM	1050	8104	18.7	8	288.81	102.0%	15	15
NK	1082 DV	1050	8052.6	18.8	8	286.63	101.2%	19	19
NK	1188 D	1050	7758.3	18.4	8	277.51	98.0%	24	24
Prairie Valley	PV111-L11 Trecepta	1050	8123.7	17.8	8	292.72	103.4%	9	9
Prairie Valley	PV112-X63 VT2PRIB	1050	7854.4	17.9	8	282.67	99.8%	21	21
Corn States	NW5406CPKZ 500	1050	3561	16.8	4	259.87	91.8%	36	36
Corn States	NW5406CPKZ 1250	1050	3617.6	16.7	4	264.26	93.3%	35	35
Corn States	NX6605CPKZ 1250	1050	3767	19.2	4	267.01	94.3%	33	33
Prairie Valley	114EXP23-PWE	1050	4068.4	19.2	4	288.30	101.8%	17	17
Brevant	13J23 AM	1050	8298.6	18.9	8	295.02	104.2%	5	5
NK	1333 AA	1050	7246.8	18.6	8	258.58	91.3%	37	37
Prairie Valley	PV113-V89 VT2PRIB	1050	7824.1	18.5	8	279.52	98.7%	23	23
Prairie Valley	PV114-R50 SSRIB	1050	8197	18.7	8	292.13	103.2%	10	10
Brevant	14R22 Q	1050	8611.4	18.4	8	308.03	108.8%	1	1
Prairie Valley	PV114-D44 Trecepta	1050	8295.3	19.2	8	293.81	103.8%	8	8
Prairie Valley	PV115-D59 VT2PRIB	1050	8154.8	19.3	8	288.48	101.9%	16	16
Prairie Valley	PV113-Z83 SSRIB	1155	9054.6	19.2	8	291.55	103.0%	11	11
NK	1523 V	1155	8853.1	19.5	8	284.00	100.3%	20	20
Brevant	16K30 AM	1155	9596.4	19.9	8	306.32	108.2%	2	2
Prairie Valley	PV116-G64 SSRIB	1155	9049.6	19.9	8	288.86	102.0%	14	14
Prairie Valley	PV116-H31 VT2PRIB	1155	8634.2	19.4	8	277.32	98.0%	25	25

Hastings Southeast

City: Hastings **Crop:** Corn **Irrigation:** Gravity
County: Adams **Seeding Rate:** 36K/33K/30K **Previous Crop:** Soybeans
Started Plot On: Southeast **Planting Depth (in.):** 2.25 **Tillage System:** Conventional
Flag Location: **Planter Type:** Row Planter **Soil Texture:** Sandy Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide/Rate:** Force
Harvest Date: 10/7/2023 **Herbicide:** Acuron
Planting Date: 5/3/2023 **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 DGVT2PRIB	1140	6567.8	16.0	8	222.69	82.5%	33	33
Prairie Valley	PV105-A21 SSRIB	1140	7072.6	16.6	8	238.09	88.2%	32	32
Prairie Valley	PV106-K51 Trecepta	1140	7855	16.0	8	266.46	98.7%	20	19
Prairie Valley	PV107-T43 SSRIB	1140	7460.7	16.6	8	251.25	93.1%	27	25
Prairie Valley	PV107-W53 VT2PRIB	1140	8716.5	17.5	8	290.34	107.6%	5	5
Brevant	08G23 AM	1140	8746.9	17.6	8	291.14	107.9%	4	4
Prairie Valley	PV108-D61 VT2PRIB	1140	8125.3	17.7	8	270.02	100.1%	15	14
Brevant	09G 33Q	1140	8536.8	18.6	8	280.60	104.0%	11	10
Prairie Valley	PV109-C34 VT2PRIB	1140	8248.2	19.0	8	269.81	100.0%	16	15
NK	0922 V	1140	7511.5	18.5	8	247.17	91.6%	30	30
NK	1040 AA	1140	7780.5	18.6	8	255.58	94.7%	24	23
Brevant	10H24 AM	1140	8757.9	18.9	8	286.91	106.3%	8	8
Prairie Valley	PV110-E54 VT2PRIB	1140	8149.8	18.4	8	268.40	99.5%	18	17
Prairie Valley	PV110-H20 VT2PRIB	1140	8283.9	19.7	8	268.60	99.5%	17	16
NK	1082 DV	1140	8112	19.3	8	264.21	97.9%	21	20
NK	1188 D	1140	7698.2	18.7	8	252.57	93.6%	25	24
Prairie Valley	PV111-L11 Trecepta	1140	7938.3	21.3	8	252.14	93.4%	26	22
Prairie Valley	PV112-X63 VT2PRIB	1140	7407.5	19.6	8	240.58	89.1%	31	31
Prairie Valley	114EXP23-PWE	1110	7681.9	21.3	8	250.59	92.9%	28	26
Brevant	13J23 AM	1100	8274.3	19.9	8	277.32	102.8%	14	12
NK	1333 AA	1090	7267.4	19.2	8	248.02	91.9%	29	28
Prairie Valley	PV113-V89 VT2PRIB	1070	7453.4	19.3	8	258.70	95.9%	22	26
Prairie Valley	PV114-R50	1030	7414.5	19.0	8	268.38	99.4%	19	12
Brevant	14R22 Q	1000	7432	18.7	8	278.00	103.0%	13	28
Prairie Valley	PV114-D44 Trecepta	960	8243	19.2	8	319.17	118.3%	1	21
Prairie Valley	PV115-D59 VT2PRIB	935	7470	21.6	8	288.30	106.8%	7	18
Prairie Valley	PV113-Z83 SSRIB	900	6922.5	20.0	8	283.33	105.0%	9	11
NK	1523 V	865	7150.9	21.2	8	299.84	111.1%	3	1
Brevant	16K30 AM	830	7151.1	21.4	8	311.89	115.6%	2	7
Prairie Valley	PV116-G64 SSRIB	785	6217.2	20.9	8	288.35	106.8%	6	9
Prairie Valley	PV116-H31 VT2PRIB	760	5332.6	20.5	8	256.81	95.2%	23	3
Dekalb	DKC5982	725	5373.7	18.3	8	278.62	103.2%	12	2
Pioneer	P1082 AM	695	5294.1	19.6	8	282.06	104.5%	10	6

Hastings Southwest

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/Rate:** Endigo
Harvest Date: 9/28/2023 **Herbicide:** Tendovo
Planting Date: 4/12-4/13, 2023 **Commodity Price:** \$11.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
Prairie Valley	PV3024E3	880	7244.6	11.0	24	101.89	116.6%	1	1
Prairie Valley	PV2724E3	880	6736.6	10.9	24	94.83	108.6%	3	3
Prairie Valley	PV2623E3	880	6300.6	10.9	24	88.69	101.5%	4	4
Prairie Valley	PV2419E3	880	5768.3	11.0	24	81.17	92.9%	7	7
Prairie Valley	PV2324E3	880	5644.4	10.9	24	79.49	91.0%	9	9
Prairie Valley	PV2124E3	880	5742.6	10.8	24	80.96	92.7%	8	8
Prairie Valley	PV2724XF	880	5576.7	10.9	24	78.55	89.9%	10	10
Prairie Valley	PV2923XF	880	5975.6	10.9	24	84.15	96.3%	6	6
Prairie Valley	PV3223XF	880	6836.4	10.9	24	96.28	110.2%	2	2
Prairie Valley	PV2423XF	880	4138	10.8	16	87.50	100.2%	5	5

Hastings Southwest Small

City: Hastings **Crop:** Soybeans **Irrigation:** Gravity
County: Adams **Seeding Rate:** 140,000 **Previous Crop:** Corn
Started Plot On: East **Planting Depth (in.):** 1.5 **Tillage System:** Conventional
Flag Location: Right Row **Planter Type:** Row Planter **Soil Texture:** Silt Loam
Fungicide: Miravis Neo **Row Width:** 30 **Insecticide/Rate:** Endigo
Harvest Date: 9/28/2023 **Herbicide:** Tendovo
Planting Date: 4/13/2023 **Commodity Price:** \$11.00

Brand	Product	Row Length	Wet Weight	Harvest Moisture %	# of Rows	Yield/Acre	% of Plot Average	Yield/Acre Rank	\$/Acre Rank
NK	23-T9XF	310	1523.7	10.9	24	60.91	93.6%	5	5
NK	27-A7XF	310	1536.8	11.0	24	61.36	94.3%	4	4
NK	28-P6XF	310	1657.4	11.0	24	66.19	101.7%	3	3
NK	30-U4XF	310	1689.4	11.0	24	67.49	103.7%	2	2
NK	34-G1XF	310	1737.5	10.9	24	69.44	106.7%	1	1

*Plot had limited irrigation - can not compare to big field.



R2G PRODUCTS

Hustle
AgPro
Pro-Lock
Ransom
Realize
Accrue
Heighten
Constrain XLT Plus
N-Stat
BMO

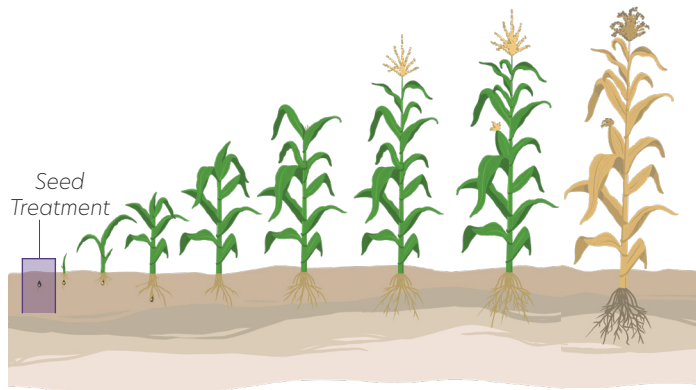


Hustle is a unique blend combining essential macro and micro nutrients and a proprietary blend of plant extracts to stimulate seed germination and to maximize early seedling growth and vigor. Hustle also includes a balanced ration of three hormones designed to work together to enhance seed germination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



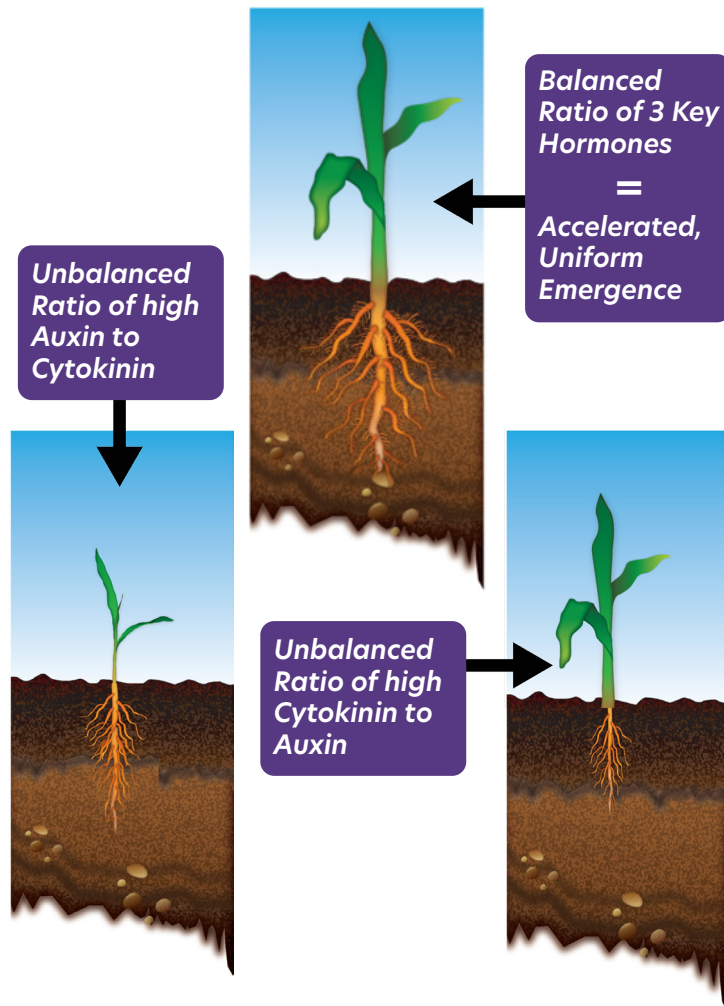
Application Method:

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



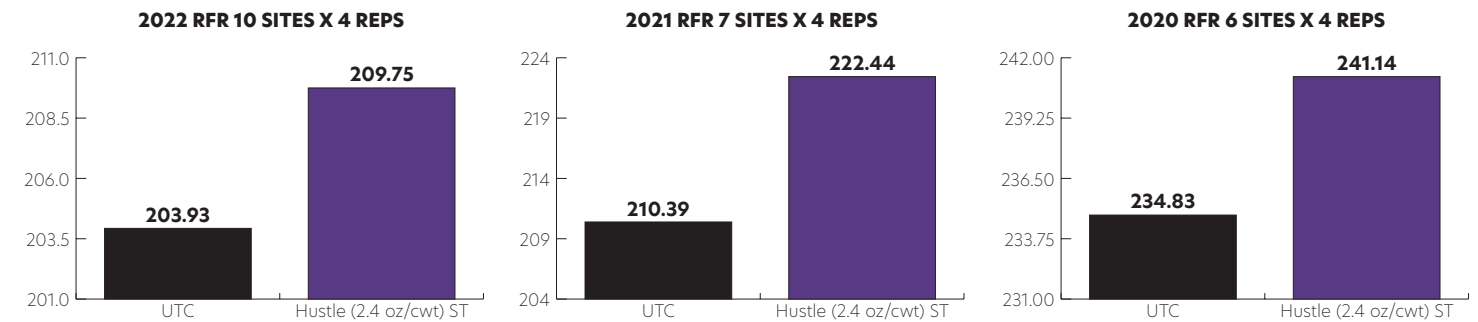
Why Hustle?

- 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

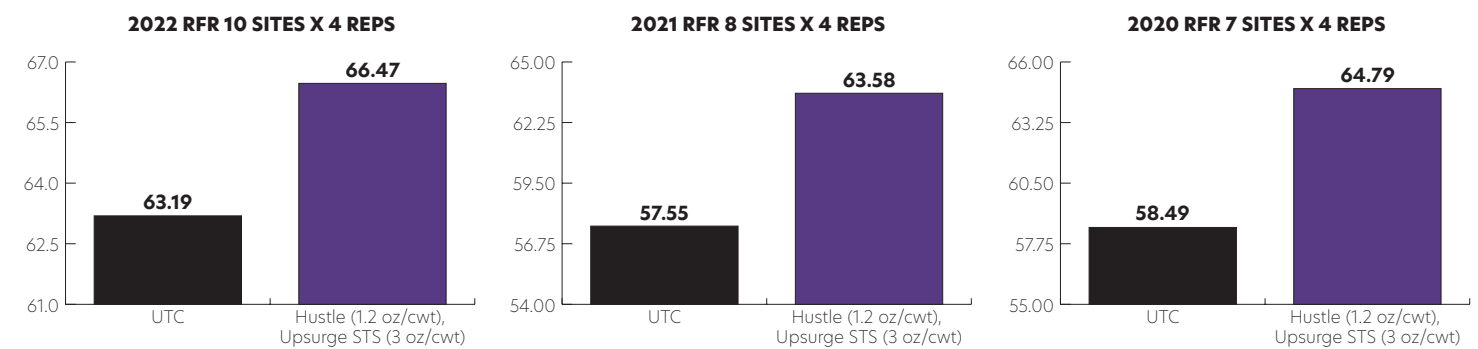
RFR



8.06

3-Year Average Bushel Advantage

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



5.2

3-Year Average Bushel Advantage

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

BIOSTIMULANT




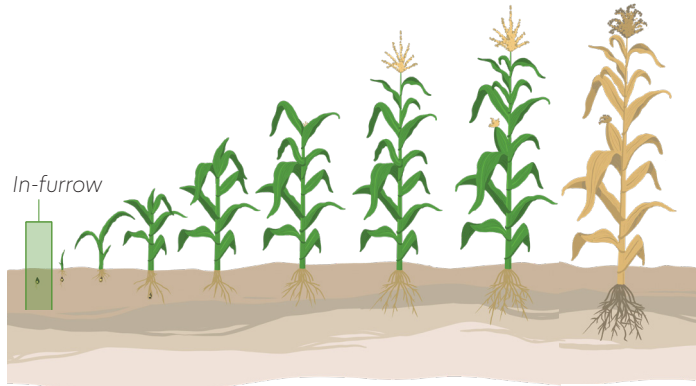
AGPRO

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

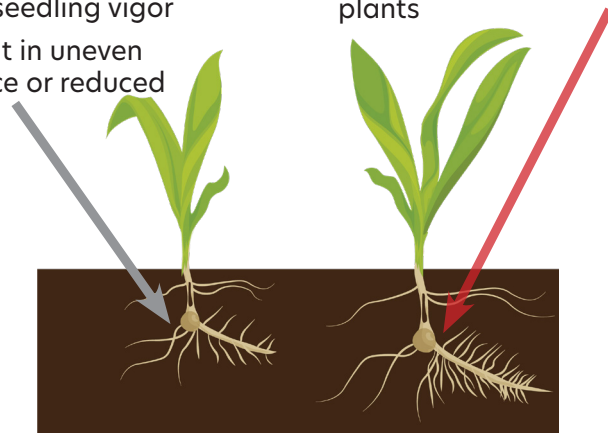
Standard Fertilizers

- 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

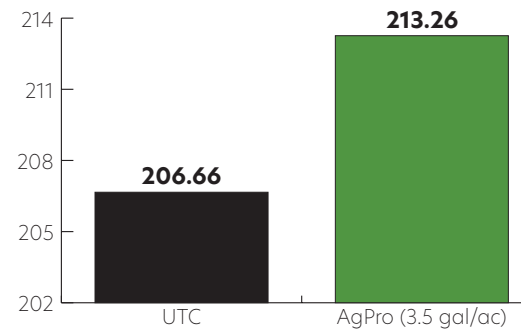
AGPRO

STARTER FERTILIZER

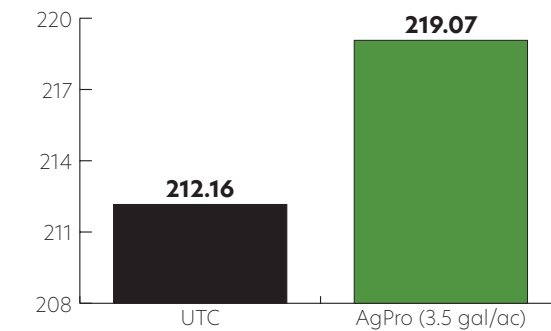
DATA & ROI by

RFR

2022 RFR 10 SITES X 4 REPS



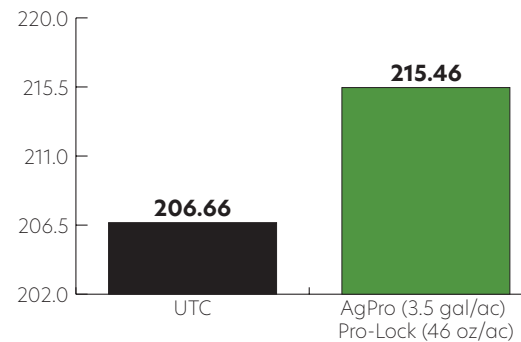
2021 RFR 7 SITES X 4 REPS



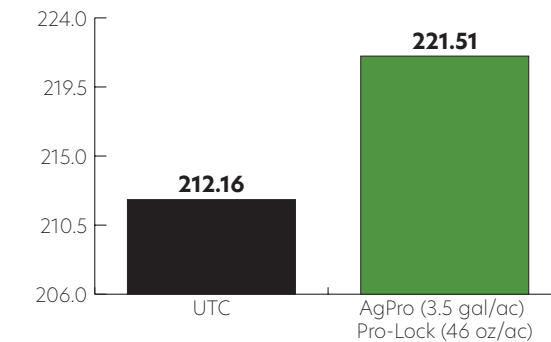
6.76

2-Year Average
Bushel Advantage

2022 RFR 10 SITES X 4 REPS



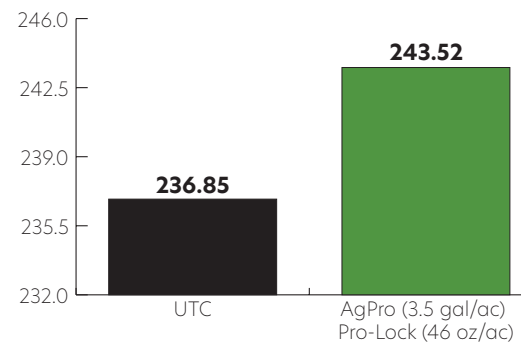
2021 RFR 7 SITES X 4 REPS



8.27

3-Year Average
Bushel Advantage

2020 RFR 6 SITES X 4 REPS

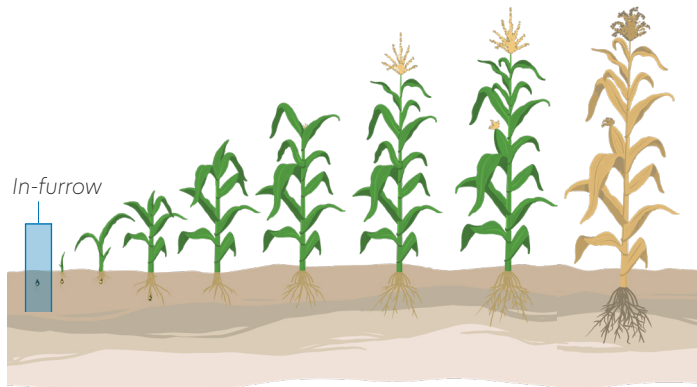


	Yield	Commodity	Cost	Return	Net ROI
AgPro (3.5 gal/ac)	+6.76 bushel advantage	\$5.25	\$11.50	\$36.49	\$23.99

PRO-LOCK[®]

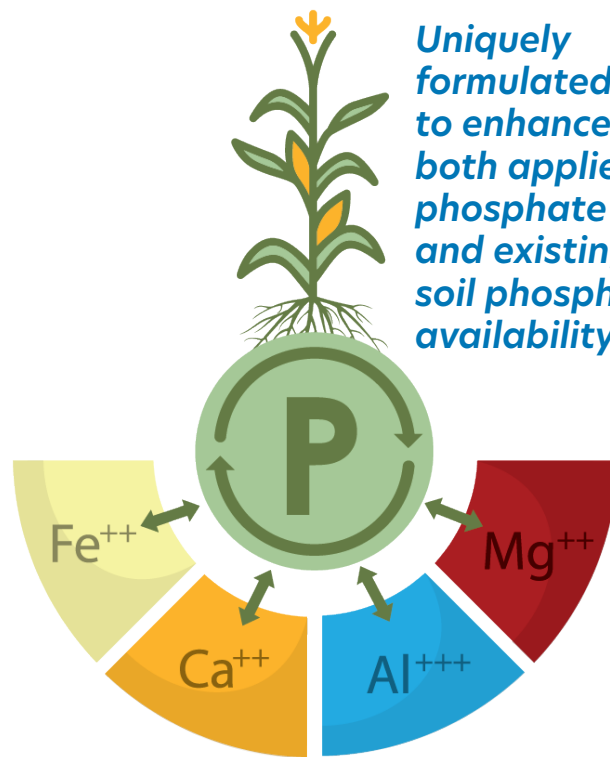
STARTER FERTILIZER ENHANCER

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

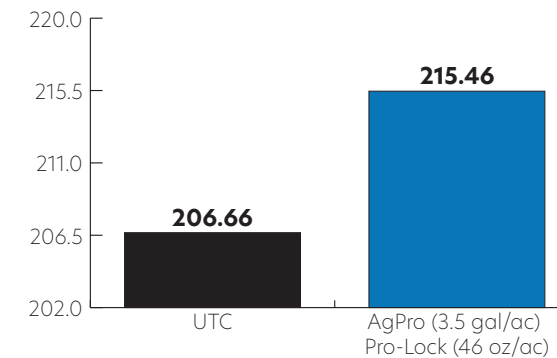
PRO-LOCK[®]

STARTER FERTILIZER ENHANCER

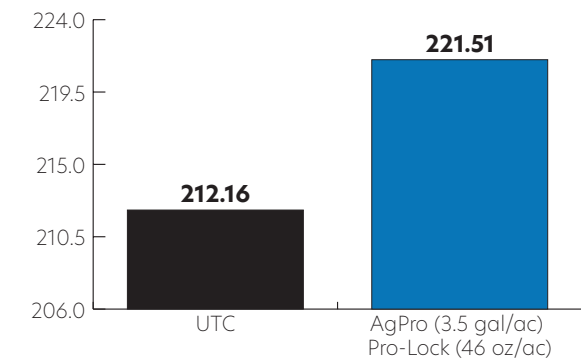
DATA & ROI by

RFR

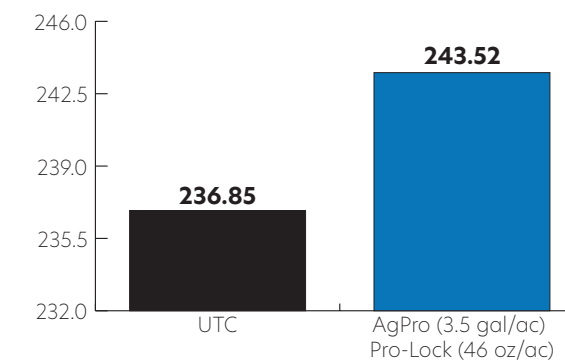
2022 RFR 10 SITES X 4 REPS



2021 RFR 7 SITES X 4 REPS



2020 RFR 6 SITES X 4 REPS

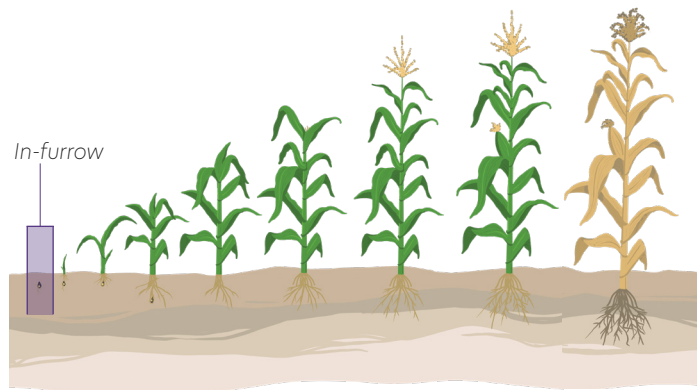


8.27
3-Year Average
Bushel Advantage

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



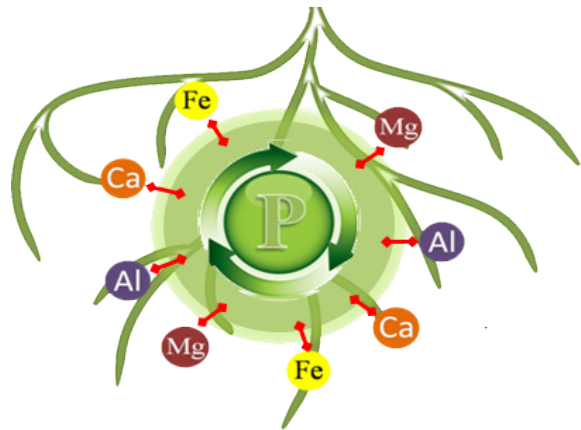
Ransom creates a more productive soil by improving microbial diversity, enhancing mineralization, nutrient uptake and plant vigor to optimize your overall yield potential.



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.



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



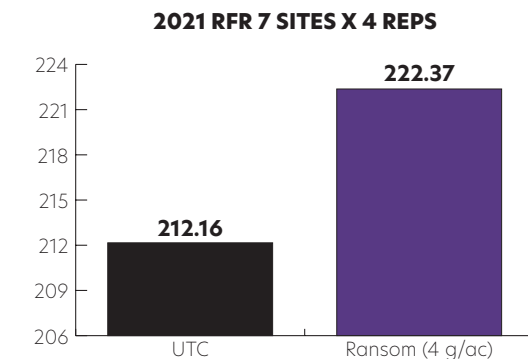
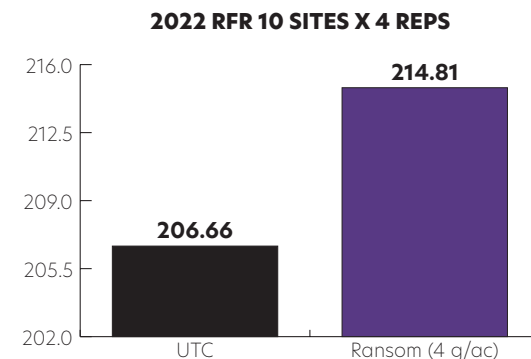
GENERATE
RANSOM
 BIOLOGICAL STIMULANT
 Custom blend of bacteria that
 colonize plant roots
 Solubilize minerals for season
 long nutrient-use-efficiency

BIOSTIMULANT

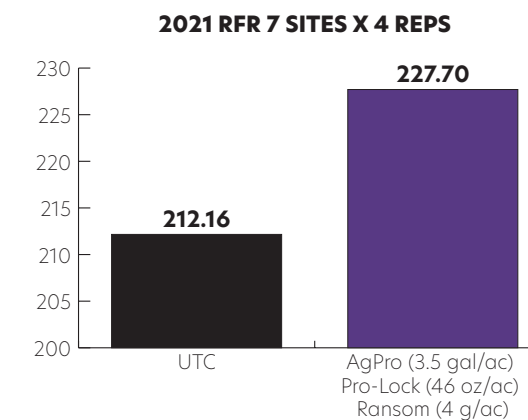
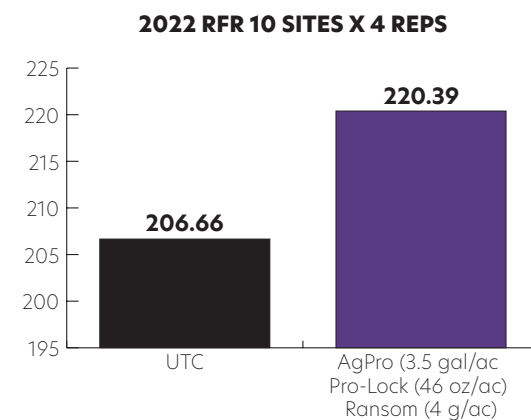


DATA & ROI by

RFR



9.18
 2-Year Average
 Bushel Advantage

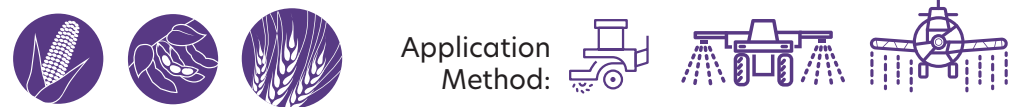


14.64
 2-Year Average
 Bushel Advantage

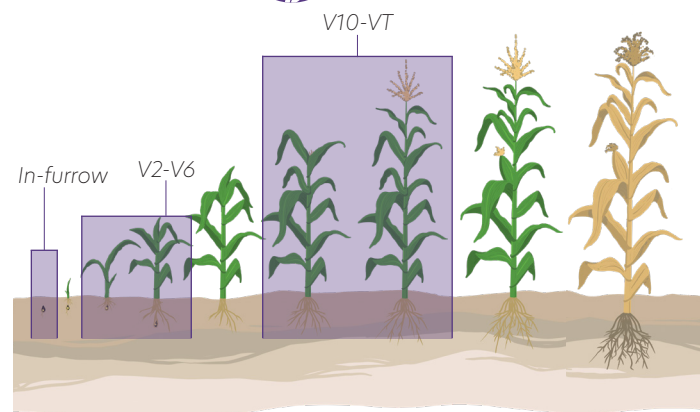
	Yield	Commodity	Cost	Return	NET ROI
Ransom (4 grams/ac)	+9.18 bushel advantage	\$5.25	\$8.15	\$48.20	\$40.05
AgPro (3.5 gal/ac), Pro-Lock (46 oz/ac) & Ransom (4 grams/ac)	+14.64 bushel advantage	\$5.25	\$37.50	\$76.86	\$39.36

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

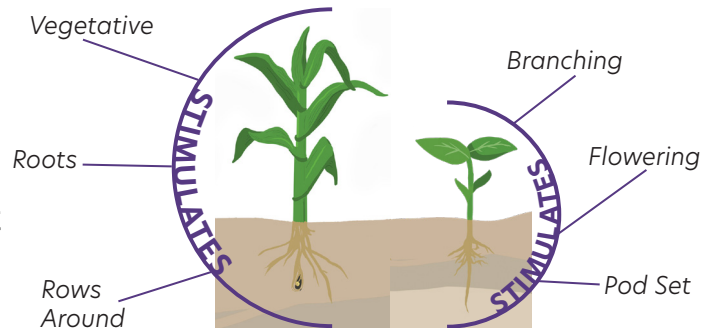
In-furrow and Foliar

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

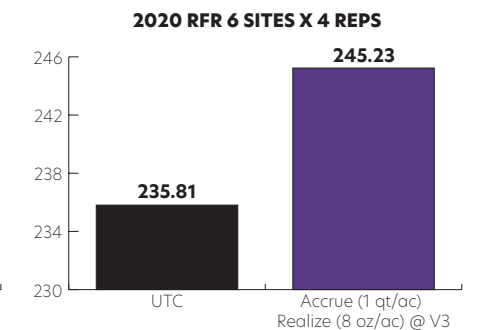
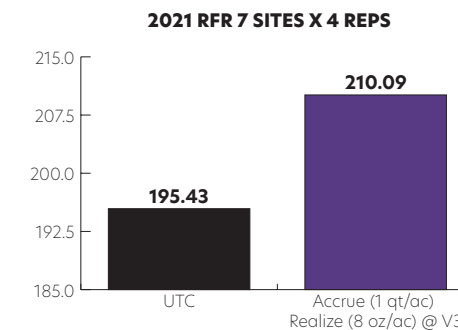
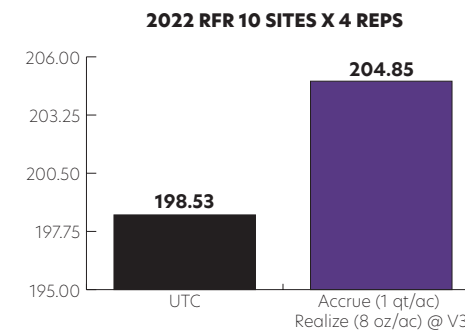
BIOSTIMULANT



Realize™

DATA & ROI by

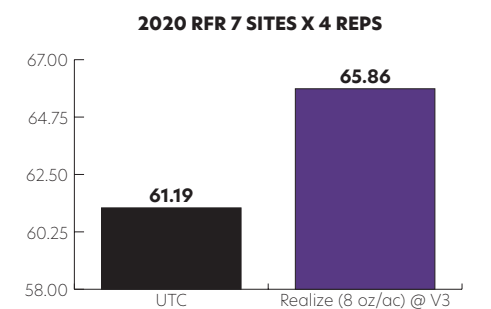
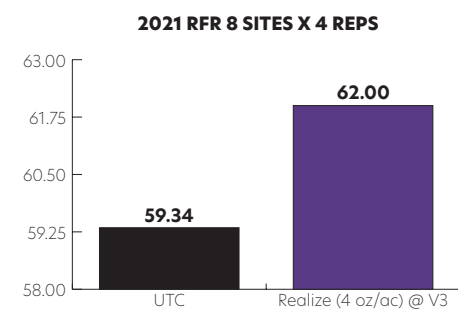
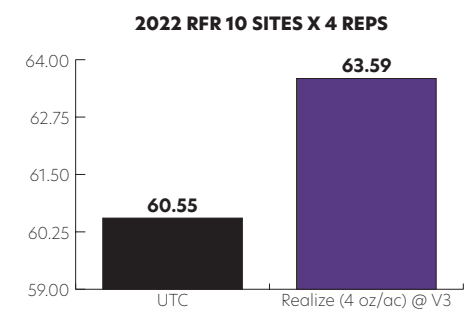
RFR



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

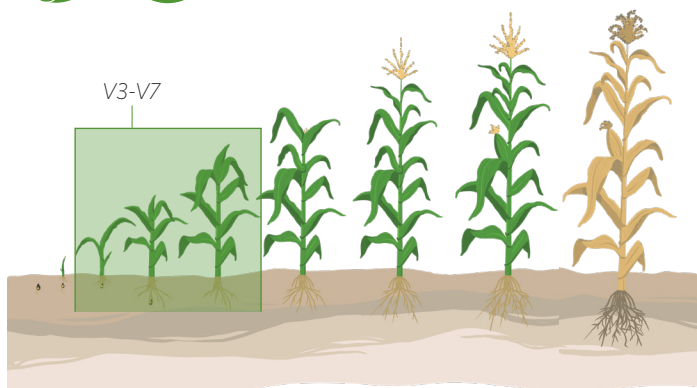
ACCURUE™

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.



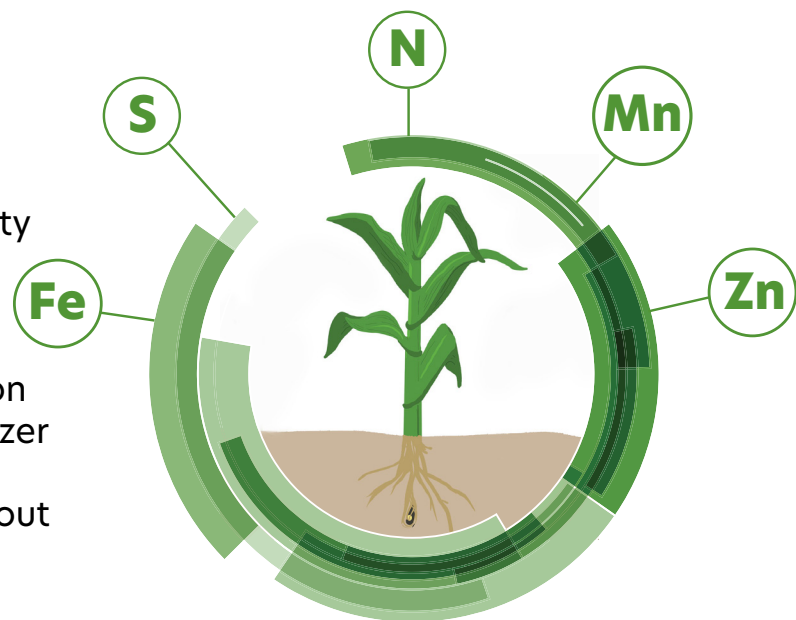
Application Method:



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



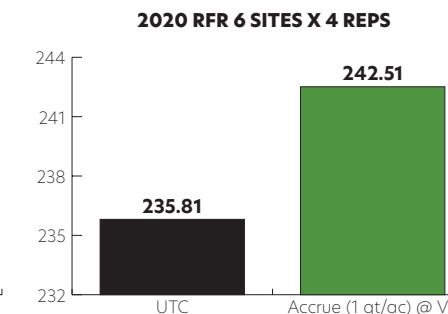
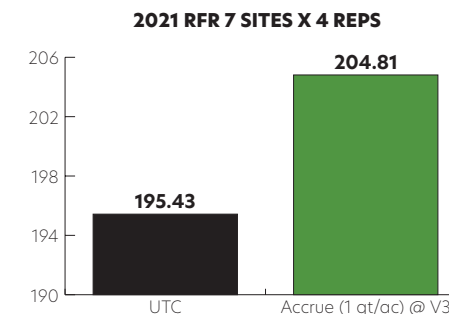
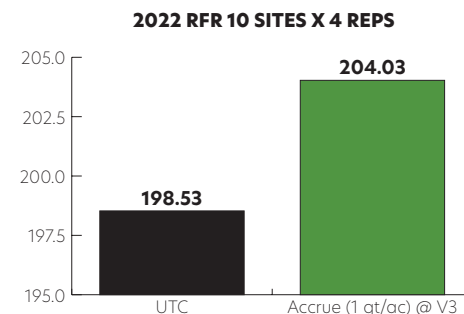
NUTRITIONAL

ACCURUE™

ENHANCED MICRONUTRIENT BLEND

DATA & ROI by

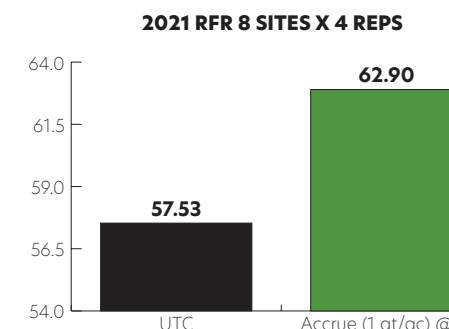
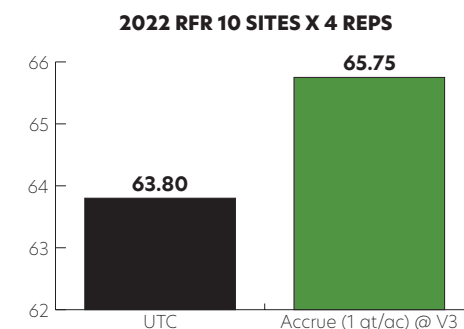
RFR



7.19

3-Year Average Bushel Advantage

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



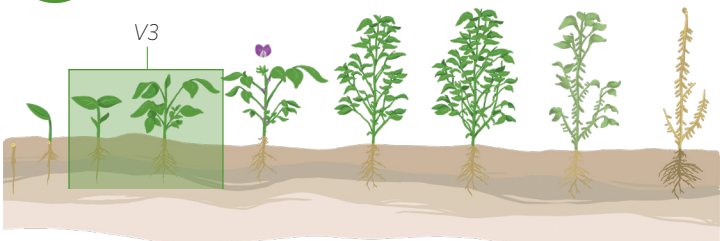
3.66

2-Year Average Bushel Advantage

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



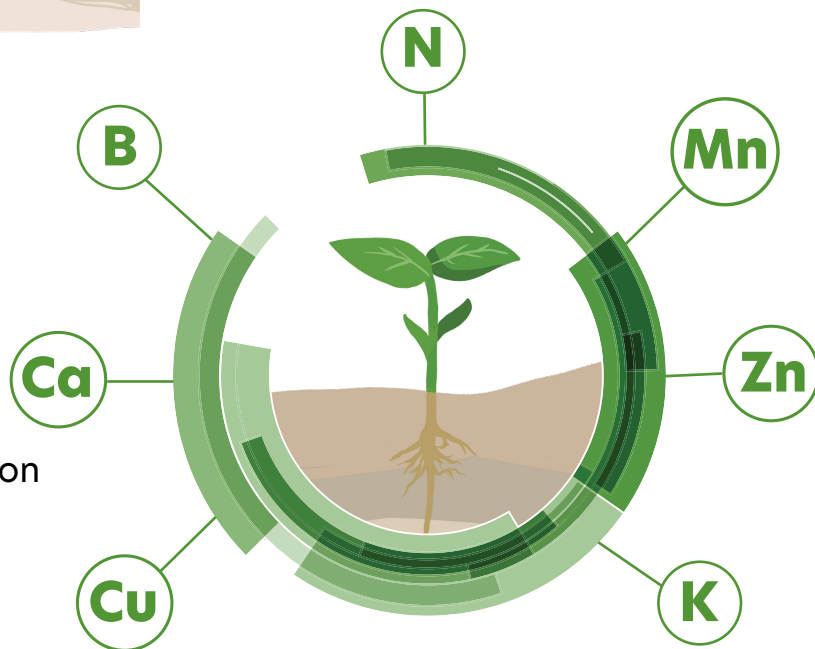
Heighten is an enhanced micronutrient blend that contains nutrients critical to obtaining optimum crop growth, and includes an exclusive R2G additive that improves nutrient uptake. Heighten is designed to increase growth, enhance plant health and maximize your return on investment on the Dicamba Tolerant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



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

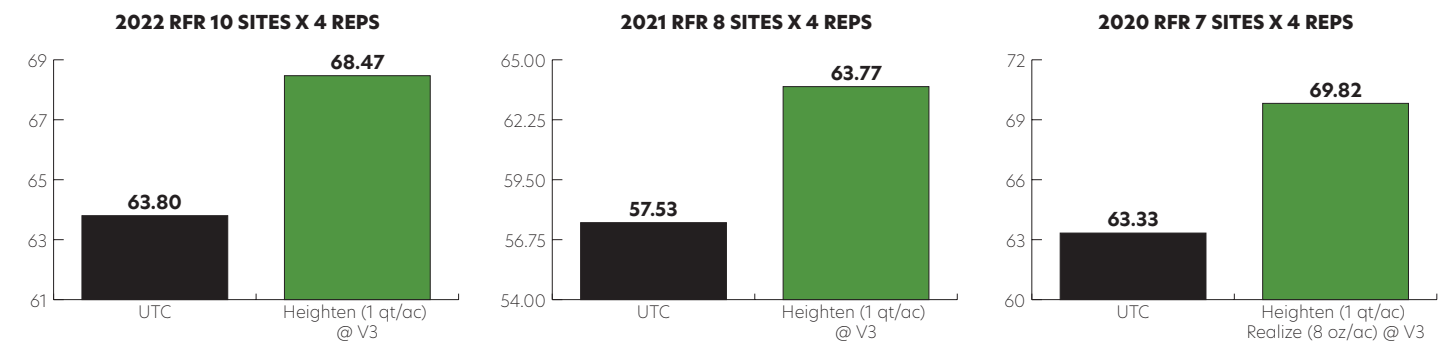
Why Heighten?

- 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

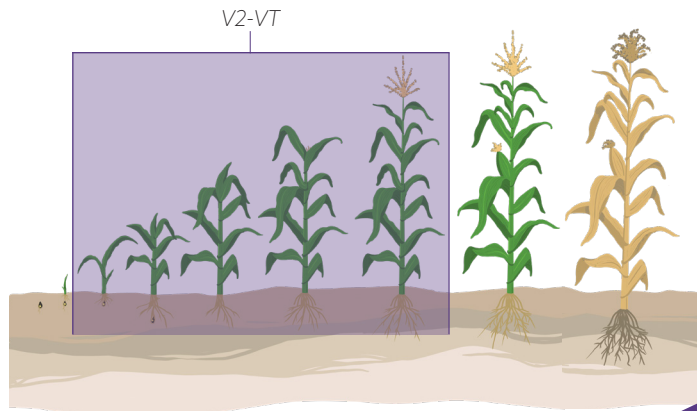


Mitigates herbicide stress protecting yield





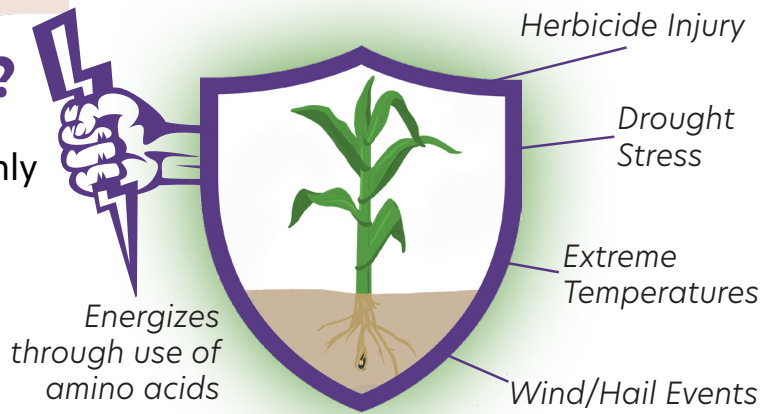
Constrain XLT Plus mitigates herbicide stress while providing fuel and energy to keep the plant focused on yield may be the single most advantageous way to increase yield.



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



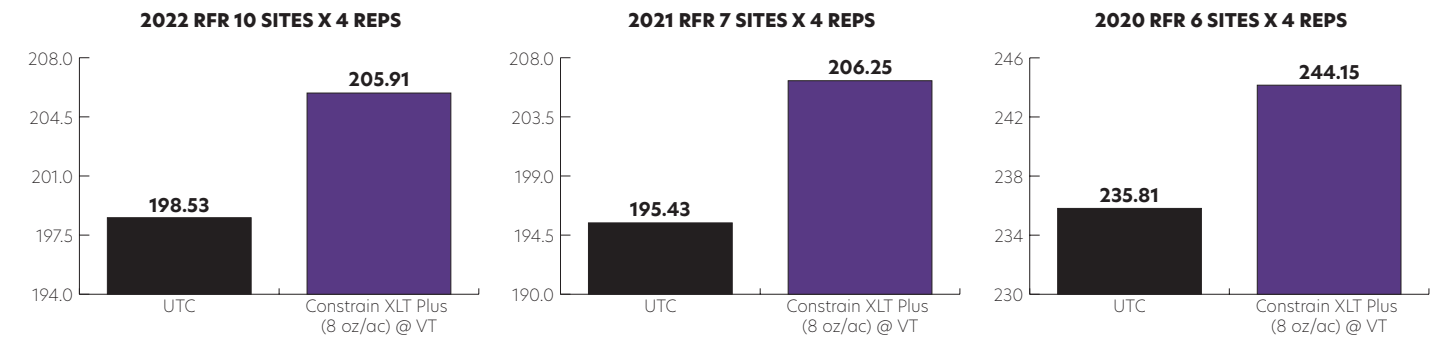
Mitigates herbicide stress protecting yield

BIOSTIMULANT



DATA & ROI by

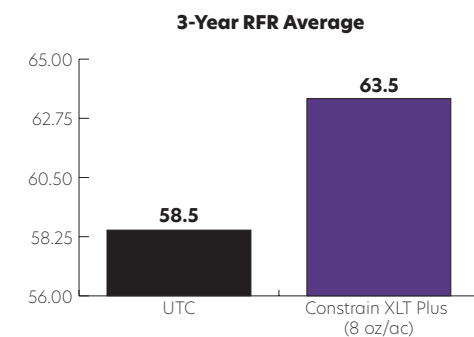
RFR



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



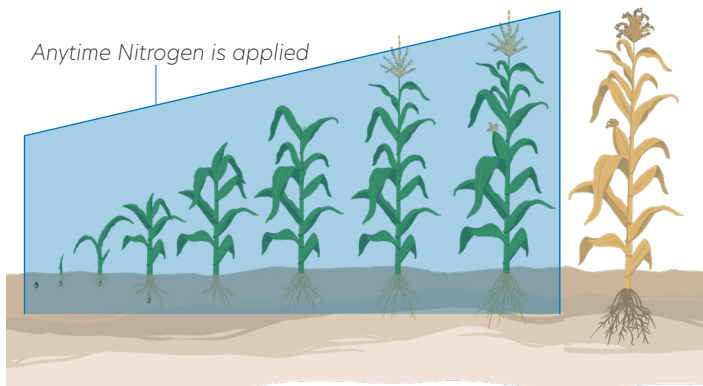
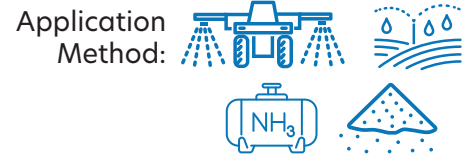
5.0

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

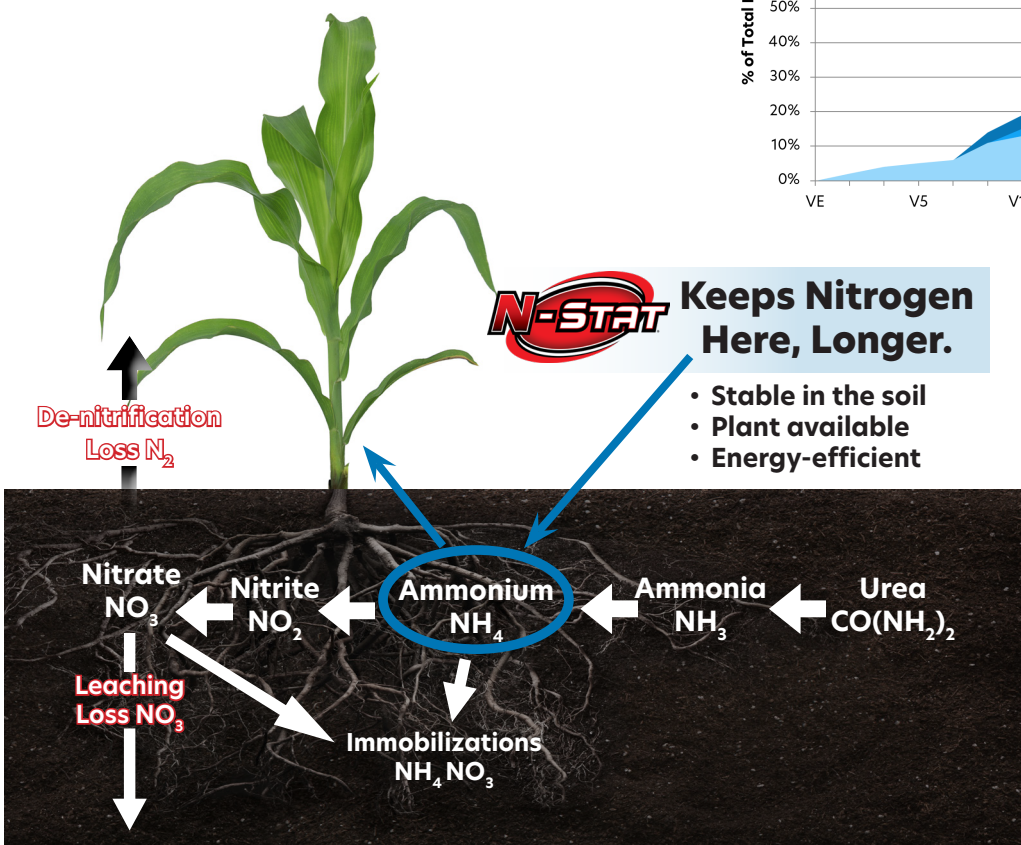
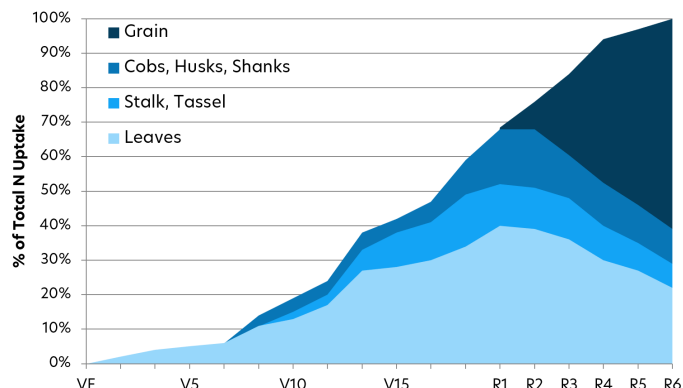


N-Stat improves nitrogen efficiency in all forms including UAN, Urea, and NH₃ from below ground nitrogen loss.



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).



N-STAT Keeps Nitrogen Here, Longer.

- Stable in the soil
- Plant available
- Energy-efficient

Why N-Stat?

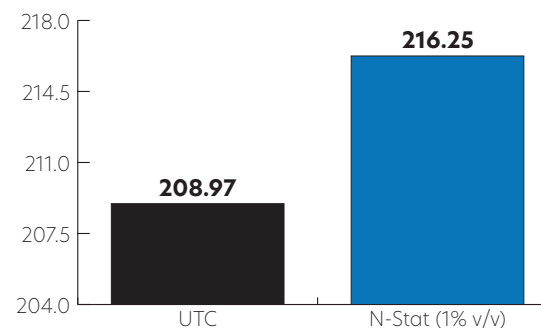
- Variable use rate
- Non-corrosive
- Stable formulation to keep in solution
- Improves nitrogen efficiency by keeping it in the root zone



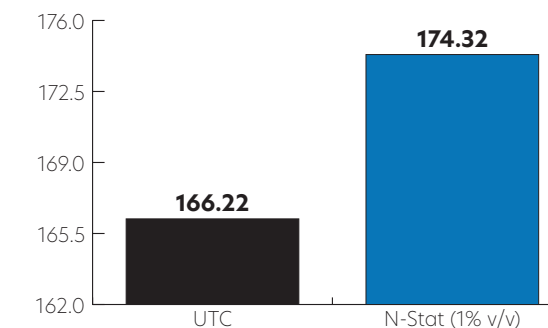
DATA & ROI by

RFR

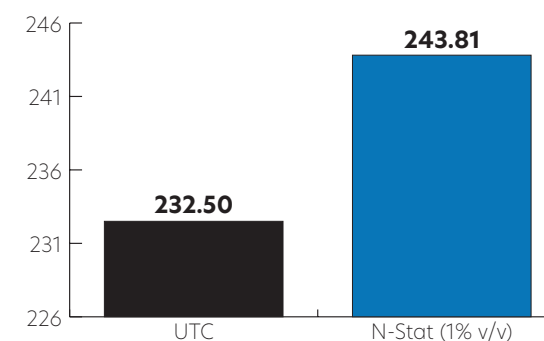
2022 RFR 10 SITES X 4 REPS



2021 RFR 7 SITES X 4 REPS



2020 RFR 6 SITES X 4 REPS



8.9

3-Year Average Bushel Advantage

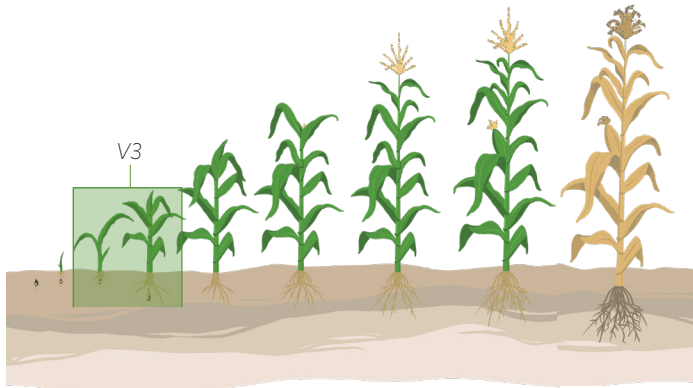
	Yield	Commodity	Cost	Return	Net ROI
N-Stat (1% v/v)	+8.9 bushel advantage	\$5.25	\$13.13	\$46.73	\$33.60

NUTRIENT ENHANCERS & STABILIZERS



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.



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

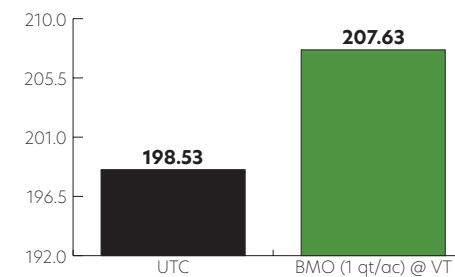


BMO

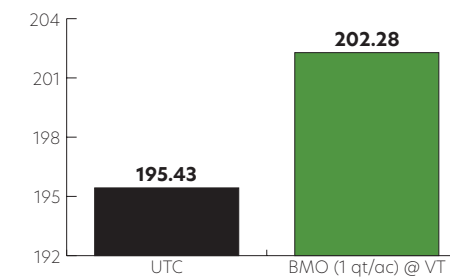
DATA & ROI by

RFR

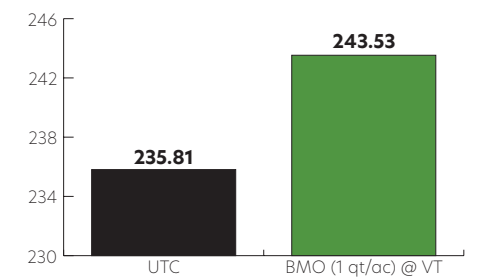
2022 RFR 10 SITES X 4 REPS



2021 RFR 7 SITES X 4 REPS



2020 RFR 6 SITES X 4 REPS

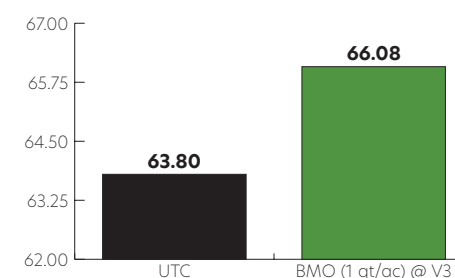


7.89

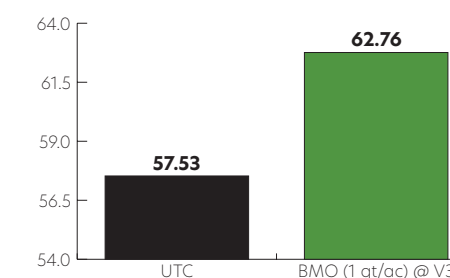
3-Year Average Bushel Advantage

	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 7 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

- Soybean Early 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 7 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

Marketing

Tessa Burgener
 Maggie Preissler
 Kim Reynolds
 Jackson McKenzie

Hospitality

Cindy Schroeder
 Team at the Aurora West Warehouse

Landlords

Cortney Brandes & 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

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
 Agsource Labs
 Ward Labs
 Aqua Spy Moisture Probes

Agronomists

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 Todd Nitsch
 Steve McManoman

Trial and Data Support

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 Shelby Ferguson
 Danielle Scheele
 Garret Johns
 Josh Floth
 Stephanie Mayer

Interns

Haley Throener
 Grant Nielsen
 Caden Schuster
 Andrew Stolpe

Speakers

Randy Dowdy
 David Hula
 Missy Bauer



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BushelUp
 PODCAST

