



YIELD BOOK

2016 FIELD TRIAL SUMMARY



timing matters • placement matters • coverage matters

2016 FIELD TRIALS:

Heads you win. Tails you win.

At 360 Yield Center, we try to develop tools that make you money no matter the year, the weather . . . or even the market prices. Our goal, for any product we bring to market, is to give you a one-year return on your investment. Sometimes, that ROI will come from increases in yield. Sometimes, it will come from cost savings from a reduction of inputs.

The last two years have shown how this approach to product development works. In 2015, mother nature threw buckets of water over much of the corn growing regions of the US. That pushed nitrogen deep into the soil – making it unavailable to the corn plant. Mid-season nitrogen application through 360 Y-DROP fed the crop at the critical time and boosted yields by an average of 13.8 bushels per acre.

In 2016, many regions had environmental conditions – heat and moisture – that fired up the mineralization machine. This made “free” nitrogen available to the plant and reduced the need for applied nitrogen. For growers that planned for a mid-season application, they could reduce the amount of applied N and pocket the savings. In many cases, the input costs savings in 2016 were equal to the value of the yield improvement in 2015.

In this book, we have summarized the results from hundreds of trials and treatments. Some of these were conducted by our team of agronomists, some by customers and some by third parties. We don’t always win these trials. But we always learn. This year, one big lesson is that if nitrogen isn’t the limiting factor, then adding more N is not going to pay. In many of our tests, we simply didn’t lower the applied N enough to discover how low you could go before affecting yield.

Here are a few conclusions to take away from this year’s testing:

Timing matters – even in a year where nitrogen wasn’t the limiting factor for many of us, corn responded to mid-season application by adding over seven bushels.

Placement matters – moving N application closer to the root mass improves effectiveness – and adds about five bushels

Coverage matters – hitting the pests where they live increases efficacy of pesticides and fungicides. Coverage of the ear leaf and underside of the leaf adds bushels.

We hope the data included here helps you make informed decisions that can improve your profitability. Of course the best tests are the ones conducted on your farm and your fields. We encourage you to put our technology to the test in your operation.



TIMING MATTERS

Corn plants use 75% of their annual nitrogen need after V10. By waiting until mid-season, you have time to evaluate nitrate needs and apply more or less UAN to minimize costs while maintaining yield potential. N efficiency is the key. It takes 1.1 units of N to produce a bushel of corn. That's a combination of the "free" mineralized N and supplied N. Too often, we provide the full amount of needed nitrogen with our pre-plant applications. However, with strong mineralization we can get 20-50 lbs of free N. Our goal is manage nitrogen with later applications that allow us to lower the Nitrogen Use Efficiency ratio to .7. That lowers input costs while maintaining full yield potential.



TIMING MATTERS

Manning, Iowa

DETAILS

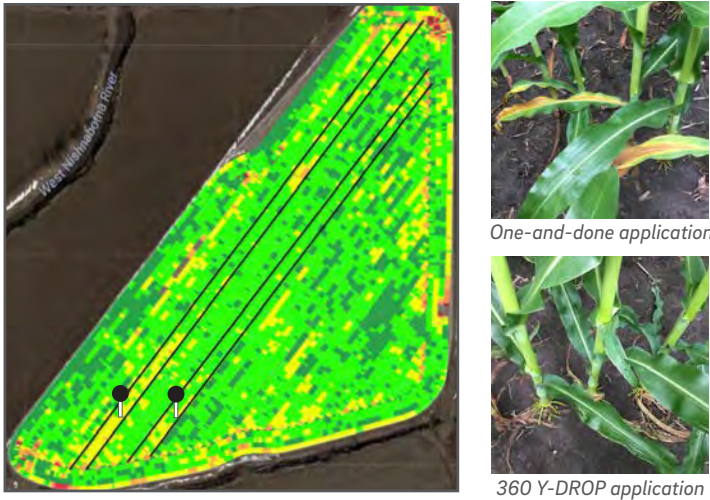
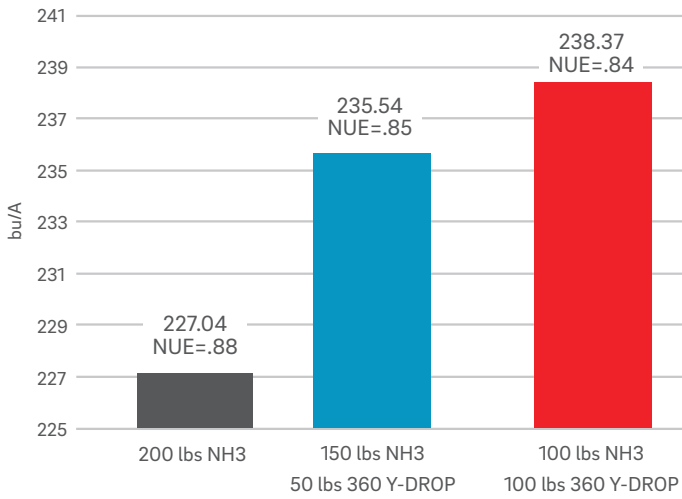
The grower compared 360 Y-DROP to typical one-and-done spring applied NH3 with the goal of evaluating timing and placement of N (keeping total N rate constant). Rates were consistent between both applications, with the only changes being in timing and placement.

- + NH3 applied April 11th prior to planting on April 25th
- + Nitrate measurements were taken at V7 and R2
- + Application with 360 Y-DROP made at V12

FIELD DETAILS

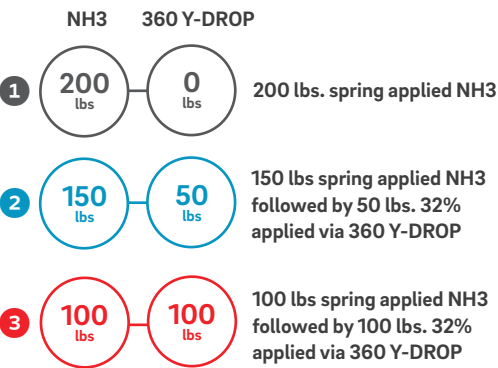
- + NuTech Hybrid Seed
- + 360 Y-DROP application made with John Deere 4730
- + No-till with a corn/bean rotation

RESULTS



METHODS

3 TREATMENTS THROUGHOUT THE FIELD



Northern Illinois

DETAILS

- + Treatments: 80' (4 harvest strips) across field
- + All treatments had 53 lbs N + 8 lbs S banded (183 lbs N, 24 lbs S total for the year)

METHODS

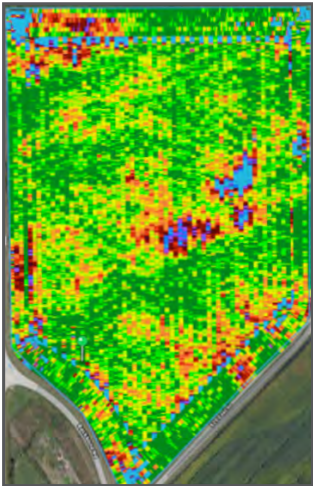
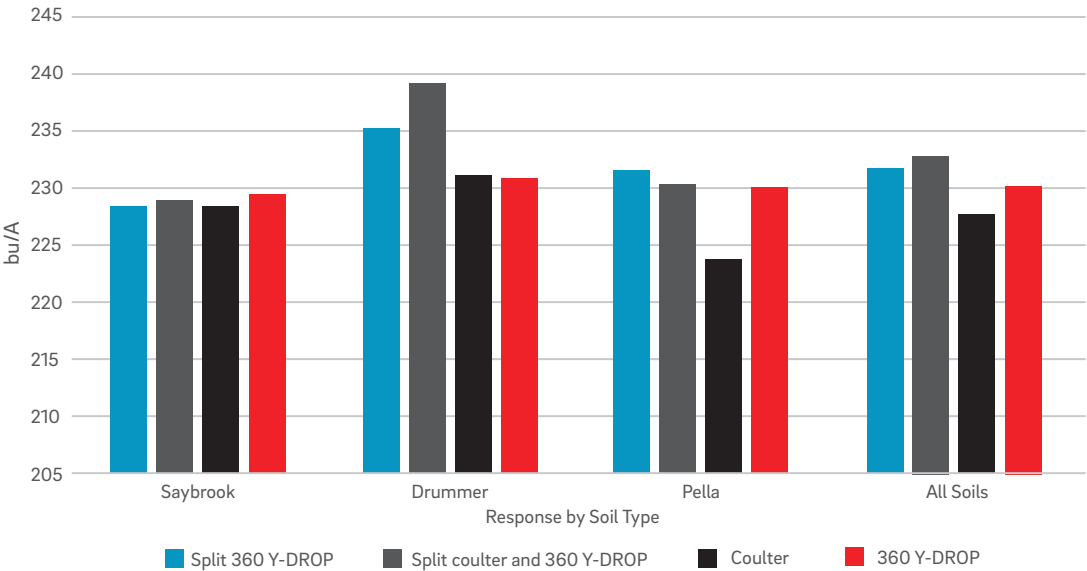
- 1** V6: 65lbs N + 8lbs S 360 Y-DROP fb 65lbs N + V12: 8 lbs S 360 Y-DROP
- 2** V6: 65lbs N + 8lbs S coulters fb 65lbs N + V12: 8 lbs S 360 Y-DROP
- 3** V6: 130 lbs N + 16lbs S coulters
- 4** V6: 130 lbs N + 16lbs S 360 Y-DROP

RESULTS

Analysis of soil type response to different applications:

- + Saybrook: silt loam, good OM, decent mineralization, well drained
- + Drummer: silty clay loam, more poorly drained, similar OM and poorer mineralization compared to the saybrook
- + Pella: clay loam, decent OM, poorly drained, heavier clay content than saybrook

- 1** Split 360 Y-DROP = 231.89 bu/A
- 2** Split coulters and 360 Y-DROP = 232.86 bu/A
- 3** Coulters = 228.03 bu/A
- 4** 360 Y-DROP = 230.19 bu/A



KEY TAKEAWAYS

Despite high levels of mineralization in the soil, 360 Y-DROP still showed a yield advantage over one-and-done application.

While some N deficiency was observed in the area with one-and-done application, the sections with 360 Y-DROP application were green until the last leaf emerged.

360 Y-DROP showed an 11-bushel advantage over the one-and-done application.

KEY TAKEAWAYS

Each soil responds to application differently due to mineralization, OM, CEC, texture, elevation, etc.

By using 360 Y-DROP, variability and yield losses from timing and placement can be minimized within the field.

When you assess your field using zone based analysis you can begin to find holes in your nitrogen program.

TIMING MATTERS

Bringhurst, Indiana

DETAILS

The grower, Brenton Peters, ran a comparison of an all pre-plant nitrogen program versus a base plus program with 360 Y-DROP.

METHODS

PRE-PLANT PROGRAM

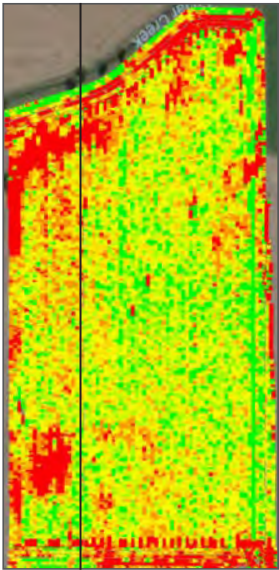
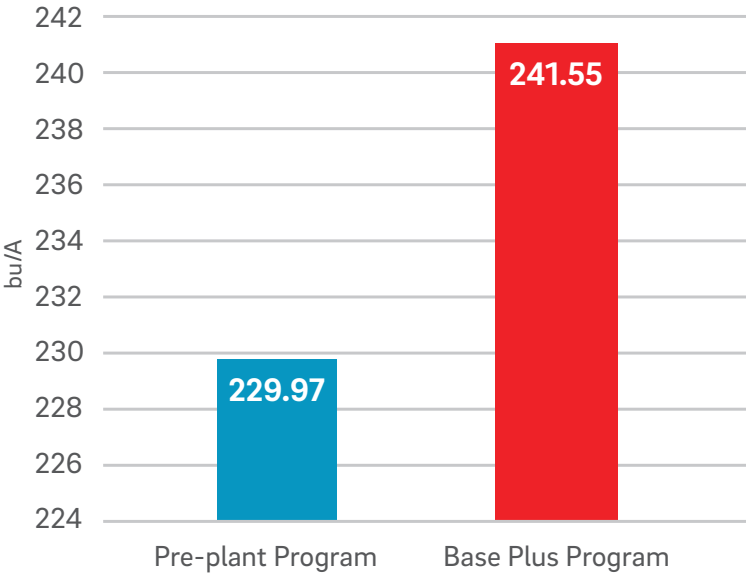
- 1 180 lbs NH3 + 75 lbs with planter
- ★ TOTAL N = 255 LBS

BASE PLUS PROGRAM

- 1 75 lbs with planter
- 2 105 lbs. with 360 Y-DROP
- ★ TOTAL N = 180 LBS

RESULTS

Trials showed an average of 11 bu/A advantage with 360 Y-DROP with less total N applied.



KEY TAKEAWAYS

N

Less nitrogen was applied overall when following the Base Plus Program, thus resulting in input savings.

11
bu/A

The Base Plus Program resulted in an average of 11 bu/A more than the Pre-plant Program.

The Base Plus Program allows the grower to wait and adjust the amount of nitrogen applied until later in the season.



Cumberland County, Illinois

DETAILS

The grower ran a comparison of pre-plant followed by sidedress applications versus pre-plant, sidedress and an additional 360 Y-DROP application with less N applied overall.

METHODS

WEST

- 1 60 lbs 32% W&F
- 2 Sidedress 195 lbs of NH3 at V5
- ★ TOTAL N = 255 LBS

CENTER

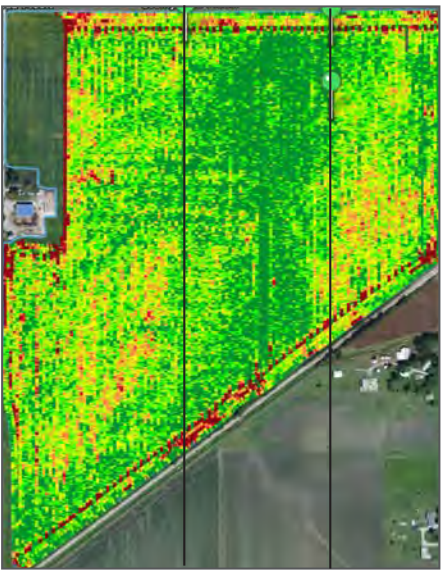
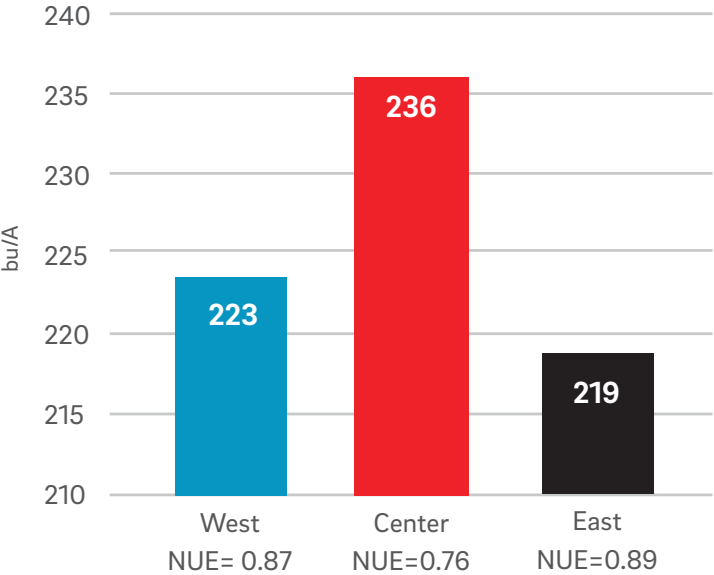
- 1 60 lbs 32% W&F
- 2 Sidedress 125 lbs of NH3 at V5
- 3 360 Y-DROP 55 units 32% at V10-V12
- ★ TOTAL N = 240 LBS

EAST

- 1 60 lbs 32% W&F
- 2 Sidedress 195 lbs of NH3 at V5
- ★ TOTAL N = 255 LBS

RESULTS

The grower, saw an average of 15 bu/A advantage with 360 Y-DROP with less total N applied.



KEY TAKEAWAYS

360 SOILSCAN allowed the grower to measure in season and adjust nitrogen rates.

360 Y-DROP allowed the grower to make an additional application later in the growing season when the crop needed it most.

15
bu/A

An additional application with 360 Y-DROP resulted in an average of an additional 15bu/A.



PLACEMENT MATTERS

Once you understand that nitrogen moves vertically – not laterally – it is easy to understand why it is critical to place nitrogen as close to the root zone as possible. Only about 30% of broadcast urea lands over the root zone. And with coulter application systems, roots must grow into the nitrogen channel that sits 15" away from the corn plant – that takes time and moisture. Improved efficiency and rapid response comes from placement directly over the root mass.



PLACEMENT MATTERS



Tremont, Illinois

DETAILS

In this trial the grower compared other management strategies to 360’s Base Plus approach.

Coulter applications were made at V8 as that was the latest time the grower could get into the field with the coulter bar. With a dry June and high mineralization rates, nitrogen wasn’t needed at that time. An application with 360 Y-DROP was also made at V8 to compare placement of N as well.

360 SOILSCAN was used to pull nitrates until results got below 10 ppm at V12 at which point the grower decided to apply additional N with 360 Y-DROP.

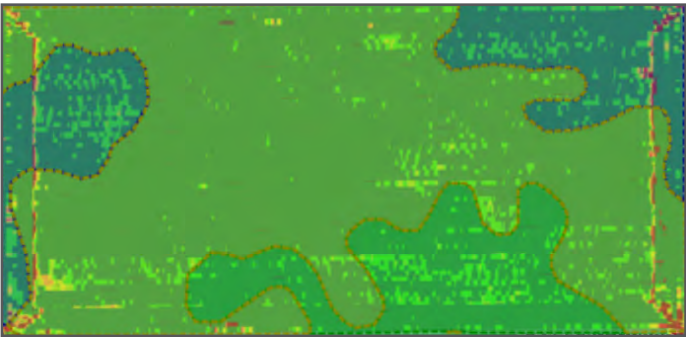
RESULTS

Strip 1: V8 Coulter (150 lbs.) = 273.6 bu/ac

Strip 2: V8 360 Y-DROP (150 lbs.) = 278.3 bu/ac

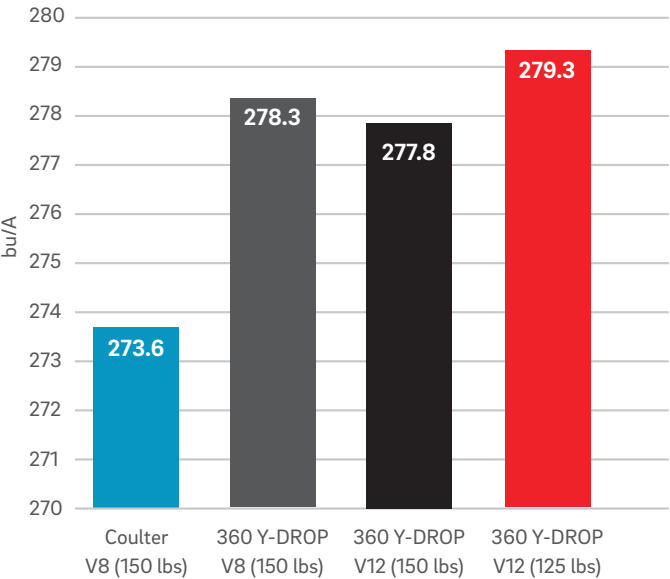
Strip 3: V12 360 Y-DROP (150 lbs.) = 277.8 bu/ac

Strip 4: V12 360 Y-DROP (125 lbs.) = 279.3 bu/ac



METHODS

- 1 Base 25 lbs. broadcast weed and feed incorporated with turbo chopper, 60 lbs. planter applied 2x2x2
- 2 V6 and V8: Soil sampling with 360 SOILSCAN
- 3 V8: **Strip 1:** Coulter 150 lbs; **Strip 2:** 360 Y-DROP 150lbs
- 4 V10 and V12: Soil sampling with 360 SOILSCAN
- 5 V12: **Strip 3:** 360 Y-DROP 150 lbs; **Strip 4:** 360 Y-DROP 125 lbs



KEY TAKEAWAYS



360 SOILSCAN allowed the grower to measure in season and adjust nitrogen rates.



The Base Plus approach allowed the grower to make an additional application later in the growing season when the crop needed it most.

5

bu/A

Placement of nitrogen with 360 Y-DROP resulted in an average of 5 bu/A more than coulter.

Waldron, Michigan

DETAILS

In this trial the grower, Stan Smith, compared applications right by the corn row to apps that were made 15” from the plant at V9. 360 Y-DROP was used to place nitrogen within 1” of the base of the plant. The 360 Y-DROP hoses were then tied together to place nitrogen 15” away, in the middle of the row, to imitate a regular drop.

FIELD DETAILS

- + Soybean prior crop
- + 3% OM
- + Sandy loam
- + No rain for 1.5 months after planting
- + Good mineralization, no early season losses, and lower yield potential than previous year

METHODS

- 1 65 lbs N at planting 28% W&F broadcast
- 2 105 lbs N at V9 28% and ATS



DROP

360 Y-DROP

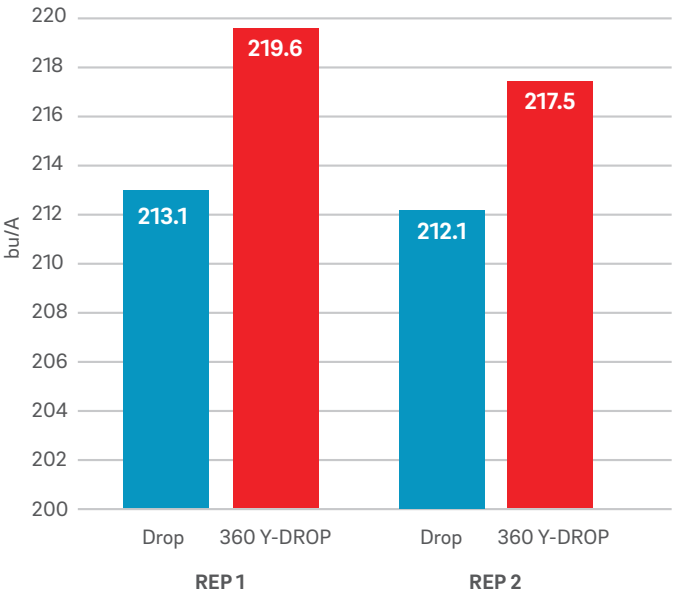
RESULTS

REP 1:

Drop = 213.1
360 Y-DROP = 219.6

REP 2:

Drop = 212.1
360 Y-DROP = 217.5



KEY TAKEAWAYS



Placing N closer to the root (system) ball increases N efficiency.



N volatilization is reduced when stem water and canopy closure is utilized.

5-6

bu/A

Placement of nitrogen with 360 Y-DROP resulted in a 5-6 bu/A advantage over placement in the center of the row.

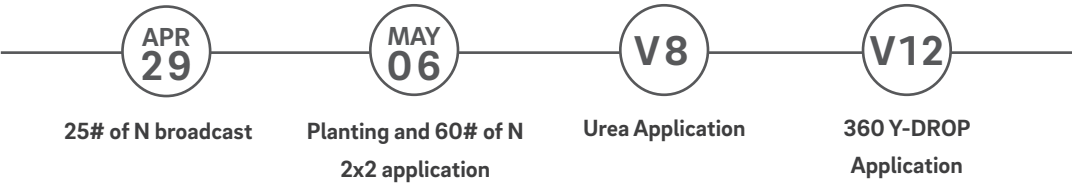
PLACEMENT MATTERS

Tazewell County, Illinois

DETAILS

The grower compared in-season nitrogen application of urea with spinner box at V8 vs. 360 Y-DROP at V12. Consistent application rates were used, with the only changes being in timing, product, and application method.

NOTE: This year, the environment was extremely favorable for mineralization of organic matter, leaving a lot of natural N readily available to the crop. Because of this, no application was made at V4 or V6 stages.



METHODS

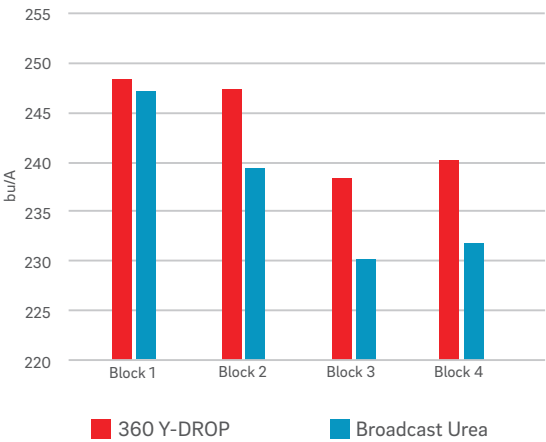
UREA APPLICATION

- + V8 measurement: 15ppm of nitrates. 125# of N was applied in the form of urea with urease inhibitor.
- NOTE:** 2 days after application, the area received 0.2" of rain favoring incorporation of Urea into soil, and reducing volatilization (loss of N into atmosphere).

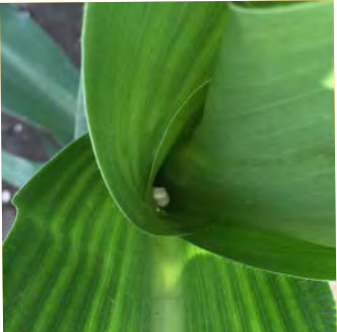
360 Y-DROP APPLICATION

- + V12 measurement: 12ppm. 125# of N in the form of UAN with urease inhibitor was applied.

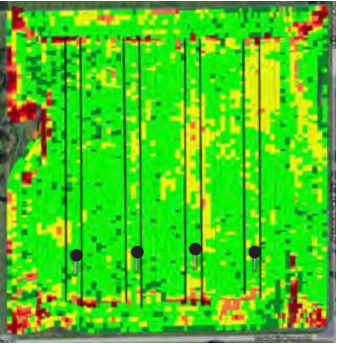
RESULTS



Distribution of urea can be erratic due to size of granular, wind, and other variables.



Granules inside the whorl caused leaf burning.



Denotes Urea Strip

KEY TAKEAWAYS



Placement with 360 Y-DROP was consistently next to the plant with no injury. Urea distribution was inconsistent with limited amount at base.



Mineralization and a high clearance applicator allowed us to push application with 360 Y-DROP back to V12.

5
bu/A

360 Y-DROP showed a 5-bushel advantage, even with the high mineralization this year.



Adel, Iowa

DETAILS

The whole field received 160 lbs. N in the fall (NH3) and 50 lbs. spring W&F. The grower left a check strip, but on each side of the check strip he applied 50 units of nitrogen. On one side the in season pass was made via 360 Y-DROP at V10 and the other was top dress urea at V8.

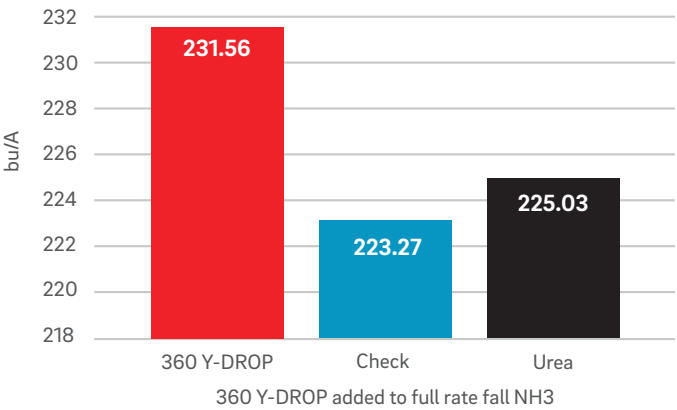
There was a yield advantage to both applications, however the Urea application did not pay for itself as the 360 Y-DROP pass did. Placement of nutrients matters in this plot. (Tests conducted by Agrivision)

METHODS

- 1 Fall NH3 160 lbs + 50 lbs W&F
- 2 50 lbs. applied with 360 Y-Drop and Urea

ACHESON

Rx	Yield	ROI for N
360 Y-DROP	231.56	\$704.66
Check	223.27	\$698.15
Urea	225.03	\$684.31



360 Y-DROP added to full rate fall NH3

KEY TAKEAWAYS

6
bu/A

Placement of N with 360 Y-DROP resulted in an average of an additional 6 bu/A over Urea.



Split application of N using a base plus approach resulted in more yield than the traditional one-and-done approach.



Measuring nitrate levels in season is important to improve profitability.

Grimes, Iowa

DETAILS

In both plots the grower applied 150 lbs. of fall NH3. Check strips were left and compared to a 360 Y-DROP rate of 60 lbs. at V10. Both farms saw a phenomenal amount of mineralization, but 360 Y-DROP still showed a yield response in both applications. (Tests conducted by Agrivision)

METHODS

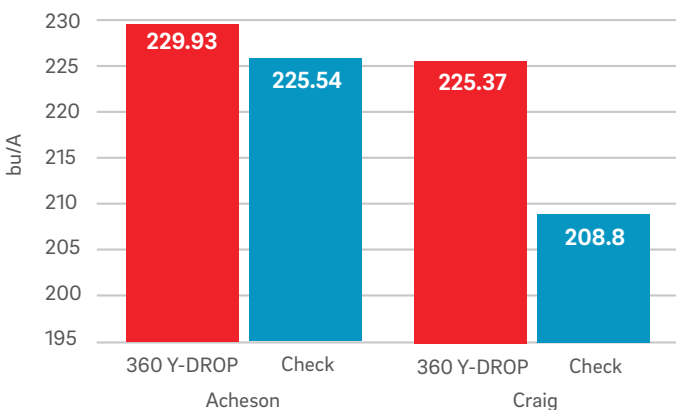
- 1 Usually Fall applied one-and-done NH3 150 lbs
- 2 60 lbs. applied with 360 Y-Drop

ACHESON

Rx	Yield	ROI for N	Difference
360 Y-DROP	229.93	\$710.26	\$11.64
Check	225.54	\$721.89	

CRAIG

Rx	Yield	ROI for N	Difference
360 Y-DROP	225.37	\$694.30	\$31.00
Check	208.8	\$663.30	



Acheson

Craig



COVERAGE MATTERS

For optimum pest control, you have to hit the target. For fungicides, that means reaching the top and bottom of the ear leaf. For insecticides, it means getting deep into the canopy and the undersides of the leaves – where the pests live. Those are difficult areas for aerial applicators to hit. Look at the coverage differences on the bottom of the ear leaf between 360 UNDERCOVER (left) and aerial application.



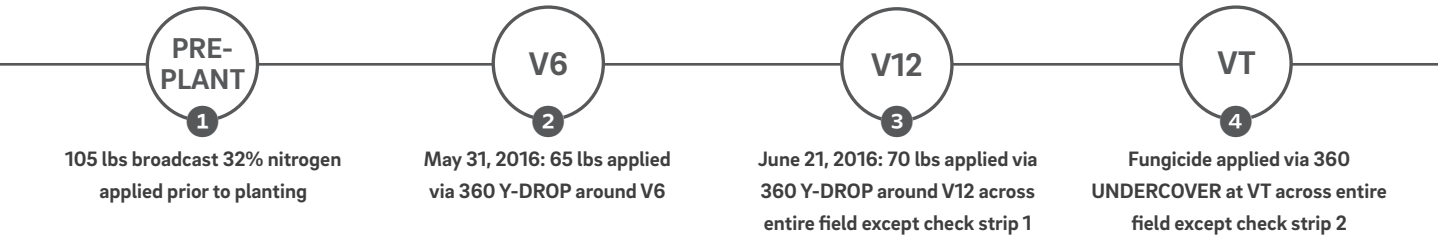
COVERAGE MATTERS



Philo, Illinois

DETAILS

The grower, Steve Hettinger, left two check strips in the test field. The first strip measured the value received from applying nitrogen during the rapid growth period of the corn plant, at V12 via 360 Y-DROP . The second check strip was left to learn how 360 UNDERCOVER affected plant health with fungicide at VT.

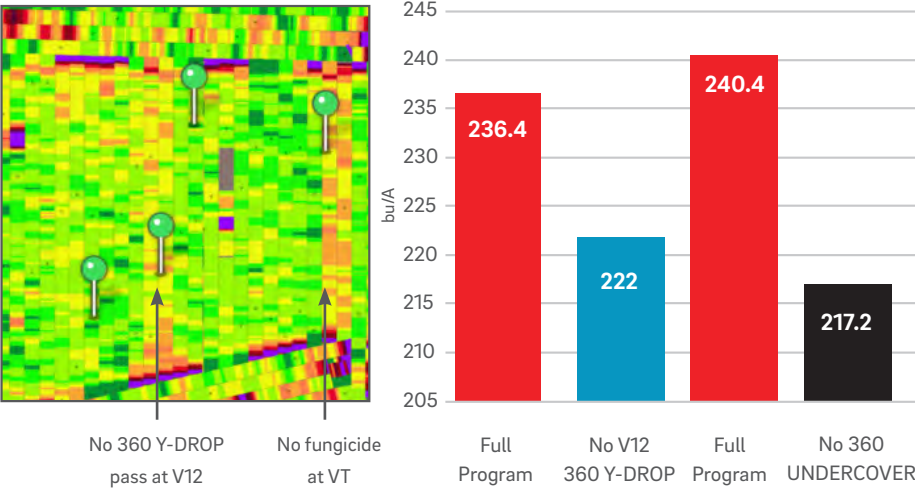


METHODS

- FULL PROGRAM
 - 1 105 lbs broadcast 32% applied
 - 2 V6: 65 lbs N applied via 360 Y-DROP
 - 3 V12: 70 lbs N applied via 360 Y-DROP
 - 4 VT: Fungicide applied via 360 UNDERCOVER
- CHECK STRIP 1
 - 1 105 lbs broadcast 32% applied
 - 2 V6: 65 lbs N applied via 360 Y-DROP
 - NO V12 NITROGEN APPLICATION
 - 4 VT: Fungicide applied via 360 UNDERCOVER
- CHECK STRIP 2
 - 1 105 lbs broadcast 32% applied
 - 2 V6: 65 lbs N applied via 360 Y-DROP
 - 3 V12: 70 lbs N applied via 360 Y-DROP
 - NO VT FUNGICIDE APPLICATION

RESULTS

The grower, Steve Hettinger, saw an 15-20 bu/A advantage with the full program of 360 Y-DROP and 360 UNDERCOVER.



Tremont, Illinois

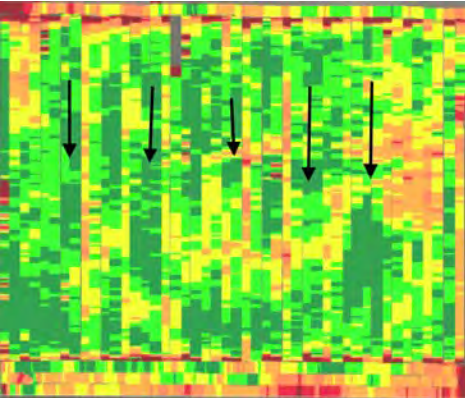
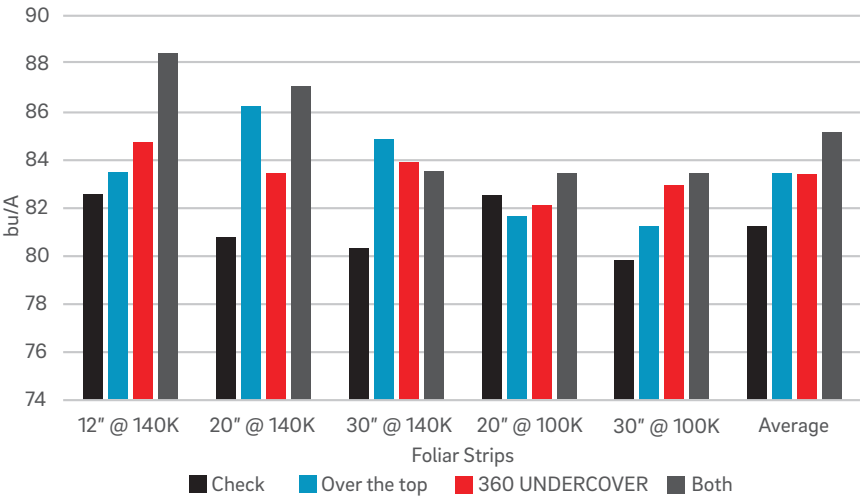
DETAILS

The grower used 360 UNDERCOVER on a 60 ft. Miller system. This soybean field had multiple row spacings (12",20",30") and populations (100,000 and 140,000) to study application effects in multiple management strategies. Insecticide, fungicide, and a foliar fertilizer containing Mn,Zn, and S was applied. A check strip was left in each row spacing and each population. Strips included 360 UNDERCOVER in the canopy, above the canopy with the regular spray boom, and a combination of both in and above the canopy.

METHODS

- The field was set in blocks with four application strips in each.
- Blocks started from the west:
 - + 12" @ 140,000
 - + 20" @ 140,000
 - + 30" @ 140,000
 - + 20" @ 100,000
 - + 30" @ 100,000

RESULTS



Arrows point to above and below applications with 360 UNDERCOVER.

KEY TAKEAWAYS

Additional fungicide and nitrogen application proved that each application was significant in optimizing yield.

15-20
bu/A

An additional application with 360 Y-DROP or 360 UNDERCOVER resulted in a 15 to 20 bushels per acre gain.

No single variable helps a grower optimize yield within the field; it is a systems approach.

KEY TAKEAWAYS

Spraying both in the canopy with the 360 UNDERCOVER and from the top from the sprayer boom resulted in the best coverage.

3.9
bu/A

Coverage matters - the best coverage resulted in the top yields, an average of 3.9 bu/A more than no coverage.

In-canopy application with 360 UNDERCOVER allowed for optimal disease control especially this year for the stem rots in central Illinois.

COVERAGE MATTERS



Danville, Illinois

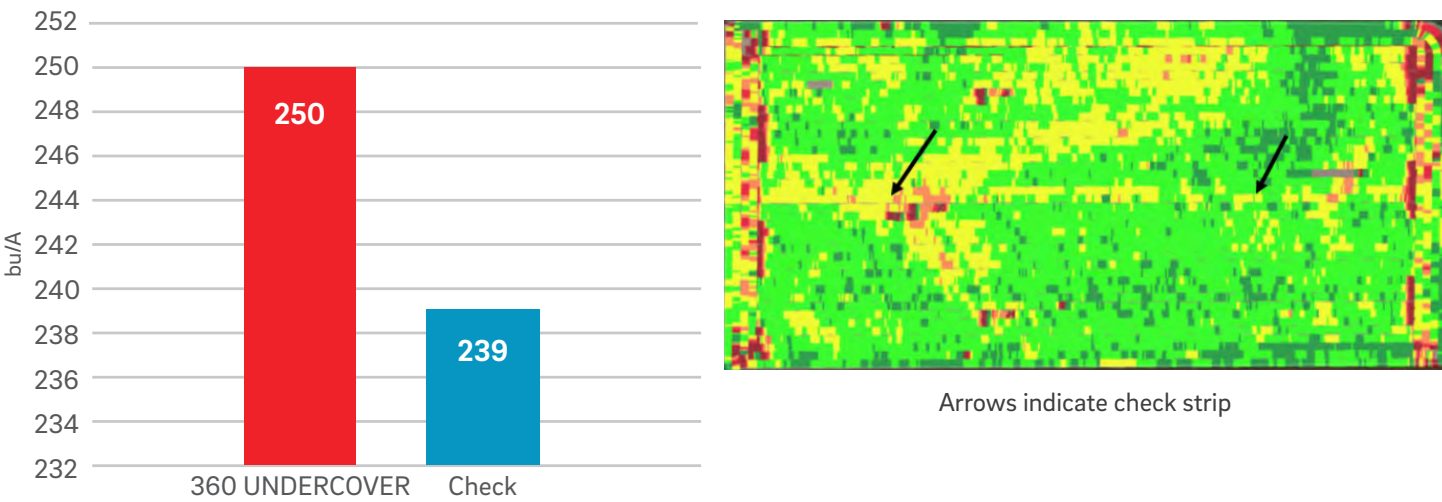
DETAILS

On this farm, the nitrogen program included 120 lbs pre-plant/incorporated + 75 lbs applied via 360 Y-DROP so nitrogen was not a limiting factor. The grower, Mark Shortz, used a Hagie STS and 360 UNDERCOVER to apply Headline Amp at brown silk (R1) and a check strip was left through the middle of the field.

METHODS

- Headline Amp applied via 360 UNDERCOVER at R1
- Check strip left through the middle of the field

RESULTS



Moweaqua, Illinois

DETAILS

On these farms, the grower, Aaron Downs, used a Hagie equipped with 360 UNDERCOVER to apply Headline Amp fungicide in Corn at VT and Priaxor in Soybeans at R2. Check strips were left within each field to study how plant health affects crop yields.

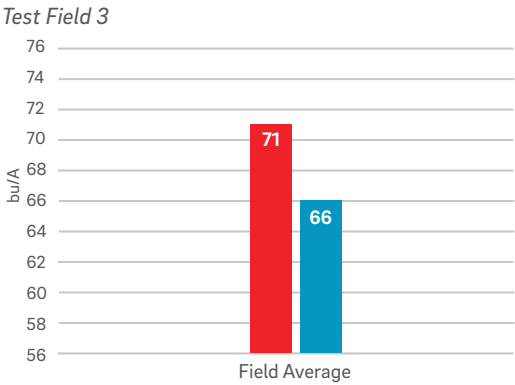
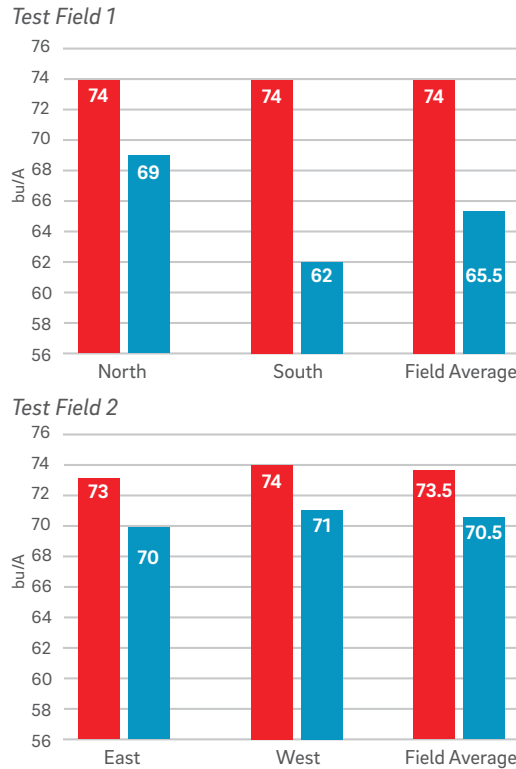
METHODS

- Corn Field: Headline Amp 12 oz/A applied via 360 UNDERCOVER at VT
- Soybean Fields: Priaxor 4 oz/A applied via 360 UNDERCOVER at R2

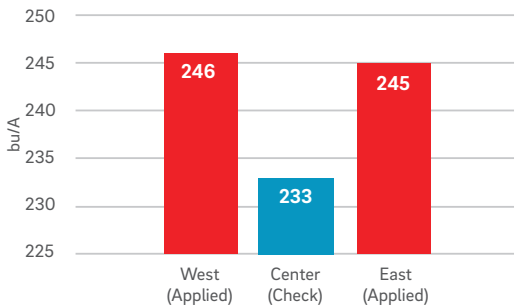
RESULTS

Applied Check

SOYBEANS



CORN



KEY TAKEAWAYS

Applying fungicide via 360 UNDERCOVER prevents disease from spreading to the upper canopy.

11 bu/A

Crop protected with fungicide produced an average of an additional 11 bu/A.

Return on investment was about \$10 per acre.

KEY TAKEAWAYS

Even when disease wasn't present in soybean fields, an application resulted in an increase in pod and grain fill.

360 UNDERCOVER was able to spray into the canopy and knock out the progression of grey leaf spot from the lower canopy into the upper canopy.

North Central Research Station - 2016

AGROLIQUID®

NITROGEN METHOD OF APPLICATION COMPARISON

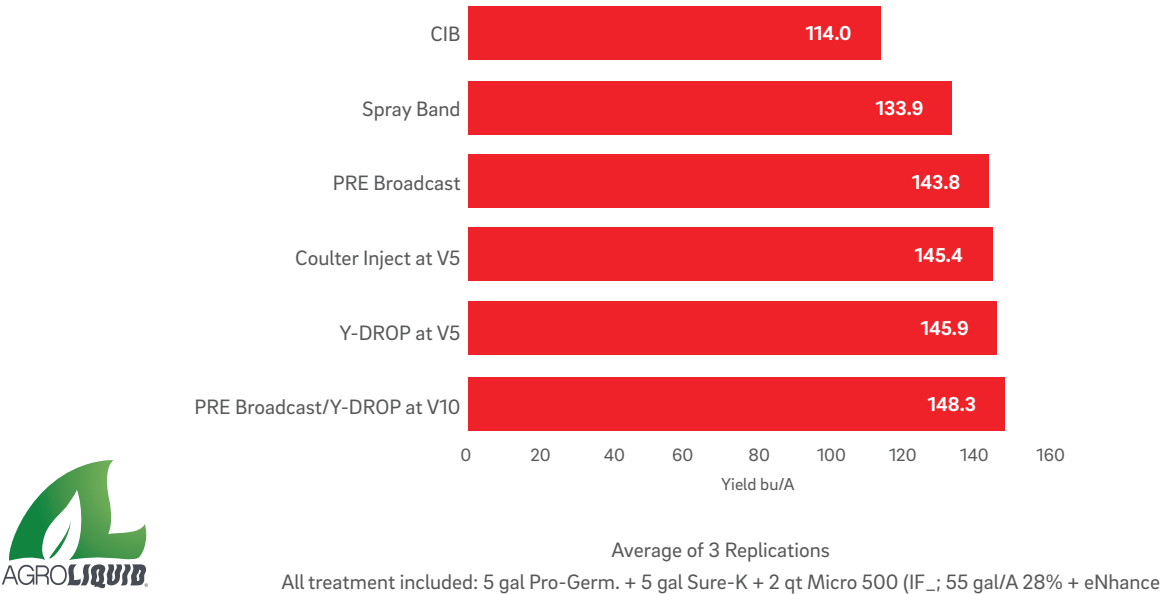
Stephanie Zelinko | Field Agronomy Research Manager



RESULTS

Product	2015	2016	Average
Pre-Emergence	125.3	136.0	130.7
Sidedress at V5	133.7	148.2	141.0
1/3 PRE; 2/3 SD V5	128.5	141.4	135.0
1/3 PRE; 2/3 YD V5	141.4	154.9	148.2
1/3: PRE; SD V5; SD V10	128.8	148.7	138.8
1/3: PRE; SD V5; YD V10	130.7	133.8	132.3

NITROGEN METHODS OF APPLICATION COMPARISON



AGROLIQUID®

FOLIAR APPLICATIONS ON CORN AT VT

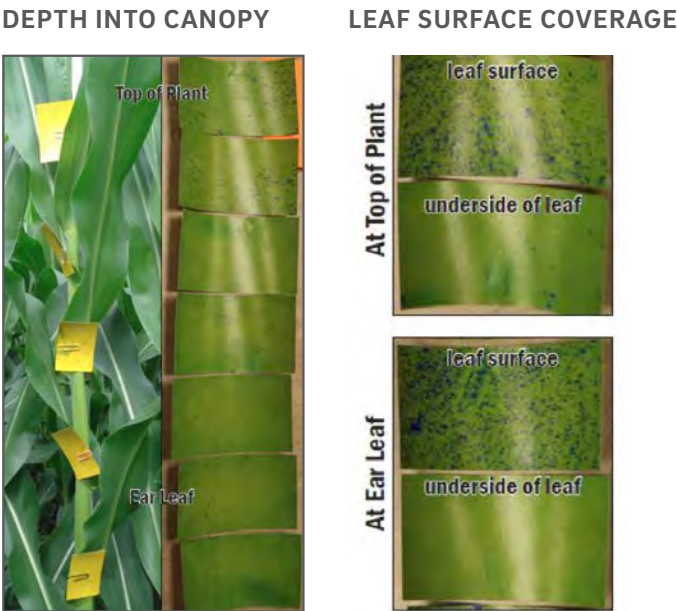
Stephanie Zelinko | Field Agronomy Research Manager

DETAILS

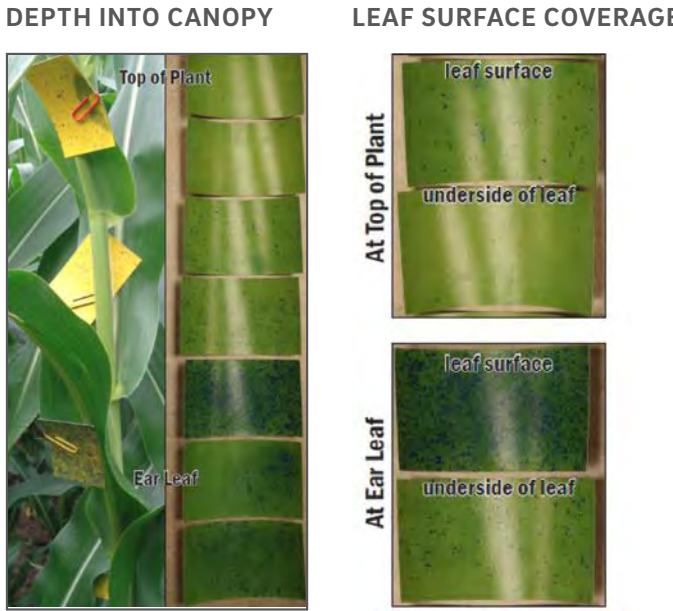
Water sensitive spray paper was placed within the corn canopy to evaluate (1) how far into the canopy sprayed product penetrated and (2) how much of the leaf’s surfaces the applied product covered. Spray paper was placed vertically on the stalk of the corn plant from the top to just below the ear leaf to determine penetration. Additionally two pieces of the spray paper were placed on the center of the leaf, one on the top leaf surface and one on the underside, to observe spray coverage.

Applications using three nozzle types were made: flat fan, Turbo TwinJet® and 360 UNDERCOVER® Turbo TeeJet nozzles. A total of 10 gal/A at 40 psi was applied.

FLAT FAN NOZZLES



360 UNDERCOVER



RESULTS

V5 Treatments	2015	2016	Average
No Foliar Application	194.7	161.4	178.1
2 gal ferti-Rain (BC)	201.2	165.3	183.3
2 gal ferti-Rain (UC)	212.9	167.5	190.2
2 gal fR+ Headline (BC)	210.5	171.9	191.2
2 gal fR+ Headline (UC)	218.7	171.1	194.9



Kentucky, Central Illinois, Ohio

2016 BECK'S PRACTICAL FARM RESEARCH

NITROGEN PLACEMENT STUDY - SIDEDRESS

PURPOSE

To evaluate a traditional sidedress application versus a 360 Y-DROP at the V5 growth stage and their effect on yield.

2016 RESULTS

V5 Treatments	Percent Moisture	bu/A	bu/A Difference
Control: Sidedress Applicator	20.6	216.5	--
360 Y-DROP	20.3	222.0	+5.5

Individual results may vary

The multi-year and multi-location nitrogen (N) timing study has shown that split applications of N pay. This study takes it a step further by testing to see if there is a difference in where in-season N is placed. The 360 Y-DROP® averaged 5.5 bu/A more than the traditional sidedress applicator. The 360 Y-DROP had the edge at all three locations where this study was conducted. The largest increase was Central IL at 14.2 bu./A. They also had the highest yield with 264 bu./A. in this study. Nitrogen can be applied within 2 to 3 in. of the stalk base with the 360 Y-DROP as compared to a traditional sidedress applicator which places it approximately 15 in. from the stalk base. This data shows that placement of in-season N affects yield. I recommend optimizing your in-season applications of N by placing it as close to the base of the stalk as possible.

Greg Shepherd | Beck's Field Agronomist



Hegworth, Illinois

CROPTech CONSULTING INC.

MULTIPLE 360 Y-DROP PLOTS

DETAILS

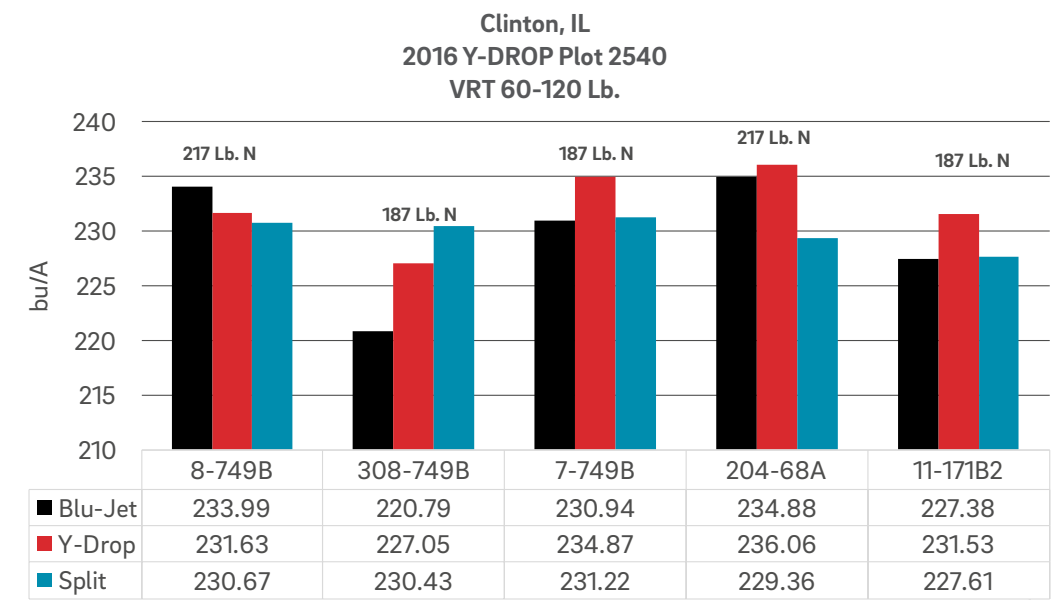
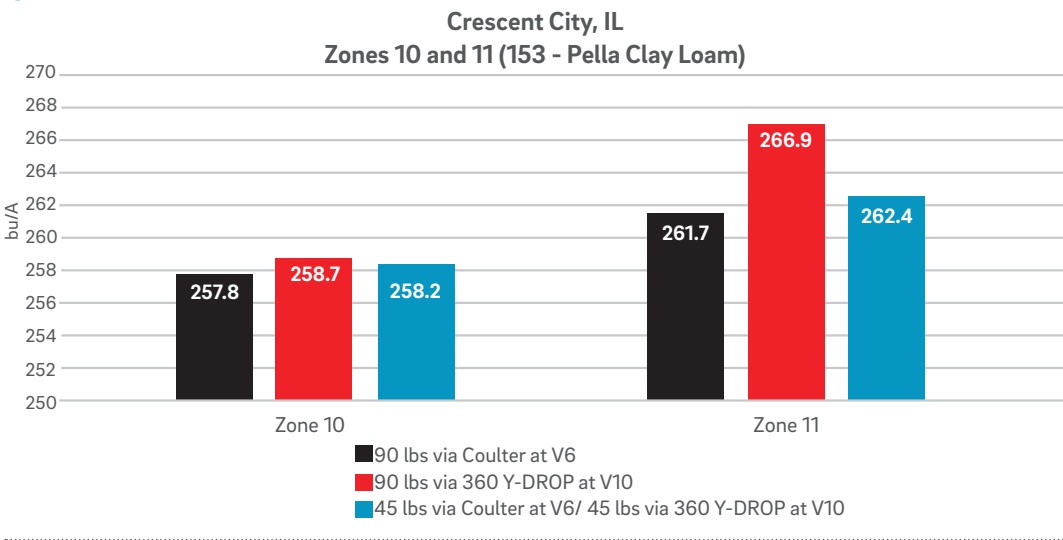
110 lb N Pre-plant, 30 lb N Starter followed by one of three of the following applications:

Strip One: 90 lbs via Coulter Sidedress at V6

Strip Two: 90 lbs via 360 Y-DROP at V10

Strip Three: 45 lbs via Coulter at V6 followed by 45 lbs via 360 Y-DROP at V10

2016 RESULTS



South Farms -Bloomington, Illinois

FS MIFIELD
FOCUS TRIAL 360 Y-DROP

DETAILS

The trial compared nitrogen timings and placements to the base treatment of 27# of N (DAP), 150# N PPI (UAN), and 60# N (Urea) at V8. 360 Y-DROP UAN applications were made at 60# of N to have a consistent 237# of total nitrogen between trials.

Foliar treatments looked at variables of plant health with fungicide, insecticide, and micro-nutrients utilizing advanced placement of 360 UNDERCOVER.

2016 RESULTS

Trial	Percent Moisture	%	Yield
1	V10 UAN	19.8	239.1
2	V10 UAN + VT Headline Amp and Hero	20.4	242.1
3	V10 UAN + VT Headline Amp, Hero, Boron	20.6	243.6
4	Urea V8	20.0	235.8
5	V10 UAN	19.7	231.7
6	V10 UAN + VT Headline Amp and Hero	20.7	260.8
7	V10 UAN + VT Headline Amp, Hero, Boron	20.9	263.2



"In my opinion the yield gap was a lot larger than the final numbers show. The difference in the overall plant health left an impression. It appeared to be a different hybrid with a longer maturity. We will definitely be interested in exploring more acres with Y-DROP and UNDERCOVER on our farm in the future."

Jeff Lynch
-Grower-



Illinois

UNIVERSITY OF ILLINOIS
¹⁵N 360 Y-DROP 2016 DATA

Credit: Kelsey Griesheim, Dr. Richard L Mulvaney, and Tim Smith at Crop Smith Inc.

DETAILS

360 Yield Center partnered with the University of Illinois using a tracer ion in a nitrogen solution called ¹⁵N to compare uptake efficiencies from various in season nitrogen applications. In this particular study an application of 100 lbs. was broadcast applied prior to planting. When the crop approached V8 all applications of 100 lbs. were made with the ¹⁵N ion tracer incorporated in the UAN solution.

METHODS

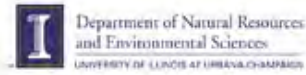
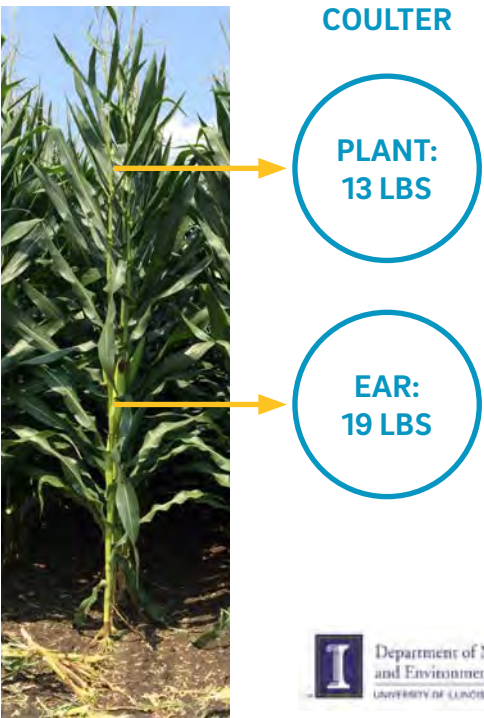
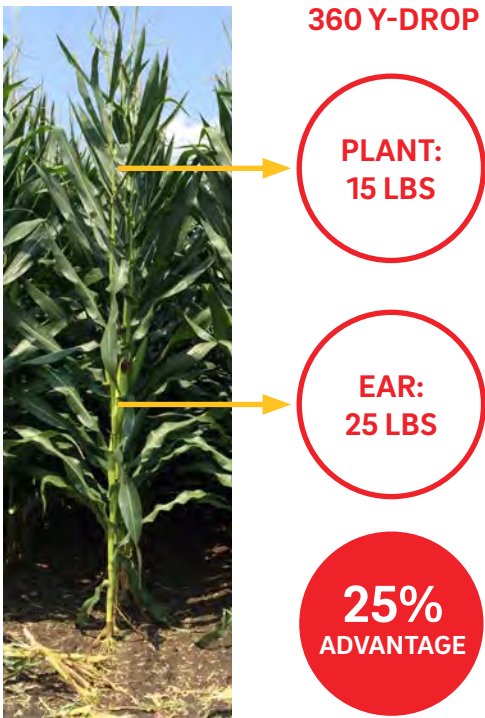
- 1 100 lbs N broadcast pre-plant
- 2 100 lbs ¹⁵N at V8 via one of the three application methods:
 - Treatment 1: 360 Y-DROP every row
 - Treatment 2: 360 Y-DROP every other row
 - Treatment 3: Coulter

This protocol was replicated three times within the plot to verify the results.

2016 RESULTS

Based on efficiencies the 360 Y-DROP (every row) was 11% more efficient at getting N into the plant than 360 Y-DROP every other row and 25% more efficient than coulter.

Percent Recovery of Fertilizer ¹⁵ N					
Treatment Method	Total lbs	Grain	Stover	Total	Loss
360 Y-DROP (every row)	100	25	15	40	
360 Y-DROP Single Hose (every other row)	100	22	13	36	-11%
Coulter (center row)	100	19	13	32	-25%



Multiple Locations

WINFIELD®
2016 SPLIT NITROGEN APPLICATION RESULTS

TREATMENTS

Rates based on location needs:

Base Rate + Y-Drop at V10-V12

Base Rate + Side-dress at V4 - V5

15 LOCATIONS

Rates based on location needs:

2 @ 80

1 @ 90

6 @ 100

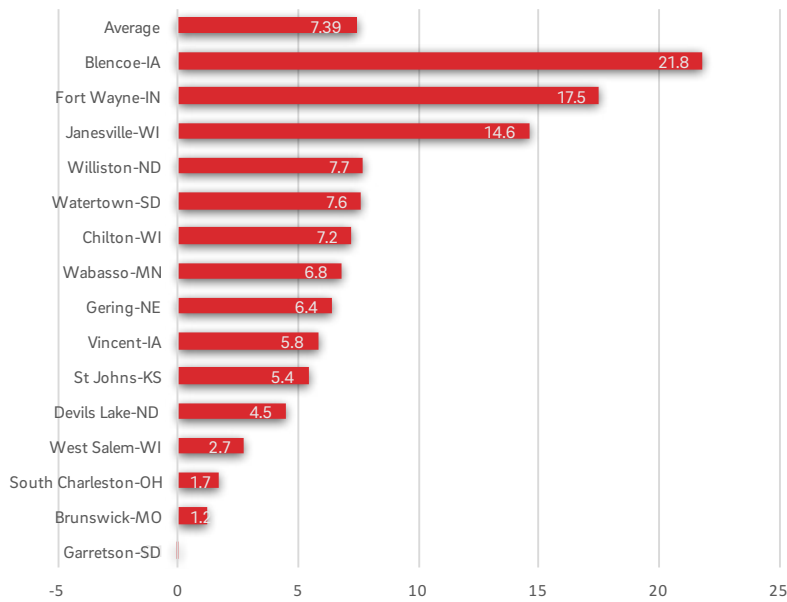
6 @ 110

2016 RESULTS

7.4 bu/A advantage to the V10 360 Y-DROP split application

5.5 bu/A response to the V4 Sidedress application

Location response to split N application at V10



2016 Split Nitrogen Application



Illinois

Location	Trial Type	Strip Details	Total N	Yield
Timing				
Brinhurst, IL	360 Y-DROP vs. Pre-plant and Planter	Pre-plant 180 lbs Anhydrous Ammonia via AA Knife, Planter 75 lbs UAN	255	241.6
		Planter 75 lbs UAN, 105 lbs UAN via 360 Y-DROP	180	230.0
Cumberland County, IL	Sidedress NH3 vs. Sidedress NH3 + 360 Y-DROP	Pre-plant 60 lbs UAN 32% Broadcast, Sidedress 195 lbs Anhydrous Ammonia via AA Knife	255	221.0
		Pre-plant 60 lbs UAN 32% Broadcast, Sidedress 125 lbs Anhydrous Ammonia via AA Knife, 55 lbs UAN 32% via 360 Y-DROP	240	236.0
Philo, IL	Late Season Additional N	Pre-plant 105 lbs UAN 32% Broadcast, 65lbs UAN 32% via 360 Y-DROP at V4-V6, 70 lbs UAN 32% via 360 Y-DROP at V12	240	238.4
		Pre-plant 105 lbs UAN 32% Broadcast, 65lbs UAN 32% via 360 Y-DROP at V4-V6	170	222.0
Tremont, IL	360 Y-DROP V12 vs. 360 Y-DROP VT	Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 125 lbs UAN 32% via 360 Y-DROP at V12	210	254.0
		Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 125 lbs UAN 32% via 360 Y-DROP at VT	210	249.8
Placement				
Bond County, IL	360 Y-DROP vs. Urea	Pre-plant 164 lbs Anhydrous Ammonia and N-serve via AA Knife, 46 lbs Urea Broadcast and Agrotain Ultra stabilizer at V12	210	208.0
		Pre-plant 164 lbs Anhydrous Ammonia and N-serve via AA Knife, 46lbs UAN 28% via 360 Y-DROP at V18	210	213.1
Danville, IL	360 Y-DROP vs. Coulter	Pre-plant 120 lbs UAN Broadcast/Worked in with field finisher, 75 lbs UAN via 360 Y-DROP at V12	195	238.1
		Pre-plant 120 lbs UAN Broadcast/Worked in with field finisher, 75 lbs UAN via Coulter at V12	195	238.3
Morrisonville, IL	360 Y-DROP vs. Coulter	Base Rate 100 lbs N, 110 lbs UAN 32% via Coulter at V4, No Stabilizer	210	241.7
		Base Rate 100 lbs N, 110 lbs UAN 32% via Coulter at V4, Stabilizer	210	245.9
		Base Rate 100 lbs N, 110 lbs UAN 32% via 360 Y-DROP at V12, No Stabilizer	210	246.8
Morrisonville, IL	360 Y-DROP vs. Coulter	Base Rate 100 lbs N, Coulter 110 lbs UAN 32% at V4, No Stabilizer	210	234.1
		Base Rate 100 lbs N, Coulter 110 lbs UAN 32% at V4, Stabilizer	210	232.9
		Base Rate 100 lbs N, 360 Y-DROP 110 lbs UAN 32% at V12, No Stabilizer	210	235.7
Northern, IL	360 Y-DROP vs. Coulter	53 lbs N + 8 lbs S Planter, 65 lbs UAN + 8 lbs S via 360 Y-DROP at V6, 65 lbs UAN + 8 lbs S via 360 Y-DROP at V12	183 lbs N 24 lbs S	231.9
		53 lbs N + 8 lbs S Planter, 65 lbs UAN + 8 lbs S via Coulter at V6, 65 lbs UAN + 8 lbs S via 360 Y-DROP at V12,	183 lbs N 24 lbs S	232.9
Northern, IL	360 Y-DROP vs. Coulter	53 lbs N + 8 lbs S Planter, 130 lbs UAN + 16 lbs S via Coulter at V6	183 lbs N 24 lbs S	228.0
		53 lbs N + 8 lbs S Planter, 130 lbs UAN + 16 lbs S via 360 Y-DROP at V6	183 lbs N 24 lbs S	230.2
Tremont, IL	360 Y-DROP vs. Coulter	Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 150 lbs UAN 32% via Coulter at V8	235	273.6
		Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 150 lbs UAN 32% via 360 Y-DROP at V8	235	278.3
Tremont, IL	360 Y-DROP vs. Coulter	Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 150 lbs UAN 32% via 360 Y-DROP at V8	235	274.3
		Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 150 lbs UAN 32% via 360 Coulter at V8	235	271.9
		Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 150 lbs UAN 32% + Limus Stabilizer via 360 Y-DROP at V8	235	272.9
Tremont, IL	360 Y-DROP vs. Urea	Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 125 lbs UAN 32% + Urease Inhibitor via 360 Y-DROP at V12	210	243.5
		Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 125 lbs Urea + Urease Inhibitor Broadcast at V8	210	237.1

EXTENDED FIELD TRIAL DATA

Illinois (continued)

Location	Trial Type	Strip Details	Total N	Yield
Coverage				
Danville, IL	Fungicide via 360 UNDERCOVER vs. No Fungicide Crop = Corn	Headline AMP via 360 UNDERCOVER at R1		250.0
		Check - No Fungicide		239.0
Delevan, IL	Rate and Coverage	Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 150lbs UAN 32% via 360 Y-DROP at V10, 16 GPA Headline AMP via 360 UNDERCOVER at VT	235	271.5
		Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 100lbs UAN 32% via 360 Y-DROP at V10, 50 lbs UAN & 16 GPA Headline AMP via 360 Y-DROP and 360 UNDERCOVER at VT	235	273.3
Lenzburg, IL	360 UNDERCOVER vs. Over the top (OTT) Crop = Corn	Pass 1: Hybrid: W7506DGRIB; 20 GPA Trivapro 360 UNDERCOVER and OTT, 17.3 Moisture		194.0
		Pass 2: Hybrid: W7506DGRIB; 20 GPA Trivapro OTT, 17.1 Moisture		184.3
Lenzburg, IL	360 UNDERCOVER vs. Over the top (OTT) Crop = Corn	Pass 1: Hybrid: W7456RIB; 20 GPA Trivapro 360 UNDERCOVER and OTT, 17.2 Moisture		196.2
		Pass 2: Hybrid: W7456RIB; 20 GPA Trivapro OTT, 17.8 Moisture		194.1
Lenzburg, IL	360 UNDERCOVER vs. Over the top (OTT) Crop = Corn	Pass 1: Hybrid: W7696RIB; 20 GPA Trivapro 360 UNDERCOVER and OTT, 16.4 Moisture		206.4
		Pass 2: Hybrid: W7696RIB; 20 GPA Trivapro OTT, 16.8 Moisture		213.8
Moweaqua, IL	360 UNDERCOVER vs. Check Crop = Corn	12 oz/ac Headline AMP via 360 UNDERCOVER		246.0
		Check		233.0
		12 oz/ac Headline AMP via 360 UNDERCOVER		245.0
Moweaqua, IL	360 UNDERCOVER vs. Check Crop = Corn	12 oz/ac Headline AMP via 360 UNDERCOVER		234.0
		Check		224.0
Moweaqua, IL	360 UNDERCOVER vs. Check Crop = Soybeans	Check		70.5
		4 oz/ac Priaxor via 360 UNDERCOVER		73.5
Moweaqua, IL	360 UNDERCOVER vs. Check Crop = Soybeans	Check		65.5
		4 oz/ac Priaxor via 360 UNDERCOVER		74.0
Moweaqua, IL	360 UNDERCOVER vs. Check Crop = Soybeans	Check		66.0
		4 oz/ac Priaxor via 360 UNDERCOVER		71.0
New Athens, IL	360 UNDERCOVER vs. Over the top (OTT) Crop = Corn	Hybrid: W7506DGRIB; 20 GPA Trivapro via 360 UNDERCOVER and OTT		203.8
		Hybrid: W7506DGRIB; 20 GPA Trivapro via OTT		209.1
		Hybrid: W7456RIB; 20 GPA Trivapro via OTT		209.1
New Athens, IL	Trivapro vs. No Fungicide Crop = Corn	Hybrid: W7506DGRIB ; 20 GPA Trivapro, 14.9 Moisture		189.6
		Hybrid: W7506DGRIB; No Fungicide, 14.5 Moisture		173.3
Philo, IL	Fungicide via 360 UNDERCOVER vs. No Fungicide Crop = Corn	Fungicide via 360 UNDERCOVER		238.4
		Check - No Fungicide		217.2
San Jose, IL	Fungicide via 360 UNDERCOVER vs. No Fungicide Crop = Corn	Check - No Fungicide		251.6
		16 GPA Headline AMP via 360 UNDERCOVER at R1		258.4
Tremont, IL	360 UNDERCOVER vs. Over the top (OTT) Crop = Soybeans	Check		81.3
		20 GPA Priaxor, Hero, Smart Trio OTT at R2		83.5
		20 GPA Priaxor, Hero, Smart Trio via 360 UNDERCOVER at R2		83.5
		20 GPA Priaxor, Hero, Smart Trio via 360 UNDERCOVER and OTT at R2		85.2

EXTENDED FIELD TRIAL DATA

Illinois (continued)

Location	Trial Type	Strip Details	Total N	Yield
Other				
Normal, IL	Potassium at Sidedress	125 lbs UAN 32% VIA 360 Y-DROP at V12	225	255.4
		125 lbs UAN 32% and 3 gal KTS via 360 Y-DROP at V12	225	259.3
Delevan, IL	Rate	Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 100lbs UAN 32% via 360 Y-DROP at V10	185	255.6
		Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 150lbs UAN 32% via 360 Y-DROP at V10	235	265.2
Tremont, IL	Rate	Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 150 lbs UAN 32% via 360 Y-DROP at V12	235	277.9
		Pre-plant 25 lbs UAN 32% Broadcast, 60 lbs UAN Planter, 125 lbs UAN 32% via 360 Y-DROP at V12	210	279.3

Indiana

Location	Trial Type	Strip Details	Total N	Yield
Timing				
Indiana	Late Season Additional N	21 lbs AMS Broadcast Fall 2015, 170 lbs Anhydrous Ammonia via AA Knife Sidedress 5/31/2016	191	210
		21 lbs AMS Broadcast Fall 2015, 170 lbs Anhydrous Ammonia via AA Knife Sidedress 5/31/2016, 60 lbs UAN 28% via 360 Y-DROP at VT	251	214
Indiana	360 Y-DROP vs. One-and-Done	165 lbs Anhydrous Ammonia via AA Knife on 6/3/2016		226.9
		165 lbs UAN via 360 Y-DROP on 6/9/2016		227.8
Indiana	360 Y-DROP vs. One-and-Done	120 lbs Anhydrous Ammonia via AA Knife in November 2015, 180 lbs UAN via 360 Y-DROP on 6/9/2016		268.8
		180 lbs Anhydrous Ammonia via AA Knife in November 2015		264.6
		180 lbs UAN via 360 Y-DROP on 6/9/2016		260.0
Franklin, IN	Anhydrous Sidedress and UAN Sidedress vs. Combo Sidedress + Late Season 360 Y-DROP	135 lbs UAN 28% via Coulter at V6	135	159.3
		135 lbs Anhydrous Ammonia via AA Knife at V6	135	159.0
		65 lbs UAN 28% via Coulter at V6, 60 lbs UAN 28% via 360 Y-DROP at VT	125	159.6
		65 lbs Anhydrous Ammonia via AA Knife at V6, 60 lbs UAN 28% via 360 Y-DROP at VT	125	159.6
Placement				
Larwill, IN	360 Y-DROP vs. Drop	Pre-plant 100-145 lbs Manure, UAN via 360 Y-DROP at V10		170.2
		Pre-plant 100-145 lbs Manure, UAN via Drop at V10		167.1
Milford, IN	360 Y-DROP vs. Coulter	45 GPA UAN 28% + ThioSol via Coulter at V6		186.5
		VR 30-40 GPA UAN 28% + ThioSol via 360 Y-DROP at V10		182.5

EXTENDED FIELD TRIAL DATA

Iowa

Location	Trial Type	Strip Details	Total N	Yield
Timing				
Grimes, IA	360 Y-DROP vs. One-and-Done	150 lbs Anhydrous Ammonia via AA Knife in November 2015, 360 Y-DROP at V10		225.4
		150 lbs Anhydrous Ammonia via AA Knife in November 2015		208.8
Manning, IA	360 Y-DROP vs. One-and-Done	Pre-plant 100 lbs Anhydrous Ammonia + N-serve via AA Knife, 100 lbs UAN 32% via 360 Y-DROP at V12	200	238.4
		Pre-plant 150 lbs Anhydrous Ammonia + N-serve via AA Knife, 50 lbs UAN 32% via 360 Y-DROP at V12	200	235.5
		Pre-plant 200 lbs Anhydrous Ammonia + N-serve via AA Knife	200	227.0
Placement				
Adel, IA	360 Y-DROP vs. Urea	UAN via 360 Y-DROP		230.4
		Urea Broadcast		222.5
Adel, IA	360 Y-DROP vs. Urea	160 lbs Anhydrous Ammonia via AA Knife Fall 2015, Pre-plant 32 lbs UAN Broadcast, 50 lbs UAN via 360 Y-DROP	242	231.6
		160 lbs Anhydrous Ammonia via AA Knife Fall 2015, Pre-plant 32 lbs UAN Broadcast	192	223.3
		160 lbs Anhydrous Ammonia via AA Knife Fall 2015, Pre-plant 32 lbs UAN Broadcast, 50 lbs Urea Broadcast	242	225.0
Boone, IA	360 Y-DROP vs Drop	Pre-plant 50 lbs Broadcast, 50 lbs Field Cultivator, 100 lbs UAN 32% via 360 Y-DROP on 6/30/2016	200	221.2
		Pre-plant 50 lbs Broadcast, 50 lbs Field Cultivator, 100 lbs UAN 32% via Drop on 6/30/2016	200	214.5
		Pre-plant 50 lbs Broadcast, 50 lbs Field Cultivator, 70 lbs UAN 32% via 360 Y-DROP on 6/30/2016	170	216.5
Lake Mills, IA	360 Y-DROP vs. Coulter	115 lbs Pre-plant, 100 lbs UAN via Coulter	215	237.3
		115 lbs Pre-plant, 100 lbs UAN via 360 Y-DROP	215	241.8
		115 lbs Pre-plant, 50 lbs UAN via 360 Y-DROP, 50 lbs UAN via 360 Y-DROP	215	236.0
Rake, IA	360 Y-DROP vs. Coulter	95 lbs UAN 32% via 360 Y-DROP at V10		204.4
		95 lbs UAN 32% via Coulter at V5		208.8
Rake, IA	360 Y-DROP vs. Coulter	99 lbs UAN 32% via 360 Y-DROP at V10		252.5
		99 lbs UAN 32% via Coulter at V5		248.8
Rake, IA	360 Y-DROP vs. Coulter	53 lbs UAN 32% via 360 Y-DROP at V10		197.8
		53 lbs UAN 32% via Coulter at V5		192.5
Rake, IA	360 Y-DROP vs. Coulter	122 lbs UAN 32% via 360 Y-DROP at V10		217.3
		122 lbs UAN 32% via Coulter at V5		218.5
Rake, IA	360 Y-DROP vs. Coulter	96 lbs UAN 32% via 360 Y-DROP at V10		217.0
		96 lbs UAN 32% via Coulter at V5		216.8
Coverage				
Rake, IA	360 UNDERCOVER vs. Over the top (OTT); Crop = Corn	10 oz Headline AMP + Sniper via 360 UNDERCOVER		218.5
		10 oz Headline AMP + Sniper OTT		214.9
Rake, IA	360 UNDERCOVER vs. Over the top (OTT); Crop = Corn	10 oz Headline AMP via 360 UNDERCOVER		235.1
		10 oz Headline AMP OTT		233.7
Rake, IA	360 UNDERCOVER vs. Over the top (OTT); Crop = Corn	10 oz Headline AMP via 360 UNDERCOVER		219.4
		10 oz Headline AMP OTT		221.2
Rake, IA	360 UNDERCOVER vs. Over the top (OTT); Crop = Corn	10 oz Headline AMP via 360 UNDERCOVER		233.1
		10 oz Headline AMP OTT		234.1

EXTENDED FIELD TRIAL DATA

Kansas

Location	Trial Type	Strip Details	Total N	Yield
Timing				
Highland, KS	360 Y-DROP vs. One-and-Done	200 lbs Anhydrous Ammonia via AA Knife, 60 lbs UAN 28% via 360 Y-DROP on 6/22/2016	260	248.6
		200 lbs Anhydrous Ammonia via AA Knife	200	254.4
Highland, KS	360 Y-DROP vs. One-and-Done	100 lbs Anhydrous Ammonia via AA Knife, 60 lbs UAN 28% via 360 Y-DROP on 6/22/2016	160	249.6
		100 lbs Anhydrous Ammonia via AA Knife	100	239.7

Kentucky

Location	Trial Type	Strip Details	Total N	Yield
Coverage				
Shelby County, KY	360 UNDERCOVER vs. Check Crop = Corn	Check		202.0
		360 UNDERCOVER		224.0

Michigan

Location	Trial Type	Strip Details	Total N	Yield
Placement				
Waldron, MI	360 Y-DROP vs. Drop	Pre-plant 15 lbs AMS Broadcast, 60 lbs UAN 28% Broadcast Pre-emergence, 105 lbs UAN 28% + ATS via 360 Y-DROP at V9	180	219.6
		Pre-plant 15 lbs AMS Broadcast, 60 lbs UAN 28% Broadcast Pre-emergence, 105 lbs UAN 28% + ATS via Drop at V9	180	213.1
Waldron, MI	360 Y-DROP vs. Drop	Pre-plant 15 lbs AMS Broadcast, 60 lbs UAN 28% Broadcast Pre-emergence, 105 lbs UAN 28% + ATS via 360 Y-DROP at V9	180	217.5
		Pre-plant 15 lbs AMS Broadcast, 60 lbs UAN 28% Broadcast Pre-emergence, 105 lbs UAN 28% + ATS via Drop at V9	180	212.1
Coverage				
Michigan	360 UNDERCOVER vs. Over the top (OTT) Crop = Corn	Check		164.4
		2 gal ferti-Rain OTT		165.3
		2 gal ferti-Rain via 360 UNDERCOVER		167.5
		2 gal ferti-Rain OTT + Headline		171.9
		2 gal ferti-Rain via 360 UNDERCOVER + Headline		171.1

North Dakota

Location	Trial Type	Strip Details	Total N	Yield
Timing				
Enderlin, ND	Late Season Additional N	135 lbs Dry 28-14-12 Broadcast 5/2/2016, 35 lbs 2x2 via Planter, 35 lbs UAN 28% via 360 Y-DROP at V8	205	224.0
		135 lbs Dry 28-14-12 Broadcast 5/2/2016, 35 lbs 2x2 via Planter, Check	170	182.0

EXTENDED FIELD TRIAL DATA

Ohio

Location	Trial Type	Strip Details	Total N	Yield
Placement				
Bradner, OH	360 Y-DROP vs. Coulter	99 lbs UAN 28% via 360 Y-DROP at V6		176.8
		99 lbs UAN 28% via Coulter at V6		187.2
Bradner, OH	360 Y-DROP vs. Coulter	93 lbs UAN 28% via 360 Y-DROP at V6		181.7
		93 lbs UAN 28% via Coulter at V6		171.4
Bradner, OH	360 Y-DROP vs. Coulter	95 lbs UAN 28% via 360 Y-DROP at V6		191.5
		95 lbs UAN 28% via Coulter at V6		184.8

Ontario

Location	Trial Type	Strip Details	Total N	Yield
Timing				
Caledonia, ON	Later Season N Application	105 lbs UAN 28% Broadcast Pre-plant, 69 lbs Dry 2x2 Planter	174	162.0
		69 lbs Dry 2x2 Planter, 60 lbs UAN 28% via 360 Y-DROP at V8	129	168.0
Placement				
Ontario	360 Y-DROP vs. Urea	115 lbs Urea Broadcast Spring, 90 lbs UAN via 360 Y-DROP	205	134.3
		207 lbs Urea Broadcast Spring	207	132.7
		115 lbs Urea Broadcast Spring	115	124.9
Harriston, ON	360 Y-DROP vs. Drop	90 lbs UAN 32% via 360 Y-DROP		169.3
		90 lbs UAN 32% via Drop		154.5
Ottawa, ON	360 Y-DROP vs. Coulter	25 lbs via Planter	25	147.7
		25 lbs via Planter, 50 lbs UAN via Coulter, 30 lbs via 360 Y-DROP	105	162.2
		25 lbs via Planter, 110 lbs UAN via Coulter	135	165.1
		25 lbs via Planter, 70 lbs UAN via Coulter, 40 lbs via 360 Y-DROP	135	165.6
		25 lbs via Planter, 140 UAN via Coulter	165	165.3
		25 lbs via Planter, 110 UAN via Coulter, 30 lbs via 360 Y-DROP	165	168.2
Coverage				
Amhersturg, ON	360 UNDERCOVER vs. Over the top (OTT) Crop = Corn	Priaxor via 360 UNDERCOVER, 21.1 Moisture		208.1
		Priaxor OTT, 22.3 Moisture		208.2
		Check - No Fungicide, 19.3 Moisture		200.2
Amhersturg, ON	Headline AMP OTT vs. No Fungicide Crop = Corn	Headline AMP OTT, 22.9 Moisture		198.2
		Check - No Fungicide, 22.2 Moisture		195.5
Caledonia, ON	360 UNDERCOVER vs. Over the top (OTT) Crop = Corn	120 ml/ac Total 30 GPA Priaxor OTT 15" Nozzle Spacing at VT, 20.7 Moisture		128.0
		30 GPA Priaxor via 360 UNDERCOVER at VT, 20.4 Moisture		137.0
Caledonia, ON	360 UNDERCOVER vs. Over the top (OTT) Crop = Corn	120 ml/ac Total 30 GPA Priaxor via 360 UNDERCOVER at VT, 21.7 Moisture		145.0
		120 ml/ac and .5L/ac Total 30 GPA Priaxor + Axter OLIGO-B via 360 UNDERCOVER at VT, 20.7 Moisture		142.0
Ottawa, ON	360 UNDERCOVER vs. Over the top (OTT) Crop = Soybeans	Check		63.8
		OTT		65.1
		360 UNDERCOVER		64.2

EXTENDED FIELD TRIAL DATA

Wisconsin

Location	Trial Type	Strip Details	Total N	Yield
Timing				
Manitowoc County, WI	360 Y-DROP vs. One-and-Done	150 lbs Pre-plant	150	138.7
		140 UAN via 360 Y-DROP	140	177.0
Manitowoc County, WI	360 Y-DROP vs. One-and-Done	150 lbs Pre-plant	150	139.3
		140 UAN via 360 Y-DROP	140	182.6
Placement				
Lowelltown, WI	360 Y-DROP vs. Coulter	106 lbs UAN 32% via Coulter		224.7
		106 lbs UAN 32% via Coulter, UAN 32% via 360 Y-DROP		228.7
		53 lbs UAN via Coulter, 53 lbs UAN 32% via 360 Y-DROP		232.1
		106 lbs UAN 32% via 360 Y-DROP		232.7
		VR UAN 32% via 360 Y-DROP		235.8
Manitowoc County, WI	360 Y-DROP vs. Coulter	28.9 lbs NRG-N + Stabilizer 2x0 Pre-plant, 157.5 lbs UAN + eNhance via 360 Y-DROP	186.4	189.5
		28.9 lbs NRG-N + Stabilizer 2x0 Pre-plant, 157.5 lbs UAN + eNhance via Coulter	186.4	180.2
Manitowoc County, WI	360 Y-DROP vs. Coulter	28.9 lbs NRG-N + Stabilizer 2x0 Pre-plant, 157.5 lbs UAN + eNhance via 360 Y-DROP	186.4	212.4
		28.9 lbs NRG-N + Stabilizer 2x0 Pre-plant, 157.5 lbs UAN + eNhance via Coulter	186.4	201.0
Manitowoc County, WI	360 Y-DROP vs. Coulter	157.5 lbs UAN + eNhance via 360 Y-DROP	157.5	189.5
		157.5 lbs UAN + eNhance via Coulter	157.5	162.5
Manitowoc County, WI	360 Y-DROP vs. Coulter	157.5 lbs UAN + eNhance via 360 Y-DROP	157.5	212.4
		157.5 lbs UAN + eNhance via Coulter	157.5	186.0



2019		2018		2017		2016		2015		2014		2013		2012		2011		2010		2009		2008		2007		2006		2005		2004		2003		2002		2001		2000		1999		1998		1997		1996		1995		1994		1993		1992		1991		1990		1989		1988		1987		1986		1985		1984		1983		1982		1981		1980		1979		1978		1977		1976		1975		1974		1973		1972		1971		1970		1969		1968		1967		1966		1965		1964		1963		1962		1961		1960		1959		1958		1957		1956		1955		1954		1953		1952		1951		1950		1949		1948		1947		1946		1945		1944		1943		1942		1941		1940		1939		1938		1937		1936		1935		1934		1933		1932		1931		1930		1929		1928		1927		1926		1925		1924		1923		1922		1921		1920		1919		1918		1917		1916		1915		1914		1913		1912		1911		1910		1909		1908		1907		1906		1905		1904		1903		1902		1901		1900		1899		1898		1897		1896		1895		1894		1893		1892		1891		1890		1889		1888		1887		1886		1885		1884		1883		1882		1881		1880		1879		1878		1877		1876		1875		1874		1873		1872		1871		1870		1869		1868		1867		1866		1865		1864		1863		1862		1861		1860		1859		1858		1857		1856		1855		1854		1853		1852		1851		1850		1849		1848		1847		1846		1845		1844		1843		1842		1841		1840		1839		1838		1837		1836		1835		1834		1833		1832		1831		1830		1829		1828		1827		1826		1825		1824		1823		1822		1821		1820		1819		1818		1817		1816		1815		1814		1813		1812		1811		1810		1809		1808		1807		1806		1805		1804		1803		1802		1801		1800		1799		1798		1797		1796		1795		1794		1793		1792		1791		1790		1789		1788		1787		1786		1785		1784		1783		1782		1781		1780		1779		1778		1777		1776		1775		1774		1773		1772		1771		1770		1769		1768		1767		1766		1765		1764		1763		1762		1761		1760		1759		1758		1757		1756		1755		1754		1753		1752		1751		1750		1749		1748		1747		1746		1745		1744		1743		1742		1741		1740		1739		1738		1737		1736		1735		1734		1733		1732		1731		1730		1729		1728		1727		1726		1725		1724		1723		1722		1721		1720		1719		1718		1717		1716		1715		1714		1713		1712		1711		1710		1709		1708		1707		1706		1705		1704		1703		1702		1701		1700		1699		1698		1697		1696		1695		1694		1693		1692		1691		1690		1689		1688		1687		1686		1685		1684		1683		1682		1681		1680		1679		1678		1677		1676		1675		1674		1673		1672		1671		1670		1669		1668		1667		1666		1665		1664		1663		1662		1661		1660		1659		1658		1657		1656		1655		1654		1653		1652		1651		1650		1649		1648		1647		1646		1645		1644		1643		1642		1641		1640		1639		1638		1637		1636		1635		1634		1633		1632		1631		1630		1629		1628		1627		1626		1625		1624		1623		1622		1621		1620		1619		1618		1617		1616		1615		1614		1613		1612		1611		1610		1609		1608		1607		1606		1605		1604		1603		1602		1601		1600		1599		1598		1597		1596		1595		1594		1593		1592		1591		1590		1589		1588		1587		1586		1585		1584		1583		1582		1581		1580		1579		1578		1577		1576		1575		1574		1573		1572		1571		1570		1569		1568		1567		1566		1565	
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