

BETTER NITROGEN
UTILIZATION
STARTS HERE





GET MORE OF THE POTENTIAL YOU PLANT

Gregg Sauder and the 360 Yield Center team of farmers, agronomists and engineers have one mission: for every farmer to reach the yield potential of modern seed corn.

As a farmer himself, Gregg has long focused on capturing more yield potential. By taking a 360-degree view of yield-limiting variables and course-correcting for better results, Gregg and his team are putting new power into the hands of farmers. Our tools will help change the way you manage nutrients, nitrogen (N) and plant health for better-performing crops and better on-farm profits.

PUSH THE BOUNDARIES. START WITH THE BASICS.

While we search for new technology to help us boost yields, we can't forget about the basics — nutrient and N management, fungicide application, tillage practices and residue management. These are key factors in yield improvement and we have to think about them differently if we want to maximize yields.

NITROGEN MANAGEMENT

SHIFT YOUR THINKING AND YOUR TIMING

Improving the way you use N can have a big impact on your yields and production costs. When tested against one-and-done N applications, our base-plus approach led to a 29 bu/A increase in yields. That's an ROI of more than \$100 per acre.*

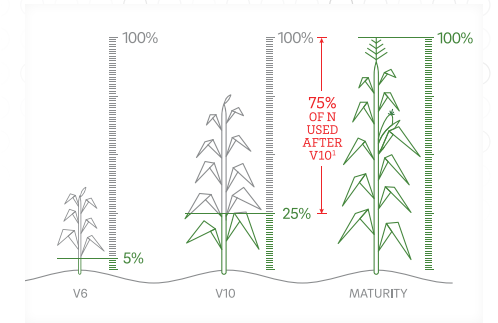
How does the base-plus approach work?

- + Apply a base rate of N in fall or spring for a strong foundation
- + Test soil in-season so you know how much N is left
- + Come back between V6 and tassel to apply more N when corn needs it most



+ BUILDING A STRONG FOUNDATION

It's important for your corn to have a strong base to start the season. But when you put all of your N out early, it's vulnerable to loss. And if your corn doesn't have the N it needs after pollination, it can lead to shorter ears and poor grain fill. In fact, corn uses almost 75% of its overall N needs after V10.¹ By saving some of your N for later in the season, you can adjust your application to meet the real-time needs of your crop during crucial stages of development.



Nitrogen Uptake Throughout the Season

+ TESTING YOUR SOIL IN-SEASON

How much N your crop needs can vary from year to year (and field to field). Using 360 SOILSCAN™, you can test your N levels right in the field with the accuracy of a soil lab. 360 SOILSCAN then generates an N recommendation based on your yield goal, growth stage, pH and organic matter. So you know exactly how much N your crop needs to finish the season right.



Real-time Testing with 360 SOILSCAN

+ APPLYING WHEN AND WHERE IT'S NEEDED

To get the most out of a midseason N application, it needs to be applied at the right time and the right place. With 360 Y-DROP®, the sidedress window has been expanded to over 30 days, from V6 to VT, for greater flexibility and control. Unlike a coulter application, 360 Y-DROP places liquid nitrogen at the base of the cornstalk, allowing the funneling effect of the leaves to push N to the root mass during precipitation for rapid uptake.



Precision Placement with 360 Y-DROP

THE \$100 BASE-PLUS ADVANTAGE

To prove how effective the base-plus approach is, we conducted side-by-side trials using four different N timing strategies. The results spoke volumes. The later we applied our N, the higher the yield was. When compared with a 200-lb. one-and-done spring application, a split-N application of 150 lb. in spring and 50 lb. at V12 using 360 Y-DROP boosted yields by 29.5 bu/A² for an ROI of over \$100 per acre.*



MAKE THE MOST OF YOUR AMMONIA INVESTMENT

Step one in the base-plus approach to N management is applying a base rate of N to get your corn off to a great start. But, precision application and consistent coverage across the field is key to ensure all of your corn gets the N it needs early in the season.



Vapor and cold flow anhydrous ammonia application systems rely on tank pressure for distribution and injection, which can cause them to unevenly deliver NH_3 from row to row. That wide application variance causes streaking in the field and can rob you of yield. The 360 EQUI-FLOW™ pressure system extends the application window and keeps the ammonia in liquid form. 360 EQUI-FLOW with Liquimatic Technology takes a new approach for better row-to-row accuracy and a wider window of application.

+ KEY FEATURES

- + Precise row-to-row accuracy
- + Wider window of application
- + Keeps NH_3 in the liquid state all the way to the injectors
- + Improved sealing at the injection point

+ PRECISION NH_3 APPLICATION IS POSSIBLE

Anhydrous ammonia is an economical and practical way to set an N foundation in the fall. But, conventional NH_3 application systems limit your flexibility and your return on investment. 360 EQUI-FLOW ensures row-to-row accuracy so you can build an even, strong foundation for full-season N management.

- + Centrifugal pump condenses the NH_3 into a liquid state for even application regardless of rate and temperature
- + Pre-assembled base unit works with any controller or monitor

+ HOW 360 EQUI-FLOW WORKS

Ammonia from the tank is delivered to the initial filter.

In the Liquimatic tower, the ammonia is separated into gas and liquid. The vapor is condensed back down into liquid and it all moves to the pump.



Every row gets the same amount of ammonia in liquid state.

The equal distribution manifold equalizes flow to each outlet.

The hydraulically driven centrifugal pump pushes 100% liquid ammonia through the flow meter and control valve to the manifold.



The ammonia is filtered at every step, right down to the orifice, so plugging virtually disappears.



Only liquid NH_3 passes through the flow meter. Since liquid measurement is more accurate than gas, you know exactly how much you are applying.



With the warm knife option — a vinyl tube insert — anhydrous ammonia never touches the knife or opener. So there's no frosting, no build-up and no widening furrow. Sealing is improved and losses are minimized.



MEASURE AND ASSESS NITROGEN NEEDS IN-SEASON

Before you make midseason N application decisions, it's important to have a clear picture of how much N is in your field. Understanding in-season N availability can be a real guessing game, but now you can know exactly how much N is left through real-time measurement. 360 SOILSCAN is a portable soil lab system that gives you the ability to test N availability and soil pH, right in the field, in about 5 minutes, with the accuracy of a traditional soil lab.



HOW TO USE 360 SOILSCAN: FIVE STEPS IN FIVE MINUTES

- Step 1

Take a soil sample from your field with a 12-inch or 24-inch core.
- Step 2

Place two scoops of soil into the standard Dixie® cup provided and place in the mixing station.
- Step 3

Mix the soil and distilled water into a slurry.
- Step 4

Analyze the soil with 360 SOILSCAN.
- Step 5

Utilize the Corn Nitrogen Need Calculator to determine an application recommendation based on the results.

KEY FEATURES

- Durable

Rugged carrying case keeps all the pieces together and protects it from the elements
- Expandable

Multiple sensor slots allow for future sensor additions
- Portable

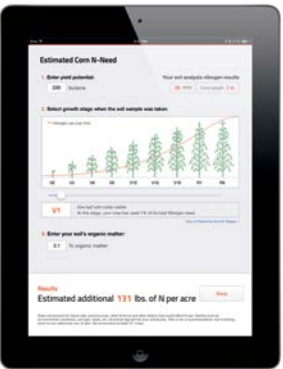
Easy to transport and operate from the back of your truck or ATV
- Functional

Uses your iPad® as the operating platform and upgrades without new hardware

MEASURE AND THEN BUILD A PLAN IN MINUTES

Knowing how much N is left and how much N you need are two different things. With the Corn Nitrogen Need Calculator in 360 SOILSCAN, you can build customized N application plans instantly after measuring your soil, simply by inputting your:

- + Yield goal
- + Crop growth stage
- + Soil organic matter



TIMELY AND ACCURATE RESULTS

360 Yield Center has participated in the Agricultural Laboratory Proficiency (ALP) Program, which is a national proficiency testing program that monitors soil analysis for consistency, accuracy and reliability. The result: 360 SOILSCAN provides the same level of accuracy as traditional labs.

Summer 2015 Results – Nitrate N

+ = 360 SOILSCAN Mean (PPM)

Samples	Range for All Labs (PPM)		
SRS1511	10.5	14.3 +	24.7
SRS1512	17	+ 20	23.1
SRS1513	7.1	14.7 +	24.4
SRS1514	34.0	+ 46	54.1
SRS1515	47.5	51.3 +	60.2
Median			

360 YIELD PATROL: EASY TO TRACK FIELD INTELLIGENCE

We've taken in-season field monitoring and soil sampling to the next level with 360 YIELD PATROL™, the new 360 SOILSCAN companion app for the iPad® and iPhone®. 360 YIELD PATROL allows users to record and track where soil samples were taken and uses a QR scanner to link soil samples to sample locations in the field.

It also offers in-field visual scouting capabilities so farmers can track what is happening in their field and their soil for better nutrient and plant health decisions. Users can digitally store all soil test data and link information from 360 YIELD PATROL and 360 SOILSCAN.



PROVIDE THE RIGHT AMOUNT OF NITROGEN WHEN AND WHERE YOUR CROP NEEDS IT

Corn demands different amounts of N throughout the growing season, with 75% of N used after V10¹. That's why a split-application of N is so important. By feeding your crop later in the season, you can supply N at the time your corn needs it most, capitalizing on yield potential.

Never before has the sidedress window been so wide, so you can split-apply N without worry. 360 Y-DROP gives you flexibility and control for timing midseason N application – from V6 to VT – a window of more than 30 days.



PRECISION NITROGEN PLACEMENT

Where N is applied is just as important as when it's applied. With traditional sidedress methods, N is applied in the middle of the crop row – nearly 15 inches from the stalk base. And, with broadcast methods, N is applied across the entire field with little precision.

A corn plant acquires more than 60% of its N from a horizontal radius of about 7 inches from the stalk base. With 360 Y-DROP, you can apply N within 2 to 3 inches of the stalk base – that means nearly 80% of the root mass is within the 360 Y-DROP application zone. This precision placement makes a big difference. Results of 123 trials across the Midwest show an average of 10 bu/A advantage of 360 Y-DROP over coulters.



Nutrients are placed right along the stalk base for maximum uptake.



With the funneling effect of corn leaves, even modest precipitation or dew pushes the N to the root mass for rapid uptake.



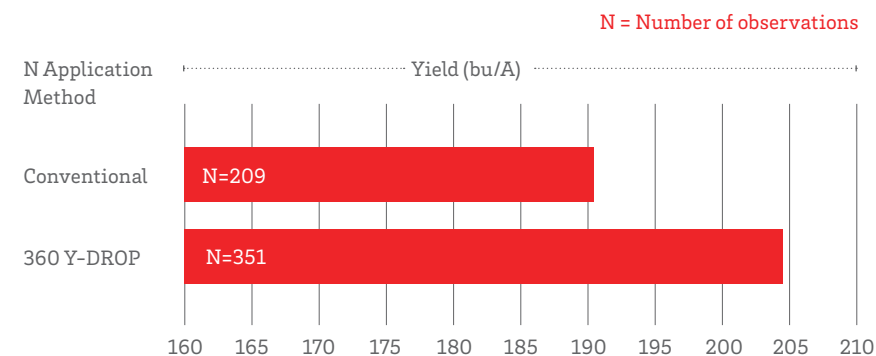
Upgrade your coulters bar by adding 360 Y-DROP sidedress for more precise N placement and no more worn coulters or faulty bearings.

KEY FEATURES

- + Provides precision placement of liquid N, as well as other nutrients like phosphorus, potassium and micronutrients
- + Newly designed shield sits above the base unit to keep leaves from wrapping on the riser or hoses
- + New narrow-row design with four-position adjustable arms, allowing for precision placement from 15-inch to 36-inch corn rows
- + Variable rate nozzles available so you can ensure the right rate, right time and right placement of N
- + New breakaway mounting brackets allow for easier navigation across hills and uneven terrain

360 Y-DROP BOOSTS YIELDS BY 13.8 BU/A

500 treatments across both wet and normal areas of the Midwest in 2015.





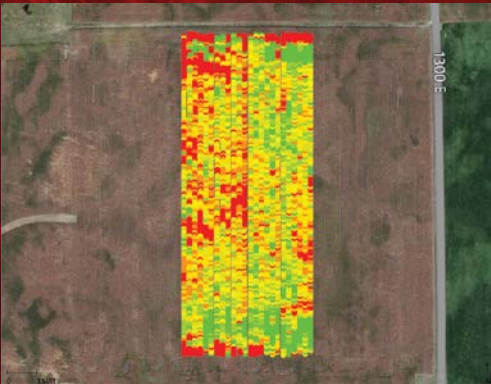
PROTECT AGAINST LATE-SEASON DISEASES AND PESTS

N management may have one of the largest impacts on production costs and yield. But, without plant health, N utilization can be limited and your yields can suffer. Most diseases start at the base of the plant. So why should protection come from above?

With 360 UNDERCOVER® farmers now have the ability to take a bottom-up approach to disease and pest management with targeted under-canopy application to put fungicides and insecticides right where they're needed.

SMARTER APPLICATION PAYS

A fungicide trial in Moweaqua, Illinois, compared a Priaxor® fungicide application made with 360 UNDERCOVER at V12 with an untreated check. Weighed yield checks showed a 25 bu/A advantage for the Priaxor applied with 360 UNDERCOVER.



+ DON'T LET DISEASES WIN

It's important to closely monitor for a variety of fungal diseases and insects throughout the development of your corn and soybean crops. White mold, bacterial blights, spider mites and soybean aphids can have a real impact on plant health and yield potential.

Some of these disease and insect issues can be resolved by uniform application of a fungicide or insecticide – especially if the crop is a good candidate and not too damaged. You can get even better under-canopy coverage with 360 UNDERCOVER compared with an over-the-top application.

+ KEY FEATURES

- + Easy add-on to your 360 Y-DROP system, sliding up and down the riser for vertical positioning within the canopy depending on crop growth stage
- + Up to four multidirectional spray nozzles on each unit for customized spray patterns
- + Ability to gain 150-degree horizontal spray application side to side
- + Special shell design that protects nozzles and moves smoothly under the crop canopy
- + Ideal for simultaneous application of N and fungicide/insecticide in dual tank sprayers
- + Can be used in corn, seed corn, soybeans, wheat, cotton and sugar beets

+ BECK'S HYBRIDS SOYBEAN FUNGICIDE APPLICATION STUDY

Beck's Hybrids ran fungicide application trials in soybeans in 2014. The results showed by using 360 UNDERCOVER to deliver fungicide application under the canopy versus over the top, farmers could experience both a bushel-per-acre advantage and additional income.

Fungicide Applied at R3	Application Method	Bushel Advantage	Added Income	Dollar Advantage
4 oz. Priaxor	Over The Top	1.7 Bu/A	\$19.04/A	(\$3.93)/A
4 oz. Priaxor	360 UNDERCOVER	3.4 Bu/A	\$38.08/A	\$15.11/A

*Cost of Priaxor was \$22.97 per acre, 3-18-18 was \$23.97 per acre and soybean price was \$11.20 per acre. Advantage is over the control.

Fungicide Applied at R3	Application Method	Bushel Advantage	Added Income	Dollar Advantage
4 oz. Priaxor + 2 gal. 3-18-18	Over The Top	3.7 Bu/A	\$41.44/A	\$8.47/A
4 oz. Priaxor + 2 gal. 3-18-18	360 UNDERCOVER	6 Bu/A	\$67.20/A	\$34.24/A

*Cost of Priaxor was \$22.97 per acre, 3-18-18 was \$23.97 per acre and soybean price was \$11.20 per acre. Advantage is over the control.

+ \$15
per acre

+ \$34
per acre

BETTER RESIDUE MANAGEMENT. IMPROVED NITROGEN AVAILABILITY.

N management isn't just about how you manage inputs. It starts with soil health. And, when you properly manage crop residue, you set yourself up for success in the next season. With a new approach to residue management, you can create the right environment for soil microbes and N availability in your fields.



⊕ KEY FEATURES

- + 360 CHAINROLL stalk rolls directly replace old stalk rolls
- + Retrofit is available for John Deere 40 series, 90 series and 600 series

360 CHAINROLL™ chops and crimps stalks, making residue more available to microbial breakdown, for better soil health and nutrient availability. The advanced patented design also leaves most sections connected — like a chain — for more stable residue pieces. So you don't experience clusters of small confetti-like residue that tie up N and impede seedbed preparation.



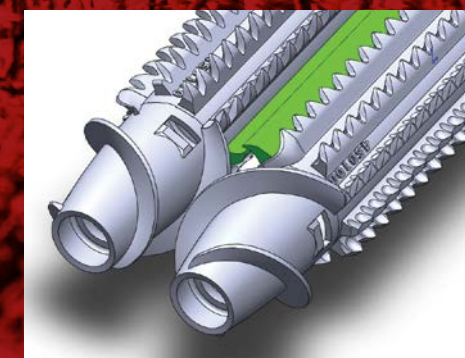
Cutting stalks precisely for pickup by row cleaners for a clear seedbed.



Crimping and scoring stalks to expose the interior to microbes and sizing them for faster decomposition and microbial breakdown.

ENGINEERED FOR PERFORMANCE

Each pair of 360 CHAINROLL units is designed to work together for exact and specific lacerations in the stalk. The stalk rolls feature a combination of cutting flutes and chaining flutes. The interaction and rotation of the flutes create chainlike residue pieces by penetrating the pith and pulling out the cut to leave a significant area exposed for microbes to enter the stalk.



DON'T LEAVE ANYTHING IN YOUR FIELD

Learn more about 360 Yield Center and its integrated tools that can give you the control to capture more yield potential and on-farm profit.

360YIELDCENTER.COM

*Calculated using \$3.60/bu corn price.
¹Data on file. ²Data on file.

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