

Growing Together

>>> 3Q | 2015

thrive[®]

Local Solutions

Seed Designed for Specific Field Conditions Helps Boost Yields



RESEARCH REPORT:

Solatenol[®]-Based Fungicides Expected to Deliver Better Treatments for Many Challenging Diseases

Grow More Experience Sites Showcase Powerful Technologies

syngenta[®]

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Syngenta contributes to the agriculture community with initiatives, such as community gardens and informative blogs.

thrive 

Even if you love your print edition of *Thrive*, you'll still want to check out the magazine's website. You'll find more content and links to important resources to help you succeed in today's marketplace. The online version also makes it easy to share specific articles with others.

Scan this QR code to take the fast track to the *Thrive* website, or go to www.syngentathrive.com.



ON THE COVER Syngenta offers corn hybrids tailored to specific field conditions to help boost yields. Illustration: Rocco Baviera

THIS PAGE A Syngenta volunteer at the Community Garden Project in Research Triangle Park, North Carolina, tends lettuce. Photo: Alex Maness

We welcome your story suggestions and comments about *Thrive*.

Please send them to thrive@syngenta.com. For more information, visit the FarmAssist website at www.farmassist.com, or call the Syngenta Customer Center at 1-866-SYNGENT(A) (796-4368).

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Thrive is produced quarterly for a nationwide agricultural audience. Its purposes are to update readers on Syngenta products, research, services and solutions, and to provide them with the information they need to succeed in today's complex marketplace.



Back to Basics


Oftentimes, the best way to overcome a complex challenge is to concentrate on the basics. So far in 2015, the most rudimentary law of economics—too much supply to meet market demand—is driving down commodity prices, causing growers to more carefully weigh the value of every input they consider. A healthier bottom line at the end of the season is still the end goal, but growers face many complicated decisions on the road to achieve it.

Fortunately, resellers like you are helping growers simplify their strategies for staying steadily on course. You understand that their success hinges on maximizing yields with core inputs, including high-quality seed and targeted crop protection products. But as a trusted advisor, you also understand that the level of investment in these tools varies from farm to farm.

With different price points along our brand ladder, the Syngenta portfolio is deep enough to effectively meet the needs of each grower and

broad enough to offer season-long protection against insects, weeds and diseases. Behind all of our technologies stands a team of local sales and agronomy representatives, ready to work with you one-on-one to help make sure the best suite of products fits each acre.

This issue of *Thrive* features some of our most powerful solutions, including our line of high-performing, high-yielding hybrids and varieties. Through firsthand experiences of growers and resellers, you'll learn which specific seed products are helping them produce record yields. Of course, seed alone cannot manage a pest as relentless as the corn rootworm. On the pages that follow, you'll see how a multiyear whole-farm program, which includes hybrids with the Agrisure Duracade® trait, is helping growers manage the billion-dollar pest at unprecedented levels. This issue also previews our rich pipeline of up-and-coming fungicides, which testing shows will improve plant wellness across many crops. Even though reading about these innovations can be insightful, seeing them for yourself under local growing conditions leaves an even deeper impression. As reported in *Thrive*, the more than 60 Syngenta Grow More Experience Sites will give you a chance to do just that this season.

Looking ahead, forecasting future financial conditions for U.S. agriculture is difficult. In a global marketplace, the economic mood can quickly shift from uncertainty one week to promise the next. But with your guidance, opportunity is always attainable for growers, especially if they stay focused on the basic tools that offer the highest yield and greatest return on investment. 

“Behind all of our technologies stands a team of local sales and agronomy representatives, ready to work with you one-on-one to help make sure the best suite of products fits each acre.”



JENNIFER JACKSON

JENNIFER JACKSON
Head, Finance
Syngenta, North America

➤ Read article online at www.syngentathrive.com.



What's in Store

Cutting-edge innovations help protect crops. News keeps you informed.

NEW TECHNOLOGIES

> New Corn Seedcare Tool Now Available

All new Syngenta corn seed produced for 2015 will be treated with Avicta® Complete Corn with Vibrance®



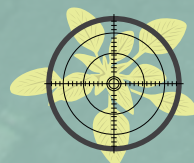
Scan this QR code to learn more about Avicta Complete Corn with Vibrance.

nematicide/insecticide/fungicide seed treatment, a combination of separately registered products. The seed treatment protects against nematodes as well as early-season insects and diseases that can attack when plants are most vulnerable. To discover the benefits of Avicta Complete Corn with Vibrance over Poncho®/Votivo® seed treatment from Bayer Crop-Science, scan the QR code (left) or

visit www.avictacompletcornwithvibrance.com to view "Put the Best on Your Seed." This video demonstrates the key advantages of Avicta Complete Corn with Vibrance protection, including its superior performance, activity, consistency and timing.



ACURON TARGETS



Palmer amaranth



Marehail



Giant ragweed

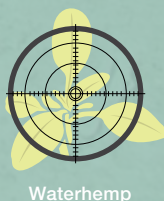


Acuron™ corn herbicide helps this cornfield in Irwin, Ohio, thrive.

>> A Step Change in Weed Management Now Available

Acuron™ corn herbicide has received EPA registration for the 2015 growing season. It features four active ingredients—including new bicyclopyrone—and three complementary, overlapping modes of action that deliver a multitargeted approach to weed control. Prior to registration, bicyclopyrone was tested in more than 700 trials. These trials helped lead to the development of Acuron, which will provide improved control of difficult weeds, including Palmer amaranth, marestail, giant ragweed, kochia, morningglory and waterhemp. Acuron is labeled to control more than 70 broadleaf weeds and grasses.

“Early-season weed management is critical to helping growers stay ahead of weeds,” says John Foresman, product lead for Syngenta. “They are looking for herbicides that will provide residual control of today’s most yield-threatening culprits. It’s the combination of power, dependability and flexibility that sets Acuron apart.” Join the conversation on social media using **#toughweeds**, and learn more about the benefits of Acuron at www.acuron-herbicide.com.



NEWS AND EVENTS

> Your Vote Matters

Syngenta thanks everyone who entered the second annual Drive to *Thrive* contest, which invited readers to describe how agriculture makes their communities thrive. A panel of judges has narrowed the field of competitors to a select group of finalists—each of whom has received a mini touch-screen tablet.

Now, we need your vote to help us determine who will be the grand prizewinner of a \$500 gift card. Also at stake is a \$1,000 donation from Syngenta to the winner’s favorite local charity or civic group. Just go to www.syngentathrive.com, click on the Drive to *Thrive* link under “Special Features,” and vote for the entry you think is most deserving. Online voting ends Sept. 1, 2015, and Syngenta will announce the grand prizewinner in October.



FOR MORE INFORMATION on the Drive to *Thrive* contest and Official Rules, visit www.syngentathrive.com.



TRADE SHOWS AND CONFERENCES

Syngenta invites you to stop by its booth at any of the upcoming shows and events listed below:

SEPTEMBER 2015

- 1–3 Farm Progress Show, Decatur, Illinois
- 15–17 Husker Harvest Days, Grand Island, Nebraska

OCTOBER 2015

- 26–31 AgroNomics, Vision for 2016 (ASFMR Annual Meeting), San Antonio, Texas
- 28–31 National FFA Convention & Expo, Louisville, Kentucky



The Path to Better Seeds

Top-of-the-line seed that includes powerful genetics and yield-protecting traits will carry your crop a long way and help you achieve higher yields.

That's why we, at Syngenta, are committed to providing growers with the best possible hybrids to help them grow more corn. We do this through a rigorous seed production process, with many steps to ensure that what ends up in the bags and boxes delivered to the farm is not only consistent and reliable, but also of the highest quality.

From planting to harvesting to packaging, the path to better seeds is a combination of traditional and cutting-edge technology, with quality-control measures every step of the way.

FOR A MORE DETAILED VIEW of this process, see the video "From Seed to Planter" on The Path to Better Seeds Web page at www.syngentathrive.com.farmproduction.

In the Field

THREE STRATEGIES AT PLANTING

Time-delay

Top-quality parent lines are planted at different times to make sure pollination and silk emergence occur simultaneously.



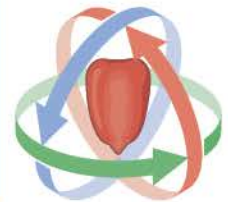
Flaming

A portion of the male plants are scorched to delay pollination and better align to female silk emergence.



Time-release coating

Emergence is delayed on a portion of males to extend the window for pollination.



BEFORE HARVEST

Risk Management

Most corn is grown on irrigated ground to reduce risk.



Detasseling

Female tassels are removed mechanically. The rest are removed by hand.



Pollination

The flowering stage in corn, which involves pollen shed and silking, is the most critical stage in determining grain yield.



Inspection

Female plants are inspected to see if pollination is complete. If so, male rows are destroyed to allow nutrients and rain to go to the female plants.



HARVEST

Harvesting begins once kernels have reached the target moisture level for the specific hybrid growing in the field.



At the Plant

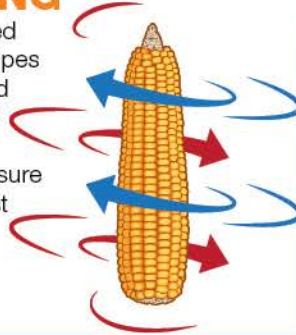
RECEIVING

Corn is carried by conveyor belts to dehusking machines.



DRYING

Customized drying recipes are tailored to specific hybrids to help ensure the highest quality.



SHELLING

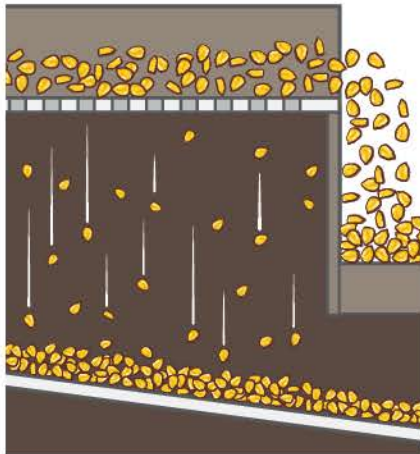
Seeds are handled gently to maintain quality using variable-speed seed shellers.



CONDITIONING

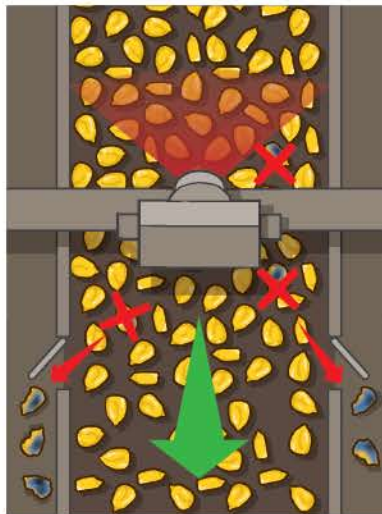
Air screening

Seeds are sized as small rounds and flats or large rounds and flats to help growers plant them individually and with uniform spacing.



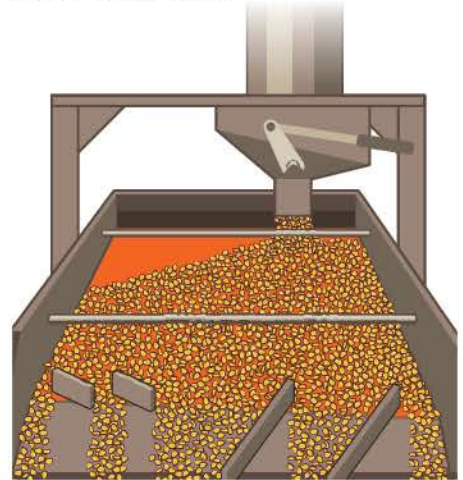
Sorting machine

Damaged and diseased seeds, which look different, are removed.



Gravity tables

Lighter and heavier seeds are separated out by their bulk density to improve vigor and germination. Lighter and damaged seeds are discarded.



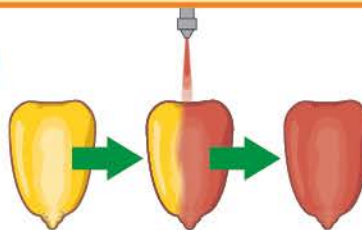
TESTING

Samples are gathered throughout the process to conduct quality checks that help ensure the standards for the highest-quality seeds are met.



SEED TREATMENT

Protection is added with a seed treatment nematicide/insecticide/fungicide.



PACKING

80,000

corn seeds are packed per bag:
1 bag = 1 unit,
1 box = 40 or
50 units.



The Greatest Shows in Ag

Trade shows offer customers a chance to preview the latest Syngenta technologies and the opportunity to make or renew valuable partnerships.

What started as a simple way for ancient merchants to display their wares in public has grown into today's dynamic trade show industry. High-tech displays of biotech plants and autopilot tractors may have replaced crates of fresh fish and primitive pottery, but the benefits of trade shows remain largely intact.

"Trade shows give us a unique opportunity to gain in-person, direct access to customers," says Melissa Lord, Syngenta trade show and customer event lead. "But to earn their attention, our booth must be eye-catching and engaging, manned by people who are both knowledgeable and energetic."

Throughout the year, Syngenta exhibits at more than 60 regional and national shows, covering almost every corner of the U.S. Syngenta tailors each regional show to its specific audience to give attendees a chance to learn about full-crop solutions in their particular geographic area. National shows, on the other

hand, highlight multiple crops and brands and oftentimes provide large-enough stages to wow attendees.

In 2015, Syngenta continues its tradition of creating trade show memories through distinctive displays and entertaining events.

Live Plants Showcase Technologies

Having something to touch and feel enhances the Syngenta story. Without fail, live plants draw large crowds to the company's trade show booth year after year. At the 2015 National Farm Machinery Show (NFMS) in Louisville, Kentucky, for example, the booth featured four planter boxes containing soybeans, corn, wheat and cotton.

"These boxes give growers a chance to see live examples of our product portfolio at work during times when they can't see them in the field," Lord says. "By stopping by our booth, NFMS attendees could judge for themselves how well our technologies, from seeds to crop protection tools, were performing in the middle of February—something they couldn't do otherwise."

A Comical Talking Weed

With the pending registration of Acuron™ herbicide, Syngenta needed a showstopper that would grab people's attention and relay important technical information on this promising new weed-management solution. In conjunction with the company's brand positioning for Acuron, which features talking weeds making fun

"Our local and national representatives are there to openly discuss the industry's latest, most exciting innovations with visitors, whether they are longtime customers or someone who's less familiar with what we offer."

—MELISSA LORD



John David Berry interacts with the Syngenta talking-weed hologram at the National Farm Machinery Show.



At the 2015 National Farm Machinery Show, Syngenta representatives Mike Saxton (far left) and Willie Hawkins (far right) join Ann Bakhaus of the Kentucky State Fair Board in presenting the first place trophy in the 8,200-pound Super Stock Tractors division to Travis Schlabach, a member of the Bone Yard Pulling Team Powered by Ambush.

of herbicides, Syngenta created a hologram based on one of the weed characters. Standing about 5 feet tall, the virtual weed teaches audiences about the product's active ingredients and the weeds it controls in a comical, interactive way.

"The result is the right combination of education and entertainment," says Lord. Already featured in February at NFMS and Commodity Classic, which took place in Phoenix, the weed hologram will also make appearances in September at the Farm Progress Show in Decatur, Illinois, and Husker Harvest Days in Grand Island, Nebraska.

Sponsorships Deliver Fun

Through trade show sponsorships, Syngenta can educate and engage attendees beyond its booth space. One of the most notable events Syngenta sponsors each year is the Championship Tractor Pull at NFMS. More than 66,000 people attend five pulls over a four-day period, and Syngenta representatives award trophies to the top three winners from each class.

"The Championship Tractor Pull brings excitement to the show and is a great platform to highlight key Syngenta products outside the boundaries of the trade show floor," says Tommy Jackson, head of the North Heartland commercial unit at Syngenta. "We are happy to be a part of such a fun family event, plus the pull supports the Kentucky Fair Board, which is important to us."

Another annual Syngenta sponsorship is the opening reception at Commodity Classic. "Attendees agree that the reception is an annual highlight," says Jill Wheeler, Syngenta head of sustainable productivity in North America. "This year, we used the event to generate awareness of The Good Growth Plan and our six commitments that address the global food and productivity challenge."

Looking ahead to September, Syngenta will sponsor the Farm Progress Show's annual concert. "This Wednesday evening event is a wonderful opportunity to come out and meet with Syngenta sales, agronomy and other technical representatives," says Lord. "Attendees of all ages can kick off the harvest season by enjoying great food and music with their friends."

Building Relationships

Of course, the true focus of the Syngenta trade show presence is establishing and strengthening relationships with growers, resellers and other industry professionals who attend the shows. "Our local and national representatives are there to openly discuss the industry's latest, most exciting innovations with visitors, whether they are longtime customers or someone who's less familiar with what we offer," Lord says. "It's these one-on-one interactions that make hosting a trade show booth or event so valuable and enriching."

For a list of shows that Syngenta will be attending over the next three months, see "Trade Shows and Conferences" on page 3. Log on to www.syngentathrive.com to see exclusive slideshows from events that have already taken place. 🍀

STORY BY ANDREA SIMNOR

BOUNDARIES ARE LIKE A LOT OF THINGS OUT HERE.

Sometimes they need a shove.



It's time to think differently about your soybean seed. With elite genetics and industry-leading traits, NK® performance class Soybeans are pushing yield boundaries upwards. So start strong by planting NK Soybeans. And stay strong and grow more by using our portfolio of seed treatment and crop protection products. Visit NKSoybeans.com or contact your NK retailer or Syngenta Seed Advisor to learn more. **It's time to plant the seeds of change.**

 **Soybeans**

 **syngenta®**



Trait Forward

Syngenta gives candid answers to questions about Agrisure Viptera, the ongoing China lawsuits and the road ahead for the company's corn traits.

Q. Why is Agrisure Viptera® such an important trait?

A. Duane Martin, Ph.D., Commercial Traits Products Lead, Syngenta, North America. Technology in general is critical to U.S. agriculture. It's what keeps our growers globally competitive and profitable and also helps the industry meet the growing challenge of feeding a rising world population. Agrisure Viptera is a good example of great technology. It's simply the best above-ground insect control trait in corn. We typically see about a 7-bushel-per-acre yield increase with the Agrisure Viptera trait, compared with competitive traits. This is due to its superior control of lepidopteran pests, which are extremely difficult to manage and scout. They cost U.S. agriculture more than 240 million bushels of corn and about \$1 billion each year. Agrisure Viptera not only controls the "big four"—corn earworm, black cutworm, fall armyworm and Western bean cutworm—but it also controls other insects, such as dingy cutworm, common stalk borer and sugarcane borer, that are clear misses with competitive traits.

Q. Did Syngenta have the appropriate approvals to launch the Agrisure Viptera trait?

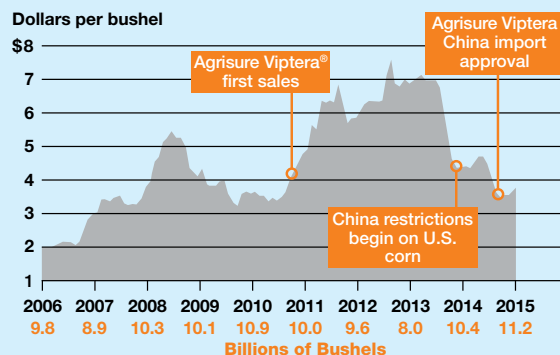
A. In 2010, we commercialized the trait with full regulatory and legal compliance in the U.S. We also had approval in export markets for U.S. corn, as recognized by industry stakeholders, including the National Corn Growers Association. At that time, the industry didn't recognize China as a significant export market for U.S. corn because it typically produced enough corn domestically that it had little need

for imported grain. But during the 2012 and 2013 crop years, when the global corn supply reached record lows, China began buying more U.S. corn. Its sudden rejection of U.S. corn shipments later in 2013 appeared to some to be an attempt to manage an abnormally large domestic corn crop produced that year. Simply put, China had agreed to import U.S. corn that it no longer needed.

Q. What do growers and resellers need to know about the Viptera China lawsuits?

A. We think it's important that growers, resellers and others in the industry have the facts to make an informed decision

U.S. Corn Price and Stocks: 2006–2015
Prices received for corn by month—United States



Source: USDA National Agricultural Statistics Service; Agricultural Price Chart Data and Grain Stock Data

about the lawsuits. The website www.vipterachinafacts.com outlines these facts using U.S. Department of Agriculture (USDA) data, not our own. Syngenta believes the lawsuits are baseless and without merit. One of the lawsuits' key allegations is that China's rejection of U.S. corn shipments led to a price decline in corn. USDA data clearly show that the U.S. corn price had already dropped and leveled off by mid-October 2013, long before China rejected the first shipment of corn in late November. Why did corn prices drop? By mid-2013, USDA forecasts projected that the U.S. had a record corn crop in the field. Other corn-producing countries around the world were also predicting bumper crops. The market responded and lowered corn prices because of basic supply-and-demand economics.

Q. How will the outcome of the lawsuits impact U.S. agriculture?

A. It could affect the industry's overall ability to bring new technologies to growers. If one country can determine what they can or can't use, U.S. growers may no longer have the tools they need to be the most productive, competitive and profitable in the world. It takes more than \$130 million and 10-plus years to bring a new trait to market. If this process becomes unpredictable from a legal, political and regulatory perspective, the decision to commit those resources will be much more difficult for technology providers, so it's not just about Syngenta or Agrisure Viptera. Moving forward, any company that develops a new trait will have to make the same decision: Will it commercialize the trait without import approval from every country that could possibly buy U.S. corn, or will it introduce the trait in a way to help farmers steward the grain to appropriate end-use markets?

We took the latter approach with the 2014 launch of our Agrisure Duracade® trait, a much-needed corn rootworm management tool. We created an innovative program to help participating growers have access to the trait and properly handle and market their Agrisure Duracade grain to appropriate end-use locations. This type of program is the best solution we have today, while stakeholders work on a long-range international effort to coordinate the patchwork of regulatory systems around the world.

Q. What's next for the Syngenta family of traits and technologies?

A. Over the last five years, Syngenta has brought more significant new traits to the U.S. corn market than any other company. Besides Agrisure Viptera, which is now approved for use in China, and Agrisure Duracade, we introduced Agrisure Artesian® hybrids and Enogen® corn. All four technologies are having an immediate, positive impact on the 2015 season. Down the road, we have extensive research efforts in virtually every aspect of crop

production, including corn. We're looking at continued developments in water optimization and advancements in nitrogen-use efficiency. We're also maintaining our focus on output traits in the energy sector. With more than 60 potential development leads, our pipeline is very strong. Obviously, we can't bring every one of those leads to market, but we are working hard to bring the strongest of them to a cornfield near you. 🌱 INTERVIEW BY SUSAN FISHER

"If one country can determine what they can or can't use, U.S. growers may no longer have the tools they need to be the most productive, competitive and profitable in the world."

—DUANE MARTIN



DUANE MARTIN, PH.D.
Commercial Traits
Products Lead,
Syngenta, North America



Left to right: Justin Anderson, a Syngenta sales representative, collects a soil sample to make assessments for the more efficient use of fertilizer. Growers and Syngenta Seed Advisors™ Kevin, Brad and Aaron Spencer look on at their farm in Ottawa, Kansas.

SEED WISE

With locally adapted corn hybrids and soybean varieties, growers can select the right Syngenta seed for every field.

BY MIRIAM WILLIAMSON

No two fields are the same. Disease pathogens, insect pressure and moisture are just a few variables growers must consider when selecting hybrids and varieties that will match each field's unique needs. To help make these decisions easier, faster and more accurate, Syngenta uses a proprietary process it calls the Y.E.S. Yield Engineering System™. This marker-assisted breeding process delivers elite genetics and higher-yielding hybrids and varieties specifically selected to meet the needs of local growing environments more quickly than traditional breeding methods.

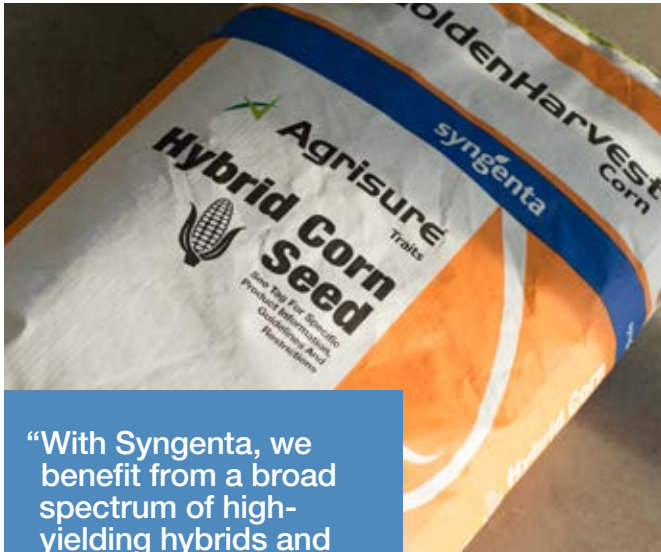
The success stories resulting from the practice of precisely matching the right Syngenta seed to the right field are as varied as the people who tell them. *Thrive* brings you a few of the most compelling.

Adapting to Variable Conditions

Aaron Spencer, a Syngenta Seed Advisor™ and grower from Ottawa, Kansas, jokes that at Spencer LLC, Mother Nature is the biggest challenge. "She's not always nice. It's either hot and dry or we're swimming and in boats."

The farm he manages with his father, Kevin, and brother, Brad, has highly variable fields, consisting mostly of silt loams and silty clay loams with some rocky soil. The high clay content creates wet, poorly drained soil, and the moisture-holding capacity of the farm's uplands is poor.

Over the years, the family struggled with heavy insect pressure and aflatoxin contamination. But since 2011, they have eliminated a lot of the worry by planting Golden Harvest® Corn with the Agrisure Viptera® trait stacks, Aaron Spencer says.



“With Syngenta, we benefit from a broad spectrum of high-yielding hybrids and new traits, suited for different soil types and different situations.”

—JEFF ANDERSON

In 2014, their top-yielding cornfield, which surpassed the previous year’s record by about 50 bushels,

was a split planter of Golden Harvest hybrids G15P07-3111 and G16K01-3111 brands.

“It was racehorse hybrids versus workhorse hybrids, and the results were phenomenal,” Aaron Spencer says. “The Golden Harvest hybrids have a lot of agronomic benefits with strong genetic packages. Syngenta shares knowledge and expertise with its customers, so we have a lot of information that we can adapt to all our acres and growing needs.”

The farm’s soils create challenges for its soybean acres as well. With a low water-infiltration rate, the likelihood of root problems and diseases is higher, making seed selection critical. But when a single field has up to five different soil types in different spots, how does a grower select the best variety?

“We focus on picking varieties with defensive packages that have good yield potential,” Brad Spencer says. “In fields with a low moisture-holding capacity, we try to minimize our drought risk by picking varieties with a longer maturity, from 4.8 to 5.0 relative maturity, to try to extend the pod fill into some late rain.”

For their more productive fields, he recommends one of the following varieties: NK® Soybeans S39-U2 brand, a widely adapted variety with above-average *Phytophthora* field tolerance; S40-N2 brand, a strong performer with high stress tolerance and excellent frogeye leaf spot resistance; and S42-W9 brand, a high-yielding variety with excellent Southern stem canker tolerance.

As Syngenta Seed Advisors, the Spencers aim to provide good service 24/7, and it shows. “I appreciate their level of expertise for my corn and soybeans,” says Randy Kitchen, a grower in Osawatomie, Kansas. “But the level of service they provide is really outstanding. Their willingness to help is

unmatched, whether there is a bug outbreak or I need seed at 10 p.m. Plus the products they offer are outstanding.”

Before becoming Syngenta Seed Advisors, the Spencers tried several seed brands. Since switching to Golden Harvest Corn and NK Soybeans, they’ve noticed higher yields and better-adapted hybrids and varieties, which allow them to set loftier goals. In 2015, they want to reach a new personal yield record of 300 bu/A for corn and 80 bu/A for soybeans—a feat that would surpass their current records by 57 bu/A and 4 bu/A, respectively.

From Hills to Bottoms

With variable acres of hills and bottoms, it’s a challenge for growers near Fancy Farm, Kentucky, to pick the best varieties and hybrids for their fields. Luckily for his customers, retailer Vince Thomason with Crop Production Services has the expertise to help.

“The yields in the past two years have been great,” Thomason says. “The genetic makeup and new traits from Syngenta are boosting our yields to the next level.”

For most growers in his area, the 2014 growing season had a rough start. They planted early corn in wet soil conditions, followed by two to three weeks of hot, dry weather later in the season. Regardless, Thomason says the NK Corn in the area performed well. On his own farm, Thomason has been planting NK Corn hybrid N70J-3011A brand, an Agrisure Artesian® corn hybrid, for two years.

“What I like about that hybrid is how well it will stay green and use water to keep yield high, despite drought conditions,” he says. “Then in your best bottom soil, where there is plenty of moisture, it can yield well over 200 bu/A.”

In this region, growers often plant soybeans early. As a result, Thomason says it’s important to have soybeans with good early health, strong emergence and excellent stand. In 2014, NK Soybeans S39-U2 brand provided good height and stand for an easier, more successful harvest. Thomason averaged 54 bu/A on his farm, and even had one grower achieve 71 bu/A over 92 acres in a creek bottom.

“I can recommend NK Corn and NK Soybeans for their consistent performance year-in, year-out over variable acres and hills to bottoms,” Thomason says. “Regardless of conditions, these varieties and hybrids continue to impress us every year.”

On the Offensive

“Soybeans do not like wet feet,” says Syngenta Seed Advisor and grower Jeff Anderson. And he’s right. Researchers with the University of Minnesota Extension say flooding for four to six days can reduce stand, vigor and yields¹. If the soil is clay and doesn’t drain well, yield reductions can be higher. So in 2014, when Anderson faced an extremely wet spring and summer in north-central Iowa, he was worried his soybeans might not

1. www.extension.umn.edu/agriculture/corn/growth-and-development/considerations-for-flooded-corn-and-soybean

Bo Becker, Syngenta sales representative, (left) and Vince Thomason with Crop Production Services examine young corn plants in Fancy Farm, Kentucky.



perform well in his high-pH fields with tight clay soil. He also feared they would be more susceptible to diseases and pests.

“NK Soybeans offer quality seed with a lot of resistance characteristics for many of the problems we have here,” Anderson says. “This year, I planted a broad spectrum of NK Soybeans, with relative maturities ranging from 1.8 to 2.6, to fit different soil types. I chose different varieties for different fields to maximize each field’s potential.”

While many growers in the area lost yields to sudden death syndrome in 2014, Anderson says the NK Soybean varieties he planted withstood the pressures, resulting in top yields. He also used Syngenta Seedcare and crop protection products. This multipronged approach helped him produce an average yield of 63 bu/A on 950 acres of soybeans, a milestone for him and the area. He even achieved 75 bu/A on one field with NK Soybeans S26-P3 brand.

Anderson puts just as much thought into selecting the right corn hybrids for each of his customers’ fields and looks for three specific qualities: good stand, good yield and good drydown. As a general rule, he prefers to test hybrids before promoting them to growers. In 2014, he planted Golden Harvest hybrid G12J11-3111A brand in a test plot. He averaged 245 bu/A for the field. But going across the plot, his monitor surpassed 300 bu/A in spots. He says he hopes to see a whole field reach 300 bu/A soon.

“In my area, we plant a wide range of Golden Harvest Corn,” Anderson says. “With Syngenta, we benefit from a broad spectrum of high-yielding hybrids and new traits, suited for different soil types and different situations.”

In 2015, Anderson is continuing his integrated, whole-crop approach. “I will definitely continue to plant NK Soybeans and Golden Harvest Corn on my own acreage and recommend that my customers do the same,” he says. “Growers who also use

Syngenta crop protection products and properly manage their fields are going to continue to have success year after year.”

Looking Ahead

While today’s seed products have the right genetics and traits to produce record yields, Syngenta is looking even further ahead and developing the genetic options needed for tomorrow’s fields.

“We are committed to supporting our resellers and addressing the unique needs of growers through our diverse line of high-performing hybrids and varieties,” says Eric Boersma, Syngenta product marketing manager for corn seeds. “Our quest to help them achieve a greater return on investment is never-ending.”

Recently, this relentless pursuit helped a Syngenta soybean breeding team initiative win the prestigious 2015 Institute for Operations Research and the Management Sciences Franz Edelman Award. The Good Growth through Advanced Analytics program uses advanced mathematics and state-of-the-art technologies to develop higher-yielding soybean varieties. Syngenta plans to develop similar tools across all major crop areas.

To learn more about Syngenta hybrids and varieties, visit www.syngentaus.com/seeds. 🌱

Harvest Chasers: Coming to a Field Near You

The Syngenta Harvest Chasers will be hitting the combine again this fall, seeking 2015 yield results and discovering which hybrids and varieties performed well in fields across the Corn Belt. Share your success stories on Twitter or Facebook using #HarvestChasers, or visit www.knowmoregrowmore.com to read posts highlighting yield results from your area. If you’d like the Harvest Chasers to visit your field, contact Gina Borgman at (312) 648-6700 or gborgman@gscommunications.com.



Betters

Syngenta researchers use know-how and resolve to develop cutting-edge solutions for today's toughest diseases. | *By Kate Rogers*

Throughout history, innovators have challenged the status quo. Alexander Graham Bell didn't settle for a telegram, Thomas Edison envisioned a better light source, and the Wright brothers refused to stay on the ground. The same can be said of Syngenta plant pathologists. They realize good tools to control disease currently exist, but their aspiration to create something better is resulting in a pipeline filled with promising new fungicides.

Standout Solution

One of the technologies generating the most excitement is Solatenol® fungicide. Its roots date back to the Asian soybean rust epidemic in Brazil earlier this century. Faced with a pathogen that had caused an estimated \$20 billion in damage, Syngenta researchers set out to develop a breakthrough that would help alleviate a problem existing tools could no longer control. After years of research, Solatenol emerged as the standout foliar SDHI (succinate dehydrogenase inhibitor) fungicide, which protects the outer layer of the leaf as well as the inner tissue.

"We developed a molecule that is intrinsically highly active on this disease at low rates and with long-lasting effect," says Eric Guicherit, technical lead for arable

fungicides at Syngenta. "In our trials, Solatenol-treated soybeans yielded 240 to 480 kilograms per hectare (4 to 8 bushels per acre) above the best market standard."

While the Asian soybean rust epidemic inspired the creation of Solatenol fungicide, the applications for this potent active ingredient expanded well beyond South American soybean fields. Syngenta researchers quickly discovered multiple uses across more than 10 crops in the U.S.

"Even though we don't have the widespread epidemic that Brazil had, we think U.S. growers should have access to this proven technology," says Allison Tally, Ph.D., technical fungicide lead for Syngenta. "Our research shows that Solatenol fungicide has outstanding intrinsic activity on many diseases, including rusts, leaf spots, Southern stem rot and apple scab."

As a result, Syngenta has created four Solatenol-based products specifically formulated for the specialty, vegetable and row crop markets. The products are currently pending approval by the U.S. Environmental Protection Agency (EPA).

Potent Performance

The lineup of upcoming Solatenol-containing formulations includes Trivapro™, Elatus®, Aprovia® and Aprovia® Top. Upon



registration from the EPA, each will provide excellent preventive disease control, reliable crop safety, long-lasting residual control, tank-mix flexibility and a chemistry that is 10 times more effective than other SDHI fungicides. Each formulation will also bring unique rewards to its respective market:

> Trivapro: Harder Working, Longer Lasting

Developed for corn, soybean and wheat growers, Trivapro will be the first fungicide to contain three modes of action with availability in all three crops. A combination of Solatenol fungicide, azoxystrobin and propiconazole, Trivapro has outperformed current market offerings and demonstrated excellent activity on rusts, leaf spots and other key diseases in preregistration trials.

“Trivapro performed better than anything else in our wheat trials, even under very intense stripe rust and leaf spot pressure,” says Peter Bruno, president of Agricumbia Resources Company in Richmond, Texas. “The level of disease control is phenomenal. In my 30 years in the business, this is one of the few products that really excites me. It’s a compound you’ll remember for the rest of your life.”

The preventive and curative activity of Trivapro also is evident in corn research trials. “In our plots in Kansas, Trivapro was applied at green silk and controlled Southern rust throughout the grain-fill period,” says Spencer McIntosh, agronomy service representative for Syngenta. “It really stood out compared to the other treatments.”

A primary source of Trivapro’s strength comes from its multiple modes of action. “When you have three different modes of action that are all unique, a fungus must overcome three different mechanisms to become resistant,” says Eric Tedford, Ph.D., technical fungicide lead at Syngenta. “This makes the process of developing resistance much more difficult.”

Beyond disease control and resistance management, growers can expect Trivapro to deliver crop-enhancement benefits as well. While these benefits may be harder to see during the growing season, the effects become evident at harvest. Trivapro-treated crops have stronger stalks and pods, enabling them to dry down in fields longer. Trivapro

FIELD NOTES



Trivapro

Chemistries: Solatenol fungicide, azoxystrobin and propiconazole

Crops: Corn, soybean and wheat

Protection: Rusts, leaf spots and other diseases



UNTREATED



TREATED

Trial location: Nebraska

A grower applies fungicide on mid-growth peanuts in Alabama to control diseases.



also helps reduce lodging and shattering, which ultimately decreases volunteer crops, improves harvestability and increases profit potential.

> **Elatus: A One-Two Punch**

Keeping the intense disease spray regimens of peanuts and potatoes in mind, Syngenta developed Elatus, a formulation of Solatenol fungicide and azoxystrobin.

Upon registration, Elatus will control Southern stem rot white mold (commonly known as white mold in the Southeast), leaf spot and other costly diseases in peanuts. "In our Elatus trials, we saw a product that managed disease and resistance," says Bob Kemerait, Ph.D., University of Georgia Extension specialist. "It will be an important tool for resistance management."

Elatus also will offer tank-mix and application flexibility in peanuts, making it a good addition to season-long fungicide programs.

"Elatus will bring more flexibility, broader spectrum control and longer residual activity," Tally says. "The impact on yield has been remarkable. In peanuts, we saw a 2,000-pound-per-acre yield bump over an untreated control and an 800-pound-per-acre increase over the current fungicide standards."

Potato growers will also benefit from using Elatus. Developed for in-furrow use, Elatus will provide excellent control of *Rhizoctonia* and other diseases, resulting in improved emergence, more uniform crop stand and optimized distribution of tuber size.

> **Aprovia: A Powerful Tool**

Understanding the unique management of pome fruit and grape diseases, Syngenta developed the solo Solatenol formulation Aprovia to give growers of these crops more flexibility in their spray programs.

"Aprovia may have the best activity of any of the SDHIs against apple scab," says George Sundin, Ph.D., Michigan State University Extension specialist. "And the new chemistry will be important for resistance management. With an effective active ingredient, it's a fungicide growers will be happy to have in their disease-management programs."

Upon registration, pome growers can also look to Aprovia for control of powdery mildew, fly speck and sooty blotch. And in grapes, Aprovia will offer enhanced control

Elatus

Chemistries: Solatenol fungicide and azoxystrobin

Crops: Peanuts and potatoes

Protection: Southern stem rot, leaf spot, *Rhizoctonia* and other diseases



UNTREATED



TREATED

Trial location: Florida

Orondis Fungicide Shows Promise in Trials

Vegetable, tobacco and potato growers will soon be able to experience the same standout performance that Syngenta and its cooperators have witnessed in field trials featuring Orondis™ fungicide. Data from the trials show that the fungicide's active ingredient, oxathiapiprolin—containing a new mode of action (FRAC Group U15)—has shown efficacy at active ingredient rates 10 to 100 times lower than current standards. As a result, Orondis, upon EPA registration, will offer improved control against some of the most economically devastating diseases, including late blight, downy mildews and root and stem rots.

"It's one of the most efficacious downy mildew fungicides I've worked with," says Richard Raid, Ph.D., University of Florida Extension specialist, who trialed Orondis on lettuce, broccoli, kale and cucumbers. "It's a novel chemistry that will go a long way in resistance management."

Professor of Plant Pathology Gary Secor, Ph.D., with North Dakota State, and Extension Specialist Steven Johnson, Ph.D., with the University of Maine, trialed Orondis on potatoes and agree that its performance on late blight will be a real benefit to growers in both geographies. "The fungicide's real strength is tuber protection," says Johnson. "It protects the tubers longer than most products, including previous standards. I am looking forward to having it in our late blight arsenal."

Michigan State Extension Specialist Mary Hausbeck, Ph.D., who trialed Orondis in cucurbits and peppers, says, "I'm very excited about this product as an upcoming tool for *Phytophthora* and downy mildew. It will offer a new approach to disease management."



"The fungicide's real strength is tuber protection. It protects the tubers longer than most products, including previous standards."

—STEVEN JOHNSON

of anthracnose, leaf blight, black rot and other economically important diseases.

> Aprovia Top: Quality Control

Cucurbit and vegetable growers can look forward to Aprovia Top, a premix of Solatenol fungicide and difenoconazole. Formulated to protect yield and enhance crop quality, Aprovia Top will provide excellent preventive activity to help safeguard fruiting and cucurbit vegetables against early blight, powdery mildew and gummy stem blight.

Ohio State University Extension Specialist Sally Miller, Ph.D., trialed the fungicide on tomato and cucurbit crops and says, "Upon registration, I can confidently recommend Aprovia Top as an addition to growers' fungicide programs

because of its efficacy against early blight, anthracnose and powdery mildew."

While Trivapro, Elatus, Aprovia and Aprovia Top promise to help growers take disease control to new levels, Syngenta will continue to invest and innovate to help make sure its customers stay way ahead of the status quo. 🍀

FOR MORE INFORMATION

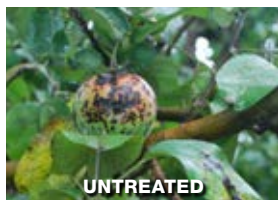
Visit www.syngentacropprotection.com for more information on the Syngenta fungicide pipeline. To keep up-to-date on product news via text message alerts, text Aprovia, Aprovia Top, Elatus and/or Trivapro to **97063** and reply "y" to confirm your registration. Message and data rates may apply.

FIELD NOTES

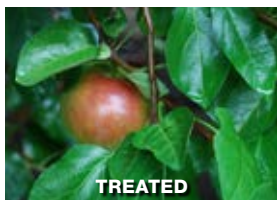


Aprovia

Chemistry: Solo Solatenol formulation
Crops: Pome fruit and grapes
Protection: Apple scab, powdery mildew, fly speck, sooty blotch, anthracnose, leaf blight, black rot and other diseases



UNTREATED



TREATED

Trial location: Michigan

Aprovia Top

Chemistries: Premix of Solatenol and difenoconazole
Crops: Fruiting and cucurbit vegetables
Protection: Early blight, powdery mildew, anthracnose and gummy stem blight



UNTREATED



TREATED

Trial location: Michigan





GROUND

GAME

Corn rootworm is a costly, sometimes hard-to-detect pest that requires an integrated pest-management approach for effective control.

By Darcy Maulsby

Controlling insects in corn crops is like trying to solve a crossword puzzle. Sometimes the answers aren't as simple as they might seem, especially when it comes to managing corn rootworm (CRW).

"We've seen a steady increase in CRW pressure in this area over the past six or seven years," says Andy Muff, grower and Syngenta Seed Advisor™ from Ventura, Iowa. "In several fields, the CRW pressure was so severe in 2013 that 10 to 12 beetles would crawl out of nearly every corn ear."

Rootworms are estimated to cost U.S. corn growers more than \$1 billion annually. Most of the damage occurs underground, where rootworm larvae feed on developing corn roots. Light to moderate rootworm damage can be easy to miss, but it still hurts yields. "CRW chew on the tiny root hairs during the seedling stage," says Mike Missman,

a Syngenta Seed Advisor from Woden, Iowa. "By the time you notice anything is wrong, the damage has been done."

Crops with moderate to severe damage may be stunted. The CRW larvae prune the root of the corn, reducing the water and nutrient uptake of the plant. Plants weakened by rootworm damage may also lodge, leading to problems at harvest. "So much of the 'factory' of the plant is underground in the roots," Muff says. "You can't fix CRW damage once it's done."

Missman is concerned about the trend he's seeing of farmers growing conventional corn in his area. While CRW hasn't been a major problem locally, he knows it's easy to get complacent—and lulled into a false sense of security.

"Conventional corn is cheaper to plant than seed with the rootworm trait, but some of the conventional corn growers don't plan to use insecticide either," Missman says. "We could be setting ourselves up for trouble."

Getting to the Root of the Issue

While CRW pressure can vary from year to year, it remains an ongoing challenge. "CRW has been around for decades and is not going to go away," says Miloud Araba, Ph.D., Syngenta technical product lead for commercial traits. "CRW adapts to different environments, and there's no one-size-fits-all solution."

Even fields with no history of CRW issues may be susceptible. Entomologists at Purdue University have found that rootworm beetles can readily move between fields and may cause damage in locations other than where they emerged. Beetles may also move into corn and/or soybean fields that have an abundance of pollen-producing weeds, such as volunteer corn, ragweed or foxtail.

Effective CRW management requires the integration of multiple control measures, as opposed to a single strategy, says Araba, who encourages an integrated pest-management approach. This starts with scouting. Muff checks fields at several key times during the growing season, starting in late June or early July when corn is close to tasseling. He conducts a float test to check for CRW larvae.

"I fill a bucket half-full of water, do a root dig and submerge the roots in the water for about five minutes," Muff says.

"Any larvae will float to the surface." Adding salt to the water in the bucket helps CRW larvae float to the top.

Muff returns to the field three to four weeks later to check for adult beetle emergence in the corn. He comes back in early fall to conduct another root dig to see if there has been more root feeding.

"If we don't find much during any of these three inspections, I know CRW pressure is low," Muff says. "If any of the tests show moderate to high infestation, it's time to take action."



"So much of the 'factory' of the plant is underground in the roots. You can't fix CRW damage once it's done."

—ANDY MUFF

Syngenta recommends the following strategies if growers expect CRW to be a problem:

- > **Take a multiyear, whole-farm approach.** Effective, long-term CRW management requires a three- to five-year plan. “Know the CRW history of your fields and develop a long-term management plan,” Araba says. “Also, reassess your plan every year, since CRW pressure can change from year to year.”
- > **Rotate to a non-host crop when there is an option.** This is the first option for breaking the CRW cycle but may not be practical in some areas. In those cases, rotating to a non-host crop every third or fourth year, rather than every second year, might be a better option, Araba says. In Missman’s area of Iowa, for example, growers have been successful with a three-year corn/one-year soybean rotation plan.
- > **Integrate multiple measures of control.** Effective CRW management requires a multipronged approach. In fields with severe CRW pressure, where 10 to 12 beetles were coming out of nearly every ear of corn, Muff encouraged the growers to use tillage in the fall to bury cornstalk residue and create a less hospitable environment for CRW. Then he helped the growers develop a long-term plan that incorporated the right combination of seed traits and/or insecticides for their needs.
- > **Use trait stacks with multiple CRW traits.** Syngenta offers options, including hybrids with built-in CRW control with the Agrisure® traits portfolio, which offers best-in-class insect control to protect quality and yield. Agrisure Duracade® trait stacks combine the Agrisure Duracade trait, the newest mode of action against CRW, with the Agrisure RW trait, a proven mode of action for CRW. Agrisure Duracade attacks CRW unlike anything else on the market by expressing a unique protein that binds differently in the gut of the corn rootworm, making it a critical tool in any CRW management program.
“Agrisure Duracade is tremendous,” Muff says. “One USDA study has shown that it reduces adult corn rootworm beetle emergence by 99.97 percent because it kills the larvae. When you reduce the ‘breeding stock,’ you start winning the battle against CRW.” In addition to the Agrisure Duracade 5122 E-Z Refuge® and Agrisure Duracade 5222 E-Z Refuge trait stacks, the Agrisure traits portfolio offers another dual-mode-of-action trait stack for CRW control, Agrisure 3122 E-Z Refuge, as well as technologies containing a single CRW trait—Agrisure Viptera® 3111 and Agrisure 3000GT. These corn rootworm trait stack packages also give growers the opportunity to rotate traits, thus providing another important means to effectively manage corn rootworm.
- > **Apply a soil insecticide.** Force® soil-applied insecticide, when used in combination with hybrids containing



CRW Management Recommendations

Want more information on developing the right corn rootworm (CRW) plan? Visit the Syngenta CRW management guide online (www.syngenta-us.com/agrisure/crw-control.aspx) for a mobile-friendly experience that provides management recommendations tailored to your fields.

“This simple, user-friendly tool gives guidance and offers flexibility to find solutions for your acres,” says Miloud Araba, Ph.D., technical product lead for commercial traits at Syngenta.

The online tool provides management recommendations, from trait stacks to insecticides and seed treatments. “Use this handy resource as a guide, and also work with your Syngenta Seed Advisor™ or reseller to develop a customized CRW plan,” Araba says.

single- or multiple-CRW trait combinations, increases yields by an average of more than 10 bushels per acre, as demonstrated by hundreds of field trials.¹ The same research shows Force also protects yield of hybrids without CRW traits. “When used at the full rate, Force provides long-residual control,” Missman says. “It works very well, plus a pyrethroid like Force has excellent crop safety regardless of which herbicide you use.”

- > **Consider a foliar insecticide.** To minimize egg laying from adult CRW females and facilitate proper pollination by preventing silk clipping later in the season, consider applying Warrior II with Zeon Technology® foliar insecticide.

Using the right mix of technologies is key to controlling CRW and managing resistance for the long run. “CRW will continue to adapt, so it’s vital to balance CRW control, yield protection and resistance management,” Araba says. “Syngenta Seed Advisors and resellers are ready to help growers find this balance to protect the durability of CRW traits and their crop’s yield potential.” 🌱

1. Average yield increase of 10.42 bu/A based on 326 Syngenta field trials.



Succeed Together

Diversity and inclusion are powerful resources that will fuel the long-term vitality of the ag workforce.

When it comes to diversity in the agriculture sector, it's truly a mixed bag.

The number of ethnic minorities serving as principal operators on the nation's farms grew by 15 percent between 2007 and 2012, according to the 2012 U.S. Agriculture Census. Hispanic farmers saw the biggest growth, at more than 20 percent, and increases were reported in all ethnicities. That's excellent news, even as the total number of principal operators across the country declines.

On the other hand, the number of female principal operators decreased by 6 percent from 2007, faster than the overall drop in principal operators of 4.3 percent.

Today, efforts are underway across many ag-related fields to improve the involvement of minorities and women. Syngenta, for example, has policies in place that promote the two intertwined-but-distinct goals of ensuring diversity and inclusion.

A Welcoming Workplace

Diversity and inclusion have become important strategic

imperatives for many multinational companies, and both represent good business practices, particularly for agriculture because it is such a global industry, says Daniel Loria, head of human resources for Syngenta.

"Inclusion is not just morally right, and diversity is not just a compliance matter," he says. "They both make a lot of sense, business-wise."

Loria characterizes diversity as the representation of the different groups from a society in numerical terms. The government often identifies these groups by major factors, such as gender, age, ethnicity, religious beliefs or sexual orientation, just to name a few. Diversity can also refer to differences in work styles, as employees sometimes have to adjust to having as many as four different generations working side by side.

Inclusion is reflected in the company's values and describes how employees interact. In other words, it is a qualitative term describing the work environment. Loria has read several research reports showing that companies with inclusive work environments have higher employee retention rates and lower turnover costs.



“At Syngenta, inclusion is part of our company culture and is not a program with a defined beginning and end,” Loria says. “We want inclusion to be ongoing and a part of how we think every day.”

In an effort to make sure diversity and inclusion are top priorities across the company, Syngenta has developed a powerful customized training program for the 900 employees whose job responsibilities include managing people. Through the training, employees learn to recognize their unconscious biases and develop a better understanding of co-workers who are different. For instance, people usually say they would have no problem hiring a person with a disability, a female or a member of a minority group; but an in-depth self-assessment often exposes unconscious mental models that cause a manager to inaccurately assess a potential employee.

“We want to ensure that when we recruit and promote people, we let go of those biases and focus instead on the knowledge, skills and experience that the person brings to the workforce,” Loria says. “If we learn to become inclusive, the representation of diversity will be an almost automatic outcome. People will come looking to Syngenta for employment because they know they will be welcome.”

The Recruiting Challenge

Despite the improvement in minority ownership from 2007, there’s still work to be done in overall participation in agriculture.

Human resource officers at the U.S. Department of Agriculture, for example, report several groups—including women (Caucasian and Asian), Hispanics, Pacific Islanders, black males and individuals with targeted disabilities—are underrepresented among its global workforce of more than 100,000.

That’s where organizations, such as Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS), come in.

MANRRS was founded more than 30 years ago to keep younger generations connected to agriculture, the environment and giving back to their communities. Through a network of 75 chapters in 38 states, MANRRS seeks to increase diversity and inclusion in the agricultural workforce through annual career fairs and training conferences.

The Junior MANRRS Program is specifically designed to reach out to high school students.

“If we are going to have a sustainable agriculture industry for the future, we have to have all audiences at the table,” says Quentin Tyler, assistant dean and director of the University of Kentucky College of Agriculture’s Office of Diversity and national president of MANRRS.

Tyler has experienced the challenges of diversity and inclusion firsthand. When recruiting underrepresented students in agriculture, natural resources and related sciences, their initial response is often, “I can’t see agriculture beyond farming or myself on the farm.” But when he explains all the different careers agriculture offers, their eyes light up.

“We’ve got to keep diverse talent coming through the pipeline,” says Ebony Webber, chief officer of operations at MANRRS. “We’ve got to keep attracting underrepresented students to sustain the pipeline and show that agriculture is inclusive to everyone.”

And that starts with each of us. “If we change the way we think and act every day, that’s the type of change we can all do,” Loria says. “Let’s embrace these new generations of employees who look different from those of the past.”

STORY BY CINDY SNYDER

“Inclusion is not just morally right, and diversity is not just a compliance matter. They both make a lot of sense, business-wise.”

— DANIEL LORIA

FOR MORE INFORMATION, visit the Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) website: www.manrrs.org.

Have a Field Day

Grow More Experience Sites offer resellers and growers a chance to see the effectiveness of Syngenta technologies firsthand.



**U.S. and Canada
Grow More
Experience Sites**

Randy Kool, agronomy service representative from Iowa, explains the Syngenta approach to growing more soybeans at the Carroll, Iowa, Grow More Experience Site.

Syngenta. “Our food security and productivity goals are totally visible there for folks to understand how we’re trying to add value to their crop production systems.”

“**S**how, don’t just tell” is familiar advice for anyone trying to convey a message. Through its 2015 Grow More Experience Sites, Syngenta is putting that advice into action. At more than 60 locations across the U.S. and Canada, the company is showing its customers how its products work—and how improved agronomic practices can make them work even better.

As educational resources for retailers, Syngenta Seed Advisors™ and growers, these sites offer an immersive experience where participants can step into a field and see the impact Syngenta products are having on crop production.

“It’s one thing to talk from a piece of literature about our portfolio,” says Bill Jacobs, a Syngenta sales representative in Nebraska. “It’s totally different when I can show you several corn hybrids planted side by side, and you can see variations in their emergence, seedling vigor, performance in local conditions and yield projections.”

The Grow More Experience Sites also help bring The Good Growth Plan to life. This Syngenta plan revolves around six commitments that will lead to more food and less waste, more biodiversity and less degradation, and more health and less poverty. The sites visually illustrate how Syngenta can help sustainably feed a growing population.

“We’re trying to bring elements of The Good Growth Plan into all locations,” says Mike Moss, head of technical development at

Showing via Demonstrations

Demonstrations at the sites help depict how those productivity goals can be met. For example, a comparison of treated versus untreated plots demonstrates the vigor effect of CruiserMaxx® Beans seed treatment, which is also a base for Clariva™ Complete Beans seed treatment—both combinations of separately registered products.

“Soybeans emerge between four and six days earlier when they’re treated with CruiserMaxx Beans,” says Bob Kacvinsky, a Syngenta agronomy service representative in Nebraska. “Over the past seven years at the York, Nebraska, Grow More Experience Site, faster emergence and improved early-seedling vigor have added from two to four additional nodes per plant, which, in 2014, resulted in an 8.4-bushel-per-acre yield increase.”

The sites also prove that when agronomics and chemistry work together, greater productivity and return on investment can result. In 2014, Syngenta and its site cooperators in York planted a CruiserMaxx Beans with Vibrance® trial at planter speeds of either 5 or 7 miles per hour. The slower speed, when coupled with the seed treatment, resulted in a 12.4-bushel-per-acre increase. Based on last year’s average soybean price, this translates into a \$130-per-acre difference—a larger improvement

than the seed treatment or slower planter speed could have achieved alone.

“Seeing the differences in a field is different from looking at a chart, where everyone wonders where those numbers come from,” Kacvinsky says. “Here you can have the plants laid side by side on a white board, and touch and see the difference.”

Technologies in the Pipeline

The 2015 Grow More Experience Sites have several educational objectives. The first is to make sure Syngenta sales representatives and agronomists have a firsthand knowledge of new products. As an R&D company, Syngenta has a powerful pipeline, and it’s important that each individual who works directly with a customer has a thorough understanding of the latest technologies, well before they enter the market. “We want to showcase new products a year or two before launch to get internal folks well-versed in the technology and excited about what we have coming,” says Moss.

Another goal is to provide resellers with agronomic training for product use, showing how to make Syngenta chemistries more productive, says Kacvinsky. “The Grow More trials are more than just product placement, but how specific products, combined with better agronomic practices—such as planter speed, depth, uniform spacing and planting date—can all be brought together to improve overall return on investment for the farmer,” he says. “Additionally, we want resellers to have visibility of our pipeline, so they will be well-positioned to help us introduce new products to the marketplace.”

Partnering With Customers

The combination of product demonstration and agronomic education is a unique feature of the Grow More Experience Sites. “We’re backing up what we’re talking about,” Jacobs says. “It’s not just, ‘Use this seed.’ We’re training our partners on what we’ve learned about our technologies, which, hopefully, will make them better agronomists. That’s something Syngenta does differently.”

Derek Nissen, seed coordinator at Cooperative Producers Inc. in Hastings, Nebraska, appreciates that difference. Last year, he took his sales staff to a nearby Grow More Experience Site three times during the growing season. What they learned there translated into better service for his customers.

“When you’re visiting with the farmer and you’ve got that experience, you can discuss Syngenta as a whole-farm solution,” Nissen says. “Everything they’re doing at the site, we can learn and relay that to the customer. It’s a great asset for us as a retailer.”

That’s all part of the plan to partner better and smarter with resellers, Moss says. The Grow More Experience Sites offer an opportunity for retailers and Syngenta Seed Advisors to understand what’s coming next from Syngenta and to figure out how they may integrate it into their own proprietary operations.

“This is creating an opportunity for our resellers to build value into their own businesses,” Moss says. “That’s really powerful.” 🌱

STORY BY SUZANNE BOPP

RESISTANCE FIGHTER

— OF THE YEAR —

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syngenta®



Ripple Effect

From seed grants and community gardens to wheat blogs and advanced analytics, Syngenta is making major contributions to the agriculture community.

AWARDS AND GRANTS

> Syngenta Grow More Vegetables Seed Grant Program

Syngenta is accepting applications through September 15 for its Grow More Vegetables Seed Grant Program. The program supports the establishment of school and community gardens and assists recipients in their efforts to educate local communities on the benefits of growing and eating fresh vegetables. Each year, a panel of judges selects one recipient from three different categories: elementary/middle school, high school/FFA chapter and community gardens. Each recipient receives a garden package that includes vegetable seed, a flip camera and a materials stipend.

This program is just one example of how Syngenta is bringing The Good Growth Plan to life in local communities by recognizing and supporting organizations that share its passion and commitment around the principles of “more food, less waste; more biodiversity, less degradation; and more health, less poverty.” For more information on the Grow More Vegetables Seed Grant Program, visit www.vegetables.syngenta-us.com.



This page: Healthy soybean pods fill out in preparation for a strong harvest.

Opposite page, left to right: Jack Kloeber of KROMITE, a decision-analytics firm that partners with Syngenta, and Bruce Luzzi, Dan Dyer and Joseph Byrum of Syngenta accept the 2015 Franz Adelman Award for a soybean breeding team initiative.

>> Leading the Ag Analytics Revolution

The Syngenta Good Growth Through Advanced Analytics program has won the 2015 Institute for Operations Research and the Management Sciences (INFORMS) Franz Edelman Award. Now in its 44th year, the award is the world's most prestigious recognition of excellence in applying advanced analytics to benefit business and humanitarian outcomes.

"People typically talk about the art of plant breeding," says Joseph Byrum, Syngenta head of soybean seeds product development. "We're interested in the science."

The Good Growth Through Advanced Analytics program is a Syngenta soybean breeding team initiative that uses advanced mathematics and state-of-the-art technologies to develop higher-yielding soybean varieties. By increasing genetic gain, which is the rate at which a breeder makes genetic improvements to yield, the program is improving soybean variety accuracy, selection intensity, genetic variation and generation time, all without using more land, water or inputs.

Growers are already achieving better yield results in the field because of the program. For example, in 2013, Soy Capital Ag Services, an independent farm management company, tested 20 soybean varieties. NK[®] Soybeans from Syngenta dominated the field trials, placing first, second and third for the highest yield. In 2014 trials, NK varieties once again earned the top three spots for yield.

"We at Syngenta are committed to addressing the global food security challenge," says Byrum. "Agricultural productivity must increase in order to feed a global population. It's an honor for our team to receive the Edelman Award and be recognized for our efforts to make crops more efficient."



PHOTOS: SYNGENTA



SOCIAL MEDIA

> 2015 Voices 4 Wheat Blog Shares Knowledge

Syngenta has launched the 2015 Voices 4 Wheat campaign. Throughout the season, this wheat-focused blog will feature the firsthand experiences of the following growers and retailers:

- > **Paul Kanning** is a third-year wheat grower and retired U.S. Air Force veteran from northeast Montana. He grows 1,150 acres of spring wheat and pulse crops, including dry peas, lentils and faba beans.
- > **Kevin Capistran** is a full-time farmer, part-owner of Capistran Seed Company and an AgriPro[®] associate located in northwest Minnesota. Capistran and his family grow wheat, soybeans, sugarbeets and sunflowers on a 2,400-acre farm. They conduct their own seed and product trials, and they host trials for universities and other companies.
- > **Tom Luhrs** is the owner of Luhrs Certified Seed in southwest Nebraska, and Scott Way leads the seed side of the business. Together, they manage a combination of dryland and irrigated crops across 1,600 acres. They also produce and sell certified winter wheat seed and oats.
- > **Brian Lorentz** is the seed manager for Columbia Grain Inc., in central Idaho and eastern Washington. Lorentz helps manage 200,000 acres of white and red wheat, barley, peas, lentils, garbanzo beans, canola, flax and oats.

To follow the 2015 participants on their journey, visit www.voices4wheat.com.



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Cautionary Statement Regarding Forward-Looking Statements

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COMMUNITY GARDENS

Fighting Hunger

Through monetary contributions and a Community Garden Project, Syngenta and its employees are making a difference in the battle against food insecurity.

About 650,000 people living in central and eastern North Carolina have been identified as “food insecure,” meaning a lack of money or other resources limits their access to an adequate supply of food at times during the year. North Carolina is just one state—add up numbers like this one for every state in the country, and the challenge of feeding people in need is daunting.

Health care costs, underemployment and unemployment take their toll, says Ashley Delamar, vice president of development for the Food Bank of Central and Eastern North Carolina.

“We had a very hard winter in North Carolina,” says Delamar. An ice storm shut down businesses for about a week. That meant lost workdays for many people. Just a few

days without pay meant people who were living paycheck to paycheck did not have enough money to buy food.

Fortunately, yearly contributions from Syngenta, other corporate sponsors and individuals help to feed more than 300,000 people in the 34 counties the food bank serves.

Over the last three years, Syngenta has donated its own vegetable varieties to a Community Garden Project in Research Triangle Park, North Carolina. The garden has supplied an array of fresh vegetables to the food bank. More than 75 Syngenta employees have volunteered their time and agronomic expertise to the garden, says George Aux, team leader of product safety business management and compliance for Syngenta.

Last year, this quarter-acre plot produced 4,000 pounds of vegetables. Syngenta volunteers delivered these vegetables—including tomatoes, peppers, squash, melons, green beans, collards, kale and more—to the food bank. The garden also doubled in size from 2013, its first year of operation.

This year, Aux expects the garden to again produce about 4,000 pounds of vegetables for the food bank. The garden also features an Operation Pollinator plot. Volunteers have planted one-eighth of an acre in perennial flowers to attract pollinators and other beneficial insects.

Syngenta has also made significant monetary contributions to the food bank over the years, and many employees from the company’s Research Triangle Park facility have volunteered to help sort food donations.

Solving the problem of food insecurity is a huge endeavor. But agricultural retailers and other companies can help make lasting impacts in their own communities, Aux says. Retailers can, for example, donate leftover vegetable seed inventories to local community gardens. Or, retailers and their employees could lend their agronomic expertise. Multiply one such project by many, and the challenge of giving all people food security becomes possible. ■ STORY BY LYNN GROOMS



“We distribute about 54 million pounds of food each year. About one-third of that is in the form of fresh vegetables, fruit and meat.”

—ASHLEY DELAMAR

This page, left to right: Syngenta colleagues Becky Cade, George Aux and Guoling Luo donate their time to the company’s Community Garden Project, which helps provide food to needy North Carolinians. Opposite page: George Aux with Syngenta proudly displays healthy collard greens grown in the company’s Community Garden in Research Triangle Park, North Carolina.





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