

Growing Together

>> 2Q | 2014

# thrive<sup>®</sup>

## With *the* GRAIN

Enogen Corn Makes  
Ethanol Production  
More Efficient

> KEEP YOUR BEST  
EMPLOYEES

> R&D USES  
GLOBAL  
RESOURCES  
TO CREATE  
LOCAL  
SOLUTIONS



syngenta<sup>®</sup>

# contents

**10 The Future of Fuel**  
Enogen corn offers substantial advantages for ethanol plants, growers and rural communities.  
*By Megan D'Angelo*

**14 Borderless Science**  
The collaboration between Syngenta scientists around the globe results in timely solutions for growers in the U.S.  
*By Darcy Maulsby*

**18 Come Rain or Shine**  
Fungicides with stress-management benefits help growers deal with the effects of extreme weather.  
*By Emily Collawn*

ON THE COVER From left to right: Delayne Johnson, chief executive officer of Quad County Corn Processors (QCCP); Todd Axtell, Syngenta Enogen account lead; and Travis Brotherson, QCCP plant engineer, stand in front of a heat exchanger, which recovers energy from mash by preheating beer for distillation during the ethanol production process. Photo: Greg Latza

THIS PAGE Dried distiller's grains (DDGs), a better-quality, high-protein feed for livestock, is one of the benefits of the ethanol production process. Photo: Greg Latza



Even if you love your print edition of *Thrive*, you'll still want to check out the magazine's digital edition. 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.

**1 WELCOME**  
**Learning and Leading**  
An increasingly complex marketplace makes continuous learning essential.  
*By Jeff Taber*

**2 WHAT'S IN STORE**  
Find out about new technologies and contests.

**6 DATA POINT**  
Global Science

**8 ASK THE EXPERTS**  
**Agronomists on Call**  
Interview by Susan Fisher

**22 BEST PRACTICES**  
**Digging for Answers**  
*By Lynn Grooms*

**24 KNOW-HOW**  
**Retain and Gain**  
*By Suzanne Bopp*

**26 RIPPLE EFFECT**  
**Learn about recent awards, a grant program and Syngenta educational scholarships.**



Scan this QR code to take the fast track to the digital version of *Thrive*, or go to [www.syngentathrive.com](http://www.syngentathrive.com).

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

Please send them to [thrive@syngenta.com](mailto:thrive@syngenta.com). For more information, visit the FarmAssist website at [www.farmassist.com](http://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, services and solutions, and to provide them with the information they need to succeed in today's complex marketplace.



# Learning and Leading

“Learning and leadership are indispensable to each other,” writes John F. Kennedy in his “Unspoken Speech.” Even though he died on his way to deliver these words, they continue to live and are as true today as they were more than 50 years ago.


At Syngenta, we understand that hard work alone doesn’t make you a leader. No matter how seasoned you are, continuous learning is critical to giving you a unique competitive advantage in an increasingly complex marketplace. It’s especially vital to the Syngenta field force, whose support of a whole-farm, whole-customer approach requires a broad understanding of your business, along with targeted crop solutions for growers.


Our team of field force excellence trainers is focused on constantly sharpening the skills and tools of Syngenta sales representatives, so that your experiences with them are unmatched in the industry. These trainers, who are located in different areas across the country, acutely understand local priorities and market nuances. At the same time, they are part of the broader learning and development organization, which gives them access to training, selling and global marketing best practices.

We proudly share this knowledge with you through customized, fit-for-purpose programs aimed at improving insights into individual grower needs. After all, you are the solutions providers closest to the farm, and your success at helping growers achieve higher-yielding, better-quality crops is intrinsically tied to ours.

Of course, the continued progression of our entire industry hinges on how well each of us prepares the next generation for the obstacles and opportunities that lie ahead. In this issue of *Thrive*, you’ll see how the Syngenta training and development initiative for recent college graduates does just that. Through the developmental sales representative program, we combine high recruiting standards with a rigorous, comprehensive learning experience. As a result, we are able to consistently produce a pool of new sales reps whose readiness to perform is second to none.

You’ll also see how the Syngenta agronomy team works side-by-side with our sales organization to give growers timely advice on managing their toughest crop challenges.

Almost every article in this issue showcases some of the tools that our globally integrated science has built. From renewable fuel innovations to cutting-edge technologies in pest control, opportunities to learn never cease at Syngenta. And neither does our quest to help you become a leader in your field, season after season. 



**JEFF TABER**  
Head, Field Force Excellence and Training  
Syngenta

**“No matter how seasoned you are, continuous learning is critical to giving you a unique competitive advantage in an increasingly complex marketplace.”**



JEFF TABER



# What's in Store

New technologies offer improved crop solutions; news keeps you apprised of the latest developments.

## NEW TECHNOLOGIES

### > **Newest Corn Herbicide Offers Superior Weed Control**

Syngenta has announced the name of its newest weed control technology in corn. Acuron™ herbicide, code named SYN-A197, contains four active ingredients, including new bicyclopyrone. “As weed resistance continues to expand, so does the need for pre-emergence residual herbicides,” says Gordon Vail, Ph.D., technical product lead for herbicides at Syngenta. “Research has shown Acuron will deliver better, more consistent weed control than today’s standards.”

Syngenta anticipates the new herbicide premix will control more than 70 broadleaf weeds and annual grasses, including giant ragweed, common ragweed, Palmer amaranth, waterhemp, marestail, cocklebur and morning-glory. With registration expected in time for the 2015 growing season, growers and retailers will have a chance to see Acuron for themselves at multiple university and Syngenta field trials in 2014. Please contact your local Syngenta sales representative for more information.



A healthy field of early-mid-growth grain corn in Wisconsin



## >> New Learning Tools for Corn

Syngenta has added three new modules to its portfolio of online educational resources. Each focuses on identifying and managing harmful corn pests. The module on Avicta® Complete Corn seed treatment demonstrates how this technology can protect corn plants and their yield potential from microscopic nematodes ([www.syngenta.com/avictacompletecornmodule](http://www.syngenta.com/avictacompletecornmodule)). The other modules are a two-part series on corn rootworms. The first tutorial focuses on identifying the pest and implementing best practices that help manage and reduce rootworm populations ([www.syngenta.com/crw101](http://www.syngenta.com/crw101)). Participants who complete the quiz are eligible to earn one credit toward the Certified Crop Adviser continuing education program. The second tutorial provides an overview of the Syngenta portfolio of traits, seed treatments, and soil- and foliar-applied insecticides that offer powerful corn rootworm control ([www.syngenta.com/crwmanagement](http://www.syngenta.com/crwmanagement)).



## BY THE NUMBERS

92  
MILLION

the total number of acres that many analysts are predicting for the 2014 U.S. corn harvest

(AS OF JAN. 30, 2014)



### >>> Taegro ECO Fights Diseases

Growers can now use Taegro® ECO biofungicide for broad-spectrum control of major soilborne and foliar diseases that are detrimental to cucurbit, fruiting and leafy vegetable crops. With low application rates, it provides effective preventive control in rotation or as a tank-mix partner and is an excellent fit for integrated pest management or methylbromide replacement programs. An Organic Materials Review Institute-listed biological fungicide, Taegro ECO does not harm beneficials and is exempted from residue tolerances, making it a valuable tool for late-season residue management, if needed. With multiple modes of action, Taegro ECO is also a resistance management tool as part of a conventional fungicide program.



## NEWS AND EVENTS

### > Drive to Thrive Contest

Syngenta invites you to tell us what drives your farm or agribusiness to thrive. In exchange, you could win one of 10 touchscreen tablets. If you're our grand prizewinner, you'll also receive a \$500 gas card and may be featured in an upcoming issue of *Thrive*. Here's how to enter:

- 1** Go to [www.syngentathrive.com](http://www.syngentathrive.com) to review eligibility and click on the easy-to-use Drive to *Thrive* entry form.
- 2** In about 200 words, describe what makes your farm or agribusiness thrive.
- 3** Using the simple instructions provided, upload a photograph or video that visually supports your written entry.

The deadline for entering is June 30, 2014. Shortly after this date, a panel of judges will choose 10 finalists, who will each receive a touchscreen tablet. Syngenta will then post all finalists' entries on the *Thrive* website and ask visitors to help choose the grand prizewinner by voting for their favorite. These votes along with the judges' scores will determine the winner. Online voting ends Sept. 1, 2014, with Syngenta announcing the grand prizewinner in October.

**FOR MORE INFORMATION** on the Drive to *Thrive* contest and Official Rules, visit [www.syngentathrive.com](http://www.syngentathrive.com).

# Stay Connected With thrive®

The new *Thrive* website features all the compelling content from our award-winning print magazine, plus so much more:

- Broader coverage of topics that matter most to you
- Breaking news on Syngenta products and industry happenings
- Timely advice from field experts
- Videos and photo galleries that bring our stories to life
- Multiple chances to win prizes\*
  - > **\$50 Cabela's® gift cards** in our monthly, answer-one-simple-question scavenger hunt
  - > Touchscreen tablets to 10 finalists plus a **\$500 gas card to the grand prizewinner** of our new Drive to *Thrive* contest

Best of all, you can take *Thrive* online wherever you go because it's easy-to-access on your smartphone or tablet. Scan this QR code to take the fast track to the website, or go to **[www.syngentathrive.com](http://www.syngentathrive.com)**.



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Join our online scavenger hunt or enter our **Drive to Thrive** contest for a chance to win great prizes.\*

\*See Official Rules for details.

**syngenta**®

# Global Science

Growers around the globe have the same goal of boosting yields, and they inevitably face many of the same challenges. Increasingly, in today's interconnected world, growers in countries distant from each other are dealing with the same issues. A pest problem in Brazil this year, for instance, may plague growers in the Midwest next year. That's one reason the global reach of Syngenta research and development (R&D) has proven so critical in the development of new seed, seed treatment and crop protection solutions that can be adapted to local environments and tailored to meet specific local needs. Drawing on a dedicated team of scientists, state-of-the-art facilities and a vast supporting network, the company is utilizing its capabilities to address growers' needs with new, innovative technologies.



**Weed Control**



**Fungal Control**



**Insect Control**



**Other Biotic Stress**



**Abiotic Stress**



**Yield and Quality**

**\$1.3** Billion Investment in R&D Annually



**3 International Research and Development Centers**

Large hubs of integrated R&D activity. Includes basic research, development and registration activities. Global reach.



**67 Agronomy Centers**

The core set of sites that generate agronomic solutions. The focus is on early selection and development. Regional/local reach.



**52 Field Sites**

Locations targeted to late selection and profiling in specific agroclimatic zones. Very local reach.





**16**  
Technology  
Centers

Centers in which the focus is on R&D technologies, typically alongside agronomic solution development and field activity. Global/regional reach.

**5,000+**  
SYNGENTA SCIENTISTS



**10** R&D  
Offices

Office-only  
locations.

Universities

**400+**

The number of R&D external partners that collaborate with Syngenta, located in more than **20 countries worldwide.**

Research  
Institutes

Private  
Companies

Acuron™ herbicide, a four-active-ingredient premix that includes new bicyclopyrone. (EPA registration is expected for the 2015 growing season.)



Quadris Top®/  
Quilt Xcel®  
fungicides



Agrisure  
Duracade™ trait



Clariva™ Complete  
Beans nematocidal/  
insecticide/fungicide  
seed treatment



Agrisure Artesian®  
technology



NK® and Golden  
Harvest® genetics  
and seed brands



See related article, p. 14

# Agronomists on Call

Technical insight and a can-do attitude make Syngenta agronomists an essential resource.

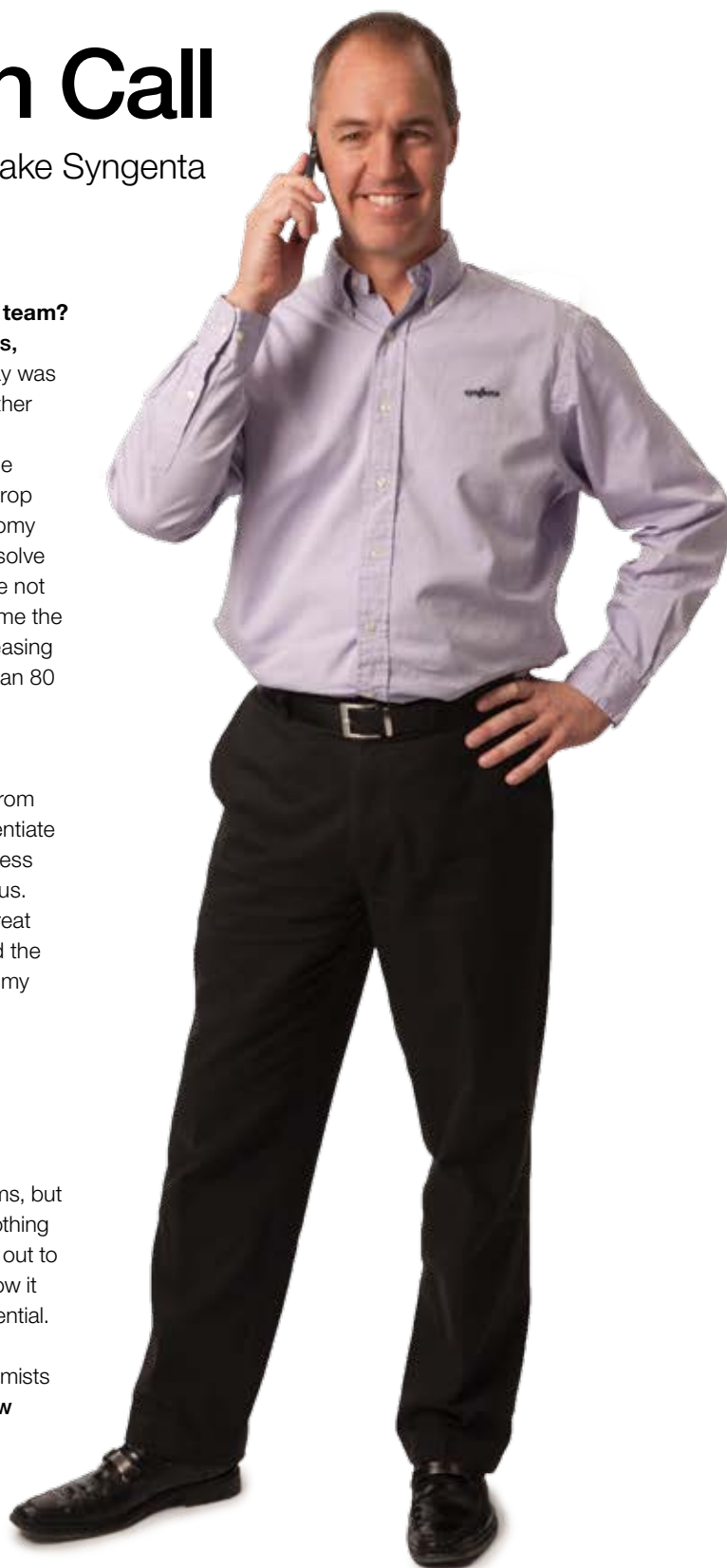
**Q. Why did Syngenta establish its own agronomy team?**

**A. Chris Cook, head, technical training & resources, Syngenta:** The agronomy team Syngenta has today was established three years ago, after we brought together various agronomy service teams from across the company. Helping farmers “Grow More” is really one of the pillars for why we integrated our seeds and crop protection businesses in 2011. It’s also what agronomy is all about. With an eye toward helping growers resolve challenges and make the most of opportunities, we not only increased the number of agronomists at the time the company came together, but we’ve also been increasing our numbers ever since. We currently have more than 80 trained agronomists in locations across the U.S.

**Q. How does your team differ from sales?**

**A.** In a lot of ways, agronomists are not that different from sales representatives. I think a simple way to differentiate between the two is that our sales team has a business focus and our agronomist team has a technical focus. That said, often the best people in sales are also great at agronomy, and the best agronomists understand the reseller’s business. At Syngenta, we tell our agronomy team to focus on three things:

- > **Demand creation**—with and through our reseller partners. A good example of this is joint sales calls with our partners.
- > **Training.** Training, of course, can come in many forms, but in-field training is often the most effective. There’s nothing quite like bringing a handful of growers and resellers out to the field, where we dig up a plant and learn about how it works and how Syngenta can help maximize its potential.
- > **Message amplification.** Whether Syngenta agronomists are writing for our Know More Grow More blog ([www.knowmoregrowmore.com](http://www.knowmoregrowmore.com)), pulling performance data that our resellers need for area growers or taking a broad agronomic principle and making it locally relevant, telling the company’s story is a key component of what we do.



Tim Waters (left), Ph.D., vegetable specialist at Washington State University Extension, and Chris Clemens, Ph.D., Syngenta agronomy service representative, look for evidence of psyllids in a potato field during a field trial demonstration.



**Q. Can you describe the relationship between your team and the Syngenta sales force?**

**A.** If you think of a football analogy, every person on the field is responsible for putting the ball in the end zone. That said, you need quarterbacks to run the plays. Our sales representatives are, without a doubt, the quarterbacks, and they help coordinate the actions of everyone on the field in support of getting that ball in the end zone. Agronomists, customer service, supply chain—we're all there to support sales and, as a team, help our resellers and growers win the game.

**Q. What benefits does your team offer to growers, resellers and other field experts?**

**A.** The biggest benefit agronomists can offer is making sure Syngenta products are best positioned to maximize their performance, so that each grower can receive top dollar for every acre he or she plants. Other benefits come from helping to train people not only on our products, but also on competitive brands as well. We look at the total acre when prescribing solutions that fit each farm, and sometimes that prescription includes technologies beyond our portfolio. Certainly, general agronomics and even just some good old "been-there-done-that" experience also come in quite handy.

**Q. How can growers and others in the field tap into your team's expertise?**

**A.** There are many ways to tap into our expertise. The easiest, of course, is to just pick up the phone and call your local Syngenta agronomist. Whether it's helping to answer questions about a particular field challenge or offering advice on one of our products, our agronomists are always great assets in the field.

Another option is to join us during one of our regional training sessions. In 2013, the Syngenta agronomy team piloted a project called the Grow More Experience trials. These were sites where we brought in resellers, consultants, farm managers and growers to highlight some of our newest technologies. We

**"Agronomists, customer service, supply chain—we're all there to support sales and, as a team, help our resellers and growers win the game."**

—CHRIS COOK

trained participants on proper product placement and talked about agronomic practices that help boost their crop's productivity. Talk to your local Syngenta sales representative or agronomist to see what type of training we have available for you.

Finally, I'd be remiss if I didn't highlight our Know More Grow More blog. Syngenta agronomists from across the country started writing advice on the website in 2013, and it's gone over really well. Whether it's a few quick words highlighting what's going on in the field or what to watch for down the road, we cover a lot of ground on many topics that could be impacting farms in your area. And if you are a strong proponent of "seeing is believing," our blog entries often feature a picture or video that literally shows you what we are referencing and how to find it. Know More Grow More is just one more way we can serve the people who help put food on our tables, clothes in our closets and fuel in our tanks. 🌱 INTERVIEW BY SUSAN FISHER

# THE FUTURE OF FUEL

Enogen corn is an increasingly important energy source, delivering significant advantages for ethanol plants, growers and local communities.

*By Megan D'Angelo | Photography by Greg Latza*





ergy from our own back yard.



Enogen<sup>®</sup>

syngenta<sup>®</sup>

A grain truck delivers a local farmer's Enogen grain to the Quad County Corn Processors ethanol plant.

“Enogen corn is a win for the farmer, a win for the ethanol plant and, in the end, a win for the consumer. Anything that increases what corn can do for our country is a good thing.”

—Marc Mummelthei



3.



2.



1.

Imagine a corn seed capable of powering the future—developed to benefit farmers, ethanol producers and consumers alike. Enogen® trait technology from Syngenta makes such a seed possible. It is the only genetically modified corn output trait developed to enhance dry-grind ethanol production.

“Enogen corn has arrived during a critical time for the renewable fuels industry,” says David Witherspoon, head of renewable fuels at Syngenta. “Since it hit the market in 2011, this unique grain has exceeded industry expectations and created value throughout the entire corn ethanol supply chain.”

#### Proven Performer

Enogen corn delivers alpha amylase enzyme in the corn kernel, eliminating the need for liquid alpha amylase in dry-grind ethanol production. When incorporated into the ethanol production process, Enogen grain provides a variety of process enhancements, including significant reductions in the viscosity of corn mash, unprecedented levels of dry solids loading and improved process flexibility. Witherspoon says these changes can lead to downstream benefits for the ethanol plant, such as increased ethanol throughput or yield, and reductions in natural gas, electricity, water and chemical usage.

Five plants have signed commercial agreements with Syngenta and now use Enogen grain to produce ethanol. Six more are trialing the grain in Iowa, Nebraska, Kansas, Minnesota and South Dakota.

Quad County Corn Processors (QCCP) in Galva, Iowa, was the first ethanol plant to sign an agreement with Syngenta to use Enogen

grain in commercial production. Just like any business, QCCP established a goal to make more product at a lower cost without sacrificing quality. A three-month trial using Enogen grain produced results that led the plant to transform its existing operation.

“Since using Enogen grain, we have seen an increase in ethanol yields by 0.04 to 0.05 gallons per bushel,” says Travis Brotherson, QCCP plant engineer. “We have also seen a noticeable decrease in natural gas usage and a decrease in energy usage by about 5 percent.” Additionally, a recent finding indicates that the plant has experienced a 3 percent reduction in residual starch and co-products.

“Enogen grain has helped our plant conversion, and we are getting more out of every bushel of corn,” says QCCP’s production manager, Charlie Voss. “With the viscosity reduction, our plant is able to run faster, smoother and more efficiently, using less energy.”

#### The Right Move

QCCP is now in its second year of using Enogen grain commercially, and Delayne Johnson, chief executive officer, believes that switching to the alpha amylase enzyme in Enogen grain was a good business move. “Our ethanol plant has had great results, and the transition has been very easy,” he says. “The decrease in energy costs and increase in number of gallons of alcohol produced per bushel of corn have been critical drivers to enhancing our bottom line.”

Looking ahead, QCCP will begin running a new bolt-on Adding Cellulosic Ethanol (ACE) technology in May, which Johnson believes will complement their use of Enogen grain. The ACE technology will allow the plant to convert corn



4.



5.

Clockwise from bottom left: 1. Corn processed into ethanol produces a superior high-protein livestock feed called dried distiller's grain. 2. Quad County Corn Processors (QCCP) lab scientist Nick Ryen demonstrates the positive impact the alpha amylase enzyme found in Enogen grain has on the viscosity of corn mash. 3. From left to right: Delayne Johnson, QCCP chief executive officer; Todd Axtell, Syngenta Enogen account lead; and Travis Brotherson, QCCP plant engineer, all play key roles in making their partnership a success. 4. Enogen trait technology enhances the viscosity of corn mash. 5. Ryen works behind the scenes at the ethanol plant.

kernel fiber into cellulosic ethanol, increasing the plant's ethanol production by 6 percent.

"This process will help create a higher protein feed, up to 2.5 times more corn oil and more ethanol out of the same kernel of corn, while significantly reducing our greenhouse emissions and carbon footprint," Johnson says.

### Grower Gains

Beyond ethanol production, Enogen corn is delivering significant benefits to growers who plant it. After the commercial introduction of the Enogen trait three years ago, 19 growers across the Corn Belt signed contracts to plant approximately 5,000 acres of Enogen corn seed. In 2014, those numbers have increased to more than 400 growers and 100,000 acres of Enogen corn.

Through a contract with ethanol plants, Enogen corn growers produce and deliver their grain directly to the local ethanol plant. In return, they earn an average 40-cents-per-bushel premium above whatever pricing options the ethanol plant offers.

"Assuming an average yield of 150 bushels an acre, Enogen corn will generate approximately \$6 million of additional revenue for the local growers who have signed contracts in 2014," says Witherspoon.

To produce Enogen corn, growers can use their existing cultural farming practices, including nutrient, weed, insect and disease management programs. More importantly, there is no yield drag shown in hybrids featuring the Enogen trait.

"My Enogen-traited corn hybrids look the same as my other commercial corn hybrids, and the stewardship requirements are easy to follow," says grower and Syngenta Seed

Advisor Andy Johnson of Charles City, Iowa. These specific, yet simple, requirements include border rows around an Enogen cornfield, planter and combine cleanout, and reserved bin space for all Enogen grain.

### Revving Up Rural Communities

In addition to benefiting local ethanol plants and growers, Enogen corn is also helping to boost the economies of the rural communities where it is grown and processed. "What truly sets Enogen corn apart from other technologies designed to enhance ethanol production is that it adds significant incremental value at the local level for communities that rely on their ethanol plant's success," Witherspoon says.

By using Enogen trait technology, ethanol producers can circulate the money they previously used to buy liquid alpha amylase from out-of-town suppliers to dozens of local farmers instead. This promotes the growth and stability of rural communities through an energy source that is helping to make America more energy independent.

"Enogen corn is a win for the farmer, a win for the ethanol plant and, in the end, a win for the consumer," says Enogen grower Marc Mummelthel of Waverly, Iowa. "Anything that increases what corn can do for our country is a good thing." 🌱

**FOR MORE INFORMATION** about Enogen® trait technology, visit [Enogen.net](http://Enogen.net) or call **1-877-4ENOGEN**. Be sure to check out the informative new videos, including "Ethanol: Fueling Rural America's Future—One Community at a Time," on the website.

## Ethanol Under Threat

Since its inception, the ethanol industry has had a positive impact on the U.S., helping to strengthen the market for American-grown corn, create jobs in rural communities, reduce fuel costs for consumers and promote a cleaner environment. Mounting political opposition to the current Renewable Fuel Standard (RFS), however, is threatening the fuel's long-term viability.

Congress mandated the RFS in 2005 to give consumers a choice, other than petroleum-based fuels, at the pump. This policy required that 7.5 billion gallons of transportation fuel come from renewable sources by 2012. The 2007 RFS elevated the requirements to 36 billion gallons of renewable fuel by 2022.

As a result, ethanol has become an economic powerhouse, creating demand for more than 4.5 billion bushels of U.S. corn during the 2012–2013 marketing year alone.<sup>1</sup> It also has created an industry that employs more than 375,000 Americans, directly and indirectly—from ethanol plant personnel to professionals in the trucking and livestock industries.<sup>2</sup>

In addition to jobs, ethanol production supports the livestock industry by generating a better-quality, high-protein feed known as dried distiller's grains (DDGs). A bushel of corn processed into ethanol produces approximately 17.5 pounds of DDGs. A metric ton of this superior livestock feed can replace, on average, 1.22 metric tons of corn and soybean meal.<sup>3</sup>

Ethanol benefits general consumers as well, saving the average U.S. driver up to \$1.50 per gallon on gasoline and promoting a cleaner environment by reducing carbon emissions.<sup>4</sup> The more than 16 million flex-fuel vehicles on the road today indicate that a ready market for blends higher than E10 exists. But recent efforts to lower the RFS could hurt an industry that has helped so many.

To demonstrate its continuing support of affordable, sustainable biofuels, Syngenta has launched a three-year initiative to donate one dollar to the renewable fuels industry for every acre planted with Enogen® corn. In 2013—the initiative's inaugural year—Syngenta donated \$65,000 to Fuels America, a leading renewable-fuels advocacy organization.

"At Syngenta, we believe renewable fuels play a crucial role in spurring economic and technological advancements that benefit our nation, our industry and our local communities," says David Witherspoon, head of renewable fuels at Syngenta. "We're proud to contribute in any way possible."

1 USDA, "World Agricultural Supply and Demand Estimates" report, Jan. 10, 2014.

2 Renewable Fuels Association, "Contributions of the Ethanol Industry to the Economy of the United States," updated Jan. 31, 2013.

3 USDA, Dec. 2010

4 *Ethanol Producer Magazine*, "New analysis: Ethanol cutting crude oil, gasoline prices," Sept. 24, 2013.



Syngenta research chemist Pauline Phillips (far left) works in a lab at the International Research Center at Jealott's Hill near London. Chris Speight and Kate Green (far right) with the Protein Science Group at Jealott's Hill look at a bacterial culture.






# BORDERLESS SCIENCE

The strong global research network of Syngenta delivers local solutions for U.S. growers.

*By Darcy Maulsby*



Hua-Ping Zhou, Ph.D., Syngenta global group leader for biotech greenhouses, examines sugar cane at the Advanced Crop Lab in Research Triangle Park, N.C.

**H**igh yields don't happen by accident. Neither do elite seed genetics or modern crop protection products that make these yields possible. "Through innovation and new technologies, we aim to protect the genetic yield potential of plants," says Marian Stypa, Ph.D., head of global product biology for Syngenta.

In today's world of borderless science, local solutions often take root in Syngenta laboratories and test plots half a world away. "You know the saying that two heads are better than one? At Syngenta, we have 5,000 research and development (R&D) specialists in multiple states and multiple countries," says Michiel van Lookeren Campagne, Ph.D., head of biotechnology at Syngenta. "We leverage this global network to boost farm productivity in sustainable ways." (See related infographic, p. 6.)

Consider corn, which is grown in many countries, from the U.S. to China to Argentina. Cropping practices can be extremely diverse, yet producers in these regions often share similar pest challenges, notes Stypa. Scientists at the company's R&D centers and field locations worldwide work together to develop new crop solutions that manage these

**"Open communication is the key to sharing information and exchanging ideas. This unleashes the power of the company's global technology network to spark creativity, which promotes innovation."**

—MARIAN STYPA

yield robbers. The products are then tested at the local level so that we can fine-tune product use recommendations to suit the environments where growers will use them.

"It's a powerful network," says Eric Palmer, Ph.D., Syngenta product biology lead for herbicides. "Syngenta has thousands of experts with diverse backgrounds, and the ability to share this knowledge increases the chances of success for developing effective solutions."

### Winning the Battle Against Pests

Approximately 700 full-time employees are based at the International Research Center at Jealott's Hill west of London, the company's largest site for crop protection R&D and product support for herbicides, fungicides and insecticides. The scientists at Jealott's Hill complete much of the company's early-stage herbicide discovery work.

Each year, researchers at Jealott's Hill screen thousands of chemical compounds in the quest to develop new herbicides. A multimillion-dollar, automated formulation robot at the facility allows Syngenta researchers worldwide to run these tests daily, in order to understand how the new compounds will behave in different formulations. This will help develop the best possible solutions for the grower—solutions that include new premixes with novel active ingredients, like bicyclopyrone, a developmental herbicide pending U.S. registration.

In corn, bicyclopyrone is part of a four-active-ingredient herbicide premix that will provide three different modes of action for sustainable control of waterhemp and Palmer amaranth, as well as improved control of large-seeded broadleaf weeds, such as common ragweed, giant ragweed and common cocklebur. "With today's herbicide resistance challenges, early-season weed management has become more important than ever," Palmer says. Syngenta will market the product as Acuron™ upon registration.

### Partnerships Prove Invaluable

Syngenta has approximately 150 R&D sites worldwide, supported by many field locations. Jealott's Hill is one of the three most important sites, which are called international R&D centers. The other two are:

- > **Stein, Switzerland**—chemistry, biological sciences (fungicides, insecticides, crop enhancement), seed treatment, field testing
- > **Research Triangle Park, N.C.**—biotechnology

Other important R&D sites in the U.S. include:

- > **Clinton, Ill.**—biological assessment for corn and soybean
- > **Gilroy, Calif.**—flowers breeding and trialing

- > **Greensboro, N.C.**—formulation, product safety, environmental sciences
- > **Slater, Iowa**—corn and soybean breeding and trialing
- > **Stanton, Minn.**—corn breeding and trialing; quantitative genetics
- > **Vero Beach, Fla.**—biological assessment
- > **Woodland, Calif.**—vegetables breeding

This strong global and national presence as well as annual R&D investments of more than \$1.3 billion allow Syngenta to address the various challenges facing growers worldwide. The company's global connections also allow researchers to evaluate new products under local conditions and partner with local scientific expertise. Mike Owen, Ph.D., an Iowa State University (ISU) Extension weed specialist, works with Syngenta to help field test the company's new products.

"Syngenta is a leader in the industry," says Owen, who has research, teaching and extension responsibilities at ISU. "Its well-trained scientists offer a level of expertise that's exemplary, and the company operates impressive greenhouses and laboratories around the world. I appreciate the opportunity to work with Syngenta on herbicide research and offer insights about what my colleagues and I think is important."

Syngenta values these partnerships. The company's global network, along with its team of more than 28,000 employees worldwide, allows it to build on the local resources that universities offer growers. "We're proud to work with many universities and extension specialists who conduct independent testing of our products," says Stypa. "Universities are focused on their specific state, and their local expertise enhances the solutions we supply to growers."

### Communication Is the Key

This local expertise also comes from Syngenta scientists who are based around the world. They test Syngenta products in an array of growing conditions in numerous countries and regions. Field trials are conducted throughout the year in Europe, North America, Asia, Australia, South America and beyond.

"We learn a lot from each other every time we get together," says Palmer, who attends the company's global herbicide technical meeting each March and helps organize several field tours each June for Syngenta colleagues from Basel, Switzerland, the company's global headquarters; Jealott's Hill; and other locations. "The field tours allow us to view the new technologies firsthand, discuss current objectives and determine what areas we need to focus on next."

Teleconferences also keep the team connected throughout the year as they pursue these goals. "Open communication is the key to sharing information and exchanging ideas," Stypa says. "This unleashes the power

of the company's global technology network to spark creativity, which promotes innovation."

In recent years, these innovations have included the Agrisure Viptera® trait, which delivers superior control of above-ground insects; Agrisure Artesian® technology for water-optimized hybrids; the Agrisure Duracade™ trait for unmatched corn rootworm control; and others.

"The global infrastructure of Syngenta gives us the extra reach that's needed to maximize the tools in the grower's toolbox, from traits to active ingredients, and to enhance each crop's genetic potential," says van Lookeren Campagne. "Our goal is for growers worldwide to produce more food per acre with fewer inputs and increase their profitability and the sustainability of agriculture in general." 🌱

## Global Roots

To help growers produce more with less, Syngenta is tapping the power of its global network to accelerate product development and offer innovative solutions that protect plant health and the environment. Take Vibrance® seed-applied fungicide, for example.

"Vibrance improves root health to provide consistent yields, even under stress conditions," says Palle Pedersen, Ph.D., Syngenta Seedcare technology manager. "Syngenta researchers developed this unique seed treatment just for the Seedcare business in the company's discovery labs in Stein, Switzerland, and it was tested in the U.S. and South America before it first received regulatory approval in 2011 in Argentina. Since then, it's been tested in many other regions around the world, including additional testing in the U.S."

Vibrance seed treatment is a proprietary fungicide based on the new active ingredient sedaxane. With a new mode of action and the distinctive RootingPower capabilities, Vibrance defends roots against a wide range of diseases, particularly offering superior *Rhizoctonia* control. The seed treatment also provides long-lasting systemic protection of the entire plant root system through critical early-season development stages of the crop and under a broad spectrum of environmental conditions. This leads to more efficient water and nutrient uptake, protects the plant's genetic yield potential, and offers a proactive approach to resistance management.

"Growers' adoption rate of Vibrance has been phenomenal, especially since it first became available in the U.S. in 2012," says Pedersen, who notes that the treatment is available on a growing list of crops, such as cereals, soybeans, corn, canola, sorghum and dry beans. "Vibrance reflects years of research through the Syngenta global network and is just one of the many products we are developing to meet the needs of growers throughout the world."



Vibrance seed treatment's path from discovery labs to first approval



# COME RAIN OR SHINE

Take the guesswork out of maximizing corn yields, even under extreme weather conditions. By Emily Collawn



Unfortunately for growers, there is no exact science when it comes to long-term weather predictions. Wide swings in temperatures and rainfall amounts are common from one year to the next. But what if a tool that corn growers are already using to fight disease can also be part of an overall strategy to reduce plant stress, no matter what the weather? (See “Integrated Water Strategy” sidebar.)

As part of its longstanding commitment to water optimization in corn, Syngenta has conducted research studies that show Quilt Xcel® fungicide is such a crop management tool. Its ability to help corn plants withstand stress on both ends of the moisture spectrum was put to the test in 2012 and again in 2013—two back-to-back seasons that posed markedly different challenges for growers.

### A Tale of Two Seasons

While “drought” best sums up 2012, conditions in 2013 were more complex. A wet, cold early spring delayed planting and, in some cases, negatively affected germination, which led to replanting. Too much rainfall throughout the season increased the risks for poor root and disease development as well as lodging.

“We’ve had a lot of weather stress in my area the last couple of years,” says Rich Lee, Syngenta agronomic service representative in Walford, Iowa. “It has been too wet, too cold, too dry and too hot, all in the same year. We can’t control the weather, but we can help limit its impact by using the right fungicide.”

Lee notes that the traditional practice of waiting until R1 to scout and make a fungicide application decision may not be the best approach. “We are trying to help growers get ahead of the curve,” he says. “Problems like weather-related stress will be there every year. I think it’s time we adjust to that and say, ‘I’m going to apply a fungicide because I know to some degree this will be an issue.’ In my opinion that’s management, and that’s what puts some folks on top.”

Matt LaFont from Brookport, Ill., is a grower who knows that going outside the lines of what he’s always done can lead to higher yields. “In the 2012 drought, we applied Quilt Xcel on one strip of corn for disease protection. We thought it was too dry to see any real benefit,” he says. “But where we did use Quilt Xcel, we saw a pretty good yield bump and were kicking ourselves for not using it on all of our corn acres.”

In addition to disease control, Quilt Xcel fungicide can improve the stalk quality of corn under drought-stress conditions, as evidenced by the size of the treated stalks on the right versus the untreated stalks on the left.

UNTREATED



The following season, LaFont acted on the lessons he had learned by applying the fungicide on 600 acres of corn. “In 2013, we received lots of rain,” he says. “We already have big fogs and dews in this area, so we had a lot of disease. Quilt Xcel kept that under wraps and kept our plants healthy as they matured.”

### Dry Run

Using a fungicide during wet seasons makes sense to most people. After all, excessive moisture creates ideal breeding grounds for fungal plant pathogens to develop and multiply. However, applying fungicides during dry weather may seem counterintuitive. The 2012 drought showed growers that when

## Integrated Water Strategy

Growers across the Corn Belt have witnessed how Quilt Xcel® fungicide protects plants from moisture stress throughout the season. They also have seen how hybrids with Agrisure Artesian® technology maximize yield when it rains and increase yield up to 15 percent when it doesn’t. It’s the proven performance of both products that makes each a flagship water-

optimization technology in the Syngenta corn portfolio. But as David Elser, head of water optimization at Syngenta, notes, an integrated mix of solutions is the best-laid plan.

“Individual advances in seed treatments, fungicides, herbicides, traits and other technologies are helping crops use water more efficiently,” he says. “However, the biggest gains in crop per drop are coming from multiple



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—MATT LAFONT

the rain isn't falling enough, it's important for plants to use the water they do receive to maximize yields.

Fungicides, like Quilt Xcel, can help. Corn plants treated with Quilt Xcel stay greener longer, leading to extended periods of photosynthesis as well as more growth and grain fill. When it only takes 2.5 additional kernels per ear to increase yields by 1 bushel per acre, larger ears with more kernels can have a significant impact on yield. The fungicide also slows water loss, improving water-use efficiency and leading to stronger stalks and healthier plants.

“Under dry conditions, Quilt Xcel keeps plants healthy and helps them utilize the moisture that is there,” says Shannon McCoy, a retailer with Crop Rite in Marshalltown, Iowa. “This

stops the plant from completely shutting down and enables it to continue growing and producing good yields.”

### Water in Excess

In 2013, too much water was the problem for many areas—at least during portions of the growing season. Wet conditions throughout much of the Midwest in the spring led to delayed planting. With a late-developing crop, disease pressure became a concern sooner than usual. On many farms, diseases emerged during early grain fill, negatively impacting yields more than they would if infection occurred later in the season. Humidity also set in by midsummer, leaving corn plants vulnerable to disease.

According to Lee, fungicide applications can become more complex in a year with uneven emergence, like 2013. “A lot of fungicides have to be applied with an adjuvant, which really limits their crop safety and application timing options,” he says. “A fungicide, such as Quilt Xcel, that can be applied with straight water keeps growers from worrying that they'll damage pollination on a year of uneven tasseling.”

Quilt Xcel provides excellent disease control but also provides benefits that relieve water-related stresses. Wet weather can lead to underdeveloped roots, so an application of the fungicide helps corn develop stronger, deeper root systems for maximum nutrient uptake.

“In wet conditions, Quilt Xcel has definitely helped plants stay healthier and better tolerate the negative effects of too much rain,” says Mark Nofziger, a grower in Wauseon, Ohio. “It keeps stalks healthier and plants standing straight to minimize lodging at harvest.”

### 2014 Preparedness

With the price of corn estimated to be around \$4 per bushel in 2014, many growers may hesitate to invest in a fungicide. But Andrew Fisher, commercial product lead for fungicides at Syngenta, argues that getting a good return on investment becomes even more important during a year with lower corn prices.

“We have seen a range of extreme weather conditions over the past few years, and growers need to be prepared for anything,” he says. “Since weather put their bottom lines in jeopardy in 2012 and again in 2013, growers understand that to increase their crop's yield potential, they must improve its handling of weather-related stress. A fungicide with stress-management benefits can do just that.”

strategies applied throughout the growing season.”

The 2013 commercial release of Water+™ Intelligent Irrigation Platform marked the introduction of an integrated approach. It combines trial-tested Syngenta agronomic inputs with irrigation technologies and services from Lindsay Corporation. During multiple years of testing in growers' fields, the platform

delivered improved yield with 25 percent less water use.

To help farmers grow more corn with less water, the Water+ Intelligent Irrigation Platform uses a whole-farm approach. For example, since weeds compete with corn for water and nutrients, early-season weed control is an essential pillar of water optimization. For growers, an effective corn herbicide plan is an important steppingstone on the

path to higher yields. That's why Water+ Intelligent Irrigation Platform growers apply Bicep II Magnum®, Lexar® EZ or Lumax® EZ herbicide, followed by a Halex® GT residual herbicide program. Meanwhile, an application of Quilt Xcel fungicide limits environmental stress and protects yield potential.

By following an integrated approach, growers can maximize yields and improve their profit potential season after season.

# Digging for Answers

Syngenta sales representatives get to the roots of growers' challenges and use the latest agronomic information to provide solutions.

**B**enjamin Franklin once famously said, "Tell me and I forget. Teach me and I remember. Involve me and I learn." These words still ring true today for Syngenta sales representatives, whether they are new employees or seasoned professionals.

Syngenta has structured its sales force so that individual team members can deliver customized service in a timely and accessible way. This structure also enables them to tap into their agronomy team colleagues for the latest crop production information to use when making recommendations. (See "Agronomists On Call," page 8.)

Most importantly, they are directly involved in impacting the customer's experience every day, according to Rusty Thompson, Syngenta training head for the Northern Crescent region.

## DSR Program

When new college graduate hires first join Syngenta as developmental sales representatives (DSRs), they participate

in central training workshops and targeted field-based learning with mentors. "This prepares them for quick success in their first sales territory," says Robin Thomas, field force talent development manager at Syngenta. DSRs meet Syngenta leaders and colleagues in different functions and across various sites. "This gives them a broad perspective of the company and allows them to build a network of resources to use when providing service to their customers."

DSRs are promoted to sales representatives after graduating from the six-month program. This initial training and development continues for up to two years. Thomas has found that these new sales representatives are eager to learn new skills, develop as leaders and share best practices among their teams and the next generation of DSRs.

All DSRs begin by receiving training focused on Syngenta strategy, crop strategies, product and technical knowledge, as well as leadership and selling skills. Next, the DSRs take responsibility for accounts in their mentors' territories, or they work in open territories with close mentor support.

DSR Tyler LePage, for example, who has a degree in agribusiness management from the University of Missouri, began his training in January 2013. He completed training in southwestern Kansas and is now a sales representative near Moline, Ill. "Tyler probably has had the most geographically diverse journey since I have been leading the program, moving from a DSR into the sales representative role," Thomas says. "While he has worked with the same basic crops, he has had to learn an entirely different cropping system and moved several hundred miles. The skills he has learned will help him succeed anywhere in any role."

LePage is grateful for the training he has received so far. "One of the most valuable sales skills I've learned is the ability to adapt to the communication styles of individual customers and fellow team members," he says. He also receives continuing education through the company's online e-learning campus as well as during district meetings.

Sales representatives and customers can easily access the e-learning training modules and choose from among 500 videos that take fewer than 10 minutes each to watch. They can choose videos that are pertinent to whatever they are doing at a given time. For example, if a customer brings

From left: Sales representatives Dennis Headley and Trent Rowland and Field Force Talent Development Manager Robin Thomas examine Syngenta soybeans at this year's National Farm Machinery Show in Louisville, Ky.





up a certain challenge during a sales call, the representative can access the module to research solutions. The advantage of e-learning is that the sales representative can receive training any time and not spend valuable time away from customers.

### **Solution Selling**


Derrick Tice, a Syngenta sales representative in western Kansas, says that one of the most valuable skills he has learned is solution selling. Solution selling involves asking customers a series of questions to identify and quantify problems in their particular field. As a result, the sales representative is better able to provide the products and services to solve those issues. After this initial step, the representative measures the results and communicates them over time.

Thompson says that honing questioning skills also has helped Syngenta retailers and seed advisors when they are talking with customers. Asking good questions helps deepen dialogue with the customer, he adds.

"I've found that when I truly try to see things from the customer's perspective, I'm almost always more successful," says Gordon Hankins, region business representative in Colorado, who has worked with Syngenta for almost 30 years. "This leads to more effective questions and helps me get to the customer's most important issues. As much as I can, I also try to help the retailer evaluate what his customers are spending their time thinking about. In the end, we have the same goal of helping the farmer grow better, more profitable crops."

### **Field Tools**

In keeping with timely and accessible training, Syngenta equips DSRs and sales reps with digital devices, such as touchscreen tablets and smartphones that they can literally take to the field. Tice likes the function that allows him to store and access folders of PDFs on everything from a crop protection label to a new product brochure. Adds LePage, "The tablet is very valuable. For example, I can use its mobility to manage my customer's accounts while on the road or answer a retailer's question about any of our products."

With effective training, a focus on customer needs and the newest digital devices, Syngenta sales representatives—both new and seasoned—are truly involved with providing solutions for customers. And from all of these experiences, they continue to learn. Ben Franklin would approve.  **STORY BY LYNN GROOMS**

**"I try to help the retailer evaluate what his customers are spending their time thinking about. In the end, we have the same goal of helping the farmer grow better, more profitable crops."**

—GORDON HANKINS

# Know More, Grow More

A Syngenta Agronomy Blog

**The latest expert  
agronomic insights –  
*directly from the field into  
your homes and hands***

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Go to [www.KnowMoreGrowMore.com](http://www.KnowMoreGrowMore.com) for a bird's-eye view of what's happening across crops throughout the country to aid management decisions.

### **Features of the site include:**

- Updates from fields, orchards, vineyards
- Highly sortable content
- Categorization by geography, crop, agronomic topic
- Agronomic resources
- Photos and videos
- Field trial updates



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# Retain and Gain

Leadership and communication can help you keep reliable workers, who are often the key to maintaining a profitable operation.



**W**orker turnover is costly, requiring employers to spend time and money finding and training new employees. That's one important reason why retaining good workers is a top priority for most agribusinesses and farm operations.

"There is no one-size-fits-all recipe for employee retention," says Mary Barefoot, human resources services manager at AgCareers.com. "Making sure employees are happy with their jobs is a complex mix of both tangible and intangible factors, and it's different for each employee." Compensation, training, professional development, incentives and flexibility are a few factors an employer should consider when looking for the combination that keeps employees engaged and committed.

## The Compensation Question

When a person feels underpaid, compensation can cause dissatisfaction, but that doesn't mean more money is the entire answer to retention. "Compensation is important as a part of retaining employees, but increases in salaries will not guarantee employees won't leave," says Bob Milligan, senior consultant with Dairy Strategies in Saint Paul, Minn. In short: You don't have to pay the most, but you can't pay the least.

"There will always be someone who beats your salary, but people have to feel like they're being treated fairly," says Kathleen Schindler, head of talent acquisition and talent management at Syngenta. Transparency is important. Communicate that you know what's happening in your market, and show that what you're offering is competitive.

Being competitive is the starting point for Mike Tobe, agronomy manager at Blanchard Valley Farmers Cooperative in Findlay, Ohio. "The other pieces then make the difference. Incentives based on their responsibilities are where the real reward comes." He's learned that flexibility in benefits is

**“Making sure employees are happy with their jobs is a complex mix of both tangible and intangible factors, and it’s different for each employee.”**

—MARY BAREFOOT

also crucial. “Employees have to have ways to accommodate their needs. You can’t do something different for every employee, but you can provide flexibility and be accommodating.”

### Good People, Good Environment

Not surprisingly, competent and satisfied people create a positive work environment, Schindler says. “People find it fulfilling to be surrounded by others who love what they’re doing and who do it well, so look at whom you’re hiring into the company.” And don’t overlook your own influence. The relationship with their manager is a key motivator for people to stay in the job—and often a significant factor as to why they leave, Schindler says. “Is the manager helping in their development? Do they have an open dialogue, and is the employee receiving valuable feedback? Is the manager energetic and a good role model; is he or she an effective leader?”

Research supports this conclusion. According to AgCareers.com’s 2013 Total Rewards Survey, a friendly and amiable work environment is important to 90 percent of agriculture employees, who agreed at some level that the relationships they have developed with their coworkers greatly impacts their satisfaction with their employer.

“This also speaks to company culture; and as a manager, you greatly influence culture,” Barefoot says. “You want to foster an environment that is productive and positive. You have to personally commit to making more connections with your employees and provide them with support.”


Tobe has followed that advice. “We’ve gone back to one-on-one, heart-to-heart conversations with individuals,” he says. “We try to stay close to them. We try to have four to six conversations in their first year, monthly at first, then spreading them out.”

Here are more ways to keep employees engaged:

- > **Learn about leadership best practices**, Milligan says. “You wouldn’t hire a crop specialist who didn’t know a lot about crops, so why would you think you’ll be a good leader and supervisor if you know nothing about it?”
- > **Ask employees what works**. “I recently learned about ‘stay interviews,’ a different approach from employee

satisfaction or exit interviews,” Barefoot says. These surveys target committed employees who have chosen to stay with an organization and help the company learn what it’s doing right.

- > **Make sure all employees know their jobs**. “Ninety percent of employees don’t really understand what’s expected of them at work. Even if they do, they don’t know why,” Milligan says. “How motivated can you be to do something if you don’t know why you’re doing it?”
- > **Provide direction**. Have processes in place to give feedback—and not in an annual performance appraisal. “If it’s January, do you want someone to tell you they didn’t like what you did back in June?” Milligan asks. A monthly appraisal is more helpful; an annual event is better suited to looking ahead.
- > **Offer opportunities for development**. “At Syngenta, that’s part of our purpose. We have to provide an environment where employee development is a priority and employees have opportunities available to them that meet their development needs,” Schindler says.
- > **Hire the right people to start with**. “Farmers spend a lot of time choosing what to plant, but there’s much more difference in productivity across people than across varieties of seed,” Milligan says. “It doesn’t mean you hire all Ph.D.s, but find people who are able to fit the requirements of a job.”

All of these steps take time, and it’s an ongoing undertaking. But motivated employees who stay with you can make all the difference to a thriving workplace—and its bottom line.  STORY BY SUZANNE BOPP

**FOR MORE INFORMATION**, please visit these websites:

- > Bob Milligan’s e-newsletter (sign-up page), [visitor.r20.constantcontact.com/manage/optin/ea?v=001eE8BHR1k0dGhkWEnvIOiA%3D%3D](http://visitor.r20.constantcontact.com/manage/optin/ea?v=001eE8BHR1k0dGhkWEnvIOiA%3D%3D)
- > Brian Tracy International, [www.briantracy.com](http://www.briantracy.com)
- > *Forbes*, [www.forbes.com/sites/billconerly/2013/12/11/quits-are-up-7-employee-retention-strategies-your-company-must-have](http://www.forbes.com/sites/billconerly/2013/12/11/quits-are-up-7-employee-retention-strategies-your-company-must-have)
- > *Harvard Business Review* (email newsletters sign-up page), [email.hbr.org/preference-center](mailto:email.hbr.org/preference-center)
- > The Ken Blanchard Companies, [www.kenblanchard.com](http://www.kenblanchard.com)
- > The University of Vermont, [www.uvm.edu/~farmlabr/?Page=recruitment/retention.html&SM=recruitment/submenu\\_recruitment.html](http://www.uvm.edu/~farmlabr/?Page=recruitment/retention.html&SM=recruitment/submenu_recruitment.html)
- > *The Wall Street Journal*, [guides.wsj.com/small-business/hiring-and-managing-employees/how-to-retain-employees](http://guides.wsj.com/small-business/hiring-and-managing-employees/how-to-retain-employees)



# Ripple Effect

Awards and grant programs promote sustainability and an appreciation for agriculture; Syngenta scholars program recognizes future leaders.

## AWARDS AND GRANTS

### > Harvest Photo Contest Winner Named

Congratulations to Michael Taylor, grand prizewinner of the Most Efficient Harvest photo contest sponsored by Quilt Xcel® fungicide and Force® insecticide. His winning photo, which earned him a \$500 Visa® gift card, showed improved stands and fuller ears at harvest after an application of Quilt Xcel on his corn at tassel.

“Quilt Xcel helped to prevent stress on our corn during a 47-day dry spell and unseasonable cool temperatures,” says Taylor of Helena, Ark. “As a result, we managed to yield 286 bushels per acre.”

### >> Seed Grant Recipients Selected

Through the Grow More Vegetables Seed Grant Program, which supports the establishment of gardens by schools and organizations, Syngenta recognizes its responsibility to share resources and knowledge with local communities. After reviewing nearly 200 applications in 2013, a panel of judges has selected three garden programs from across the U.S. as inaugural grant recipients:

- **Centreville Elementary** in Centreville, Va.





Noah Bilz, a seventh-grade student from Colby, Wis., waters green bean plants in the greenhouse garden at Colby Middle/High School, one of the grant recipients of the Syngenta Grow More Vegetables Seed Grant Program.

- Colby High School in Colby, Wis.
- Garfield Community Action Team in Pittsburgh, Pa.

Each group has received a garden package, including vegetable seed, a handheld video camera and a materials stipend. For more information about Syngenta and the Grow More Vegetables Seed Grant Program, visit [www.vegetables.syngenta-us.com](http://www.vegetables.syngenta-us.com).

### >>> Resistance Fighters Honored

With 2014 marking the fifth year of the Resistance Fighter® of the Year Leadership Program, Syngenta is proud to announce the two newest members. Jason Weirich, Ph.D., director of agronomy with MFA Incorporated in Columbia, Mo., and Joel Spring, sales representative for Two Rivers Cooperative in Pella, Iowa, have joined this elite resistance management program. Both exemplify the forward-thinking mindset necessary to successfully handle resistance issues occurring in today's agricultural landscape. From presenting educational programs on resistance management to running their own testing trials, Weirich and Spring demonstrate the progressive approach needed to lead the way in the fight against resistance. To learn more about the Resistance Fighter of the Year Leadership Program and its members, visit [www.resistancefighter.com](http://www.resistancefighter.com).



JASON WEIRICH



JOEL SPRING

# thrive

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**Important: Always read and follow all bag tag and label instructions. Some crop protection products may not be registered for sale or use in all states or counties. Please check with your local extension service to ensure registration status.**

### Cautionary Statement Regarding Forward-Looking Statements

This document contains forward-looking statements, which can be identified by terminology such as 'expect,' 'would,' 'will,' 'potential,' 'plans,' 'prospects,' 'estimated,' 'aiming,' 'on track' and similar expressions. Such statements may be subject to risks and uncertainties that could cause the actual results to differ materially from these statements. We refer you to the publicly available filings of Syngenta with the U.S. Securities and Exchange Commission for information about these and other risks and uncertainties. Syngenta assumes no obligation to update forward-looking statements to reflect actual results, changed assumptions or other factors. This document does not constitute, or form part of, any offer or invitation to sell or issue, or any solicitation of any offer, to purchase or subscribe for any ordinary shares in Syngenta AG, or Syngenta ADSs, nor shall it form the basis of, or be relied on in connection with, any contract therefore.

**Bicep II Magnum, Force CS, Force 3G, Lexar EZ and Lumax EZ are Restricted Use Pesticides.**

**Avicta Complete Corn 250 and Avicta Complete Corn 500 are Restricted Use Pesticides.** For use by certified applicators only. Growers planting Avicta treated seed are not required to be certified applicators.

**Acuron (SYN-A197) is not registered for sale or use in the U.S.** Clariva Complete Beans is an on-seed application of Clariva pn nematocide, a CruiserMaxx Beans insecticide/fungicide and Vibrance fungicide.

CruiserMaxx Beans is an on-seed application of one of the following: CruiserMaxx or CruiserMaxx Advanced alone or with Apron XL; Cruiser 5FS, Maxim 4FS and Apron XL; or Cruiser 5FS and an ApronMaxx brand fungicide.

Acuron™, Agrisure®, Agrisure Artesian®, Agrisure Duracade™, Agrisure Viptera®, ApronMaxx®, Apron XL®, Avicta®, Bicep II Magnum®, Clariva™, Cruiser®, CruiserMaxx®, Enogen®, Force®, Golden Harvest®, Halex®, Lexar®, Lumax®, Maxim®, NK®, Quadris Top®, Quilt Xcel®, Resistance Fighter®, Thrive®, Vibrance®, Water™, the Alliance Frame, the Purpose Icon and the Syngenta logo are trademarks of a Syngenta Group Company. Herculex® and the HERCULEX Shield logo are trademarks of Dow AgroSciences, LLC.

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Product performance assumes disease presence.

GS 404.97001 04/14 SLC 1046H 02-2014

SCHOLARSHIPS

# Syngenta Scholars

New Syngenta Agricultural Scholarship program recognizes tomorrow's ag leaders in a nationwide contest.

Continuing its investment in tomorrow's ag leaders, Syngenta has launched a new scholarship initiative that gives eligible college students a chance to compete for a prestigious national prize—and grow their futures. The Syngenta Agricultural Scholarship challenges students in accredited ag programs at land-grant universities to apply their creativity to real issues in agriculture through an essay competition.


"We're excited to offer this opportunity to college students nationwide who are pursuing agricultural degrees in all crop areas," says Mary Streett DeMers, Syngenta senior communications lead. "Syngenta has always been dedicated to the future of agriculture. This wide-reaching scholarship helps strengthen that commitment."

A robust scholarship program is not new to Syngenta. Since its formation almost 15 years ago, the company has awarded dozens of deserving students from across the country with recognition and monetary awards. Many past recipients have gone on to make valuable contributions to agriculture. Jarrod Hardke, for example, won a Syngenta-sponsored scholarship in 2010. Today, he is a rice extension agronomist for the University of Arkansas Cooperative Extension Service.

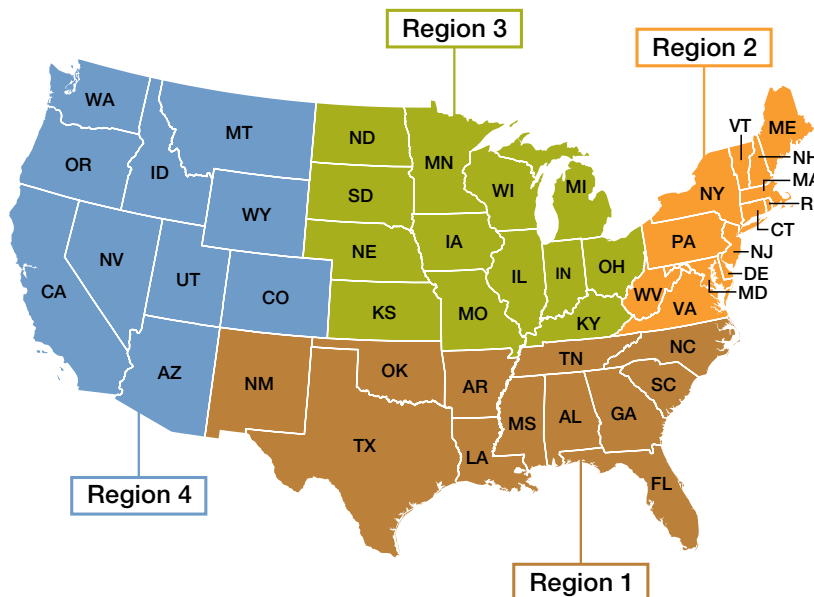
"Ag scholarships provide an opportunity for students to further distinguish themselves in pursuit of their careers," says Hardke. "My advice to future ag leaders: It's always worth your time to pursue scholarship opportunities. Whether you receive the scholarship or not, the essay topics promote critical thinking about current issues facing agriculture."

The prompt for the 2014 Syngenta Agricultural Scholarship asks students to describe in 750- to 1,000-word essays how they would educate the public and their peers on timely agricultural issues. To make sure the \$20,000 scholarship fund rewards promising young leaders in all areas of the country, Syngenta has divided the competition into four separate regions. (See map.) Two finalists from each region—an undergraduate and graduate student—will each receive a \$1,000 scholarship. All finalists' essays will then advance to the national competition, in which Syngenta will award one undergraduate and one graduate grand prizewinner a \$6,000 scholarship.

Currently, a distinguished panel of judges is beginning to read through all qualified entries. Syngenta will announce the eight regional finalists in September and the two grand prizewinners in November.

"Today's students are tomorrow's leaders," says Corey Huck, head of U.S. sales at Syngenta. "We know higher learning plays a critical role in the next generation's ability to develop new strategies and innovate with new technologies to advance agriculture. When we invest in the next generation of ag leaders, we're investing in the future of the industry." 

STORY BY ALEX MOSS



Judges select one undergraduate and one graduate student from each region to participate in the national Syngenta Agricultural Scholarship competition.

FOR MORE INFORMATION on the Syngenta Agricultural Scholarship, go to [www.syngenta-us.com/scholarships](http://www.syngenta-us.com/scholarships).

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—JARROD HARDKE

Jarrold Hardke reviews a book he recently edited in his office at the University of Arkansas Cooperative Extension Service.



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