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People. Policy. Profitability.

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The Power of Perception

THE G MO DEBATE

The Quest for Truth

SOY FORWARD
"Win their hearts"
says Jon Entine,
Genetic Literacy Project

SOY FUTURES
Prairie Californian connects
in blog about food and ag

SOY CHAMPION
U.S. Senator Heidi Heitkamp
from North Dakota

SOY HORIZONS
Iowa farmer helps change the
conversation about biotech

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Vol. 3, No. 1

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The American Soybean Association (ASA) represents all U.S. soybean farmers on domestic and international issues of importance to the soybean industry. ASA's advocacy, education and leadership development efforts are made possible through voluntary membership in ASA by farmers in states where soybeans are grown.



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SOY news

Health Canada Approves Health Claim for Soy Food



Health Canada has approved a health claim linking the consumption of protein-rich soy food to lowering cholesterol levels. The claim is based on scientific evidence that shows consumption of at least 25 grams of soy protein per day helps reduce cholesterol, which is a risk factor for heart disease. According to Statistics Canada data, 39 percent of Canadians aged six to 79 years old have unhealthy levels of total cholesterol.

"Soy has long been considered a healthy food option, but Health Canada's acceptance of the science means that we can now include this information directly on packaging to help consumers make healthy food choices," said Soy 20/20 CEO Jeff Schmalz.

"This decision by Health Canada opens up tremendous opportunity for growth in the Canadian soybean and soy food industries, both domestically and internationally." *Source: Soy 20/20*



Soybean-Based Air Freshener Wins Purdue Student Contest



Sara Richert sits between Evan Anderson (left) and his brother, Sean, as they display Soy Sniffs, winner of the 2015 Student Soybean Product Innovation Competition at Purdue University. *Photo Credit: Purdue Agricultural Communication photo/Tom Campbell*

A team of three college students who created a soybean-based air freshener won the top prize in the 2015 Student Soybean Product Innovation Competition sponsored by the Indiana Soybean Alliance and Purdue University.

The students who developed Soy Sniffs receive a \$20,000 prize for their first-place entry in the annual contest, which challenges Purdue students to develop new products based on soybeans. This year, 13 teams composed of 39 students competed.

"The Soy Sniffs team has created a unique product with real potential in the \$8.5 billion global market for air fresheners and purification products," said David Lowe, president of the soybean industry group and a farmer from Dunkirk, Ind. "Every year, it's difficult to judge among so many innovative ideas, and this year was no exception – it's a testament to the ingenuity of our Purdue competitors and the versatility of the soybean."

The Soy Sniffs team members include Evan Anderson, an agricultural and biological engineering major from Churubusco, Ind.; his brother, Sean, majoring in forestry; and Sara Richert, a public relations/strategic communications major from Oak Park, Ill.

Source: Purdue University

BY THE NUMBERS



FOOD + FUEL

57,900

The number of skilled job openings annually in the food, agriculture, renewable natural resources and environment fields in the United States. (USDA)

97 percent

The percentage of the 2.1 million farms in the United States that are family-owned operations. (USDA)

1.3 million tons

The amount of U.S. soybean meal used by U.S. beef operations every year. (USB)

70-80 percent

The percentage of food we eat today that contain GMOs. (CoalitionforSafeAffordableFood.org)

More than 1/2

The number of women graduates in the food, ag, renewable natural resources and environmental areas of study in higher education. (USDA)

94 percent

The percentage of soybeans grown by farmers in 2014 that contained GMOs (CoalitionforSafeAffordableFood.org)

\$19 billion

The potential cost of a three-year delay in biotech approvals. (International Soybean Growers Alliance)

WITH SOYBEANS, WE DON'T HAVE TO CHOOSE.

U.S. soybean farmers grow versatile and renewable soybeans to help meet food, feed and fuel demand globally. Soybeans are one of many choices we have to meet a range of needs for protein, as well as fats and oils. That's good news, because when it comes to providing food or renewable alternatives to petroleum, we don't have to choose. Here's a look at how soybeans in the United States are being used.

80%

MEAL The primary component of soybeans is meal.

20%

OIL

The other soybean component is oil.

97%

ANIMAL FEED

97% of U.S. soybean meal is used to feed poultry and livestock.



3%

FOOD PRODUCTS

3% of soybean meal is used in food products like protein alternatives and soy milk.



68% FOOD

68% of soybean oil is used for frying and baking food, as a vegetable oil and as an ingredient in foods like salad dressings and margarines.



25% BIODIESEL & BIOHEAT*

25% of soybean oil is used for biodiesel and Bioheat.



7% INDUSTRIAL USES

Less than 7% of soybean oil is converted into industrial uses like paints, plastics and cleaners.



SoyFutures

Big Move, Small World

By Candace Krebs

Jenny Dewey Rohrich blogs to connect, build conversations about food and ag

On one woman's journey to becoming a North Dakota farm wife, her blog was a constant companion and tool to jump into the much larger conversations surrounding modern agriculture today.

Thanks to social media, it's a small world, even for geographically isolated farmers and the increasingly alienated consumers they hope to reach.

For Jenny Dewey Rohrich, mixing personal blogging with agricultural advocacy led to friendship, love and her life's destiny.

Four years ago, Rohrich was encouraged to venture online by Megan Brown, an intrepid cattle ranching friend with a blog of her own, *The Beef Jar*.

She started blogging while still in her native California. "My parents own a butcher shop, retail store and deli," she said. "Their shop is in Chico, which is a city of 120,000 people, but I actually grew up in the smaller town of Durham. Almonds and rice are the main things grown there."

With small scale butchering nearly a lost art, she had fascinating material to share. But it took some tinkering to find an influential style.

"My blog posts started out very

technical, almost like research papers, but they didn't have a very good reception," she recalled. "When I started to break it down to very simple things, I discovered that people were really interested and would share them."

Nowadays when she does take on a technical issue – for example, the use of glyphosate as a pre-harvest treatment on wheat – she has quick resources at her fingertips from organizations like the American Soybean Association (ASA).

As Rohrich's online network grew, she crossed paths with Mark Rohrich, a young farmer from North Dakota who would broaden her horizons even more.



Jenny Dewey Rohrich (*right*) began blogging about her parents' butcher shop while still in her native California, but after marrying Mark (*left*) and joining his family's third generation farm, she expanded her conversations surrounding modern agriculture and grew a larger audience.

Do you know someone who represents the diverse, changing face of agriculture that should be featured in Soy Futures? If so, send an email to jbright@soy.org.

"I joke with my friend if it wasn't for her I would never have met my husband," Rohrich said.

After they married, she became part of Mark's family's third generation farm near Ashley, N.D., where they raise 4,000 acres of soybeans, corn, wheat and sunflowers with his father and a brother. They also operate a farm supply business, where she works full-time.

Throughout her journey, her blog has been a constant companion, capturing highs and lows and evolving along the way. The *Prairie Californian* site now gets about 12,000 views a month.

"I've always had a deep passion and intrigue for agriculture as I grew up surrounded by it in the Northern Sacramento Valley of California," Rohrich said. "Since moving from California, my blog has evolved from simply sharing photography to utilizing photography, among other avenues, in order to tell the story of agriculture and the food we enjoy."

Rohrich said she is blessed and honored to share and be actively involved in such an amazing industry.

"I branded myself and my blog as the *Prairie Californian* after I got married. It reflects me perfectly as it represents two parts of my heart, the prairies of North Dakota and my now home, but also my family, friends and life back in California."

But it's not all smooth sailing as an agriculture blogger and Rohrich believes the way you respond to critics is just as important as the content you share.

"I've been fortunate I've never had to seek legal action, but I've had a lot of negative comments and reactions," she admitted. "I had a woman on Twitter who stole my profile photo and put the title Queen of Toxic Wheat on it. More recently I had a woman on Facebook telling other readers that I had a fake identity and Monsanto was paying me to write what I do."

Her response in such situations is to treat readers respectfully, but demand respect in return.

"I encourage them to post again. I want people to feel comfortable expressing a difference of opinion. Activists and negative people have the loudest voices, but those in the middle are watching and just taking it all in. It's hard to have these discussions, but speaking about it is absolutely important."

Rohrich believes that online conversations have the ability to change people's lives and views on modern agriculture—which is a big part of why she blogs.

"The human side of it all is so important. As farmers, we forget that a huge part of the conversation is simply reminding consumers we are human, she said. "We have families, we have passions and we have fears. Connecting with people on that personal level, even before conversations about agriculture are started, establishes trust. And with that trust, it gives us as communicators the ability to form relationships with people who are extremely far removed from where their food comes from." ▣

At a glance with Jenny

Her most popular blog post: *10 Ways Marrying a Farmer Changes Your Life*
"It took me all of 30 minutes to write. I sat down in the middle of harvest and made light of my situation and pretty soon people all across the board were commenting on it."

Recent blog themes: Building a house, home decor, food and recipes. "For so long, I thought the blog was about technical stuff, but a breakthrough for me was realizing that something like food blogging catches a larger audience and in the course of reading they might learn about glyphosate use on wheat too."

Social media as a lifestyle: "My husband enjoys using Twitter, because it's simple and quick to use. Social media has been a big part of our lives, and we've met so many special people through it. So it's been a cool thing for us. A lot of people watched our relationship develop online so we ended up live-streaming our wedding for those who couldn't make it."

Favorite argument for biotech: "Genetic modification saved the American chestnut tree. There's a species in Appalachia that gets a blight, so researchers took a resistant gene and inserted it into the plant and it is now saving the trees from going extinct. Stories like that help people to see GM technology in a different light."

Beyond blogging: Rohrich uses her *Prairie Californian* blog to sell original photographs (fields of sunflowers are a favorite), kitchen items and farmer-friendly apparel such as "I love gluten" T-shirts. By attending conferences like TECHmunch in New York City, she cultivates new ways to expand her brand and her platform.

Inspiring quote: "Nobody cares how much you know until they know how much you care." by Theodore Roosevelt. "Even though science is really important, to convey points to people you really have to show them what you care deeply about and connect on that personal level. I think that's something we in agriculture forget about sometimes."

SoyTown Hall

We asked established agriculture bloggers:

“What’s the best approach to talking constructively about genetically modified organisms (GMOs) and modern ag?” Here’s what they said:

Katie Pratt, Illinois

Rural Route 2
illinoisfarmgirl.wordpress.com



“Always speak from your personal farm experience when answering questions or engaging in

conversation about modern farming practices. People can identify with a person’s individual story versus a research study. I’ve also discovered that an answer to a GMO question always includes some of the other great things happening on our farm – adoption of tractor technology, conservation practices, soil improvements, etc. Look at the GMO question as a gateway to talk about other aspects of farm work and life.”

Janice Person, Missouri

A Colorful Adventure
janiceperson.com



“Having lots of conversations with the general public, I have found seeking first to understand

is critical. That means I have to set aside my biases and focus on truly trying to learn more about the person or group I am talking with, how they have formed opinions, what those opinions are and their willingness to hear other viewpoints. So my guideline is when someone asks me a question that I think is misplaced or based on misinformation, rather than ‘correct’ the person, I ask some questions. Once I think I get where they are coming from, I say something like ‘my experience has been really different, can I tell you about it?’ That helps it be more

conversation than debate. Both of us can learn something rather than feel like we have to defend our turf.”

Jenny Rohrich, North Dakota

Prairie Californian
prairiecalifornian.com



“I have a note stuck to my computer screen; it says ‘Nobody cares how much you know, until they know

how much you care.’ This quote from Theodore Roosevelt serves as a reminder to me, daily. As someone who spends her time advocating for agriculture, nobody will even begin to listen to what I have to say unless they first know I care. Science is certainly important to help convey the points I am trying to make in support of GMO technology and modern agriculture, but science alone does not relay to the general public that I care. Showing someone you care means connecting with them as a person first, not as a farmer first. The best conversations about agriculture, don’t start with agriculture, they start with shared values.”

Jeanette Merritt, Indiana

Fencerow to Fencerow
fencerowtofencerow.com



“The best approach is to truly listen to their question before you begin explaining anything. The general consumer knows very little about GMOs or modern agriculture. We tend to speak in terms they don’t know or understand. Listen first. And then speak to them, not at them.”

Michelle Miller, Iowa

Farm Babe
facebook.com/IowaFarmBabe



“Before I met my boyfriend and started living and working on the farm, I actually was anti-GMO.

The reason for that is because I was exposed to nothing but ‘documentaries’ in my downtown Chicago hi-rise, which I later learned were catered to selling organic foods and tricking consumers into thinking GMO was ‘bad.’ We try our best as bloggers through social media to reach the consumer but honestly, we are such a small piece of the puzzle. I know there is a documentary or two coming out to showcase the good news about GMOs, and more of a mainstream media push, and I honestly feel we need more of that.”

Greg Peterson, Kansas

The Peterson Farm Brothers
petersonfarmblog.wordpress.com



“Try to view the individual(s) you are talking to as one of your good friends.

There is almost always differences of opinions between close friends on at least one topic. Think of how you would discuss a touchy subject you disagree on with that person, and then apply it to talking with someone who disagrees with your stance on GMOs/modern ag. The conversation is very hard to move forward if it is approached with two opposing sides. However, if respect, politeness and calmness is maintained (even if only by one side), there is a lot better chance for a breakthrough!” ■

Issue Update

Biotech Approvals Landscape

| By **Lekan Oguntoyinbo**

U.S. Makes Progress in China, Will 'Wait and See' in EU

Last April, the European Commission voted to give member states the authority to opt out of importing food and feed containing biotechnology traits. Then the commission voted to approve 17 biotech traits for import. Many of these traits had been in the European Union (EU) approval process for more than five years.

The news was a mixed blessing for the soybean industry. Significant delays in the approval process are costly for both farmers and consumers. A white paper released last April by the International Soybean Growers Alliance (ISGA) shows that a three-year postponement in global approval of biotech-enhanced soybean traits over the next 10 years could cost farmers and consumers nearly \$19 billion.

For more than a decade representatives of the American soybean industry in China could count on a slow but predictable approval of the biotech process. But in recent years the process has become slower and less predictable.

In the last few years, soy exporting countries in the Americas have teamed up with their U.S. counterparts to warn of the negative consequences of these delays for the EU livestock, poultry and pork industries and the potential higher prices for consumers, should countries opt out of biotech use in the feed industry. China and the EU nations account for about

30 percent of U.S. soybean exports, with the EU accounting for between five and six percent and China approximately 25 percent.

Jim Sutter, chief executive officer of the United States Soybean Export Council (USSEC), said while there are some similarities between the approval processes in the EU and China, there are some major differences as well. Sutter said the uncertainty of approval of traits limits the ability of farmers to use the latest technological improvements and also discourages technology innovation.

Sutter believes the process in the EU is politically driven.

"Within the 28 member states there are differences of opinion over the desire to have biotech consumed in those countries that causes a political logjam," he said. "They still have to go through a scientific approval."

David Green, senior technical consultant for the United Soybean Board, said anti-biotech member states such as Austria, Poland, Luxembourg and Hungary have consistently voted against scientific assessments "on stated political grounds." This, he said, has been a big driver in biotech approval delays.

Green added if the proposal before the EU is not killed early on and drags out for several years, the EU-wide approval system could be compromised.

In contrast, the Chinese government has publicly affirmed its belief in biotech products despite misgivings

from some members of the public, said Sutter.

"In China I believe there is some similarity in terms of questions from consumers about whether biotech is safe. The Chinese government has come and said we believe in biotech and we believe it is safe and we need to have it in order to have food security for our country," Sutter said. "Whereas in Europe there is no central government saying biotech is safe. The Chinese government and universities are investing heavily in it. China doesn't grow many soybeans. China has made a strategic decision to use the land to grow other crops. I think their decision has been correct. But unfortunately soybeans have been caught up in political decisions over approval."

Sutter said representatives of the U.S. soybean industry in China are taking aggressive steps to improve the approval process. They are working to influence the government on the risks of prolonged delays. They have developed a "Farm Moms to China" program, made up of a team of four women, farm moms from the Mid-western United States, who talk to Chinese consumers about biotech crops.

"We believe we are making progress" in China," Sutter said. "In Europe we are taking more of a wait and see attitude. The overarching thing we must do is to make sure us farmers have access to these markets and we remain the preferred supplier to both China and Europe." ■



China



European Union

HORIZONS

SOY

When Laura Foell looks at her family's fields near Schaller, Iowa, she knows that every other row of soybeans will be exported in the form of whole soybeans, soy meal or soybean oil. She's also seen how vital this is to people around the world, from impoverished women in South Africa and Mozambique, to hungry children in India.

"When I traveled to India last summer, I saw things that were very disturbing," said Foell, who chairs the U.S. Soybean Export Council (USSEC) and serves on the United Soybean Board (USB). "I'll never forget seeing so many little children running around in the streets of Delhi and Mumbai. It looked like the cattle in India were fed better than the people."

Malnutrition rates run as high as 40 percent in India, and the country also has a high infant mortality rate. A majority of people in India live on less than \$2 a day, while many live on less than 50 cents a day, said Foell, who noted that most people in India

consume very little protein in their diet.

That's heart-wrenching—and motivating—to Foell, who chairs the USSEC's Meal Action Team and is a strong proponent of biotechnology. "As farmers, we're here to feed people. We need to change the conversation about biotechnology and emphasize how it increases sustainability in all its forms—economically, environmentally and socially."

Biotechnology's power to transform lives became clear to Foell in August 2008, when she traveled to South Africa and Mozambique with an all-female delegation of Midwestern soybean industry leaders to develop markets for U.S. soy. Foell met with entrepreneurial African women who were selling food and household items door-to-door. She focused on getting more texturized soy protein (TSP) among the supplies that were sold in these villages.

TSP is more than a basic food source in Africa, which has been ravaged by HIV and the AIDS epidemic. "Africa has lost an entire generation to HIV, but there's hope," Foell said. "African women with HIV who ate TSP main-

With malnutrition rates as high as 40 percent and most people in India consuming very little protein in their diet—Foell is determined to show how biotechnology has the power to transform lives.
Photo Courtesy of Laura Foell

How Laura Foell Changes the Conversation about Biotech

By Darcy Maulsby

tained their weight or gained weight, which improved their quality of life. Seeing how U.S. soy can make such a positive impact on people's health made this a life-changing trip for me."

Biotech enhances sustainability

Foell has traveled to more than 30 countries in recent years to meet with government officials and promote the benefits of U.S. soy and biotechnology. Her passion for agriculture can be traced to her rural roots, which run deep in the Midwest.

After growing up on a farm near Mt. Vernon, Ill., and earning her ag degree from Southern Illinois University, Foell worked for the Extension service in Illinois. She also met her future husband, Bill, through her job. The young couple married and moved in 1984 to Sac County, Iowa, where Bill's family had farmed since the 1890s.

After surviving the Farm Crisis, the Foells looked for ways to keep the operation viable as they raised their son and daughter on the farm. A new opportunity opened up in 1996 with Roundup® Ready soybeans. "We tried them on a small field and saw very good results," Foell said. Weed management with the herbicide-resistant crop proved so effective that the Foells switched to no-till farming practices. "Biotechnology allows us to be more efficient no-till farmers," Foell noted.

No-till helps control soil erosion, protects water quality, lowers agriculture's carbon footprint, preserves moisture in the soil and increases biodiversity in the soil, which can improve nutrient

recycling. "Our soil contains more earthworms now and has better water-holding capacities," Foell said. "Using conservation tillage in combination with herbicide-tolerant crops has also allowed us to reduce the number of herbicide applications and use less diesel fuel, since we make fewer trips across the field."

Along with competitive crop yields, the sustainable nature of biotechnology also yields an important social benefit. "No-till saves us approximately 440 working hours per year, which allows me to volunteer on behalf of agriculture," said Foell, who is a member of the Iowa Soybean Association and serves on the Sac County Farm Bureau board.

Taking a new approach in China

Foell's volunteer work includes trips overseas to open new markets for U.S. soy and encourage acceptance of biotechnology. In the spring of 2015, Foell traveled to Beijing, China, with farmers from Iowa, Texas and Kansas to participate in the Forum on Biotechnology and Global Soy Trade. About 100 Chinese agriculture, state and industry representatives attended the forum.

"Chinese consumers have concerns about biotech, and we want to share the facts," said Foell, who also partnered with farmers from Brazil, Argentina, and Paraguay to present a united front in Beijing through the International Soy Growers Alliance (ISGA), which sponsored the forum.

"Argentina, Brazil, Canada, Paraguay, Uruguay and the U.S. supply more

than 95 percent of the world's soybean production," Foell noted. "Even though we're competitors, we share a commitment to meet the rapidly increasing world demand for high-quality, healthy soy products produced in a sustainable, environmentally-friendly way."

During the forum, Foell and the other farmers presented Chinese officials with a peer-reviewed white paper detailing the benefits of genetically modified (GM) crops for countries that accepted. The document notes that biotech crops were raised by 18 million farmers in 28 countries in 2014. This use of those biotech crops has increased crop productivity while reducing land use and fuel use. Slow regulatory approval and zero-tolerance policies, however, have threatened international trade and have the potential to cause price increases, according to the white paper.

"This is scientifically peer-reviewed research, not just hearsay," said Foell, who looks forward to sharing this information with more foreign buyers. "When we are visiting with industry representatives and government agencies, the paper helps highlight the economic and cultural consequences that slow approvals create. If new biotech traits are delayed in reaching the market, for example, this will restrict consumers' access to adequate nutrition."

Foell hopes the work she and her fellow farmers did in China will speed up the biotech approval process. While American soybean growers are already setting records each year with their exports to China, Foell believes there's room to grow

THE QUEEN OF BEANS

(continued on page 12)



Laura Foell speaks at the recent International Soy Growers Alliance (ISGA) meeting in Beijing, China where ISGA presented a white paper on the economic and social costs of delays in biotech approvals in China. *Photo Credit: Joseph L. Murphy/Iowa Soybean Association*

this market. She encourages growers to look beyond China, however. "We shouldn't put all our eggs in one basket," Foell said. "It's important to look at the market potential of emerging nations like India, too."

Thinking beyond the grain elevator

While India grows soybeans, it can't meet the needs of an exploding population that's on pace to make the country more populated than China by 2030. "India's farmers only get about 40 percent of what we get out of each acre, due to low soil fertility levels and other issues," Foell said. "Also, the average farm in India is half an acre, with a lot of hand labor."

It's ironic that India's administration does not want to allow genetically-modified crops into the country, even though the nation's farmers grow biotech cotton. "India is struggling to decide whether to go with tradition or science," said Foell, who added that U.S. soy flour and soy milk could enrich people's diets while offsetting hunger and malnutrition-related health problems.

It can be frustrating to deal with foreign government leaders who don't seem to care about feeding the hungry. "I've been told more than once by these officials that

if U.S. farms raise more food than Americans need, we should quit overproducing," Foell said. "They also don't understand why we want to share the benefits of biotech."

Foell understands clearly, though, especially as she considers the hardships people face daily in India, Africa and many other countries she's visited. "When you see real poverty, where people have little access to nutritious food for their families, you're reminded how fortunate we are here in America."

U.S. soybean growers can do something about world hunger. "As farmers, we want to make sure everyone has safe, nutritious, affordable food," Foell said. "Biotechnology is one of the ways we can supply this around the globe."

It's important for U.S. growers to focus not only on yield but on quality, added Foell, who noted that standards for soybeans include a protein content of 35 percent and oil content of 19 percent. "As farmers, we may tend not to think about what becomes of the crop we grow once we've hauled the beans to the local elevator, but we need to pay attention to what our global customers want."

Certificate of sustainability creates competitive advantage

This requires U.S. growers to stay informed about global trade issues and put a face on agriculture to build trust with consumers at home and abroad. "We don't need to apologize for using biotechnology," Foell said. "We need to share the facts and explain why we do what we do."

The facts tell a compelling story, as detailed by the USB's 2012 Field to Market study, which revealed:

- The amount of land required to produce 1 bushel of soybeans has decreased by 35 percent since 1980.

- U.S. soybean farmers have reduced soil erosion per bushel by 66 percent since 1980, thanks to soil conservation practices.
- U.S. soybean farmers have reduced their energy use, greenhouse gas emissions and irrigation water use per bushel by more than 40 percent in the last 30 years.

To share these success stories and build global demand for U.S. soy, the American Soybean Association (ASA), USSEC, USB and state soybean boards developed the U.S. Soybean Sustainability Assurance Protocol. Launched in 2013, this protocol helps document sustainable soybean farming practices for international customers.

The protocol covers four key components, including sound environmental objectives, social responsibility, promoting economic growth and continuous improvement in technology and cultural practices. The protocol also addresses how sustainable performance by U.S. soybean farmers is measured and verified by various government programs. U.S. soy exporters can go online to get a certificate of sustainability for the amount of soy they want to export.

The U.S. Soybean Sustainability Assurance Protocol creates a competitive advantage for U.S. soy, Foell said. "It ensures that global demand and acceptance for our product will remain strong. It's a promise U.S. farmers can keep, because we're committed to responsible production."

Keeping promises and focusing on continuous improvement is important to Foell, who remains optimistic about the future of biotechnology and U.S. soy exports. "U.S. agriculture will continue to play a key role in feeding people around the world. We need to continue promoting technology that's economically, environmentally and socially sustainable." ■

Showcase Conservation on Your Farm



Tell us your conservation story and you could be a winner.

Are you using a reduced tillage practice on your farm such as conservation tillage, strip-till or no-till? Do you grow cover crops? Have you taken steps to reduce soil loss or improve water quality? These are just a few conservation practices used on some farms today that help produce sustainable U.S. soybeans. If you are using one of these practices or perhaps others, tell us about your accomplishments and you could win a Conservation Legacy Award.

This annual awards program recognizes U.S. soybean farmers who distinguish themselves through outstanding conservation practices, while remaining profitable. All U.S. soybean farmers are eligible to enter. Three regional winners and one national winner are selected.

Winners Receive:

- Expense paid trip for two to Commodity Classic, March 3-5, 2016, in New Orleans, La.
- Recognition at the ASA Awards Banquet at Commodity Classic.
- A feature on your farm and conservation practices in *Corn & Soybean Digest* and a special online video.
- Potential opportunity for the national winner to join other farmer-leaders on a trip to visit international customers of U.S. soybeans.

Applications must be submitted by Sept. 1, 2015.

Visit SoyGrowers.com for application details and video features on past winners.



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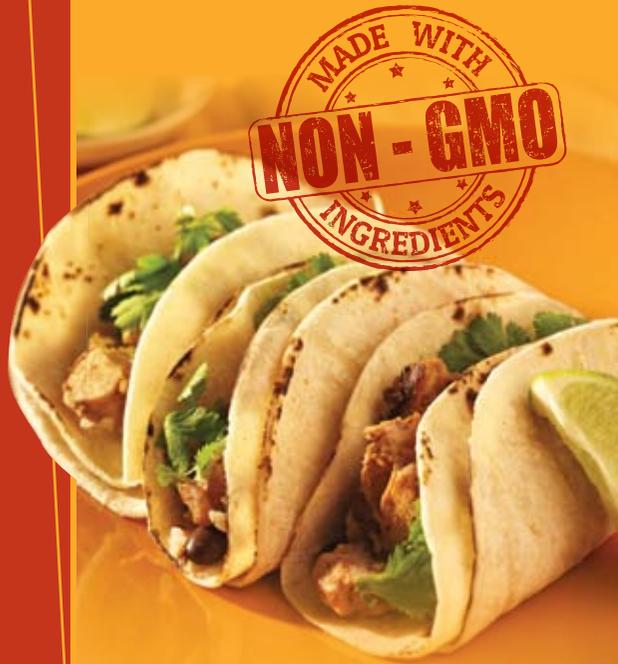
Soy Growers to Chipotle: Misinformation is Not a Marketing Strategy

The American Soybean Association (ASA) issued a statement in response to Chipotle's announcement in May that the fast-food chain would remove all foods containing genetically-modified ingredients, including the soybean oil used in cooking, from its menu. ASA President Wade Cowan, a farmer from Brownfield, Texas, noted farmers' continuing frustration with the misinformation about agricultural biotechnology advanced by Chipotle:

"Farmers are no strangers to the heated discussion of GMOs and biotechnology. We recognize that there are passionate viewpoints on both sides, and we respectfully disagree with those who choose to dispute the scientific consensus on the safety of these agricultural innovations. What is different about Chipotle's announcement is that it smacks of a willful subversion of science, all in the name of selling burritos.

"Chipotle contends that more study is needed on GMOs, even though they are among the most studied and tested food products in the world, and have been since their introduction almost 20 years ago—all without a single incidence of harm to humans, plants or animals. Think about that for a minute: a planet's worth of meals over two decades means literally trillions of servings without one adverse occurrence. Chipotle, however, bypasses the overwhelming scientific consensus and places long-debunked safety concerns first and foremost in its new effort. For this, the restaurant has been taken to task by viewpoints ranging from the Center for Science in the Public Interest to media outlets like National Public Radio and the Washington Post—voices that certainly couldn't be mistaken as 'shills' for big agriculture.

"We might suggest a better approach: abandon the scare tactics and join us in our effort to provide clarity to this conversation. Soybean farmers are ready and willing to come to the table and help consumers find out more about what we do and why we use these products. Just like soybean farmers, Chipotle and indeed all links in the farm-to-fork supply chain have a huge opportunity to help Americans discover more about their food. This comes, however, with the responsibility to do so in an ethical and honest manner." ▣



Pollinators and Health



American Soybean Association (ASA) farmer-leaders and staff had the chance to visit Bayer CropScience's Bee Care Center in North Carolina to discuss ongoing research and education surrounding pollinators and their health concerns, along with the White House's new pollinator health strategy. Bayer Director of Stakeholder Relations and Stewardship Alan Ayers (left) speaks to the group about Bayer's efforts surrounding pollinators and their health concerns. Standing next to Ayers from left to right is ASA President Wade Cowan (TX), ASA Industry Relations Manager Michelle Hummel, ASA First Vice President Richard Wilkins (DE), ASA Chairman Ray Gaesser (IA) and Lee Hall, Bayer Industry Relations Lead.



ASA First Vice President Richard Wilkins (*center*) speaks alongside Senate Republicans at the Capitol on the importance of Trade Promotion Authority (TPA) to U.S. soy.



ASA Director Bill Gordon (*far left at table*), from Minnesota, testifies before the Senate Ag Committee in May on reauthorizing the Grain Standards Act.

ASA Talks Trade at Critical Time in Washington

American Soybean Association (ASA) First Vice President Richard Wilkins took part in two separate trade briefings in Washington as the association ramped up its pressure on Congress to pass legislation that would grant trade promotion authority to the White House. In his comments, Wilkins, who farms in Greenwood, Del., expressed optimism at the bill's progress in the Senate.

"We can't conclude agreements expeditiously without Trade Promotion Authority. In the immediate term, this means the Trans-Pacific Partnership with our partners along the Pacific Rim. In the future, it means agreements with Europe and a broad range of new partners," Wilkins said. "The bill gives the U.S. Trade Representative the ability to get the best deal possible for American farmers, and it provides Congress the oversight it needs to ensure each agreement works for everyone."

Wilkins also highlighted the significant role global trade plays in the continued growth of the soybean industry in the United States. Soybeans and soy products are the most valuable U.S. agricultural export, with 2014 exports of roughly \$30.5 billion in soybeans, soybean meal and soybean oil. Between 2000 and 2010, the value of U.S. oilseed and product exports more than doubled, from \$9 billion to over \$20 billion. ■

ASA Calls for 'Mandatory and Continuous' Grain Inspections

American Soybean Association (ASA) Director Bill Gordon, of Minnesota, testified in Washington in May, calling on the Senate's Agriculture, Nutrition and Forestry Committee to help ensure that grain inspections under the Grain Standards Act remain both mandatory and continuous, even in the event of a work stoppage due to strike or lockout.

Gordon's statement came as Congress weighs reauthorization of the Grain Standards Act of 1976, under which official inspections are required for all export shipments. In the testimony, ASA indicated that, while most provisions subject to reauthorization before October 2015 are non-controversial, it is critically important for Congress to resolve outstanding questions about whether and when the Federal Grain Inspection Service (FGIS) is required to step in when inspection services are withdrawn by delegated state agencies. ■



SoyChampion

Senator Heidi Heitkamp

By Patrick Delaney

It's not easy being the new kid in town, especially in a place like Washington, where relationships mean everything, yet take years to cultivate. That problem can be magnified in Congress, where new members are often relegated to committees where they can't affect the kind of change for their constituents that they envisioned during the campaign process.

Don't tell that to Heidi Heitkamp, though. The junior senator from North Dakota, now in the third year of her freshman term, has in such a short

time established herself as a vocal and formidable force for farmers in the nation's capital, leveraging her seat on the Senate Agriculture Committee to lead the charge on a range of issues and deliver tangible results to farmers in her home state.

"Sen. Heitkamp came to the Senate in the midst of the Farm Bill negotiations and she jumped right in, rolling up her sleeves and working across the aisle to help pass a broadly supported bipartisan bill," said Senate Agriculture Committee Ranking Member Debbie Stabenow of Michigan.

That bipartisan mindset—one that places the interests of North Dakota farmers over the business-as-usual partisan encampment that so often marks politics in Washington—has gained Heitkamp respect among her peers, regardless of political affiliation.

"We've appreciated the way we have been able to work with Sen. Heitkamp across party lines on agriculture issues, and in particular the farm bill," said Sen. John Hoeven, the state's senior Republican senator with whom Heitkamp serves on the Agriculture Committee. "Agriculture is our number one industry, and North

Sen. Heitkamp visits the Kummer Farm in Colfax, N.D. (Left to right): Paul Kummer, Sen. Heitkamp, Vanessa Kummer, USDA Deputy Secretary Krysta Harden, Megan Kummer, Blaine Kummer and Minnesota Sen. Amy Klobuchar.



Dakota congressional delegations have a long history of cooperation when representing the interests of our state's farmers and ranchers."

Allan Johnson, former U.S. Department of Agriculture Deputy Undersecretary for Rural Development, and a native of Almont, in the south-central portion of the state, also appreciates Heitkamp's style and ability to get the job done.

"What has impressed me the most is the support she has built back in the state. I have good friends, many of whom are Republicans, who are very impressed by her efforts for North Dakota, pointing specifically to the access to her and her staff," he added.

Johnson highlights Heitkamp's work on rail issues as an indicator of her deserved status as a driver of results for her constituents. Railcar availability takes on special importance in North Dakota, one of only two of the top 10 soybean producing states without direct access to the inland waterways system.

"Sen. Heitkamp has helped provide pressure on the railroads to provide adequate service for soybean producers so that export demand can be met," said North Dakota Soybean Growers Association Executive Director Nancy Johnson. "This helps to maintain the reputation our state has worked to develop for timely shipments of quality soybeans to Asian customers."

Johnson also credited Heitkamp's leadership on the 2014 Farm Bill as a key factor in crafting the bill to suit the needs of North Dakota soybean farmers, whose production has increased in recent years such that the state is now the country's second largest soybean exporter.

"Sen. Heitkamp has been a leader in the fight to ensure that the farm program does not distort trade. Soybean farmers in North Dakota rely heavily on export markets to sell their commodities," Johnson added. "A program that coupled planted acres to target prices would have created trade distortions that would have threatened access to foreign markets. In the end, Sen. Heitkamp was successful in preserving a program that tied support to production histories in order to free up farmers to plant for the market instead of the program."

Heitkamp has also distinguished herself through her work on biodiesel, a critical priority for the American Soybean Association (ASA) and for North Dakota, which is home to one of the largest biodiesel production facilities in the country.

"Sen. Heitkamp has seen first-hand the successes of the biodiesel industry and the importance of a thriving biofuel sector to the soybean growers of her state," Johnson said. "The Senator has continued her strong support of the biodiesel industry, and alongside a coalition of her colleagues, Sen. Heitkamp led the call for the reinstatement of the biodiesel tax credit and for the Environmental Protection Agency to increase renewable fuel volumes for biodiesel."

Heitkamp's Senate predecessor recognizes her outstanding work on renewable fuels as well.

"Heidi Heitkamp has been waging an aggressive fight to get the right results on the Renewable Fuels Standard (RFS) from this Administration and she is making a difference," said the state's former Senator Byron Dorgan. "As one of the original authors of the RFS, I admire



Now in the third year of her first term, Sen. Heitkamp's leadership on the 2014 Farm Bill was a key factor in crafting the law to suit the needs of North Dakota soybean farmers, who are now the country's second largest soybean exporters.

Heidi's leadership in Congress to continue building a renewable fuels industry in the U.S. She is aggressive and tough in taking on those who want to pull the rug out from under soybean growers and others who have been successful in developing a growing biodiesel industry."

Stabenow agreed, calling Heitkamp a fierce champion for North Dakota's farmers and ranchers that she is proud to call her friend and the Senate Agriculture Committee is lucky to have as a member.

For her exemplary public representation of soybean farmers on issues of biodiesel, transportation, federal farm programs, and many more to come, the American Soybean Association is proud to honor Sen. Heidi Heitkamp with the Soy Champion Award. ■

Soy SHOTS

Submit Your Soy Shots at:

membership@soy.org

Beans sprout to life on Kevin Hoyer's farm in West Salem, Wis.
Photo Courtesy of Kevin Hoyer



With clear skies overhead, Kentucky farmer-leader and ASA/DuPont Young Leader Brennan Gilkison is ready to get in the field and plant.
Photo courtesy of Kentucky Soybean Association



(From left to right) Dalton, Doug and Jade Bartek take a break from preparing equipment for a quick family photo on their farm in Wahoo, Neb.
Courtesy of Doug and Joni Bartek



The Horter family piles into the tractor to plant soybeans together one Sunday this spring in Andover, S.D. (From left to right) John, Dane, Jaclyn and baby Raegan. *Photo Courtesy of John Horter*



Gary Berg captures a shot of his son Stephen in their bean field in St. Elmo, Ill. during the summer of 2014. *Photo Courtesy of Illinois Soybean Association*



One-year-old Harlow Leonard observes as his dad Tom Leonard gets ready to plant soybeans on their farm in southeast Wisconsin.
Courtesy of Tom Leonard

Industry Perspective

Biotech Trait Development Grows in Foreign Markets

| By **Brian Wallheimer**

As the world leader in soybean production, the U.S. and its farmers get a lot of attention from big biotech companies.

But over the last decade or so, South American countries have put themselves on the radar. In 2002, Brazil and Argentina combined for more soybean acres than the U.S.—and they haven't slowed.

Since 2000, Argentina has increased soybean acreage 117 percent, to 51.4 million acres in 2014. And Brazil in 2014 had 77.1 million acres, an increase of 125 percent since 2000. Both statistics are according to the International Service for the Acquisition of Agri-biotech Applications.

Those countries' farmers benefit from traits that work anywhere, such as yield increase potential or herbicide resistance. But some companies are now willing to invest resources in traits that specifically serve those rising markets.

"Our focus is on bringing forward novel biotech traits across the U.S., Canada and South America," said Matthew Rekeweg, U.S. industry relations leader at Dow AgroSciences. "Our efforts to match our biotechnology resources to farmers' needs can lead us to develop traits for use in specific markets around the world."

New traits can cost as much as \$150 million in research and development and take as long as 15 years to get to market. Demand for a new trait has to be there well into the future.

"You have to look at whether this is a need that will continue to be there. Or can we solve this through breeding?" said Mindy

Whittle, soybean industry affairs lead at Monsanto. "The need for a biotech solution has to be really strong."

Monsanto saw a strong enough need in Brazil to launch its first trait specifically for an international market. The Intacta RR2 PRO line of soybeans debuted in 2014. In addition to yield boost and Roundup resistance, the line utilized Bt to protect against worms and insects distinct to South America.

"These worms are very difficult to control down there," Whittle said. "That's a very big need they weren't able to meet with spraying insecticides alone."

Other companies are doing the same. Dow is developing a novel Bt trait, Conkesta. And Bayer CropScience is working on soybean lines with specific traits to combat pests common to South America.

"We are developing them with Brazil, Argentina, Uruguay and Paraguay in mind," said Diego Angelo, global soybean seeds and traits marketing manager at Bayer. "South America already grows more beans than the U.S. The market potential is large."

Companies listen to growers all over the globe, but for the moment, other international markets just don't have the production output to spur biotech trait development that can't also be marketed in North America and South America.

That could change, however, as demands for protein in countries such as India and China rise. If those countries raise animals domestically to meet that need, they'll have to feed them. ■



Diego Angelo, global soybean seeds and traits marketing manager, Bayer CropScience



Matthew Rekeweg, U.S. industry relations leader, Dow AgroSciences



Mindy Whittle, soybean industry affairs lead, Monsanto

THE POWER OF PERCEPTION THE QUEST FOR TRUTH



GMO Debate



By **Tamara Hinton**

Mark Lynas was once so certain that genetically modified organisms (GMOs), were a threat to the food system and environment, that he personally vandalized crops.

The author, environmentalist and recovering anti-GMO activist describes his work as one of the early actors and protestors of biotech crops in the 1990s in Britain, as one of the most successful campaigns he's ever been involved in.

"It grew like a wildfire. The aftershocks of it are still with us today," Lynas said.

There was just one problem with his beliefs: they lacked factual, scientific support.

"I was an activist, but not particularly well read on the science," he added. It was a long process, but eventually he changed his mind and now supports the technology, especially as a way to tackle poverty in developing countries.

Lynas' initial reaction to GMOs mirrors that of many consumers today, and represents the challenge the scientific community is trying to overcome. There is widespread consensus among every major scientific and health organization regarding the safety and use of GMOs.

Yet, they still cannot shake the bad press they've received through the years—most of it rooted in misinformed campaigns like the one Lynas was



A group protests genetically modified organisms (GMOs) in Florida.
Photo courtesy of Ira Bostic/Shutterstock.com

once a part of—and win the collective hearts and minds of consumers.

A recent study conducted by the Pew Research Center in collaboration with the American Association for the Advancement of Science measured the views of scientists and the general public about biotech crops. While 88 percent of scientists viewed GMOs as safe, only 37 percent of the public agreed.

"GMO has become a symbol for things we are concerned about," said Jon Entine, a journalist and founder of the Genetic Literacy Project, an initiative he started to tackle some of the misperceptions about biotechnology. "It's a word that captures all of these negative images of distrust in government, corporations and industrial takeovers. It's taken a while for anyone to counter them."

Indeed, if there is one lesson to be learned from the debate surrounding GMOs, it is that public relations and education matters from the beginning.

"If we—scientists, companies, government—had thought about the technology in a way that deserved explanation where education and conversation with consumers was a priority, we wouldn't be where we are with the current challenge," said Dr. Cathleen Enright, a biochemist by training and the former executive vice president of food and agriculture at the Biotechnology Industry Organization (BIO).

Enright has spent most of her career working in some capacity on biotechnology issues in the lab, government and in the private sector. She arrived at the U.S. State Department on a fellowship program 20 years ago right when GMO grains were coming on line. She acknowledges the agricultural industry was not prepared for the backlash because it did not view expanding methods for improving crops and crop production as a radical, or even new, idea.

(continued on page 22)

"If we—scientists, companies, government—had thought about the technology in a way that deserved explanation where education and conversation with consumers was a priority, we wouldn't be where we are with the current challenge."— Dr. Cathleen Enright



Plant tissue cultures grow in a lab at the U.S. Department of Agriculture's (USDA) Agriculture Research Service (ARS) in Ft. Collins, Colo. *Photo courtesy of Lance Cheung/USDA*

"This is just agriculture to us," Enright said. "It's just an extension of traditional breeding."

Dr. Robert Fraley, a World Food Prize Laureate and the executive vice president and chief technology officer at Monsanto Company, echoed this sentiment. He joined the company in 1981 as a research specialist when it was just a chemical company. Monsanto saw the potential in agricultural biotechnology and was an early investor and leader in developing it. Fraley helped pave the way with breakthrough developments that have made it possible for farmers all across the globe to improve crop yields, increase incomes and feed a growing population. But, this is a narrative that is often overshadowed by fear of the unknown.

"If we made one mistake that I wish we could have corrected, it's when we launched the products, we focused almost all of our communications on farmers and growers and not much on public education," Fraley said.

But, another phenomenon and innovative marvel was developing alongside biotech crops to complicate matters that no one fully anticipated. The Internet arrived

on the scene with electronic mail, websites and later social media that changed the way we communicate. The bittersweet advent of the Internet meant an abundance of new information was just a click away. The downside was that the information available might not be entirely accurate, or worse, purposefully manipulated to spread misinformation and fear.

"Before the Internet and social media there wasn't really a focus on transparency back in the day," Enright said. "There wasn't an expectation like it is now and when that expectation started to emerge we didn't really seize the opportunity provided to tell our stories."

Changing the Conversation

In contrast, activists and other organizations like the Environmental Working Group (EWG) and Greenpeace that represent the anti-GMO sentiment recognized early on that it is easier to sell fear than complex science even if that science contributes to noble goals like food security and sustainable practices.

"It was their brilliant use of social

media that catapulted them into the forefront of the discussion," Enright said.

A quick search on Google for "GMO" can produce frightening images of fruits and vegetables with syringes injected into them, skull and cross bones, and even Frankenstein-type characters. Additionally, one can find articles rife with inaccuracies about biotech crops, including that they're untested, hurt the environment, they pose health risks and increase pesticide usage. In fact, the opposite is true.

"We're still dealing with these perceptions and myths that are 20 and 30 years old," Fraley said.

But, a few years ago, the agriculture and biotech industries took stock of this public relations war being waged against them and decided to change the dynamic of the conversation. BIO joined forces with biotech companies and agricultural groups like the American Soybean Association (ASA) and created a space for facts and a civil discussion surrounding GMOs—a website called GMO Answers, designed to "do a better job answering your questions" about this technology.

Roughly around the same time, farmer and rancher-led organizations and agricultural stakeholders created the U.S. Farmers and Ranchers Alliance (USFRA) as a way to connect consumers with farmers. GMOs are one of the many issues they tackle.

"We did research on how consumers are absorbing information about biotechnology," said Randy Krotz, the chief executive officer of USFRA. "It showed us that we needed to make it more of a dialogue about the value of this technology."

Right to Know or Right to Mislead

These efforts to improve transparency and create a more open dialogue have somewhat trumped the anti-GMO's right to know campaigns. Companies are willingly providing more information about their products and are voluntarily making business decisions based on consumer demand.

For example, General Mills announced last year that it would remove GMO ingredients from its Cheerios brand, but did so while also making clear its support for biotechnology and belief that GM ingredients are safe.

This has caused anti-GMO interest groups to up the ante and take an even more strident and misleading approach pushing for mandatory labeling of products containing GMO ingredients. "Mandatory labels would falsely imply that foods with GMO ingredients are somehow inferior or unsafe," Fraley said.

Additionally, these groups are claiming agriculture and food companies are blocking attempts to label GMO ingredients because they want to keep consumers in the dark. On the contrary, there are a number of companies and organizations that actually support labeling as long as it's voluntary and there is a national standard. "We know we have nothing to hide," Enright said.

In fact, a broad-based outreach effort came together last year in the form of the Coalition for Safe, Affordable Food to advance legislation in Congress that creates a voluntary, uniform, science-based standard for GMO food labeling. It has the support of nearly 400 national and state farm and food groups. Such legislation would preempt states from creating their own labeling requirements, which the group says would disrupt interstate commerce, confuse consumers and pave the way for endless litigation resulting in higher food prices.

A bipartisan group of members introduced H.R. 1599, the Safe and Accurate Food Labeling Act, in the U.S. House of Representatives this year and a companion bill in the Senate is also likely to follow.

The International Element

This discussion regarding biotech crops does not begin and end at our borders. Overcoming negative perceptions of biotech crops internationally is equally important, especially for the agriculture industry, which relies heavily on trade. China and the European Union (EU) are two of the largest importers of soybeans in the world, and in general are large export markets for the United States.

This point is not lost on Jim Sutter, the chief executive officer of the U.S. Soybean Export Council (USSEC).

"Any unease that countries have regarding biotech crops has an

(continued on page 24)

Pressure Builds in Congress for GMO Labeling Solution

Since 2012, there have been ballot initiatives to label genetically modified organisms in California, Washington, Oregon and Colorado. They were all defeated, but during the same timeframe state legislatures pushed through labeling laws in Connecticut, Maine and Vermont. A lawsuit filed by the Grocery Manufacturers Association to overturn the Vermont law was unsuccessful and it will take effect on July 1, 2016.

Additionally, more than 70 different labeling bills have been introduced in at least 30 states and there are concerns that the 2016 presidential election will see more labeling initiatives on the ballot.

The risk of every state passing laws to develop its own state-specific label, coupled with the cost of fighting ballot initiatives and any ensuing litigation, has prompted calls for Congressional action.

This year, Reps. Mike Pompeo (R-KS) and G.K. Butterfield (D-NC) introduced H.R. 1599, the Safe and Accurate Food Labeling Act, which would block states, like Vermont, from implementing their own labeling requirements. Instead, it would set up a national, voluntary labeling program that would certify foods that do not contain GMOs.

Supporters of the bill, which include more than 50 co-sponsors and nearly 400 farm, food and biotech organizations, argue that this creates uniformity, protects interstate commerce, and allows consumers to make informed decisions. The alternative is a patchwork of state laws across the country that would confuse consumers, create endless lawsuits, and increase the cost of groceries.

The House Committee on Energy and Commerce is expected to consider the bill this summer. Sen. John Hoeven (R-ND) is expected to introduce a companion bill in the Senate.



Overcoming negative perceptions of biotech crops internationally is equally important, especially for the agriculture industry, which relies heavily on trade.
Photo courtesy of USDA

impact on growers because it slows the approval process and limits market access," he said.

Generally, China's leadership has embraced biotechnology. "They have recognized that long term investments in technology are critical in producing more food," said Jack Bobo, senior advisor of biotechnology for the U.S. State Department.

But, that doesn't mean they have always been cooperative with the U.S. In fact, in the past, U.S. Secretary of Agriculture Tom Vilsack and others have lamented the slow regulatory review process for GM crops in China saying there is a "disconnect." But, some are optimistic this will improve over time.

"The more they become a technology adopter themselves, the more likely our regulatory systems can work together more smoothly," Bobo said.

The EU with its 28 member states is another story. A recent study from the office of the U.S. Trade Representative (USTR) indicates this is an export market that continues to be mired in arbitrary restrictions for U.S. agricultural products, especially biotech crops.

"It's a very politicized issue," Sutter said. "They would have you believe they don't want anything to do with biotech, but they're actually big consumers."

In the past, it has delayed decisions on biotech crops despite a World Trade Organization (WTO) ruling stating this practice was inconsistent with its obligations under trade rules.

The U.S. has worked to normalize agricultural trade with the EU, but it's been a challenge with the main issue of overcoming negative perceptions about GMOs.

"When you have consumers who think technology is irrelevant when it's critical, it's the worst of all worlds," Bobo said. "It will be incumbent on the EU government to make clear to the public why this is an important technology to them."

'Technology Doesn't Stand Still'

Only time will tell who ultimately wins in the court of public opinion as it relates to agricultural biotechnology. But, one thing is for certain: thanks to the outreach efforts of many in the agriculture and biotech communities, there is more of

a level playing field to counter false and misleading information.

This point was illustrated recently when Chipotle, a fast-food restaurant with a history of attacking agriculture, made the announcement it was going GMO-free and questioned the safety of biotech crops in the process.

A collective smack down ensued from what would have been an unlikely place years ago: newsrooms. Editorial boards from major newspapers across the country filled their opinion pages with criticism for using fear mongering as a marketing scheme. *The Washington Post* called it a "gimmick" that's "hard to swallow." *Bloomberg* claimed, "Chipotle banned credibility."

Those who work for the advancement of biotechnology are optimistic the momentum will continue and sound science and common sense will prevail in the end, but it will still take more work to overcome the wary public perception of GMOs and much is at stake in the process. We will need to produce at least 50 percent more food by 2050 to accommodate a growing world population, using less water, less land and fewer inputs.

"Technology doesn't stand still," Lynas said. "I'd like to see this technology liberated from opposition so it can be free to do some real good in the world."

If science and reason can win over this most unlikely supporter, who just decades ago was vandalizing biotech crops and is now one of its loudest advocates—there's hope for the future.

It's a powerful reminder that change, really is, the only constant. ■

"I'd like to see this technology liberated from opposition so it can be free to do some real good in the world." – Mark Lynas



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Soy Checkoff News from the United Soybean Board

Biotechnology Gains Acceptance Beyond U.S. Borders

With Chinese customers buying more than half of U.S. soy exports, they must not have concerns about biotechnology, right?

Actually, the opposite is true. Many Chinese consumers, especially moms, have misconceptions about the safety and environmental impacts of genetically modified (GMO) foods. These misconceptions are the target of newly expanded checkoff efforts that are a natural extension of years of similar work in the United States.

"Moms across the globe worry about the health and welfare of their families, and Chinese moms are no exception," said Nancy Kavazanjian, soy checkoff director from Wisconsin who also leads the checkoff's communication efforts.

Recently, the U.S. Soybean Export Council invited four women soybean farmers from the United States to Beijing to participate in town-hall meetings with professional Chinese women to specifically address



The Soy Checkoff is working with Chinese consumers, especially moms, who have misconceptions about the safety and environmental impacts of genetically modified (GMO) foods.

questions about genetically modified organisms (GMOs). Sara Ross from Minden, Iowa; Kristin Reese from Baltimore, Ohio; and LaVell Winsor from Topeka, Kansas, joined Kavazanjian to talk with the Chinese women about the safety of GMO crops grown on their own farms.

The Chinese women asked many questions about food safety and food security, including:

- Does the United States send its GMO crops for export and save non-GMO crops for itself?
- Is the seed from GMO crops sterile?
- What are the general benefits of biotechnology?

"It was easy to see that, just like us, the Chinese women want to raise strong, healthy, happy families and are as concerned as we are about protecting our planet, sustaining our neighborhoods and leaving the world a better place," said Kavazanjian, who also serves as chairwoman of the U.S. Farmers and Ranchers Alliance. "We shared a connection with them, and we're looking forward to future conversations with moms overseas." □



For Insect Management, Researcher Says There's No Substitute for Scouting

While insects affect soybeans in certain parts of the country more than others, all farmers must manage insect pressures to some extent. According to Mississippi Extension entomologist Angus Catchot, Ph.D., good insect management starts with scouting.

"There's no substitute for scouting a field," he said. "Physically walking fields is the best way for a farmer to be able to minimize unneeded applications and save money with less impact on the environment. A good insect-pest-management-based approach, when you combine cultural methods, such as planting date, with chemical control, is generally going

to provide the best results."

Catchot provided best-management practices for insect management during a recent Focus on Soybean webcast. The soy checkoff sponsors these short web-based videos to provide U.S. soybean farmers with valuable production information they can use on their farms. Check out these webcasts at www.PlantManagementNetwork.org/fos.

The best methods of insect pest management, according to Catchot, include manipulating planting dates and the use of tillage practices. Insecticide seed treatments have also been successful in the Mid-South

region, and about 85–90 percent of all of the farmers in the area use an insecticide seed treatment. On average, these treatments have resulted in yield increases of between 2 and 2.5 bushels per acre. □



Check out the soy checkoff sponsored short web-based videos on insect management and other valuable production information to use on the farm at www.PlantManagementNetwork.org/fos.

5 Resources You Need to Start the Conversation about Agriculture

You can make a difference in consumer perceptions of agriculture today! It might start at the grocery store, or at your son's or daughter's soccer game. Wherever the location, whatever you're doing, use these resources to help get the conversation going.

1. All You Need to Know about

GMOs: GMO Answers utilizes a collection of subject-matter experts from a variety of academic institutions, industry groups and partnering companies to address consumer questions about biotechnology. www.gmoanswers.com

2. Tackle the Issues: The Center for Food Integrity's Engage Resource Center helps those involved in the food system serve as voices of reason while setting the record straight! It provides a platform

for you to tackle misconceptions, misinformation or issues in the media. www.cfiengage.com

3. Find Your CommonGround:

CommonGround is a coalition of volunteer farm women who connect with moms and serve as a resource to provide moms with the facts about how U.S. farmers raise food, using both experience and third-party, credible research. www.findourcommonground.com

4. All Facts are Friendly: Best Food Facts connects users with university-based subject-matter experts. It provides farmers and others in food and ag the information they need to effectively communicate with consumers about food production. www.bestfoodfacts.org

5. Make Some Allies: The U.S.

Farmers & Ranchers Alliance is a group of organizations that work together to engage consumers with conversations about today's food. www.fooddialogues.com ■



Whether in the grocery store or on social media, farmers make a difference when they start conversations about agriculture with consumers—and there are several tools to help start the dialogue.



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SoyWORLD

WISHH Pioneers New Use of U.S. Soy Flour in West Africa

The American Soybean Association's (ASA) World Initiative for Soy in Human Health (WISHH) program introduced U.S. soy flour into one of West Africa's most widely eaten foods. Through a U.S. Agency for International Development project in Liberia, WISHH used U.S. soy flour from CHS and Cargill to bring the benefits of soy protein to a popular West African food called gari.

According to the International Institute of Tropical Agriculture, nearly every person in Africa receives an estimated 37 percent of dietary energy from this staple crop that is also found in other tropical climates. While rich in carbohydrates, gari is poor in protein. With funding from the U.S. Agency for International Development (USAID), WISHH built



ASA's WISHH showed the benefit of including defatted soy flour in "Gari," a traditional West African food made at two factories in Liberia. The U.S. Agency for International Development provided the funding for the project and the purchase and shipping of the U.S. soy flour.

two factories that each employ about 40 Liberian women who manufactured the more nutritious soy-flour gari that contains about 80 percent gari, 18.4 percent soy flour and the rest a vitamin premix.

"WISHH blazes the trail for new uses of U.S. soy," said WISHH Program Committee member and Iowa soybean grower Dean Coleman. "U.S. soy flour is an important ingredient in WISHH's work that improves health, nutrition and food security in new markets."

WISHH also trained local communities about nutrition and health. Pregnant women as well as young children received the soy-flour gari during the first thousand days of a child's life, which are critical to the immediate needs as well as long-term potential of the child. ■

An advertisement for the World Soy Foundation. It features a photograph of two young girls smiling. One girl is covering her eyes with her hands. The text 'You Can Give Them Time to just be kids' is overlaid on the image. In the bottom right corner, there is a logo for the World Soy Foundation, which includes a globe icon and the text 'world soy FOUNDATION bringing nutrition to life'.

Give the gift of protein today! Visit www.worldsoyfoundation.org

Sustainability

Student of Conservation

By Barb Baylor Anderson

National Award Winner Continues to Perfect Practices

Photo Credit: Iowan Soybean Association

Steve Berger operates under conservationist Aldo Leopold's philosophy that a farmer does not really own his land. It belongs to God, and the farmer is a steward for his generation. The 2015 national winner of the Conservation Legacy Award has been a student of conservation for 35 years.

"We approach the farm as a business, science and as an art," said the Wellman, Iowa, soybean and corn farmer. "It is challenging in today's farming environment to blend economics and esthetics, but it is very rewarding. Farmers must be shown conservation practices can work effectively and economically so more will embrace conservation voluntarily."

Berger and his wife Julie farm with Dennis and his wife Janice, as Dennis D. Berger & Son, Inc.—a fourth generation 2,200-acre family partnership. Steve is also in a farrow-finish hog partnership. They follow a management plan to use the manure, and soils are tested every four years.

Emphasis on soil conservation on the river bottoms farm began in the 1960s. Today, there are more than 14 miles of tile inlet terraces on steep sloped soils and levees. About 15 percent of the farm's acreage is prescription planted with plans to increase that to 100 percent this season. No-till became a practice in 1977, and the Bergers moved to all no-till in 1990.



Cover crops as a conservation strategy were added about 15 years ago. Now the entire farm has cover crops planted after each field is harvested. The Bergers plant cereal rye, but would like to diversify species by adding oats and exploring other cover crop "cocktail mixes" that work in Iowa. The cereal rye cover attracts pheasants, other birds and wildlife.

"Each field is annually measured by soil quality factors," Berger said. "Our soil's organic matter is slowly increasing at about 0.1 percent per year."

Nitrogen is applied at many different times. Berger uses late spring soil nitrate tests and stalk nitrate tests for monitoring. He also measures soil nitrates and phosphorus collected from tile lines through the help of the Iowa Soybean Association's OnFarm Network.

"The results are promising but improvement is needed," he said.

Steve Berger operates under the philosophy that his land belongs to God, and as a farmer he is a steward for his generation. The 2015 national winner of the Conservation Legacy Award emphasizes soil conservation and is in a farrow-finish hog program, in addition to implementing all no-till in 1990 and adding cover crops 15 years ago.

"When we measure and track water quality we get motivated to find methods to manage manure better and differently."

Berger also is motivated by better crop yields, and tracks change through data collection.

"When we can improve soil biology, yield increases follow," he said. "We are exploring living mulches and planting crops into a living cover on an experimental basis, too."

Berger enjoys sharing conservation tips with others. "I visit with other farmers by phone and email as I can," he said. "I want to help them improve crop yields and soil quality." ■

SoyForward

Call to Action for Farmers: Will Scare Tactics Scuttle the Modern Agricultural Revolution?

By **Jon Entine**

It's become a mark of foodie sophistication to bemoan supermarket bread while yearning for brick ovens; seek heirloom vegetables over genetically modified (GM) corn free of mycotoxins; or ridicule scientists who develop high-yielding crops with genes tweaked to use less chemicals. In this eco-romantic model, GM foods are seen as "violations of nature."

What is the trajectory of the global anti-technology food movement?

The encouraging news is a victory for science was achieved on GMO (Genetically Modified Organisms) food safety. While two years ago, the global media was flooded with pictures of cancer-twisted rats, allegedly victimized by "dangerous" GMOs, the consensus today is GMO foods are perfectly safe.

In the United States, every major media outlet, most liberal leaning, including New York Times, Washington Post and USA Today have editorially endorsed the safety of GMOs, rejecting mandatory labeling as scientifically scare-based.

The media trend was underscored by a poll of America's top scientists showing 88 percent agreed that GMOs are safe.

A less pronounced but real shift of public opinion is also underway in Europe. That was underscored with the recent airing on GM Food – Cultivating Fear on BBC Panorama,

which profiled genetically modified crops that reduce chemical usage or nutritionally enhance foods. Destined mostly for the developed world, these innovations are the target of what the BBC characterized as scurrilous attacks by anti-science advocacy groups.

These are hopeful developments, but the big picture isn't all bright. Anti-GMO forces are cleverly sidestepping the growing consensus of GMO safety, coalescing around a new fear-based narrative: biotech crops are linked to the overuse of dangerous synthetic chemicals, with glyphosate as the devil poster child.

Forget that Bt crops have all but eliminated the use of insecticides on some farms and herbicide tolerant crops have led to a reduction in the toxicity of chemicals sprayed per acre. This emerging hysteria isn't tied to science but relies on frightening parents about our "contaminated" food supply.

Activists attempt to leverage concerns over a World Health Organization (WHO) reclassification of glyphosate as a "probable carcinogen" for workers exposed to the chemical into a worldwide anti-GMO panic. The report concluded there's no evidence of harm to consumers, and oversight organizations have reaffirmed this low toxicity herbicide is not carcinogenic to consumers—but that's not how it's played in the

online fear chamber.

Non-governmental organizations (NGOs) claim the "global fallout" from the WHO report could put the "nail in the coffin" for one of the most high profile chemicals linked in the public's mind to GMOs. Numerous countries issued partial bans or warnings, including El Salvador, Columbia, Bermuda and Sri Lanka, and France announced a ban on counter sales of glyphosate.

What does this all mean to the modern farmer? Don't take successes in the fields—improved yields, lower inputs and higher profits—as assurance you've won the hearts and minds of a fickle public under propaganda assault by science-hostile NGOs. This is a political battle. For modern agriculture to prevail, you must win the hearts of the people not just their minds. ▣

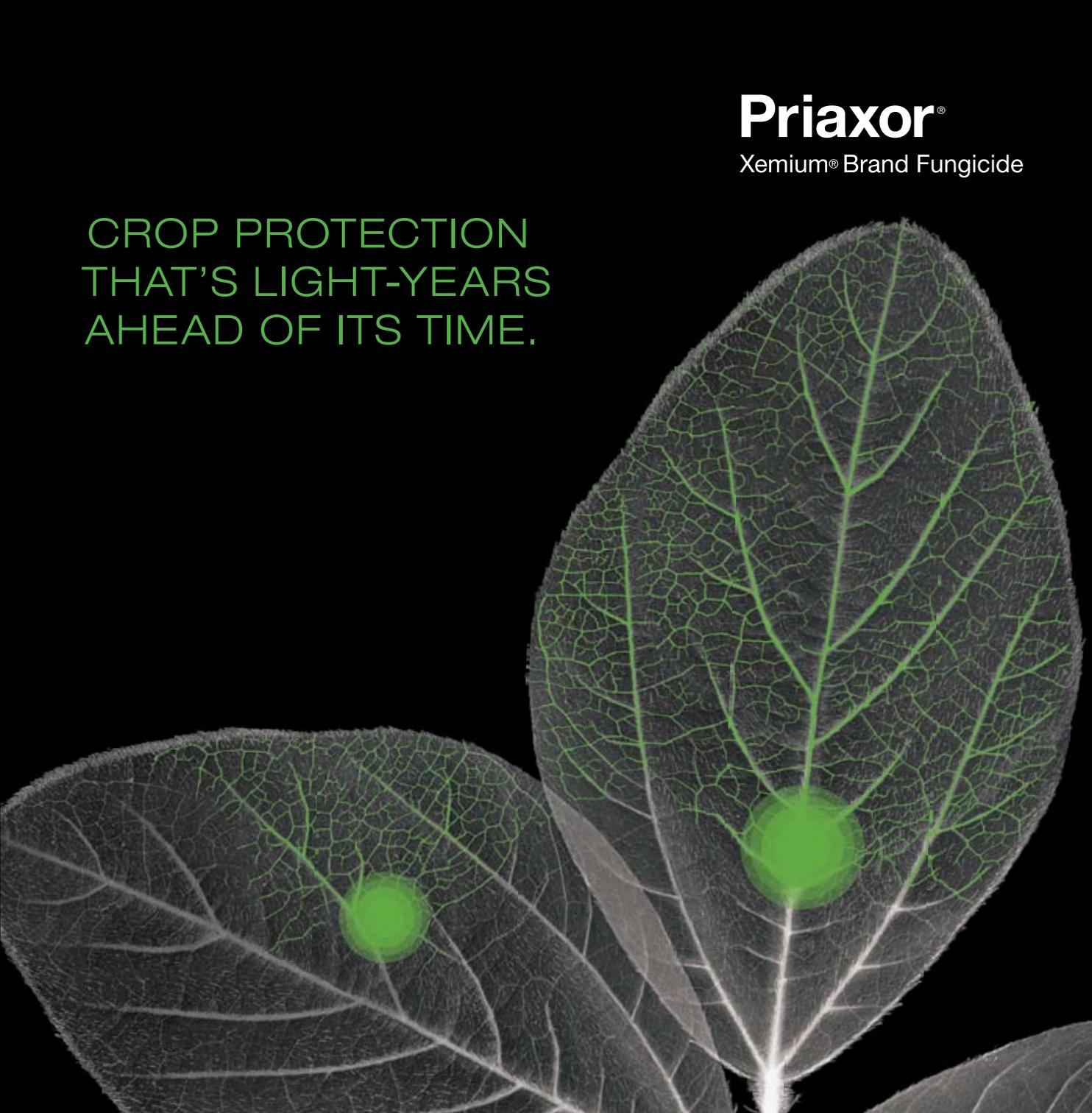


Jon Entine, director of the Genetic Literacy Project, is Senior Fellow at the World Food Center, University of California-Davis.

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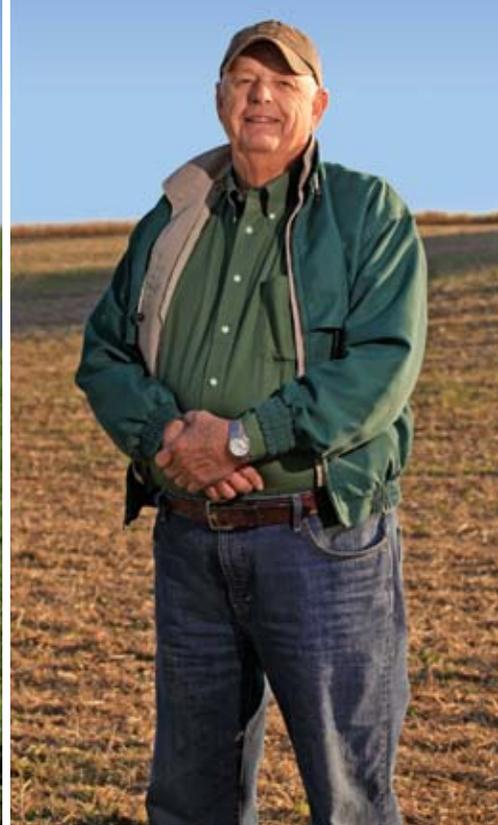
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