

AMERICAN soybean

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People. Policy. Profitability.

A PUBLICATION OF THE AMERICAN SOYBEAN ASSOCIATION



SOY HORIZONS
Minnesota Farmer Has
the Right Stuff to Change
the Minds of Critics

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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.



If you believe, belong.



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SOY news

Soy Protein Increases Muscle Strength

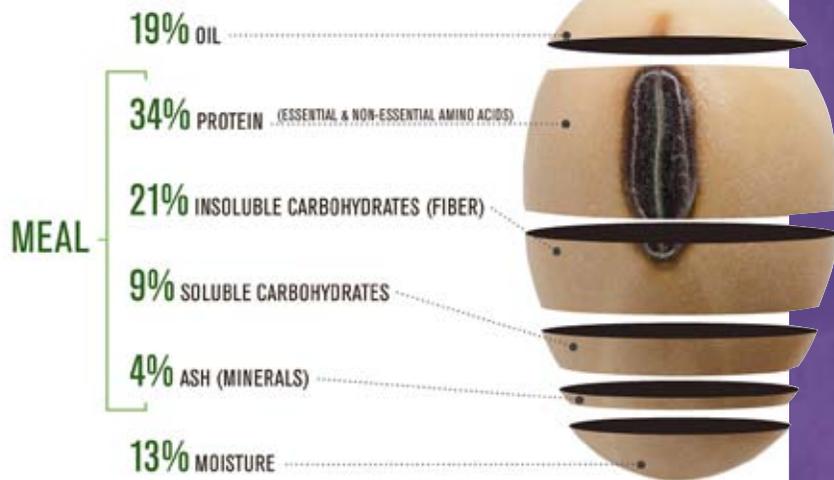
Only 21 percent of adults in the U.S. meet the recommendations for physical activity, a problem that has carried over to many parts of the world as our lives become more sedentary. Decreased physical activity can increase risk for weight gain, poor blood circulation, weakened muscles and many chronic diseases.

Researchers in Japan recently studied if the type of protein, soy or casein, had a positive impact on skeletal muscle growth and strength. They worked with 31 participants separated between those who had high activity levels and low activity levels and split into the casein protein group and the soy protein group. Another 27 bedridden participants in hospitals were divided into three dietary groups: no added protein, casein and the soy protein group. For those with the highest activity level the small amount of additional protein in their diets did not increase muscle volume or strength. In participants with low physical activity, soy protein significantly increased skeletal muscle volume, compared to casein. Soy protein significantly increased the muscle strength of the quadriceps muscle for the knee extension in bedridden participants, though both casein and soy protein increased the volume of the quadriceps muscle.

Source: Soyfoods Association of North America



AVERAGE SOYBEAN SEED COMPOSITION

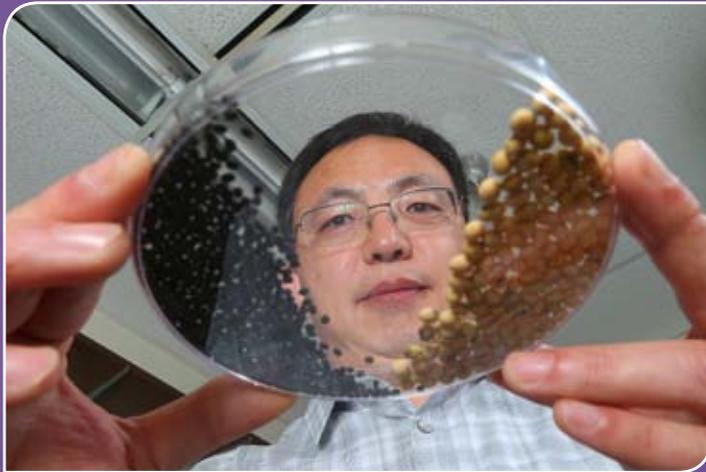


Data as of October 2015



Source: United Soybean Board

BY THE NUMBERS



Agronomist Jianxin Ma holds a dish of seeds from cultivated soybeans (right) and from their wild, hard-coated progenitors (left). Photo Credit: Purdue Agricultural Communication/Tom Campbell

Gene Identified that Controls Soybean Seed Permeability, Calcium Content

Purdue University researchers have pinpointed the gene that controls whether soybean seed coats are hard or permeable, a finding that could be used to develop better varieties for southern and tropical regions, enrich the crop's genetic diversity and boost the nutritional value of soybeans.

Jianxin Ma, associate professor of agronomy, and fellow researchers found that a mutation in the gene *GmHs1-1* causes the tough seed coats of wild soybeans to become permeable. The gene could be modified to produce improved varieties for growing regions in which seed permeability can be a handicap, Ma said. *GmHs1-1* is also associated with the calcium content of soybeans, offering a genetic target for enhancing the nutrition of soy food products.

Understanding the mechanism that determines seed permeability could also give researchers better access to the largely untapped genetic diversity of wild soybeans to enrich cultivated varieties, in which the lack of genetic richness has curbed improvements in yields.

"This is the first gene associated with hard seededness to be identified in any plant species," Ma said. "This discovery could help us quickly pinpoint genes that control this trait in many other plants."

Source: Purdue University Agriculture News

85.1 million

The number of acres of soybeans planted by U.S. growers in 2015, up 2 percent from last year and setting a new record high. (USDA/NASS)

155 percent

The increase between 2003-2014 in U.S. agricultural exports to countries where the United States has free trade agreements. (United States Department of Agriculture)

5

The number of seasons High Oleic soybeans have been planted. (United Soybean Board)

57,900

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

94 percent

The percent of the soybeans grown by farmers in 2014 that contained GMOs. (Coalition for Safe and Affordable Food.org)

88 percent

The percent of U.S. farms that are small family farms. (United States Department of Agriculture)

SoyFutures

No Fear: Heather Feuerstein Takes Leadership to a New Level

By **Darcy Maulsby**

Do you like chocolate? It's an unexpected, intriguing question Heather Feuerstein asks people who stop by the Michigan Soybean Association's booth at Breakfast on the Farm.

"Many chocolate bars contain soy lecithin, and so does Orbit® gum," said Feuerstein, whose family farms near Ionia, Mich. "When I ask people what soybeans mean to them, I surprise them with facts like this that show how soybeans touch their daily lives."

Connecting people to agriculture has become second nature for Feuerstein, who is passionate about helping consumers become better acquainted with Michigan farmers and learn more about modern-day food production. She's not afraid to field the tough questions, either, from genetically-modified organisms (GMOs) to environmental stewardship.

"I feel strongly about GMOs and the role they can play in feeding the world," said Feuerstein, a director with the Michigan Soybean Association (MSA) who works for the State of Michigan's Department of Environmental Quality (DEQ). "While the anti-GMO movement is strong, I want lawmakers to know what GMOs mean to my family and our farm."

That's why Feuerstein traveled to Washington, D.C., in September 2015 to speak with federal lawmakers about GMOs. She was part of a fly-in with the Coalition for Safe Affordable Food, which includes farmers,



food manufacturers and other agri-business leaders who support voluntary, uniform, science-based standards for GMO food labeling.

"Farmers aren't trying to hide anything," said Feuerstein, who spoke with Michigan Sens. Debbie Stabenow and Gary Peters. "I never thought in a million years I'd be sitting across from Sen. Stabenow sharing a farmer's perspective on GMOs, but I'm glad I took this opportunity."

None of this surprises Dan Wyant, who heads Michigan's DEQ. "Heather is fearless," said Wyant, the former director of the Michigan Department of Agriculture. "She's proactive, a natural leader and is a tremendous ambassador for agriculture."

Heather Feuerstein (*right*) may not plant or harvest the crops on the family farm she operates with her husband Greg (*left*), but she is actively advocating for agriculture and taking on leadership roles to share her passion of helping consumers become better acquainted with farmers and learn more about modern-day food production.

This girl is on fire

Feuerstein credits her husband, Greg, with inspiring her passion for agriculture. "Greg is my high school sweetheart, and he's the hardest worker I know," said Feuerstein, who grew up in Belding, Mich. "He motivates me to tell people about ag."

After marrying Greg in 2009 and experiencing the day-to-day joys and challenges of farm life, Feuerstein started sharing her stories with friends and family.

"I was shocked by how little people know about farmers," said Feuerstein, whose family raises soybeans, corn and wheat, in addition to running a farrow-to-finish swine operation. "Since Greg is so busy with work, I wanted to be his voice and help spread the word about modern agriculture."

A Farm Bureau meeting opened the first door for Feuerstein. When she heard about Michigan's Breakfast on the Farm program, which attracts 1,500 to 3,000 people to each event, she wanted to get involved. After volunteering to help promote Michigan soybeans at these breakfasts, Feuerstein looked for additional ways to speak up for agriculture. She found the right fit through the American Soybean Association (ASA) and DuPont Young Leader program.

"I don't plant or harvest the crops on our farm, but I wanted to find ways to promote agriculture," said Feuerstein, whose husband's family owns and operates a Centennial Farm between Grand Rapids and Lansing. "The Young Leader program opened my eyes to all the possibilities."

After completing the ASA-DuPont Young Leader program in 2011 with her husband, Feuerstein got involved in the ASA's Leadership at Its Best program, sponsored by Syngenta. This elite program recognizes emerging farmer-leaders and provides them with extensive training to further develop their leadership skills and learn more about communication styles, strategic planning, forecasting, media training and business etiquette. A trip to Washington, D.C. with the 2013 Leadership at Its Best class motivated

Feuerstein to become more involved in the soybean industry at the state level.

"I learned how I can communicate effectively with lawmakers and help influence policy," said Feuerstein, who works in the Michigan DEQ's legislative office. "I knew I wanted to take my leadership training and put it to work right away."

In December 2014, Feuerstein was elected to the MSA board, where she serves on the Public Affairs/Policy Committee. "A lot of dedicated people serve on this board, and I'm looking forward to working with them on some key issues for soybean growers," she said.

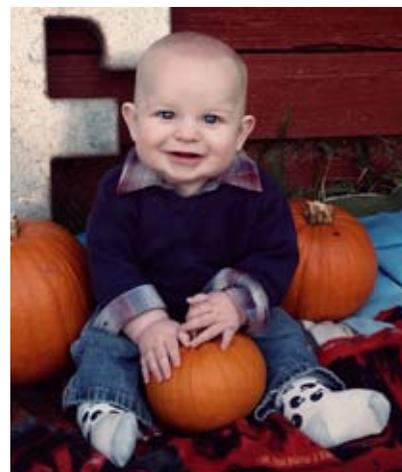
Guiding the future of farming

Conservation and environmental stewardship are top priorities for the Feuersteins, who recently purchased their first farm. The young couple uses many eco-friendly farming practices, including no-till and cover crops. "Farmers are the original conservationists," said Feuerstein, who noted that she and her husband are the fourth generation of his family to farm.

When her husband first tried seed-ing cover crops on 80 acres a few years ago, this became the talk of the neighborhood. "People had a lot of questions about what we were growing," Feuerstein said. "We learned a lot from those experiments and now seed rye and oats for cover crops."

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.

An emphasis on continuous improvement also defines Feuerstein in her role at the DEQ's legislative office, where she serves as senior executive management assistant to Deputy Director Maggie Pallone. "I like learning more about how to get things done through the legislative process," Feuerstein said.



Heather and Greg Feuerstein hope their son, Oliver, born in March 2015, will become the fifth generation to run their family farm.

Whether she's focusing on ag policy or ag promotion, keeping the big picture in mind is important to Feuerstein, who became a new mother in March 2015. She and her husband hope their son, Oliver, will become the fifth generation of their family to farm.

"That's why I want to help more people understand how agriculture affects their everyday lives and encourage more support for farmers," Feuerstein said. "The sky's the limit for agriculture, and I'm excited about the great progress we'll see in the years ahead." ▣

Ag Ambassador Lets the Facts Speak for Themselves

By Susan Winsor



Most farmers wouldn't voluntarily take on a group of agitated GMO protestors. But explaining the facts is part of farming in today's world for Mike Petefish.

He sees beyond the furrow, to policy issues and agriculture's vulnerable image. The Minnesota farmer happened upon a rowdy anti-GMO group with signs and megaphones as he left a hotel hosting a corn industry convention. He walked toward the picketers and asked, "Could we talk about this?" Taken aback, they gathered around and watched.

This comes naturally to Petefish, given his personality and education. The fifth-generation corn/soybean farmer draws on his undergraduate degree in plant genetics and a master's degree in agronomy. But he's also a patient listener and a graduate of the American Soybean Association's DuPont Young Leader training program.

"I listen to the details of how protestors frame their questions to reveal their true concerns," he said. "One person cares about feeding the world, while another cares about her family.

Petefish said after listening to them awhile, he took the opportunity to explain what he does on his farm and how it works, using the facts and the science behind GMOs to illustrate how the technology enables him to be safer and more sustainable, both environmentally and economically.

"If I spray a cornfield with pesticide, I indiscriminately kill many insect species, including beneficial insects. If I spray genetically altered corn with the Bt trait, I can target just the problematic insect species

Photo credit: Steve Woit

(the European corn borer, and/or corn rootworm larvae); I explain that one GMO is corn with *Bacillus thuringiensis* (Bt). Bt's a naturally occurring bacteria commonly found in soils, leaves, water and in the gut of caterpillars, some moths and butterflies," he said.

Protesters and anti-GMO activists are often surprised to hear that organic growers use Bt sprays as an approved pest control input. Or that Bt has been used to control insect pests since the 1920s.

"Anti-GMO activists are also surprised to learn that other, related Bt bacteria can target specific flies and mosquitoes, beetles, and wasp relatives that carry human disease," Petefish added, "Bt's specificity makes these biopesticides environmentally friendly, with no effect on humans, wildlife, pollinators, and most other beneficial insects."

Minnesota's tougher buffers

Petefish will need that environmental focus in the years to come, as the "Land of 10,000 Lakes" will soon require Minnesota landowners to have 50-ft. buffers along all water bodies. The deadline is November 2017, except for along ditches (by November 2018).

Petefish, who farms in the southern part of the state, isn't sure exactly what this means for him just yet. He and his father Richard rent 70 percent of their farm ground, and the law stipulates landowners as the responsible party for implementing the newly mandated buffers, says Doug Thomas, Minnesota Board of Water and Soil Resources (BWSR) assistant director for regional operations. "A landowner can

designate an agent but is still ultimately responsible."

One issue is "what's defined as 'waters' requiring buffers," Petefish says. "Will that include a gully that doesn't contain water most of the year?"

Another of Petefish's concerns is "that the water is public, but the land surrounding it is private," he says. He already has 16.5-ft. buffers on the 4,300 acres of corn and soybeans they farm. Expanding that buffer to meet the new law "amounts to removing over 4 acres from production for every mile of buffer you add," he says. "With Dodge County farmland valued at \$8,000 to \$10,000 per acre, that is potentially \$40,000 worth of land removed from production by one mile of buffer.

"It feels like the government is taking our land and making us pay for what they want to do with it. If this is in the best interest of the public, why don't they invoke similar practices when they are building roads, pipelines or transmission towers? They should pay us for the land some fair market value and then they should be the ones that install and maintain the buffers. Can you imagine the state taking someone's land for a road and then making them build and maintain the road when the public uses it?"

"The state claims that you still own the land the road is on, and therefore must pay property taxes on it. It's absurd," Petefish adds. "I may as well give the land to the state. At least then I don't have to pay to install and maintain the buffers, and I won't be taxed for the property. It's not that farmers are against clean water or natural habitat, it's the way in which it's being implemented. I always say

(continued on page 10)

Crop biotech's conservation benefits

Advanced genetic techniques enable farmers to grow more food on fewer acres, using fewer inputs. Put another way, these hybrids and varieties save 11 percent of the U.S.' arable land from being used for crop production.

GMO protestors don't often connect the dots between more productive hybrids and less resource use.

Without biotechnology, farmers would have needed nearly the acreage of Iowa and Wisconsin (44.7 million more acres) in 2014 to produce the same amount of crops. That's the same as 11 percent of the U.S.' arable land, or 29 percent of Brazil's arable land.

Crop biotechnology reduced pesticide spraying (1996-2013) by 8.6 percent. This decreased herbicide and insecticide's environmental impact by 19 percent (as measured by Cornell University's Environmental Impact Quotient indicator).

Biotechnology has also significantly reduced agricultural greenhouse-gas emissions. Genetically engineered corn and soybeans reduce fuel use and increase soil-carbon storage. In 2013, this corresponded to the carbon dioxide reduction of removing 12.4 million cars from the road for one year (or removing 28 billion kg of carbon dioxide from the atmosphere).

—Annual PG Economics report, "GM crops: global socio-economic and environmental impacts 1996-2013"

'put your money where your mouth is.' If this is important to Minnesotans, then everyone should be willing to pay a little bit for it. It makes no sense to just stick the burden on the backs of a few."

There are too many unknown details at this point to answer the question of whether this represents the constitutionally prohibited taking of private land for a public purpose, says Minnesota Farm Bureau Public Policy Director Doug Busselman. But "indignation" is the most typical farmer response he's seen at the 40 Farm Bureau meetings to explain the buffer requirement.

"We're waiting to see what materializes on the [water body] maps released this summer and whether they match what local folks have," Busselman says.

Taking land out of production to regulate water quality is one extreme of the regulatory spectrum. At the other end is Minnesota's voluntary Agricultural Water Quality Certification Program. It certifies farmers and ag landowners that implement conservation practices and approved farm management practices to become certified in exchange for "regulatory certainty" for 10 years.

Petefish lives in a state that takes water quality very seriously: Minnesota raises \$95 million annually from a 25-year constitutional amendment, says Minnesota Clean Water Act Manager Barb Peichel. It levies a 0.375 percent sales tax to support water quality, habitat, parks and cultural heritage. It passed by a healthy 56 percent margin nine years ago. ■



Minnesota will soon require landowners to have 50-ft. buffers along all water bodies. Mike Petefish, who farms in the southern part of the state, isn't sure exactly what this means for him just yet. He says one issue is "what's defined as 'waters' requiring buffers?" Photo credit: Steve Witt

What is known so far about the buffers?

Minnesota has more surface water than any of the 48 "lower" states. It recently passed a buffer requirement that appears to be the first of its kind in the nation. A similar law in Wisconsin requires a five-foot setback and "sod or self-sustaining vegetative cover providing a minimum of 70 percent coverage."

Farm landowners of property adjacent to a water body (identified and mapped on a Department of Natural Resources (DNR) buffer protection map) must maintain:

- 50-foot average, 30-foot minimum buffer on public waters
- A 16.5-foot minimum buffer along ditches, whose definition has not yet been finalized. "This definition will likely include ditches which aren't "public ditches," says Minnesota Farm Bureau's Busselman. "It is one of the major issues involved in the discussion between legislators and state agencies," he says.
- Public water buffers must be in place by Nov. 1, 2017. Public drainage ditch buffers must be in place by Nov. 1, 2018.
- A buffer is defined as...perennial vegetation, excluding invasive plants and noxious weeds, adjacent to all state water bodies that protects from runoff pollution; stabilizes soils, shores, and banks.
- Haying, grazing and mowing are permissible on buffers, as long as their perennial nature is preserved.
- Cultivated farmland owners can replace a buffer with an "alternative water-quality practice providing equivalent benefit" (one listed in the Natural Resources Conservation Service (NRCS) Conservation Manual).

The state DNR will map public waters and ditches requiring permanent buffers by this July. The maps will help landowners identify whether, where and how they need to create a buffer, the DNR says.

"Landowners will be responsible for implementing the buffer law, but local governments will have enforcement authority," says Minnesota Farm Bureau's Busselman. "Local Soil and Water Conservation Districts (SWCDs) provide technical support and compliance reporting," he says. "They will also identify additional other waters not covered under the definition of 'public waters' or ditch definition."

"The new law provides flexibility and financial support for landowners to install and maintain buffers," says the Minnesota DNR website. But Busselman's not aware of any cost-share buffer language. "Retiring land (as in CRP) is the only cost share I'm aware of," he says.

SoyTown Hall

We asked farmers: “What is the most dramatic step you’ve taken to fight weed resistance on your farm?” Here’s what they said:

Donn E. Branton, Le Roy, N.Y.

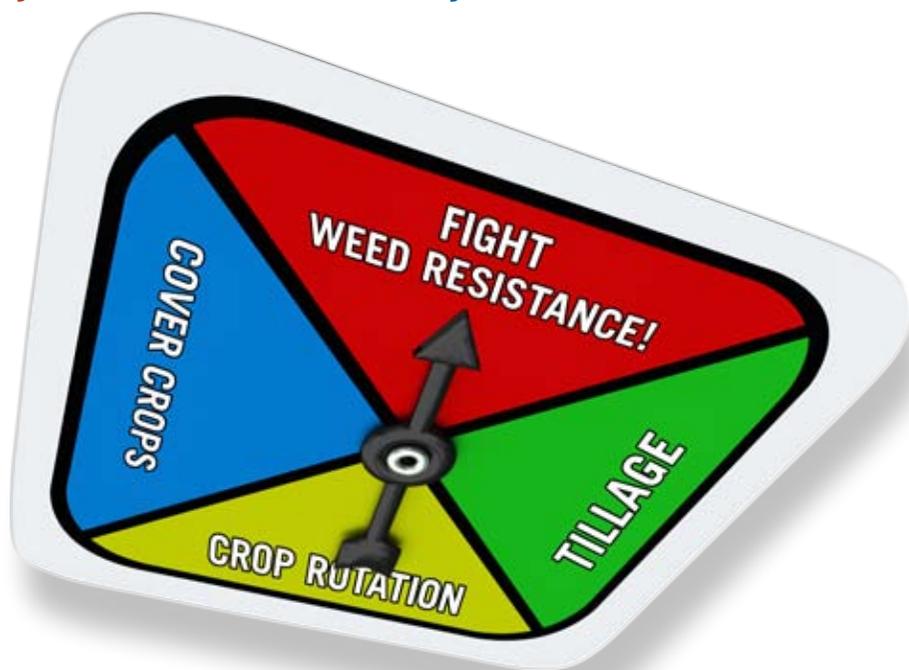
“We now use multi modes of action in our weed control program along with more focus on cover crop establishment and crop rotation. We also inform neighbors when we see a resistant weed issue within their crop operation as we do not want their weed seeds moving from their acreage to ours!”

Jenny Mennenga, McLean County, Ill.

“The most dramatic thing I’ve done to fight weed resistance is completely change the way I grow soybeans. On our farm we have glyphosate resistance to both waterhemp and marestail. On the most afflicted fields, we’ve had to change from no-till to conventional tillage to break up the growth cycle of marestail. This also provides a warmer seedbed for earlier planting, faster early season growth and canopy close to suppress waterhemp. In addition, we’ve narrowed row spacing from 30” to 15,” again for quicker canopy. These practices on top of layering residual herbicide programs have helped but not completely solved our weed resistance issues.”

Charles Atkinson, Great Bend, Kan.

“Intensifying crop rotation and bringing in cover crops, like legumes and red clover, into the rotation.”



Brooks Hurst, Tarkio, Mo.

“We resorted to a little bit of tillage in the worst spots. Weed resistance is a problem—it’s just not a huge one for us just yet.”

Eric Maupin, Dyersburg, Tenn.

“We’ve had to take a disc and work the soybeans back up and then replant them all again. It started raining before we could spray the residual and by the time I got back in there, the pigweeds were too tall to kill. These weeds grow up to two inches a day and once they’re four inches, nothing is guaranteed to get rid of them.”

Ted Glaub, Jonesboro, Ark.

“The University of Arkansas has a zero tolerance program because pigweed is out of control. We’ve had turn rows moved and ditches cleaned because we’re dragging weed seeds in there. We’ve also done a crop rotation of rice, corn and grain sorghum, and are looking at residuals. We haven’t been successful with cover crops but are looking at how to work those in. We’re looking at more rotations to break the growth pattern.”

E.L. Reed, Chillicothe, Mo.

“We planted cover crops. We use wheat and radishes. We also changed the brand of soybean we were using.”

ASA in Action

Delaware's Wilkins Assumes Presidency of ASA

Richard Wilkins, a farmer from Greenwood, Del., is the new president of the American Soybean Association (ASA) following his confirmation by the ASA Board of Directors at their annual winter meeting in St. Louis in December. Outgoing president Wade Cowan from Brownfield, Texas, moved to the position of chairman of the ASA board and Ron Moore of Roseville, Ill., was elected to serve as vice president.

"I'm honored to serve as president of this wonderful team of farmers, and I'm excited to move forward with what is a very full agenda for the year," Wilkins said.

ASA CEO Steve Censky congratulated Wilkins and said he is looking forward to the next year.

"Richard is a smart leader who has a great purchase on how our industry can engage with our partners in other walks of agriculture to make sure we're all successful," Censky said.

With his election as vice president, Moore is now in line to be the association's president in 2017.

"These are an extremely important next few years for our industry," Moore said. "The soybean industry and agriculture as a whole will need continuity and strength in its leadership, and I'm excited to continue that here at ASA."

Also elected to form ASA's nine-member governing committee were Secretary John Heisdorffer

from Keota, Iowa; and At-Large Governing Committee Members Bret Davis of Delaware, Ohio, Kevin Hoyer of West Salem, Wis., Kevin Scott of Valley Springs, S.D. and Sam Butler of New Hope, Ala. Davie Stephens of Wingo, Ky., was elected to serve a second term as treasurer.

Rotating off the ASA governing committee is outgoing chairman Ray Gaesser of Corning, Iowa, who will continue on the ASA Board for the remainder of his term as director.

"Helping to guide this organization has been a real joy for me, and I am proud of how far we've come," said Gaesser, during whose presidency ASA successfully advocated the passage of the 2014 Farm Bill.

Wilkins said Gaesser deserves a great deal of credit for the strong advocacy ASA has provided for soybean farmers over the last three years.

ASA's meeting also served as a venue to celebrate the retirements of former president Steve Wellman of Nebraska, former treasurer Bob Henry of Kansas and directors Dennis Bogaards, of Iowa, John Rivers, of South Carolina, and Walter Godwin, of Georgia.

Assuming positions on the ASA Board as new members are Charles Atkinson, of Kansas, Cliff Barron, of South Carolina, Ken Boswell, of Nebraska, and Dean Coleman, of Iowa. ■

2016 Governing Committee



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Richard Wilkins
Greenwood, Del.



Chairman
Wade Cowan
Brownfield, Texas



Vice President
Ron Moore
Roseville, Ill.



Secretary
John Heisdorffer
Keota, Iowa



Treasurer
Davie Stephens
Wingo, Ky



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Delaware, Ohio



At-Large Member
Kevin Hoyer
West Salem, Wis.



At-Large Member
Kevin Scott
Valley Springs, S.D.



At-Large Member
Sam Butler
New Hope, Ala.

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Jerry Bambauer
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Cliff Barron
Johnsonville, S.C.



Ken Boswell
Shickley, Neb.



Dean Coleman
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Kendall Culp
Rensselaer, Ind.



Mike Cunningham
Bismarck, Ill.



Cory Devillier
Lettsworth, La.



Todd DuMond
Union Springs, N.Y.



Ed Erickson, Jr.
Milnor, N.D.



Wayne Fredericks
Osage, Iowa



Ray Gaesser
Corning, Iowa



Ted Glaub
Jonesboro, Ark.



George Goblish
Vesta, Minn.



Bill Gordon
Worthington, Minn.



Bruce Hall
LaCrosse, Va.



Gerry Hayden
Calhoun, Ky.



Brooks Hurst
Tarkio, Mo.



Mark Huston
Thamesville, Ont.



Willard Jack
Belzoni, Miss.



Mark Jackson
Rose Hill, Iowa



Eric Maupin
Dyersburg, Tenn.



Jim Miller
Belden, Neb.



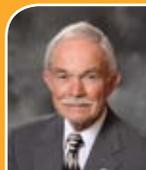
Lance Peterson
Underwood, Minn.



Monte Peterson
Valley City, N.D.



Dave Poppens
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E.L. Reed
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Dan Roe
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Joe Steinkamp
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Matt Stutzman
Jasper, Mich.



Lawrence Sukalski
Fairmont, Minn.



Wyatt Whitford
Ernul, N.C.



Bill Wykes
Yorkville, Ill.

Not pictured: **Steve Yoder, Jr.**, Altha, Fla.

Soy Growers Lead Coalition Push for TPP

The American Soybean Association (ASA) led a coalition to discuss the implications of the Trans-Pacific Partnership (TPP) and what it means for American farmers at a press event during the National Association of Farm Broadcasting Trade Talk in November.

ASA and representatives from five other national farm groups joined U.S. Department of Agriculture Foreign Agricultural Service (USDA/FAS) Administrator Phil Karsting in Kansas City. The event featured farmer leaders from ASA, National Pork Producers Council (NPPC), National Corn Growers Association (NCGA), National Cattlemen's Beef Association (NCBA), U.S. Grains Council (USGC) and National Association of Wheat Growers (NAWG), exploring the importance of TPP for their individual industry sectors. ▣



ASA then-President Wade Cowan (standing center) addresses media at the TPP press event at November's NAFB Trade Talk in Kansas City. Photo Courtesy of Melissa Kessler



2015 ASA President Wade Cowan testifies before the House Ag Committee on Sept. 30 about the long-standing partnership between U.S. farmers and the Food for Peace program and ASA's continued commitment to providing a safe and abundant food supply. Photo courtesy of the House Ag Committee



Indian soy farmers give ASA Vice President Bret Davis (right) and United Soybean Board (USB) Director C.D. Simmons (left) a tour of their farms. During their visit in India, Davis and Simmons shared photos and videos of their own farms and also provided Indian farmers with information about technology and farming systems that they use at home. Photo courtesy of USSEC

ASA Announces 2016 Class of ASA DuPont Young Leaders

The 32nd class of ASA DuPont Young Leaders kicked off their leadership training at DuPont Pioneer headquarters in Johnston, Iowa in December. This was just the first phase of the training designed to identify up-and-coming leaders in the soybean industry and provide them with tools to enhance their skills. The **2016 ASA DuPont Young Leaders** are: Brady Peek, Ala.; Derek Holden and Amanda Crangle, Ark.; Jeff and Dianne Barlow, Canada; Aaron and Melanie Thompson, Del.; Brian Ogletree, Ga.; Alan Hill, Ill.; John Wildermuth, Ind.; Ethon Smith, Iowa; Matthew Atkinson and Mary Ann Ross, Kan.; Ben and Katie Furnish, Ky.; Adam and Lindsey Hendricks, Ky.; Vincent Cannatella, La.; Nik Morris, La.; Mike Opificius, Mich.; Rodd and Jamie Beyer, Minn.; Taylor and Rebecca Tesch, Minn.; Paul Muirhead, Miss.; Andrew and Jennifer Lance, Mo.; John and Stephanie Thompson, Mo.; Wade Walters, Neb.; Brett Medlin, N.C.; Greg and Monica Gussiaas, N.D.; Luke Ryan, Ohio; Patrick Burch and Grace Walter, S.C.; Joshua and Kara Kayser, S.D.; Don Holbert, Tenn.; Brett Wightman, Va.; John Mills, Va.; and Rochelle and Evan Schnadt, Wis.



Fierce XLT Field Trial Demonstrates Effective Weed Control



Photo Credit: Photos courtesy of Valent U.S.A. Corporation

This past growing season, 58 ASA members in Iowa, Illinois, Indiana, Missouri and Ohio participated in a field trial to evaluate the effectiveness of Fierce XLT Herbicide applied pre-emergence to soybeans. The field trial was sponsored by Valent U.S.A. Corporation, a key industry partner for the association. Despite challenging weather conditions in some parts of the country, 90 percent of growers who participated in the field trial rated their overall satisfaction with Fierce XLT as good or excellent due to the effective weed control it provided.

ASA helped facilitate the trial by promoting enrollment in the program to members. The trial provided farmers with the opportunity to observe and measure how application of the herbicide could help control resistant weeds on their farms. Each farmer treated 20 acres with Fierce XLT for comparison to their standard pre-emergent herbicide program.

“Valent sincerely appreciates the detailed feedback provided by ASA members who participated in the Fierce XLT Field Trial program,” said Jeff Smith, Valent Industry Affairs Manager. “The comments provided will be used to aid in future recommendations to customers and to help identify additional product needs for improved weed control and higher soybean yields.”

Of the farmers who completed a field trial evaluation, 93 percent rated Fierce XLT as equal to or better than their standard herbicide program. Ninety-percent rated the length of residual control provided by Fierce XLT as good or excellent.

“This field trial, and others ASA has been involved with in the past, provide an opportunity for the association’s members to try new products on their operations and find different ways to improve their production,” said ASA Governing Committee Member Bret Davis, a farmer from Delaware, Ohio and field trial participant. “Valent has been a strong industry partner for ASA, and their support also helps increase the strength of our advocacy efforts on key issues that impact all U.S. soybean farmers.”

While there were no significant yield differences between the Fierce XLT acres and the standard program, many growers did observe differences in weed control. Overall, there were 29 percent fewer observations of escaped weeds in the Fierce XLT treated fields compared to the grower standard, including ragweed, waterhemp/pigweed, marehail and annual grasses.

For more information on the field trial, visit www.soygrowers.com/learn. More information on Fierce XLT is available at www.valent.com/agriculture/products/fiercexlt/.

Industry Perspective

It Takes a Hive

| By **Candace Krebs**



Can collaborative cross-pollination improve pollinator health and ward off future regulation?

Jerry Hayes is deeply involved in pollinator health issues. He was part of an early tide of hobby enthusiasts that led to a surge in backyard beekeeping, had a front row seat when the term “colony collapse disorder” was first coined at the Florida Department of Agriculture in 2006 and played a key role in organizing the first ever Honey Bee Health Summit, an undertaking that resulted in a diverse coalition that now includes all “big six” crop protection companies as well as beekeepers, commodity groups, non-governmental organizations and conservationists.

The Honey Bee Health Coalition has in turn become a leading informational resource for President Obama’s Interagency Pollinator Health Task Force, which was introduced in June of 2014.

Hayes’ official title is Honey Bee Health Lead for Monsanto. But his perspective and influence extends far beyond that.

“I didn’t want this to be just the Jerry show,” he says, noting that one of the first things he did after joining Monsanto three years ago was to form a honeybee advisory council.

“This isn’t Monsanto acting unilaterally,” he asserts. “We wanted to partner with the industry and with other people who are well informed. Nobody does anything good without partnerships and collaboration.”

Despite its buzz-worthy sound-bite appeal, pollinator health is an immensely complex issue. Finding solutions requires investments in education, communication and coordination. Hayes estimates that outreach to commercial beekeepers, hobbyists and the general public makes up fully three-quarters of his job.

In mid-2013, when Hayes set out to convene a wide-ranging bee health summit at Monsanto headquarters in St. Louis, there was initially reluctance on all sides. But forging personal connections and mutual understanding proved so effective it



Jerry Hayes, honey bee health lead for Monsanto.



Caydee Savinelli, pollinator and integrated pest management stewardship lead for Syngenta.

led to the formation of a sweeping coalition comprised of at least three-dozen members.

Hayes’ unusual background — he started out as a high school teacher and then sold plastics before starting on his current career path by becoming the “consummate backyard beekeeper”— helped make him the right person at the right time to forge a broad alliance. In his work, he experiences the benefits of bringing people of diverse backgrounds together everyday.

“We did a research project last year where we had beekeepers place hives in soybean fields and then measured the production,” he says. “The short story is it looks like there’s an 8 percent bump in yield from having the honeybees there.” Iowa State University is continuing that research.

"If we can get beekeepers to respect soybean growers and soybean growers to respect beekeepers that just strengthens them both and provides a model for other things we can do in the future," he says. "The worst thing we can have is one part of agriculture pointing fingers at another. That's a bad day for everybody."

And what about the public pointing fingers at production agriculture?

Hayes feels he is making progress on that front too.

After speaking on pollinator habitat loss at the prestigious Aspen Ideas Festival, he was approached by a wealthy couple so inspired they immediately called their landscaper with directions to tear up the front lawn.

Hayes admits the response was a little extreme, but it shows his point is getting through.

"In this country we have 40 million acres of pristine suburban lawns," he says. "It takes 10,000 gallons of water per lawn per year, and more than 80 million pounds of chemicals in total, to do that. We need to be a little scruffier. Think of what would happen if just one to three percent of that was converted to pollinator friendly habitat."

"The urban population has a role to play," he adds. "They are a part of agriculture, they just don't always know it."

The Buzz on Pollinator Health

Crop protection companies invest heavily in pollinator health programs.

As part of the registration process for

new products, for example, Dow AgroSciences provides regulatory agencies such as the U.S. Environmental Protection Agency (EPA) with scientific studies on pollinators to support EPA's risk assessment process.

In addition, the company actively promotes Integrated Pest Management (IPM) principles, alone and in conjunction with other industry associations, which support pollinator health.

Bayer has a 25-year history of bee care initiatives. Syngenta's Operation Pollinator program, which provides expertise and resources to farms and golf courses willing to set aside acreage for regional wildflower plantings, has been around for 12 years.

"Operation Pollinator is a perfect illustration of how agriculture and biodiversity can coexist," says Caydee Savinelli, pollinator and IPM stewardship lead for Syngenta.

Bayer and Syngenta recently teamed up with Valent USA to commission an independent study of the socio-economic benefits of neonicotinoid insecticides in North America. Their report showed that seed treatments add billions of dollars in value, increase crop yields and benefit entire communities, not just farmers.

That analysis is helping groups like Crop Life America and the American Soybean Association repudiate previous studies denying the value of treated seed while making the case for reasonable, balanced policymaking.

Last spring, a new coalition was formed to address the sharp decline in monarch butterfly populations. Former ASA Board Member Dennis Bogaards, of Pella, Iowa, represents soybean farmers on that coalition. ■



The Next Frontier: Biologics

Monsanto Honey Bee Health Lead Jerry Hayes believes the adoption of biological mite control could vastly improve honeybee health.

Somewhere around 42 percent of the chemical residues found in commercial hives are placed there intentionally by beekeepers to control parasitic mites. Three years ago, Monsanto acquired an Israeli company, Beelogs, which is exploring techniques like RNA interference (RNAi) as an alternative for controlling mites and viruses.

RNAi works by "turning off" unwanted genes. It is most commonly associated with futuristic cancer treatments aimed at shutting down or silencing rogue genes.

Monsanto and other crop protection companies are studying the use of biologics to control other agricultural pests as well, including corn worms and potato beetles.

ASA's Legislative Forecast

Legislative and Regulatory Possibilities in 2016



| By **John Gordley**
ASA/Washington
Staff

For a number of reasons, prospects for legislative and regulatory action in 2016 are relatively more predictable than in years past.

FIRST, it's a presidential election year, meaning Congress will adjourn in mid-July in advance of the nominating conventions, and then won't consider any major legislation before the November elections. Any FY-2017 appropriations bills that aren't done by July will wait for a lame duck session after the elections, and a short-term Continuing Resolution will need to be passed in September to keep the government running until then.

The shortened legislative session could also result in efforts to utilize the final appropriations bills as vehicles for policy "riders" to address legislative priorities in 2016. However, most action will be regulatory, not legislative. The first few months of 2016 will see Executive Branch agencies propose and try to finalize every regulation they care about well before the elections. These could include the national dietary guidelines, changes to pesticide use labels as part of the president's pollinator initiative and, hopefully, the Gulf of Mexico Fisheries Management Plan, to name just a few.

SECOND, the chances for a government shutdown over spending or a default on the national debt are negligible. The two-year budget deal reached in September locked in the amount Congress will spend in FY-2017, an issue that closed the government in 2013. A second deal also reached in September will allow the federal debt ceiling to increase until April 2017, when a new president and Congress will have taken office. There is talk of trying to build a two-year budget, including FY-2018, into this year's Budget Resolution while maintaining annual appropriations, which could provide some stability in the Congressional spending process.

THIRD, Congress and the Administration reached agreement on several key pieces of legislation before adjourning in December, so they won't need to be taken up again in 2016. These included a tax package which made several provisions permanent and extended others, such as bonus depreciation, for five years. The package also included a two-year extension of the biodiesel tax credit, which will now expire at the end of 2016. Given election year politics and the fact that several drivers of the perennial "tax extenders" package were renewed for five years or made permanent law, it will be more difficult to forge action on the tax credits that expire at the end of 2016. On the transportation and infrastructure front, Congress completed a five-year highway bill reauthorization in 2015, removing this issue from the 2016 agenda.

Also on the biodiesel front, while the Environmental Protection Agency (EPA) has set volume requirements for the biomass-based diesel category through 2017, they will be issuing proposals on volume requirements for the overall Advanced Biofuels category, which impacts biodiesel. The biodiesel industry and stakeholders

will also be closely monitoring trade issues, particularly the potential for larger import volumes from Argentina.

Of the issues that remain, the stalemate between Republicans and the Administration over the Waters of the United States (WOTUS) regulations promulgated by the EPA is almost certain to continue, leaving any possible resolution to the courts. Chances for a major tax reform package will be deferred to no earlier than the lame duck session, which will depend on the outcome of the elections. There will also be an attempt to restore the traditional two-year reauthorization schedule for the Water Resources Development Act (WRDA). However, any action would be small in scale and will focus on technical issues and implementation of reforms enacted in 2014.

On the trade agenda, the Administration will need to decide whether to heed Senate Majority Leader Mitch McConnell's warning to not submit the Trans-Pacific Partnership (TPP) agreement for approval by Congress until after the elections. The Transatlantic Trade and Investment Partnership (TTIP) negotiations are unlikely to be completed by this Administration, and decisions on issues important to U.S. agriculture, including the European Union's biotech approval process and RED (Renewable Energy Directive) requirements, are a long way from being resolved. While progress on further normalizing relations with Cuba are likely to be delayed until after the elections, efforts will continue to educate Members of Congress on the importance to U.S. agriculture of lifting the embargo.

While the outlook for legislation and regulatory activity in 2016 that affect agriculture may now appear to be more predictable, no one should be surprised if and when issues

that are not on the table suddenly become urgent priorities. The recent shift in public attention from income inequality to terrorism is only one example of how priorities can change, almost overnight. And with the hyper-politicized policy environment caused by the current presidential primary season and the approach of the general elections, the landscape for federal action can change many times before the end of next year. ■

ASA's Forecast for Agriculture Committees

Items on the agenda for the Agriculture Committees in 2016 include reauthorizations of school nutrition standards and the Commodity Futures Trading Commission (CFTC). There is also the unresolved and pressing issue of biotech food labeling, with the approaching implementation of Vermont's law in July and other states considering similar action. U.S. Secretary of Agriculture Tom Vilsack has announced that he will bring food companies and consumer groups together starting in January in an effort to find common ground, but the endpoint of this process is difficult to foresee. ASA will push hard for Congressional action on legislation to establish voluntary federal standards to prevent a patchwork of state labeling requirements would that raise food costs and stigmatize foods containing biotech ingredients.

The Agriculture Committees are also likely to hold more hearings on the effectiveness of the Agricultural Act of 2014 and on priorities for the next farm bill. In addition, the cotton industry is looking for either the Administration or Congress to provide relief from low prices and the limited effectiveness of the Stacked Income Protection (STAX) program in supporting producer income, a prospect that could require reopening the farm bill.



CHECKS & BALANCES:

Helping Farmers Protect Water Resources

By **Tamara Hinton**

A common refrain among those in the agriculture community is that farmers are the original conservationists and the best stewards of our natural resources. In fact, visit with farmers across the country and they will quickly recount how much their livelihoods depend on being conscientious caretakers of the land and water.

"Farmers as a whole really do care about the environment," said Jerry Baumbauer, a member of both the American Soybean Association (ASA) and Ohio Soybean Association (OSA) boards. "We are more than willing

to do what we can to improve it."

Todd Sutphin, the senior operations manager of environmental programs and services at the Iowa Soybean Association (ISA), added that he has not met a farmer who is not concerned about water quality.

Yet, increasingly their stewardship and commitment to environmental quality have been called into question and outright challenged. This has been especially true with water quality issues across several different regions of the country.

In Iowa, in particular, a lawsuit is

underway between a public utility and a few drainage districts in the northwest part of the state over the levels of nitrate found in the Raccoon River, a source for drinking water. It is a case that has captured the attention of the agricultural community on the national stage because of the possible ramifications. As the U.S. Secretary of Agriculture Tom Vilsack stated earlier this year, "The worst thing that can happen is for a federal judge to decide Iowa's water quality lawsuit."

Indeed, the case has demonstrated the easy speed at which fingers

are often pointed at farmers as the cause of water quality degradation. However, many industry sectors have an impact on water quality. Moreover, farmers are playing a significant role in the solution by implementing – many times on a voluntary basis – a number of conservation strategies to improve environmental quality.

One thing is for certain: the problems are complicated and timeless with what seems to be an ever changing benchmark or timetable for success and a perennial debate over what approach is the most effective: the carrot or the stick.

“What I’m hearing is frustration among farmers that they know what they’re doing and they know they’re doing a lot,” said Don Parrish, the senior director of regulatory relations at the American Farm Bureau Federation (AFBF). “They’re going to continue to do more, but they’re kind of scratching their heads as to what it’s going to take to achieve the next level of environmental responsibility.”

Baumbauer said he thinks the biggest challenge at this point is doing the research to find out what farmers can do that will have the biggest impact.

“There are a lot of theories, but no one has put a finger on it and said this will solve a lot of our environmental problems,” he said.

This discussion is happening all across the country, but specifically in four key regions where agricultural leaders, farm organizations, state and local governments and other stakeholders are trying to address the ongoing challenge of protecting our water resources without harming the livelihoods of farmers.

The Chesapeake Bay

The 64,000 square mile Chesapeake Bay watershed has a long and controversial history as it relates to cleanup efforts. Despite decades of both private and public efforts to improve its health, the results have been modest.

To expedite efforts, President Barack Obama, through executive order, charged the Environmental Protection Agency (EPA) to develop a new strategy to restore the health of the Bay. This entailed developing a pollution diet, otherwise known as Total Maximum Daily Load (TMDL), setting a more demanding timetable for water quality goals, and penalizing states that fail to meet the guidelines.

The guidelines place limits on the amount of nitrogen, phosphorous and sediment that are allowed into the watershed and applies to the District of Columbia and six states that include Delaware, Maryland, New York, Pennsylvania, Virginia and West Virginia. The EPA says that the Bay absorbs too much to maintain a healthy ecosystem. Whereas in the past, states had largely relied on voluntary compliance with agricultural pollution regulations, now there are heavy consequences for failing to meet reduction targets.



ASA President Richard Wilkins has farmed in the Chesapeake Bay watershed for four decades. The watershed has a long and controversial history as it relates to cleanup efforts.

For farmers such as American Soybean Association (ASA) President Richard Wilkins, who has farmed in the watershed area for more than four decades, this new regulatory regime has its positives and negatives. For example, it has encouraged better practices. “Growers are more aware of how to handle, store, and apply manure because of fear of being fined,” Wilkins said.

But, it comes at a cost to the farmer to comply. Wilkins said compliance costs him roughly 20 to 25 percent of his net profit, which is particularly challenging during periods of low commodity prices. “Trying new things is always difficult when you don’t have any excess money laying around to use,” he said.

It is this cost to the farmer that has inspired a number of groups, especially in agricultural, to dispute the Bay TMDL using the court system. To date the federal courts have rejected these challenges and upheld the pollution diet. But, a new effort is underway to petition the U.S. Supreme Court to hear arguments regarding the legality of the Bay’s cleanup plan and whether or not the EPA has exceeded its authority.

Iowa

Water quality issues became a hot topic in Iowa just a few years ago, when in 2013 the state adopted a plan to reduce nitrate and phosphorous loads in Iowa waterways by 45 percent looking at all sources of pollution.

The genesis for creating this science-based initiative stemmed from the Hypoxia Task Force Action plan, which is a state and federal interagency response to Gulf of

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Mexico Hypoxia. It asked states to develop plans to reduce nutrients flowing to the Mississippi River and ultimately the Gulf of Mexico. The Iowa Department of Agriculture and Land Stewardship and the Iowa Department of Natural Resources, in consultation with the EPA and a host of other stakeholders, responded with the creation of the Nutrient Reduction Strategy.

Meanwhile, the Iowa Soybean Association (ISA) had already been working on water quality issues for 15 years, and continues to implement projects, watershed plans and strategies to help farmers achieve these goals.

"The local watershed plan was written with the Nutrient Reduction Strategy in mind. We looked at what was feasible, what was doable in adapting these practices and we set a 25-year goal to achieve it," said ISA president and ASA Director Wayne Fredericks.



While water quality only became an issue in Iowa a couple of years ago, the Iowa Soybean Association has studied and implemented projects for 15 years. Farmers like Wayne Fredericks, who work with other growers on these issues daily, say it's time to establish a baseline to understand what's working.

Today, ISA's Environmental Programs and Services (EPS) department helps farmers make decisions as it relates to natural resource management practices and environmental quality while maintaining farm profitability.

"We can go all over Iowa and showcase the positive things farmers are doing to address water quality issues," said Todd Sutphin, the senior operations manager for EPS.

But, the overall Nutrient Reduction Strategy and the conservation

efforts of farmers have come under fire this year as some question the effectiveness of these practices and lament the lack of a clear deadline in which to measure success. In particular, Bill Stowe, the president and chief executive officer of Des Moines Water Works is unimpressed. With just three years on the job as head of the utility, he and the board initiated a lawsuit this year against drainage districts in three counties claiming that the nitrate level in those districts are so egregious that they should be federally regulated under the Clean Water Act (CWA).

"We're concerned about the nitrate levels in the Raccoon River. If there is a way to reduce them voluntarily, then so be it, but we haven't seen it yet," Stowe said. "And, we haven't seen any discussion about doing that in a reasonable timeframe. Telling me we want to reduce it by 45 percent is a platitude. I've got to see results."



But, those like Fredericks and Sutphin who work with farmers on these issues daily say it takes time to establish a baseline so they understand what is working. The ISA is one of more than 30 partners in three watershed demonstration projects – two of which are in counties involved in the lawsuit – to test the effectiveness of conservation practices over the next three years.

“You’re not going to see immediate results overnight. This is a long term plan and strategy,” Sutphin said. “I think if we give enough time and resources we can see nutrient reductions in our water bodies in Iowa.”

Right now, the case is scheduled to be heard by a federal judge in August of next year. It remains to be seen if both sides can agree to a resolution before then. Regardless of the outcome, ISA said it will continue its efforts.

“I don’t feel like farmers have been doing a bad job,” added Fredericks. “I think we’ve been doing a tremendous job. It’s just we have a new focus on how to continue to improve.”

Minnesota

Meanwhile, in Minnesota, Gov. Mark Dayton announced this year a new buffer initiative that is designed to protect water resources from erosion and runoff pollution by establishing 110,000 acres of buffers along waterways. It was announced in January and quickly moved through the legislative process to become law in June, causing alarm in the agriculture community that they were not adequately consulted or considered.



Todd Sutphin, Senior Operations Manager,
Environmental Protection Agency



Joe Smentek, Environmental Affairs Director,
Minnesota Soybean Growers Association

“This was out of the blue,” said Joe Smentek, the director of environmental affairs for the Minnesota Soybean Growers Association (MSGA). “It was not on our radar before the governor announced it.” Smentek explained that a lot of people, including farmers, already have buffers and few people believed this was necessary.

Moreover, it seems like the law is targeting farmers while giving lake homes and recreational areas a pass from the requirements. Further, it remains unclear what qualifies as public water and subject to a 50-foot buffer or public drainage system and subject to a 16.5-foot buffer.

“A stream that was called a drainage ditch back in the 1800s may qualify as both buffers,” said Smentek. “We don’t know which section of the law applies to what.”

It’s still in the midst of being implemented, but some maintain the law is subject to legal challenge going forward as it could be argued this is a public taking of land. Invariably some farmers will face the prospect of removing land from production to comply with the new law. While others say that buffer laws were always on the books but not in a uniform fashion across the state.

“I don’t think there is a farmer out there who isn’t for water quality,” said Jason Garms, the agricultural liaison for the Minnesota Department of Natural Resources. “The tug is between is it regulatory or is it voluntary.”

MSGA tried to negotiate with the governor’s office after the initiative was announced to mitigate regulatory reach. “We really tried to focus on loss of soil and loss of nutrients mainly because those are things that cost farmers money,” Smentek said. “It made economic sense to fix that and water quality benefits would follow.”

The law didn’t land exactly as MSGA wanted but they were able to secure a provision that allows for alternative practices to the buffer requirement so long as it provides comparable water quality protection. This addressed concerns that the new regulations would not be a one-size-fits-all approach, which is not practical given the diversity of agricultural land and operations. “We’ve been working with engineers to bolster the case for some of those alternative practices,” Smentek added.

Still, he said, if there is one takeaway from this entire experience it is that farmers need to do a better job of telling their stories and speaking

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with one voice. “Conservation practices are what farmers do and they don’t get credit for it,” he added.

Ohio

Like those states that reside within the Chesapeake Bay watershed, Ohio is no stranger to water quality issues, especially algal blooms in public water sources. Although Ohio is a water-rich state where agriculture happens to be the number one industry, the state has taken more of a holistic and collaborative approach to improving water quality rather than targeting one industry in particular.

This collaboration was on display this past year when a bill to address the algal bloom problem in the Lake Erie basin made its way through the state legislature. One of its primary sponsors, Sen. Bob Peterson, said at the time it was being considered, “If you flush a toilet, if you operate a farm, if you do anything, you’re part



The Ohio Soybean Association provided feedback to state legislators this past year that resulted in a bill that made the application of nutrients to frozen, saturated ground illegal to protect the integrity of the soil.

of the problem that’s creating algal blooms in Ohio.”

Indeed, throughout the process, legislators sought input and feedback from the Ohio Soybean Association (OSA) and others. The result was a bill that included a ban on the application of nutrients when the ground is saturated, frozen, or snow-covered. “This practice is frowned upon in agriculture because of the ability of nutrients to leave the soil and to leave the place where it was

applied, so we discourage farmers from doing it and now it is illegal,” explained Adam Ward, the executive director of OSA.

He said this is a classic example of what can be accomplished when we work together for a common goal. “We have to work with different segments of the population to get a satisfactory resolution,” Ward added. “When farmers engage, there is a chance to have a meaningful outcome.” ■

Clean Water Rule Provides Perfect Model for ASA-State Cooperation

Perhaps more than any other issue, the question of what the industry is doing to tackle water quality concerns, and how the Environmental Protection Agency’s proposed regulation may impact how farmers do business, presents a perfect snapshot at the way the American Soybean Association (ASA) and its affiliates at the state and regional levels work together to address an issue.

The Clean Water Rule is a unique case, in that the rule itself is issued at the national level, and addressed through public meetings and the public comment process by ASA. The direct and tangible impacts of the Clean Water Rule, however, are most immediately felt at the state and local levels. So while lawmakers and regulators approach ASA at the national level to work on a solution to the

regulatory issues posed by the rule, the on-the-ground examples of the hardships it creates will come from the states.

Given the prevalence of water quality issues in places like Minnesota, Ohio, Iowa and the Mid-Atlantic, it becomes imperative, then, that the lines of communication are open and free-flowing between state affiliates and the national body. ASA carries farmer stories of the impact of a rule like the Clean Water Rule up to Capitol Hill and to contacts in the administration, and points to them as examples of why the rule is unworkable, in the interest of finding a positive solution for soybean farmers.

This is a perfect model of the state-national relationship within the soybean industry.

Issue Update

Legislative Path Offers Little Hope for Clean Water Rule Resolution

| By **Patrick Delaney**, ASA Policy Communications Director

There is little doubt that the Environmental Protection Agency's Clean Water Rule, also known as the Waters of the United States rule, or WOTUS, was the most polarizing piece of standalone policy within the agriculture industry in 2015. While the discussion over consumer acceptance of biotechnology and the labeling of genetically modified food continues to rage in consumer conversation, most heartburn is reserved for the WOTUS rule, a definition of the breadth and scope of the Clean Water Act of 1972, which critics say would dramatically expand the Environmental Protection Agency's jurisdiction to the creeks, streams and ponds that crisscross American farmland.

From the outset, the American Soybean Association has opposed the rule, and called on the Environmental Protection Agency (EPA) to withdraw it. ASA continues to cite the rule's needlessly broad scope, and specifically the misapplication of the "significant nexus" test—which determines to what extent one small body of water connects to a larger body currently under jurisdiction—as key reasons the rule should be scrapped.

Most Republican lawmakers and a growing number of farm-state Democrats have lined up to oppose the rule as well, but as the past year has shown, a Washington climate short on legislative progress means that a Congressional fix for the WOTUS rule will offer very little hope of a positive outcome for farmers on this particular issue.

Thus far in the 114th Congress, there have been several organized efforts to stop the implementation of the WOTUS rule, beginning with the House Energy and Water Appropriations bill last April. That bill contained language that would have prevented the Obama Administration from implementing the rule, however it fell well short of the number of votes needed to override a threatened veto from the White House. Second came a freestanding bill cosponsored by House Transportation and Infrastructure Committee Chairman Bill Shuster and Agriculture Committee Chairman Mike Conaway. That, too, passed, but without enough votes to override a veto threat. The Senate then was unable to move its version of the legislation, although not for the efforts of Senate



Agriculture Committee Chair Pat Roberts and Democrats Heidi Heitkamp and Joe Donnelly, among others. Finally and most recently, language to block the rule was stripped out of the two-year Omnibus funding bill passed by both chambers in mid-December.

While the efforts of Congress are certainly made in the right spirit, there is a significant discrepancy between what lawmakers are asking for, and what ASA policy is on the issue. In short, Congress continues to call on EPA to go back to the drawing board on the WOTUS rule, while ASA is looking for EPA to simply withdraw it. ASA's viewpoint on the matter is that farmers take great strides toward ensuring water quality, and if agricultural practices are exempt, as EPA maintains they are, the rule is unnecessary. So what next?

If there is hope for resolution on the WOTUS issue, it lies in the courts. Currently, the rule is under a nationwide judicial stay by a three-judge panel from the U.S. Court of Appeals for the Sixth Circuit. That stay, however, is temporary, and the Sixth Circuit still needs to issue a full and final ruling on the WOTUS rule. The timeframe on that decision, though, is a long one, so buckle up, because the WOTUS issue will continue to fester for the foreseeable future. ▣

Soy Checkoff News from the United Soybean Board

The Profit of Prevention



Study shows herbicide-resistance management plans bring long-term gains

Long-term herbicide-resistance management requires more than weed control aimed only at minimizing crop loss in any one season. It requires long-term strategies focused on delaying the evolution of herbicide resistance and reducing weed seed in fields.

Recent research has shown that these long-term strategies can also produce long-term profit gains. David Nichols, Tennessee farmer and United Soybean Board director, can personally attest to the value of prevention on his farm.

"There have been several years that we definitely had some yield gains because of our herbicide-resistance management," he said. "And during

those years, guys who didn't really get behind on yield."

Wisconsin and Northern Illinois BASF Technical Service Representative Vince Davis, Ph.D., said herbicide-resistant weeds cost U.S. farmers \$2 billion a year. And considering how fast resistance is expanding through the soybean-producing region of the United States, that figure is likely still climbing.

"Diversification is the most important thing farmers can do to manage these weeds," said Davis.

Effective herbicide-resistance management combines a variety of chemical and nonchemical management tactics to diversify selection pressure on

weed populations and minimize spread of resistance genes.

"It's about giving your crops a competitive advantage against weeds," Nichols said. "It's about delaying the evolution of herbicide resistance and preserving herbicide technology."

Nichols, who has had some form of herbicide-resistance management plan in place since the early 2000s, says that the costs of managing the resistance are worth it to avoid possible low yields – and profits – that a really bad year of weeds could cause.

"Consider the costs," he said. "The costs of managing weeds after herbicide resistance has evolved are often higher than the cost of a program for reducing the risk of resistance in the first place."

Recent research backs up Nichols' thoughts. According to a study done by the Weed Science Society of America, managing herbicide resistance can give farmers monetary gains in as little as two years.

Depending on the cropping system used, proactive resistance management increased farmers' profits by 14-17 percent over a period of 20 years, according to the same study.

Nichols is committed to continuing his use of herbicide-resistance-management tools.

"Long-term, the weed management program will pay a return on investment," he said. "After several years of decreasing the amount of weeds that go to seed, the pressure declines, and so not as much herbicide is necessary." ▣



Expanding Uses for High Oleic Soybeans

How high oleic soybean oil could end up in your engine

The soy checkoff has collaborated with researchers to develop new markets for high oleic soybean oil, and recent results could make your engine a customer for these soybeans.

As companies that depend on petroleum search for renewable and sustainable alternatives, one company landed on U.S. soy.

Greg Blake of Biosynthetic Technologies said high oleic soybean oil is a good match for the technology his company has developed to make a cost-effective and high-performing motor oil. Biosynthetic Technologies plans to select a site this year for a full-scale plant that will produce high oleic base oil for use in motor oil.

"This first plant will give our customers the confidence to formulate



and market motor oil brands containing our products," Blake said.

High oleic soybean oil caught the attention of Biosynthetic researchers when it performed better than other plant-based oils.

"High oleic soybean oil is unique in its composition, making it a stronger,

longer-lasting oil," Blake said.

The soy checkoff helped fund testing by Biosynthetic Technologies on the motor-oil blend. The blend passed critical tests, and the company is moving forward on full-scale production. ▣

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SoyWORLD

Growers Observe African Markets for U.S. Soy and Poultry During USDA Trade Mission

Soybean growers from Illinois and Missouri recently joined the American Soybean Association's World Initiative for Soy in Human Health (ASA/WISHH) Program for a U.S. Department of Agriculture (USDA) trade mission to the West African country of Ghana.

The growers witnessed how U.S. soy and poultry are already consumed in the country, as well as how WISHH and USDA's development work trail blazes the path for new trade opportunities.

USDA Deputy Secretary Krysta Harden led the November trade mission with representatives of 26 U.S. companies and agricultural organizations from across the United States. Soybean leaders attending included WISHH Secretary/Illinois Soybean Association Chairman Daryl Cates, who farms near Columbia, Ill.; Missouri Soybean Merchandising Council Chair David Lueck, of Alma, Mo.; and ASA Director/WISHH Committee Member Bill Wykes, who farms in Yorkville, Ill.

The growers said they saw examples of U.S. soybean and poultry use in Ghana, as well as the opportunities for more.

"There is definitely potential for trade there," Cates said. "Ghana has a great port and they are working to double its capacity. U.S. soybean meal, whole soybeans and poultry, like leg quarters, are already coming into that port."

Lueck added that Ghana's poultry industry is growing and the egg industry can use a jumpstart.

"They don't produce a lot of eggs there because they don't have the sources of protein for the poultry and they need consumer education on eggs," he said.

"Their economy is rising. I believe Africa will be a new frontier for Missouri soy."

Wykes, who along with the other farmers, participated in USDA's networking sessions between the U.S. groups and African businesses, said the African entrepreneurship is amazing.

"We met a wide range of people who wanted to increase their soy purchases for foods as well as feeds," he said.



From left: David Lueck, Daryl Cates and Bill Wykes join USDA Deputy Secretary Krysta Harden at the Akate feed mill that is already purchasing U.S. soybean meal. Photo credit: Jim Hershey

The farmers also joined the project launch for WISHH's new five-year USDA-funded poultry value chain project in Ghana. USDA's Harden and the Ghanaian Minister of Food and Agriculture, Fifi Kwetey, officiated the announcement.

"The Food for Progress agreements are the latest example of the partnership between the people of Ghana and the United States," Harden said. "When the government of Ghana asked for assistance to improve its poultry sector, USDA and its partners were ready to help."

The agreement with WISHH focuses on educating producers about the importance of high-quality feed and improves the industry's capacity to test feed, among other activities.

Wykes said being in Ghana reinforced the importance of WISHH's work that looks at the whole agricultural value chain in developing countries like Ghana. If U.S. soybeans and poultry are to have market access to Ghana, then Ghana's own agriculture must also progress.

"I believe trade is the best way to have friendships with other countries," Wykes said. "You do what you do best and we will do what we do best, and we will trade on what benefits each of us." ■

Sustainability

Reduce, Recycle, Replenish

By **Barb Baylor Anderson**

Almost all of the 12,000 acres of cotton, corn, soybeans, rice, peanuts and wheat Jeremy Jack and his family grow near Belzoni, Miss., are irrigated.

That makes water a top priority for Silent Shade Planting Company. Founded by American Soybean Association (ASA) director Willard Jack and his wife, Laura Lee, in 1979, the family-owned business is now managed by son, Jeremy, and daughter, Stacie Koger, and their spouses.

"Conservation is not a line item on our budget. Conservation is what sustains our farm for future generations," said Jeremy Jack, who is in charge of day-to-day operations. "We have enough water to irrigate during my lifetime, but we must protect the asset for our children and beyond."

The acreage farmed by the Jacks is scattered across Humphreys, Leflore and Holmes counties, and has expanded 250 percent since 2007. Acres are pivot, row and flood irrigated.

"Water is crucial. Our goal is to reduce, recycle and replenish it. We focus on efficient use of water and use innovative farming techniques and technology to manage it," he said.

That technology includes soil moisture sensors that tell Jack when to irrigate, surge valves which alternate water back and forth across fields, and poly pipe with holes placed so they keep the water evenly distributed through the field. It all adds up to less water use. The Jacks also have water recovery systems to capture surface water and channel it into an aquifer for future use.

"We are doing everything we can, and we are always looking for new ideas," said Jack, who holds bachelor's and master's degrees in ag economics and business from Mississippi State University (MSU). "For the last two years, we have worked with MSU irrigation specialist Jason Krutz, MSU REACH (Research & Education to Advance Conservation & Habitat) program coordinator Beth Baker and Delta F.A.R.M. (Farmers Advocating Resource Management) executive director Trey Cooke to see how they could help us evaluate and measure to improve water use and quality."

Currently, the Jacks are doing measurements from their water recovery system, including taking water samples



Water conservation is a top priority both now and in the future for Jeremy Jack and his family farm in Mississippi. "We have enough water to irrigate during my lifetime, but we must protect the asset for our children and beyond," Jack said. *Photo courtesy of Jeremy Jack*

from the fields, reservoir and ponds to determine what nutrients are present. They have also calculated their water savings using the new technology.

"We learned we can irrigate with surface water for half the cost of groundwater. We are just getting into this area, and finding it can help us pay for irrigation," he said.

Jack is optimistic about future economic and environmental benefits to reduce, recycle and replenish on all farms.

"The more other farmers can get involved with their local organizations to improve their own water use and quality, the better off all of U.S. agriculture will be," he said. ■

SoyForward

Success Against the Odds For Soybean Farmers in 2015

By ASA Chairman **Wade Cowan** and President **Richard Wilkins**

As we take stock of strides that we made on behalf of soybean farmers in 2015, we have much for which to be thankful. We want to tell each of you how much we value your support of our organization and your dedication to our industry.

For the second straight year, ASA forged landmark progress on a broad range of issues in a town where progress is distinctly hard to come by. It goes without saying that the political climate in Washington is not one that lends itself to cooperation, compromise or bipartisanship, which makes our success that much more significant. We are a leader in Washington and around the world on farm and trade policy, and in 2015, we leveraged that role for a series of significant victories for ASA members and the larger soy industry.

ASA fought to grant the White House Trade Promotion Authority, which allowed the Trans-Pacific Partnership (TPP) negotiations to be successfully completed.

ASA advocated for and obtained a final rule on the Renewable Fuel Standard that increases biodiesel volumes to 2 billion gallons by 2017.

ASA worked to enact a Surface Transportation Reauthorization to provide funding certainty for road and bridge construction and maintenance.

ASA drew a line in the sand on crop insurance, and got Congress to rescind the \$3 billion cut included in the FY-2016/17 budget agreement.

ASA helped to lead the industry's effort to secure House passage of the Safe and Accurate Food Labeling Act.

ASA's cooperation with the U.S. Department of Agriculture (USDA) resulted in the elimination of biotech application backlogs.

ASA identified issues with the structure of the County Agricultural Risk Coverage program and established resolution of the use of administrative counties for the program.

ASA achieved reinstatement of the biodiesel tax credit in the Tax Extenders package, permanent reinstatement of higher Section 179 expensing limits, and a five-year extension of Bonus Depreciation provisions in the Tax Extenders package.

ASA led the charge for increased funding for waterways infrastructure and harbor maintenance.

ASA lent critical support in the fight to rescind Country of Origin Labeling in the House and Senate.

ASA helped to secure increased funding for the Agriculture & Food Research Initiative (AFRI) by \$25 million.

ASA's work helped conclude a Trans-Pacific Partnership (TPP) agreement with increased market access for soy and livestock products, enhanced sanitary and phytosanitary provisions, biotech and low-level presence procedures.

ASA continued our cooperation with the U.S. Soybean Export Council on submission of the Soy Sustainability Protocol to meet the European Union's Renewable Energy Directive (RED) requirements and continuing emphasis on RED as a priority in the Transatlantic Trade and Investment Partnership negotiations.

ASA led industry efforts as coordinator of the U.S. Biotech Crops Alliance, and as coordinator of the international agricultural development coalition on legislative proposals.

There is no downplaying the combined impact and significance of these victories for our industry. They will help us in the coming years to farm more profitably, which is the purpose of our association, after all.

But we're not finished.

In the coming year, we will implement ASA's bold new strategic plan. The plan will help us sustain the success we've seen in 2014 and 2015, and accomplish more in the years that follow. We will continue to enhance our working relationships with state affiliates, and our new structure will help us focus on those areas that are critical to our mission.

Thank you, as always, for your dedication to our industry, and happy New Year. ■



Wade Cowan
Brownfield, Texas, *Chairman of ASA*



Richard Wilkins
Greenwood, Del., *President of ASA*

Let's Discuss



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You can't always be here.
But ASA can.

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The American Soybean Association is looking out for the best interests of U.S. soybean growers by doing important farm and trade policy work on Capitol Hill:

- ASA fights for biodiesel tax incentives
- ASA advocates legislation fair to soybean farmers
- ASA promotes trade agreements for soy exports

The law says your soybean checkoff can't do these things.
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