



# Maryland Soybean Board

# Soybean Sampler

Annual Report 2016

## *Soy board wins Top Hand Award from cattlemen*



Recognizing that farmers in Maryland need to take a more active role in consumer outreach, and that farmers are the best spokespeople that agriculture can employ, the Maryland Soybean Board has partnered with other farm organizations to give more farmers the tools they need to become more effective advocates for agriculture.

Barao. Livestock and poultry consume 98 percent of domestic soybean meal.

At the convention, more than 70 cattlemen listened to elements of “Engage” training, which promotes using the power of shared values when communicating with consumers.

Jana McGuire and Donna Moenning of the Center for Food Integrity provided the training, which was sponsored by MSB. “A consumer’s confidence in a farmer’s judgement is three to five times more important than the farmer’s competence when it comes to building trust,” McGuire explained. “You have to build, or sometimes rebuild, trust before you can expect to earn the social license that allows you the freedom to operate.”

McGuire was also on hand at the Maryland Farm Bureau Convention in Ocean City, Md., in December, where the Women’s Committee hosted Engage training for about 30 people, sponsored by the soybean board.

Engage trains farmers to approach consumer communications from a values-based perspective and a shared-values mindset. Developed  
*Continued on Page 2*

Because of that, the Maryland Cattlemen’s Association bestowed their “Top Hand Award” on the Maryland Soybean Board during the MCA convention in March. MSB director Alan Hudson, a cattleman and poultry farmer from Berlin, Md., (shown above, at left) accepted the award from MCA Executive Director Dr. Scott

## *Regional checkoff boards form Atlantic Soybean Council*

**Seeking a forum** to coordinate regional research, identify gaps and duplication in research efforts, and leverage state checkoff research funding with the United Soybean Board’s funding, six state soybean boards have joined to form the new Atlantic Soybean Council (ASC).

ASC’s first executive director, Ellen Davis. Davis is retired from USDA Rural Development and is a veteran of the Virginia corn and small grains checkoffs. The Eastern Region Soybean Board is the seventh board. The organization expects to solicit its first research projects this fall.

At a meeting in March in Annapolis, representatives from Virginia, Maryland, Delaware, Pennsylvania, New Jersey and New York reviewed bylaws and term limits and settled on the name with

Travis Hutchison of Cordova, Md., is the first president of the organization. Cameron Gibson of Virginia is the vice president and Jay Baxter of Delaware is the Secretary/Treasurer.



## Webcast weighs soybean seeding rates

The Plant Management Network (PMN) has added a new presentation to the Focus on Soybean resource entitled “Risk and Benefits of Changing Farmers’ Common Soybean Seeding Rates” by Peter Kyveryga, Director of Analytics at the Iowa Soybean Association.

With higher seed cost and lower commodity prices, there are many questions about optimizing soybean seeding rates and variable rate soybean planting. This presentation will discuss results of multi-year on-farm studies to identify when and where farmers can increase or decrease their normal or common soybean seeding rates. The focus will be on the predictive power of on-farm trials and the economic benefit of changing common soybean seeding rates for categories with different plant row spacing, planting dates, rainfall, soil, and field topography. Risk analysis indicates no significant effects of spatial factors on soybean yield response to higher seeding rates but higher probability of economic yield response after May 20 planting in normal years or after June 15 in years with delayed planting.

This webcast will remain open access until May 31. Focus on Soybeans may be accessed via [www.mdsoy.com](http://www.mdsoy.com). The Maryland Soybean Board is a sponsor of PMN Focus on Soybean.

## Take Action against herbicide resistance

It’s time to rethink weed control ... to think beyond a single season and work towards long-term solutions. It’s time to take action against herbicide-resistant weeds. Controlling herbicide-resistant weeds can be challenging, but it’s a challenge that can be overcome with teamwork.

Take Action is an industry-wide partnership between university weed scientists, major herbicide providers and corn, cotton, sorghum, soy and wheat organizations to help you manage herbicide-resistant weeds.

Visit the updated website to help identify the sites of action for various herbicides, to create a weed management plan, and to test your knowledge of herbicide-resistant weeds and best management practices. To learn how you can diversify your weed control techniques to fight herbicide resistance, take action and visit at: <http://takeactiononweeds.com>

## Saathoff attends soy leadership college

Danny Saathoff of Denton was one of 120 farmers and industry leaders who attended the 2016 Soybean Leadership College in Orlando, Fla., in early January.

Soybean Leadership College provides training to promote the industry, communicate key messages and work to expand U.S. soybean market opportunities domestically and internationally.

Panel discussions were presented in a variety of topics, including current and future agricultural trends; science and its impact on agriculture and “storytelling” for businesses. Author, speaker and professional speech coach, David Okerlund spoke on making the best of a challenge in agriculture. SLC attendees also attended breakout sessions on soybean sustainability, financial management and social media for farming. To apply for SLC 2017, contact Sandy Davis at (410) 742-9500 or [sdavis26@verizon.net](mailto:sdavis26@verizon.net).



*Participants at the Mid-Atlantic Women in Ag conference in Dover in February extracted DNA from a strawberry.*

## “GMO 101” comes to Dover

About 50 men and women attended the GMO 101 Workshop sponsored by the Maryland Soybean Board at the Mid-Atlantic Women in Ag Conference held in Dover.

The preconference workshop was led by Roxi Beck of the Center for Food Integrity, who shared basics of GMOs as well as tips on recognizing and responding to consumers’ emotion-based concerns regarding GMOs.

Participants were also able to extract DNA from a strawberry during the workshop.

“GMO crops have been around for 20 years but we don’t seem to be becoming more familiar and comfortable with them – in fact, it seems like in spite of all the conversations about GMOs, they are becoming more foreign,” Beck said. “An increased focus on GMOs through media coverage, ballot initiatives, and advocacy group activity has caused a widening gap between what both farmer and consumers thought they knew, and the information they’re now hearing.”

## Top Hand Award ...

*Continued from Page 1*

by the Center for Food Integrity and supported through funding from the United Soybean Board’s Animal Agriculture Initiative, Engage walks farmers through the process of identifying their personal values and the passions that led them to farm.

Then the program encourages farmers to listen and connect with consumers before trying to “educate” consumers about farming.

“Consumers like farmers. We know this,” says Jana Maguire, Engage trainer. “But consumers aren’t sure that what you’re doing today is really farming – at least what farming is in their minds.

“What they want to know is if they can trust you to make the right decisions. How you help them decide that is by showing them who you are, by responding to their emotional appeal for reassurance with a personal message, not cold science. Only after you’ve earned their trust have you earned the right to start ‘educating.’”

Organizations interested in hosting Engage training should contact Susanne Zilberfarb at [susanne@hammondmedia.com](mailto:susanne@hammondmedia.com).

# From floor to rooftop, soy-based products perform

**Baltimore parents are cheering.** Why? Because the inside of the Exhibit Barn at the Baltimore County Center for Maryland Agriculture and Farm Park has a new, soft green synthetic “lawn,” featuring a soy-based backing.

“The old floor was dirt,” explains Bronwyn Mitchell, the farm park manager. “In addition to being used during our annual fairs, the Exhibit Barn serves as classroom space for Farm Sprouts Preschool and Farm Camps, and the kids had to sit on the dirt floors. And that means they sometimes went home with dirty pants.”

Thanks to a grant from the Maryland Soybean Board’s Green Events Program, the soy lawn product known as Syntipede 354 from a company called SYNlawn, was installed March 30.

Synthetic lawn products like Syntipede and AstroTurf represent a growing market for soybean oil, which is used to create a backing that locks the synthetic grass fibers in place. In 2015, AstroTurf was installed on 300 athletic fields across the U.S. It takes the soybean oil from approximately five acres of soybeans to produce the backing for a typical field. In Maryland, farmers grow about a half a million acres of soybeans, producing more than 20 million bushels of beans each year.

“Soy-based products often provide superior quality and performance than petroleum-based products and they support our family farmers,” says William Layton, chairman of the Maryland

Soybean Board. “Through a variety of research and promotion programs, the soybean checkoff has fostered the creation of hundreds of soy-based products over the last two decades.”

Soybean oil displaces about 60 percent of the petroleum-based polyurethane in BioCel, the backing material used by SYNlawn, according to Underwriters Laboratories certification.

Soybeans offer an abundant, domestically produced and renewable supply of ingredients, offering companies the opportunity to reduce the petroleum content in commercial and industrial products. The soy checkoff partners with manufacturers to commercialize new soy-based products, giving farmers and others even more opportunities to buy products that contain U.S. soy. To find soy-based products, visit [www.soybiobased.org](http://www.soybiobased.org).

MSB’s Green Events Program provides grants to agricultural fairs and expos through a competitive process which begins with a request for proposals in the fall. More information is available on the board’s website at [www.mdsoy.com](http://www.mdsoy.com).

Thanks to the program, the Great Frederick Fair will repaint five metal roofs with a soy-based paint. The Show Ring, two hog barns and two cattle barns will get a fresh coat later this spring.

And the Washington County Ag Fair will use and promote SoyInk in its tickets and fair program.

## Checkoff introduces 29 new industrial soy products

**In 2015, the soy checkoff partnered** with researchers to develop 29 new soy-based products that replace petrochemicals and help manufacturers meet sustainability objectives. These products, and hundreds of others developed with checkoff support, add value to U.S. soy and expand its market potential.

“At a time when prices are low, it’s more important than ever to increase demand for U.S. soy,” says checkoff farmer-leader Jim Domagalski, a soybean farmer from Columbus, Michigan. “Part of that is finding new ways to use it.”

Products developed with checkoff support in 2015 include an insulating foam that helps green building contractors earn LEED (Leadership in Energy & Environmental Design) certification, soy-based adhesives that replace formaldehyde without compromising quality, lubricants and solvents that reduce reliance on petrochemicals, and rubber belting that farmers can use in their equipment.

New uses have helped farmers increase demand for U.S. soy from 14 million bushels in 2003 to more than 111 million bushels in 2013. This sales trajectory is expected to continue as a result of the soy checkoff’s ongoing commitment to support the discovery of new soy technologies and share previous research findings that companies use to create more sustainable products.

USB’s Soy Products Guide is an online catalog of the thousands of currently available soy-based products, ingredients and manufacturers. New soy-based products and ingredients introduced

in 2015 as a result of checkoff support include:

**Plastics** such as the Best Rest Eco Lux™ – a soy-foam mattress by Best Rest USA; HeatLox XT™ – insulating foam for buildings by Demilec, Inc.; U-Pack 5310™ – foam-in-place packaging foam by WFI Global; and UCore+™ – foam used to insulate plastic window frames by WFI Global.

**Rubber products** such as WCCO Conveyor Belt – soy-and-rubber belting by WCCO Belting, Inc.

**Coatings and inks** for printing such as Natural Environmental Barrier™ – a new coating by Green Eagle Technologies and ProSoy 7460™ – a soy-protein-based pigment binder for water-based flexographic and gravure inks.

**Adhesives** such as SOYAD Adhesive™ – an adhesive used in the manufacture of hardwood plywood by Solenis; Acous-Tec Adhesive™ – an adhesive used to manufacture acoustic panels by W. F. Taylor; ProSoy 4410™ – a soy-protein-based adhesive for paper substrates by Applied Protein Systems and ProSoy 4315™ – a soy-based additive that can replace phenol formaldehyde in wood adhesives by Applied Protein Systems.

**Paper products** such as ProSoy 5452™ – a soy-protein-based binder and additive for paper and paperboard coatings by Applied Protein Systems and ProSoy 5820™ – a lower cost soy-based binder and additive for paper and paperboard coatings.

Other products include **solvents, lubricants, waxes, and cleaners.**

Exploring our markets

## Checkoff board visits Perdue Chesapeake



**Maryland Soybean Board** directors and staff visited Perdue Farms' export facility in Chesapeake, Va., Jan. 27. Perdue AgriBusiness began processing soybeans in 1961. Today it produces and sells oilseed products including soybeans, soy meal, soy hulls, crude soy oil, refined edible soy oil and blended oils.

Perdue's domestic grain operations (which includes all of the company's operations east of the Mississippi) include more than 75 million bushels of storage space at 75 locations. The company supplies grains to major domestic ag companies in the poultry, dairy, hog and pet food industries and supports international sales.

Perdue AgriBusiness includes the Grain & Oilseed; Animal Nutrition and Agricultural Services components.

International sales originate from the Chesapeake, Va., terminal, including high-protein soy meal, crude degummed



*Above, Ray Keating leads the tour. At left, a battery of tests - including a low-tech "sniff test" assure a quality soybean product. Below, soybeans are unloaded from a train for processing.*

*Next page: Bill Langenfelder, Danny Saathoff, Brian Johnson, Jim Lewis, Keating and Joe Layton listen to Paul Schaubert.*



*Middle right: The Control Room at Chesapeake. Below, a ship is loaded with soybean meal at the deepwater berth. Inset: Joe Layton displays a handful of soybean meal.*



soy oil, corn, soybeans, soft red winter wheat and barley.

The facility is capable of crushing more than 55,000 tons per month of soybeans and can produce more than 45,000 tons per month of soybean meal and more than 10,000 tons per month of soybean oil. The company's oilseed production amounts to more than 300 million pounds each year, with products ranging from bakery shortening, margarine oil, salad oil, spray oil, lecithin, palm oil blends to Plenish High Oleic oil.

Chesapeake's deep water berth is Panamax-capable. The company operates with unit trains on the NS and CSX lines and has barge loading capabilities on the Great Lake, Ohio River and Mid-Atlantic.



# Maryland farmers break cover crop record - again

A small airplane swoops low over a field of golden soybeans, and then zooms back up into the air before making another round at Schmidt Farms, located on the Eastern Shore of Maryland.

“What we’re doing is an aerial application of cover crops,” explains Hans Schmidt, on a sunny day last fall. “Applying the cover crop seeds while the original crop is still in the field allows us to take advantage of seed mixes that produce dual results for soil health.”

Schmidt Farms is one of many Maryland farms which together seeded a record 492,244 acres of cover crops last fall, the Maryland Department of Agriculture has announced. Maryland farmers have exceeded the Watershed Implementation Plan milestone goals in 2011, 2013 and 2015 for cover crops and are on track to exceed the next two year milestone in 2017 with this new record enrollment acreage.

Cover crops are widely recognized as one of the most cost-effective and environmentally sustainable ways for farmers to meet nutrient and sediment reduction targets outlined in Maryland’s Watershed Implementation Plan to protect and restore the Chesapeake Bay by 2025.

“Maryland farmers believe in the environmental and agronomic benefits of planting cover crops on their fields to improve the soil, recycle unused plant nutrients, control erosion, and protect local waterways,” said Maryland Secretary of Agriculture Joe Bartenfelder. “This is the sixth consecutive year that farmers have planted more than 400,000 acres of cover crops on their fields.”

Schmidt Farms is a third generation family farm, operated by Hans and his wife, Jennie, and Hans’ brother, Alan and his wife Brenda. The farm cultivates about 2,000 acres of food and feed – high oleic soybeans used to create soybean oil, soybeans used in tofu and soy milk, green beans, tomatoes and wine grapes. In addition, they grow soy, corn and barley for animal feed.

Using a cover crop application program allows the farm to feed nutrients into the top soil, and at the same time improve the fields’ soil tilth.

“Tilth is the physical condition of the soil that allows for a healthy root system to support plant growth and plant health,” says Jennie. “Having soil with good tilth means that the soil has large pore spaces for oxygenation and water filtration. This all adds up to a better no-till program in the spring and a reduced use of fertilizer.”

The cover crop program is not a new idea on the farm. In fact, Walter Schmidt was one of the first farmers in the country to implement cover crops, way back in the late 1960s.

“Dad wanted to ensure that the next generation of our family had healthy soils to continue our family farming legacy,” says Hans. “He certainly was able to meet that goal, and Alan and I continue the practice of constantly improving our soils.”

The Schmidt family goes out of its way to promote environmental stewardship and leadership for agriculture in Maryland.

The farm has earned a designation of Certified Agricultural Conservation Steward under the Farm Stewardship Certification and Assessment Program (FSCAP), and Hans, who recently

“retired” as volunteer chairman of the Maryland Soybean Board and from the Maryland Association of Soil Conservation Districts, has been appointed Assistant Secretary of Resource Conservation at the Maryland Department of Agriculture. Jennie is now president of the Maryland Grain Producers Utilization Board. “It’s rewarding to grow food for our neighbors, and the larger community,” says Hans. “We all have an influence on the environment. As farmers, we put the safety and health of the environment first. We are not the only farmers doing this. For most, it’s second nature.”



Alan (left) and Hans Schmidt pour cover crop seed into a hopper last fall at their family farm in Sudlersville. Their father, Walter, was an early adopter of the cover crop concept, planting cover crops in the 1960s as an investment in soil health that would yield dividends for future generations.



**YOUR PERSPECTIVE IS WORTH GROWING**

**The soy checkoff is looking for farmers**

from diverse backgrounds to get involved in USB or in one of the 31 state or regional soybean boards across the country. There are a variety of opportunities to serve, and your talent and input can make a difference.

**Help to lead the U.S. soybean industry into the future. Contact your state checkoff and get involved today, or visit**

**[www.UnitedSoybean.org/GetInvolved](http://www.UnitedSoybean.org/GetInvolved).**



## The meat of it: Livestock, poultry are strong contributors to economy

The animals that feed us are also feeding our economy, according to a new soy-checkoff-funded study. The analysis shows animal ag, U.S. soy's top end user, increased gross national product by \$123 billion in economic output, improved household earnings by over \$21 billion and added 645,629 jobs from 2004-2014.

According to the Economic Analysis of Animal Agriculture, during 2014 alone, U.S. animal agriculture's support of the national economy included:

- \$440.7 billion in economic output
- 2,363,477 jobs
- \$76.7 billion in earnings
- \$19.6 billion in income taxes

Those figures all increased from 2013.

"The fact that our animal ag sector is growing is very beneficial for U.S. soybean farmers," says Mike Beard, a soy checkoff farmer-leader who grows soybeans and raises hogs on his farm in Frankfort, Indiana. "With 97 percent of soybean meal going to animal ag, the strength of poultry and livestock production are incredibly important to the U.S. soybean industry."

During 2014, U.S. animal agriculture consumed an estimated 27.9 million tons of soybean meal, or the meal from about 1.2 billion bushels of U.S. soybeans. This soybean meal was fed primarily to:

- Broilers: 464 million bushels
- Hogs: 327 million bushels
- Dairy cows: 112 million bushels

The report concluded that U.S. soybean farmers shouldn't let their support for the animal ag industry weaken. Poultry and livestock farmers face many pressures, which also threaten the profitability of all soybean farmers.

## Financial Report

The Maryland Soybean Board is funded through the national soybean checkoff program, under which one-half of one percent of the net market value of soybeans sold is set aside for research, marketing and education. The board's activities are administered by the volunteer farmer-directors shown on the last page of this report.

### Fiscal Year 2015 - October 1, 2014 through September 30, 2015

Total FY15 Assessments	\$1,176,390
50% to United Soybean Board	<u>588,195</u>
Maryland Soybean Board	588,195
Interest & FY14 Project Funding Carryover	584,337
Miscellaneous	<u>11,112</u>
Total Revenues FY15	\$1,183,644

### DISBURSEMENTS

Administration, Collection, Compliance, Board Operating Costs & Elevator Audits	\$84,119
Special Projects	190,084
Communication	47,514
Promotion	174,296
In-State Research	<u>206,893</u>
Total Disbursements FY15	702,906

Ongoing Project Funding FY16	\$480,738
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## Maryland Soybean Board approves in-state research funding

Directors of the Maryland Soybean Board approved \$228,057 to support 16 research projects at their March board meeting, looking into subjects ranging from double crop performance to kudzu bug to groundwater quality to the use of neonicotinoid seed treatments.

More details on the research will be provided in a special edition of The Soybean Sampler, due out this summer.



MSB research committee members and researchers discuss a potential project in February.



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## Ag's a "growing field" for new graduates

**Over the next five years**, college graduates with degrees related to food, agriculture, renewable natural resources or the environment can expect to see an average of 57,900 job openings annually – far more than the anticipated 35,400 graduates in those fields, the USDA reports.

In order to attract students to careers in agriculture, the Maryland Soybean Board tapped an old friend for help: Glycine Max.

Known casually as "Max" (his full name is the botanical name for soybeans), the character is the star of a booklet tracing his life as a young sprout and hailing the scores of uses to which he contributes throughout his life. The booklet, designed for third, fourth and fifth grade students, is provided free to Maryland classrooms via [www.MaxTheSprout.com](http://www.MaxTheSprout.com)

Now Max is following those 300,000+ students who have met him into the higher grades – sixth, seventh and eighth – where he helps them consider various career choices through a new website: [www.MaxCareers.info](http://www.MaxCareers.info)

"Maryland agriculture needs bright young minds to pursue farm careers," says William Layton, chairman of the Maryland Soybean Board and a farmer from Vienna, Md. "With less than two percent of Americans involved in farming, we have to work at attracting students back to agriculture and getting the education to prepare them to serve Maryland's number one industry."

In a quick survey process, Max offers several scenarios with six questions. Students choose one answer in each scenario. The answers lead to placement of the student in one of six personality types – realistic, investigative, artistic, social, entertaining or conventional. In the Realistic personality type, career choices involving hands-on activity emerge, such as farming and driving a truck. For an Investigative personality type, suggested career choices include soil scientist, ag researcher or seed developer. From there, the students will learn about careers based on their interests. All told, 36 possible career areas, covering a broad spectrum of human activity, emerge from the program.

At the completion of the program, Max awards the students a certificate acknowledging their participation and urging them to continue to "follow your dream."