



# CHECKPOINT

PENNSYLVANIA SOYBEAN BOARD FISCAL YEAR 2013 ANNUAL REPORT



Our soybean checkoff.  
*Effective. Efficient. Farmer-Driven.*



## Thank You, John Yocum

If you're a Pennsylvania soybean grower, there's a very good chance you've run into John Yocum. Not only is John a member of the Pennsylvania Soybean Board, over the years, he's taught countless courses on soybean crop management. John has the distinction of being a well-respected crop researcher and was the Scientist in Charge of Penn State's applied research center for southeast Pennsylvania in Landisville, PA, for 41 years.

After more than 20 years of volunteer service to soybean growers as a member of the Pennsylvania Soybean Board, John is retiring from the Board.

"John's knowledge, insight and wisdom have been invaluable to the Board," says Board Chairman Bill Beam. "We sincerely thank him for the many hours of service he's contributed on behalf of growers, and wish him the best."

# Working for You: The Soybean Checkoff

**The purpose of the soybean checkoff is straightforward: to maximize the profit opportunities for all U.S. soybean farmers.**

The Pennsylvania Soybean Board is funded by the national soybean checkoff under an assessment program, approved by Congress in 1990, under which soybean farmers contribute 50 cents of every \$100 they receive for their beans at the first point of sale.

Funds are used to develop markets, educate consumers, and research new ways to utilize and produce soybeans more efficiently. By law, checkoff funding cannot be used for lobbying or political purposes.

Half of the checkoff funding from soybean growers in these states goes to the Pennsylvania Soybean Board, and half goes to the United Soybean Board for national and international programs designed to benefit all U.S. soybean farmers. As stipulated in the federal Soybean Promotion, Research and

Consumer Information Act, the USDA Agricultural Marketing Service has oversight responsibilities for the United Soybean Board and the soy checkoff.

## Directed by famer/leaders

On a national level, the 69 farmer-directors who volunteer their time to serve on the United Soybean Board invest and leverage checkoff funds to meet four key strategic areas that will increase the value of U.S. soy meal and oil, to ensure U.S. soybean farmers and their customers have the freedom and infrastructure to operate, and to meet the needs of U.S. soy's customers.

The seven farmer-leaders who serve on the Pennsylvania Soybean Board are responsible for managing the region's share of funds received from the nationwide Soybean Checkoff program. ✓



- William Beam, Chairman, Elverson, PA
- Michael Gerhart, Vice Chairman, Ephrata, PA
- Steve Hykes, Secretary/Treasurer, Greencastle, PA
- Daryl Alger, Lebanon, PA
- Brian Kreider, Lebanon, PA
- Jim Musser, Mount Joy, PA
- John Yocum, Catawissa, PA
- Del Voight, Ex-Officio Member, Lebanon County Senior Extension Educator

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## Pennsylvania Soybean Board 2013 Fiscal Year

Oct. 1, 2012 through Sept. 30, 2013

### Income

FY'12-FY'13 Assessments	\$ 1,584,342
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<b>Total Income</b>	<b>\$ 1,584,342</b>
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### Expenses

50% of FY'12-FY'13 Assessments to United Soybean Board	\$ 792,171
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Administration, Compliance, Audits, Insurance	\$ 60,496
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Special Projects	\$ 46,361
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Communications	\$ 42,995
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Promotion	\$ 165,079
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Research	\$ 222,065
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<b>Total Expenses</b>	<b>\$ 1,329,167</b>
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Carryover available for FY'12-FY'13	\$ 255,175
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## Today's Agriculture Shows Consumers the 'Real Deal'

For the thousands of visitors who flock to the Pennsylvania Farm Show, the Today's Agriculture display is the must-see exhibit. The popular display, a joint effort among many advocates of Pennsylvania agriculture, is designed to dispel misinformation and change the attitude of consumers regarding today's farming and agriculture practices.

This is the third year for the display, and the Pennsylvania Soybean Board and the United Soybean Board have been sponsors from the start.

With the urban and suburban population five and six generations removed from farm life, there's a knowledge gap that can be all too easily filled with misinformation, explained Bob Stallman, President of the American Farm Bureau Federation, who was on hand to unveil last year's display.

"Farmers know what they do to keep food safe," he said, "and they assume everyone else knows, too. There is an effort needed to bridge the information gap between producers and consumers. Farmers need to communicate the basics of what we do so that

consumers feel good about their choices."

Consumers want to know how their food is produced, how production impacts the environment, and how animals are cared for on the farm. The Today's Ag display answers those questions.

The display provides real-life displays and educational materials that show how products like eggs, chicken, beef, soybeans and corn are raised using modern agricultural practices. A barn built inside the Farm Show Complex houses chickens, ducks, turkeys, pigs and cows housed in cages and pens that are the industry-standard. Modern farm equipment shown in field settings is also part of the display.

And just as important as the display itself are the farmer/volunteers who are on hand to interact with the public and answer their questions. The transparency of showing what goes on in barns and fields across the Commonwealth, and the opportunity to talk with a real-life farmer, is having a positive impact on the public's perceptions of farming. ✓



### STOP BY!

Visit the Today's Agriculture exhibit at the 98th Pennsylvania Farm Show from January 4-11, 2014 at the Pennsylvania Farm Show Complex & Expo Center, North Cameron and Maclay Streets, in Harrisburg.

## Penn State Elevators Get Lift from Soybean Oil

Did you know that the oil from U.S. soybeans can help give you a lift or bring you down with a push of a button? That's right – some 17,000 gallons of soy-based hydraulic fluid is now powering elevators across the Pennsylvania State University's 22 campuses, thanks to a list of collaborators including the Pennsylvania Soybean Board and national soy checkoff, Penn State researchers and the university's administration.

It all started in 1998, when the hydraulic hoses on tractors at the university farm leaked hydraulic fluid into the ground, causing expensive contamination of soil and water. Lysa Holland, an engineer at the university, connected with Dr. Joseph Perez, an expert on biobased fuels and oils for the solution—and the tractors started using soy based fluid. Then Holland

got the idea of using soy-based fluid in the university's hydraulic elevators, an area Perez's team had been working on since 1995.

As it turned out, USDA successfully tested the soy-based elevator fluid in the Statue of Liberty in 2002. Bunge purchased the licensing agreement three years later, making the product commercially available. Since then, it's been known as AgriTech® soy-based hydraulic fluid. The state Department of Environmental Protection then approved the fluid, and all hydraulic elevators were switched to the soy-based product.

"This is a perfect case history of how all concerned parties—those responsible for operations, those responsible for compliance, and those who have the scientific knowledge and skill—at a university

like Penn State can work together, to advance sustainability goals," says Steven Maruszewski, the assistant vice president, physical plant.

Dr. Perez credits the soy checkoff on playing a role in the early development of soy-based hydraulic fluids. "The Pennsylvania Board provided some funds for the first study on soy-based hydraulic fluid for the Penn State tractors, and USB has provided funds for study in handling the used fluid," he says. ✓



**Check it out!**  
Watch the elevator fluid in action at [www.youtube.com/watch?v=Ts9vOsi9sU8](http://www.youtube.com/watch?v=Ts9vOsi9sU8) or scan this QR code.

# CHECKOFF

Pennsylvania's soybean producers are investing in research and education projects designed to provide reliable data to soybean growers, expand markets for soybeans, and educate the public through checkoff grants awarded by the Pennsylvania Soybean Board. In Fiscal Year 2013 (October 1, 2012 – September 30, 2013), more than a quarter million dollars was allocated to research projects to benefit Pennsylvania growers.

Research summaries of checkoff funded projects are available online at [www.pasoybean.org](http://www.pasoybean.org).

# FUNDED



## CROP PRODUCTION RESEARCH

### A Sentinel Plot Program for Detection of Insect Pests and Diseases in Pennsylvania Soybeans

*Penn State*

The sentinel plot program is run in collaboration with Penn State Extension to provide soybean growers with statewide assessment of insects and diseases active in soybean fields. Eighteen soybean fields were scouted weekly for insect pest and disease population throughout the 2013 growing season.

### On-Farm Network

*Penn State*

In 2013, more than three dozen Pennsylvania growers throughout the state participated in the On-Farm Network to evaluate products and crop management practices on their farms. The On-Farm Network, which was initiated in 2009, focused on the following:

- Evaluating the potential of foliar fungicide responses under high yield conditions
- Evaluating the effectiveness of the effectiveness of molybdenum seed treats, especially on fields with low pH
- Evaluating the potential of bio stimulants for soybean production

The results of the On-Farm Network research are shared with growers at soybean crop production meetings held at various locations throughout the state, and disseminated through crop meetings and online resources.



### Evaluation of Soybean Germplasm under Pennsylvania Conditions

*Penn State*

Penn State crop specialists manage the annual soybean variety trials at Penn State's research farms in Lancaster and Centre Counties. Commercial varieties and experimental cultivars are evaluated. The continuing search for higher yielding varieties, the onset of new diseases and insects, and the new focus on value-added traits in the future is essential to soybean producers in Pennsylvania. The 2013 Pennsylvania Soybean Variety Performance Report is now available. Go to

<http://extension.psu.edu/plants/crops/news/2013/12/2013-pennsylvania-soybean-variety-performance-report-now-available> or scan this QR code.



### Common Pokeweed Management in Field Crops

*Penn State*

Common pokeweed is a perennial weed that has invaded Pennsylvania fields. Traditionally, plowing was used to keep pokeweed at bay. However, the widespread adoption of no-till, along with a decline in the use of soil residual herbicides, especially in soybean, has allowed pokeweed populations to explode. Pokeweed not only hinders the growth and yield of crops, the mature plants are toxic to animals and humans.

This project is designed to increase understanding of the biology and ecology of pokeweed, and evaluates the effectiveness of various herbicide options for control in no-till applications.

### The Effects of Manure Application on Soybeans

*Penn State*

The state's intensive animal agriculture industry makes the investigation into the value of manure application on soybeans an important research project. Issues related to manure use include yield impact and environmental impact. This project will evaluate different manures (dairy and swine) on different crops and soil in south-central Pennsylvania. (Look for results of this study in the PSB spring 2014 newsletter.)

# D PROJECTS

## ANIMAL AGRICULTURE

### Anticipating the Next Welfare Challenge: Environmental Enrichment for Gestating Sows

*University of Pennsylvania, New Bolton Veterinary Center*

Changing expectations of society about how food is raised is driving efforts to reform agricultural production systems. Mounting societal concerns about modern agriculture has fueled the efforts of animal advocates who are seeking sweeping reforms of today's agriculture. While often well-intentioned, many legislative initiatives are not well-backed by science, and have the potential to actually decrease animal welfare and/or put farmers at a competitive disadvantage, threatening their livelihood.

This research targets gestating sow enrichment in anticipation of the next animal welfare challenge. It addresses these concerns in order to prepare Pennsylvania farmers for the future and to ensure that the Pennsylvania swine industry is preserved and positioned for future growth.

## NEW USES

### Prevention of Inflammation-Driven Colon Cancer by Soy Protein Concentrate

*Penn State*

Colon cancer is the third most common cause of cancer death in the United States. Research has shown that inflammation and oxidative stress of the gastrointestinal tract increase the risk of developing colon cancer, while some dietary compounds are associated with their prevention. This research will build on studies that support this new use of soybean protein. If successful, the studies will provide pre-clinical data to support clinical trials on the colon cancer preventative effects of soy protein concentrate.

## EDUCATION

### Soybean Field Workshops

This past growing season, the Penn State Field and Forage Crops Team conducted ten Soybean Field Workshops across the state. The workshops were sponsored by the Pennsylvania Soybean Board. Two workshops were held at each site – the first shortly after planting, and the second around canopy closure. The first workshop focused on soybean emergence and populations, row widths, and soil fertility, while the second workshop addressed insects, diseases, and harvest considerations.

The workshops were formatted to allow hands-on learning and interaction among the participants. Field and Forage Crops Educators discussed practices to help improve soybean yields, while growers shared their experiences with one another. This interactive setting allowed an overwhelming majority (84%) of the 296 participants to increase their knowledge of soybean production practices, and 67% of the participants plan to implement a production practice that was discussed during the workshops.



*At a Soybean Field Workshop, Andrew Frankenfield, Extension Educator, Montgomery County (background) and Dwane Miller, Extension Educator, Schuylkill County, calculate soybean stand using a 100-foot tape.*

### Pennsylvania Soybean Workshops

Penn State Extension educators hosted Soybean Workshops for growers in Potter, Westmoreland, Schuylkill, and York counties in December 2013. The workshops focused on cultural management tactics, insect and disease management, weed management systems and harvest and storage considerations.

### Today's Agriculture Display

The Pennsylvania Soybean Board supports the Today's Agriculture display at the Pennsylvania Farm Show. The exhibit is designed to dispel misinformation and change consumer attitudes regarding today's farming and agriculture practices. (See story on page 3.)

### Biodiesel Technicians Training

The Pennsylvania Soybean Board hosted a Biodiesel for Diesel Technicians training course conducted by the National Biodiesel Board. (See story on page 6.)

### Mobile Ag Lab

Support of the Pennsylvania Farm Bureau's Mobile Ag Lab brings ag education to thousands of school children throughout Pennsylvania

## Diesel Mechanics Eager to Learn More about Biodiesel

In its continuing focus on soybean research, marketing and education to support the profitability of Pennsylvania soybean farmers and the soybean industry, the Pennsylvania Soybean Board hosted a Biodiesel for Diesel Technicians training course.

The National Biodiesel Board (NBB) conducted the ASE-accredited training course where diesel mechanics learned the latest information about the performance of biodiesel in engines, the benefits of using commercial biodiesel, and about biodiesel blends.

“Diesel mechanics and service technicians are often the first point of contact for users of biodiesel, so they need to be well-informed about the use of biodiesel products,” says Bill Beam, Chairman of the Pennsylvania Soybean Board.

Steve Howell, the instructor of the course, is one of the nation’s foremost biodiesel technical experts and has served as the Chairman of the ASTM International Task Force on Biodiesel Standards since 1993. In the NBB training course, which is the only NATEF-approved course for diesel mechanics in the U.S., Howell focuses on the importance of fuel quality and the 20 years of testing on biodiesel blends in diesel engines sponsored mainly by the soybean checkoff program.

“The scientific community and the diesel engine experts have amassed a lot of data over the past 20 years which served as the basis for the stringent ASTM specifications we now have in the U.S. for biodiesel and biodiesel blends,” said Howell.

Many mechanics in the field are not aware that biodiesel blends meeting today’s ASTM specifications are largely trouble-free, notes Howell.

“Many of the previous issues with renewable fuels have not been with biodiesel—they have been with raw vegetable oil or some other concoction that wouldn’t come close to meeting the ASTM specifications for biodiesel. We really try and drive that point home to mechanics,” said Howell.



*Mel Agne (right), owner of Conestoga Diesel Injection, and Joel Shenk, a diesel mechanic who also attended the biodiesel training, stand next to a 6.9 L International Harvester diesel engine they have used for alternative fuel experimentation.*

Mel Agne, owner of Conestoga Diesel Injection in Willow Street, Pennsylvania, was one of more than two dozen technicians and educators who attended the training. “Increases in the percentage of biodiesel are a concern to fuel shops like mine,” he says. “One of the highlights of the training was the verification that biodiesel can be produced to a standard that satisfies OEM requirements. The more knowledge we have about how biodiesel behaves, the better it will help us diagnose fuel problems for our customers.”

Professor Jeff Gieniec, who teaches automotive technology at Harrisburg Area Community College, also attended the training with the intent to share the knowledge he gained with his students. He believes teaching students about biodiesel will help future generations see the value of diesel-powered passenger vehicles – something he says Americans have been resistant to. Highlights of the training for him were learning industry standardization of the biodiesel content in fuels, uses for biodiesel other than on the road, quality control issues, and taxation rules.

“Going back to the classroom, I will use the information in our fuels class, and also try to educate our students on the benefits to the use of biodiesel to power our vehicles,” he says.



*Jeff Gieniec will share the information he learned at the biodiesel training course with automotive technology students at Harrisburg Area Community College.*

## Pennsylvania to Host United Soybean Board Summer Meeting

This summer, Pennsylvania will play host to the 69 farmer/leaders who are directors of the United Soybean Board. The group will meet in Hershey, Pa. from July 16 -17, 2014 to make strategic decisions in support of the nation’s soybean growers. Their goal is to effectively invest and leverage soybean checkoff resources to maximize profit opportunities for U.S. soybean farmers. Pennsylvania growers are welcome to attend the meeting. Contact Jennifer Reed-Harry at [jrharry@pasoybean.org](mailto:jrharry@pasoybean.org) if you are interested.

# Wanted: A Healthier Soy Oil

High oleic soybeans deliver demand-building opportunities in the U.S. and in Pennsylvania

Today's agriculture industry is innovative – farmers can use precision farming, auto-steering and varied seeding and fertilizer rates. Why should soybean varieties be any different? They're not.

Take high oleic soybeans, for example. These deliver an innovative solution to customers. And Pennsylvania farmers have an opportunity to grow them. In select areas of the state, farmers can grow high oleic soybeans in their fields today.

Soybean farmers lost 4 billion pounds of annual soybean oil demand because commodity soybean oil no longer met the needs of select customers and trans fats were required to be labeled. But the oil from high oleic soybeans helps fill a gap in the market. It offers soy customers the functionality they need.

High oleic soybean varieties were developed to deliver a soybean oil with increased functionality for some food customers. The oil these soybeans produce adds functionality customers don't get with standard commodity oil, while avoiding trans fats and containing less saturated fats.

“Usually, you don't see seed-technology companies entering into agreements like this with their customers,”

These new soybean varieties became even more important this year with the Food and Drug Administration's announcement that it intends to ban trans fats. That could result in food companies reformulating their products over time to remove partially hydrogenated vegetable oils, thus reducing the demand for commodity soybean oil even more. High oleic soybeans produce an oil that could make up most of that lost demand.

The soy checkoff collaborated with seed-technology companies DuPont Pioneer and Monsanto to expand maturities of high oleic soybeans faster and in broader geographies. Those companies are now working to ensure these varieties yield comparably with other varieties in the

area, so farmers won't see a yield difference in their fields.

“Usually, you don't see seed-technology companies entering into agreements like this with their customers,” said Jim Stillman, chairman of the United Soybean Board (USB) and a soybean farmer from Emmetsburg, Iowa. “These collaborations show how committed the soybean industry is to developing quality, high-yielding high oleic soybean varieties and to developing the markets for them.”

For food companies to use high oleic soybean oil, farmers must first show they can grow a consistent supply of this oil. If the food industry trusts U.S. soybean farmers to provide an abundant, locally grown supply of high oleic oil, that will set the soybean industry apart from other oils like canola and palm and build demand for U.S. soybeans.

High oleic soybean oil also delivers added benefits for industrial, non-food users of soybean oil. The same functionality benefits that help the food industry also help industrial users who need oil that is stable in high-heat conditions.

Globally, customers could demand 9 billion pounds of high oleic soybean oil by 2023. To reach that, U.S. soybean farmers will need to plant 18 million acres of high oleic soybean varieties. The clock starts here and now, and Pennsylvania farmers can help reach this goal and bring back demand for U.S. soybean oil.



## The good news about high-oleic soybeans

- Pennsylvania farmers can grow high oleic soybeans right now. Contact your local seed rep or processor to find out more about opportunities in your area.
- Farmers in the eastern region of the United States who planted high oleic soybean varieties see them yield comparably with other varieties in the area and with their on-farm averages.
- High oleic soybeans meet food industry needs by increasing functionality for frying and baking. The oil produced by high oleic soybeans has no trans fats and less saturated fats.
- Industrial users can also benefit from high oleic soybeans, and additional oil demand could come from motor-oil and expanded lubricant applications, in particular.
- The soy checkoff set a goal of 18 million acres planted to high oleic by 2023 to help meet the potential global demand of 9 billion pounds of this soybean oil.

# winter SOYBEAN CONGRESS

Be sure to mark your calendar!

**When:** February 6, 2014  
9 a.m. – 4 p.m.

**Where:** Grantville Holiday Inn  
Hershey Exit 80, I-81  
Grantville, PA 17028

- Learn the latest research findings in soybean production
- Farmer-to-farmer panel discussion

Register by calling the Pennsylvania Soybean Board at 717-651-5922 or via email at [jrharry@pasoybean.org](mailto:jrharry@pasoybean.org).

**We look forward to seeing you there!**

Sponsored by the Pennsylvania Soybean Board. All soybean growers are invited to this free, informational session. Lunch is provided.



## Upcoming Events

Pennsylvania Farm Show

**WHEN:** January 4-11, 2014

**WHERE:** Pennsylvania Farm Show Complex  
Harrisburg, PA

Professional Crop Producers Conference

**WHEN:** February 17-19, 2014

**WHERE:** Best Western Eden Resort  
Lancaster, PA

Keystone Farm Show

**WHEN:** January 7-9, 2014

**WHERE:** York Fairgrounds  
York, PA

PSB Board Meeting

**WHEN:** February 13, 2014

**WHERE:** Pennsylvania Soybean Board Office  
Harrisburg, PA

Winter Soybean Congress

**WHEN:** February 6, 2014

**WHERE:** Grantville Holiday Inn  
Grantville, PA

Commodity Classic

**WHEN:** February 27 – March 1, 2014

**WHERE:** San Antonio, Texas

For more details on these events, go to [www.pasoybean.org](http://www.pasoybean.org)