



CHECKPOINT²⁰²⁰

PENNSYLVANIA SOYBEAN BOARD FISCAL YEAR **2020 ANNUAL REPORT**

Here's How the Soy Checkoff Works

The national soy checkoff was created as part of the 1990 Farm Bill. The Federal Act & Order that created the soy checkoff requires that all soybean farmers pay into the soy checkoff at the first point of sale of the soybeans. These funds are then used for promotion, research and education at both the state and national level.



Led by volunteer farmers, the United Soybean Board and the Pennsylvania Soybean Board invest and leverage soy checkoff dollars to **MAXIMIZE PROFIT OPPORTUNITIES** for all U.S. soybean farmers.

FIELD NOTES

Message from the Pa. Soybean Board Chair



John Harrell

The many challenges and changes occurring in the agriculture industry drove the thought behind the new strategic plan for the Pennsylvania Soybean Board. As farmers ourselves, we take very seriously our mission to be trusted stewards of checkoff funds. At our February 2020 meeting, we charted the course that will guide us in investing checkoff dollars for the benefit of our state's soybean farmers. As the ag industry evolves year to year, we will be looking

at our plan to make sure we're keeping up with industry changes and focusing on what's needed to move the soybean industry forward.

Checkoff funds are used exclusively for promotion, research and education. We've always been very big in our support of animal ag, Pennsylvania's largest ag industry. We're still heavily supporting animal ag, but we're putting more emphasis on education. Part of that is educating the up and coming generations about agriculture.

We also invest heavily in research projects. Through university research, Penn State Extension educators, field days, newsletters and social media, we are continually providing research-backed information to educate farmers on how to get the best return on the resources they invest in growing soybeans.

And we're providing information to our first purchasers and other industry stakeholders on what the checkoff is doing on behalf of soybean farmers.

On research projects, as well as sponsorship proposals, collaboration is one of the things we're emphasizing as we look at requests that come to the Board. We ask that if you bring a proposal forward, bring an organization or university that will

partner with us to broaden our reach and help advance the soybean mission and Pennsylvania's ag industry as a whole.

Being a good steward of the checkoff dollars is a responsibility each of us on the Board takes seriously. We look at projects in-depth and we don't rubber stamp a project just because we have the resources to fund it. We do a deep dive into each project proposed to us. Our Board is remarkably diverse within the ag industry. Board members all grow soybeans, but they're also involved in dairy, beef, hogs, poultry and row cropping. When a proposal comes to us, we always ask, 'Is this something that makes sense for our farmers?' We make every effort to move forward only the projects that we feel will put dollars back into our farmers' pockets.

If you have the time and desire to work on behalf of our state's soybean growers as a member of our Board, let us know. And even if you aren't able to serve on the Board, we welcome your input. Please feel free to contact Jennifer Reed-Harry, our Executive Director. She'll be sure to answer your questions or put you in touch with one of our Board members.

Wishing you all a safe, happy, and prosperous 2021,

John Harrell

Chair, Pennsylvania Soybean Board

PENNSYLVANIA SOYBEAN BOARD STRATEGIC PLAN

Adopted February 5, 2020

STRATEGIC OBJECTIVES

1. Preserve and advance animal agriculture, the largest consumer of soybean meal
2. Promote biofuels and bioheat through partnering opportunities
3. Identify and promote sustainable practices that provide return on investment
4. Drive new innovations to increase the value of soy
5. Increase the understanding of soy

ROAD MAP FOR INVESTING CHECKOFF DOLLARS

1. Address key needs of all our audiences and stakeholders
2. Explore “outside the box” — new varieties, uses and markets, ag and food issues, and reaching the next generation
3. Seek out new opportunities, collaborating with other state checkoffs and farming organizations
4. Practices for economic and ecological sustainability, success planning

CHECKOFF WORKING FOR YOU

The results of a 2019 independent economic study, which is required by USDA and takes place every five years, found that between 2014 and 2018, U.S. soybean farmers received \$12.34 in added value for every dollar they invested in the soy checkoff.



Oct. 1, 2019–Sept. 30, 2020

Pennsylvania Soybean Board Officers

John Harrell*, Lebanon, PA
Chair

Emily Landis,
Pennsylvania Furnace, PA
Vice Chair

Steve Hykes, Greencastle, PA
Secretary/Treasurer

BOARD MEMBERS

Andy Fabin*, Indiana, PA
Justin Jones, Wyalusing, PA
Dustin Kieffer, Rebuck, PA
Justin Knoebel, Elysburg, PA
Robert Reed, Danville, PA
Rick Telesz, Volant, PA

Ex-Officio Member

Dr. Paul Esker, Penn State

EXECUTIVE DIRECTOR

Jennifer Reed-Harry
jrharry@pasoybean.org
(717) 651-5922



* Also serves on United Soybean Board

PENNSYLVANIA SOYBEAN BOARD ANNUAL FINANCIAL REPORT

Fiscal Year 10.1.19 to 9.30.20

CASH ASSETS:

Operating Funds	\$420,871
Emergency Preparedness Fund	\$500,000
Dissolution Fund	\$230,218
Equipment, net	\$1,273
Less: Liabilities	-
Net Assets at 9.30.20	\$1,152,362

REVENUE:

Assessment Income	\$1,214,144
Less: Assessments Paid to USB & QSSB's	\$(704,230)
Interest/Other Revenue	\$14,737

PROGRAM EXPENSES:

Communications	\$(67,796)
Promotion & Education	\$(193,601)
Research	\$(561,651)
Administration/Audits/ Compliance/Insurance/Other	\$(158,610)
Increase/(Decrease) in Net Assets	\$(457,007)

CHECKOFF FUNDED

Research projects designed to provide reliable crop production data to soybean growers and to support Pennsylvania's animal agriculture industry were awarded checkoff grants by the Pennsylvania Soybean Board. Research projects focused on crop management practices as well as research benefiting animal agriculture, the largest domestic user of soymeal and the largest sector of Pennsylvania's agricultural industry.



CROP PRODUCTION

RESEARCH



SOYBEAN RESPONSE TO NITROGEN AND SULFUR RATE AND TIMING OF FERTILIZER APPLICATION

- Penn State

This research will help to identify whether one sulfur fertilization event can meet the needs of both a soybean and corn crop, or if there is a benefit to applying sulfur fertilizer to both crops in the rotation. The results will aid farmers in managing the sulfur supplied to their soybean crop, either from the previous year's fertilization or fertilization in the current year to maximize yield and grain quality.

ASSESSING THE SUITABILITY OF NON-GMO SOYBEANS IN NORTHEAST PENNSYLVANIA GROWING CONDITIONS

- Penn State

Soybean producers in northeastern Pennsylvania often struggle to find marketing opportunities for their crop due to a lack of available local grain buyers. This project will explore the possibility of utilizing Sulfonylurea Tolerant Soybeans (STS) to gain access to non-GMO commodity markets. This variety of soybeans allows producers to grow soybeans for a niche market and price premium while providing additional options for the control of difficult weeds.

PROACTIVE MONITORING AND MANAGEMENT OF SOYBEAN CYST NEMATODE

- Penn State

Soybean cyst nematode (SCN) is the most destructive soybean pathogen in the United States. One of the greatest challenges for SCN management is the fact that infestations and yield reductions can occur in the absence of visible symptoms. This project will aim to raise awareness of the risk SCN poses to soybean production and offer a free SCN testing program to proactively track SCN across Pennsylvania to develop best management practices.



BEST MANAGEMENT GUIDELINES FOR WHITE MOLD

- Penn State

The persistent annual risk of white mold requires development of a proactive approach to understanding the importance of different risk factors, as well as farm-level economics to incorporate new changes on the farm. Research will investigate best management practices for the control of white mold.

CHECKOFF FUNDED **RESEARCH**



PENNSYLVANIA ON-FARM NETWORK

- Penn State

In a continuing project, the Penn State Research Experiment Farms and Pennsylvania growers participating in the On-Farm Network test a variety of products and management practices. A new project this year addressed integrating different cover crops into standing soybean to improve nitrogen sequestration. Growers in 27 counties participated in the research. The report will be available online at pasoybean.org and through Penn State Extension educators.



SENTINEL PLOT PROGRAM

- 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. Soybean fields in 20 counties throughout the state were scouted weekly for insect pest and disease population. Reports of the scouting results were reported weekly throughout the growing season on Field Crop News and other Penn State Extension-based outlets.

BACTERIA BIOCAPSULES: GREEN MATERIALS THAT IMPROVE THE PERFORMANCE OF SOYBEAN INOCULANTS

- Penn State

Maximizing soybean crop yields requires large amounts of fixed nitrogen. This project will develop a non-tonic, sustainably sourced material that can be used to improve the performance of nitrogen-fixing soybean inoculants. This new technology will address the needs of maintaining soil health and technologies to combat mold and other pathogens with a more sustainable, greener alternative.

ANIMAL AGRICULTURE

Detection and Analysis of Streptococcus Zoepidemicus in Pigs

- Penn State

A bacterium, which is commonly abbreviated Strep zoo, has become a growing concern in the swine industry worldwide. In China, repeated outbreaks of Strep zoo over the past decade have revealed genetic changes of the strains associated with a more severe disease. There is an opportunity during this early phase of emergence in the U.S. to limit Strep zoo before the more virulent strain becomes persistent. However, if it is not detected in a timely manner, mortality can quickly reach 30 to 50 percent. This research will investigate an alternative diagnostic procedure which is highly sensitive, rapid and specific and can identify the presence of a pathogen within hours instead of days.

Determination of the Effect of High Oleic Soybeans on Fatty Acid Digestibility

- Penn State

Dietary fat helps support high energy demands of lactating cows, but the dairy cow has a limited ability to digest dietary fat. High oleic soybeans provide both dietary fat and protein to diets and increase milk fat yield compared to conventional soybeans in lactating dairy cows. The research will investigate whether the effect of high oleic soybeans on fat digestion may provide an additional benefit to dairy cows by increasing fatty acid digestibility.

Production Effects of Extruded Soybean Meal in Comparison with Canola Meal in Lactating Dairy Cows

- Penn State

The study aims to demonstrate a greater supply of metabolizable protein and increased cow productivity with extruded soybean meal versus canola meal, which will expand the market for soybeans and soybean meal among dairy producers.



Control Measures for Avian Reovirus Variants and Other Enteric Viruses in Poultry Flocks

- Penn State

Prevention and sanitization of avian infectious disease agents, especially highly pathogenic or newly emerging pathogens, are essential and priority issues to prevent disease outbreaks and maintain healthy production in poultry flocks. This research will test the efficacy of “soft” disinfectants on the ARV variants to develop more effective control measures.

Promoting the Proliferation of Specialist Microbes on Selected Soybean Products in Concert with Forages to Improve Rumen Function in Dairy Cows

- University of Pennsylvania

Producers are constantly looking for cost-effective feeds to boost milk production. University of Pennsylvania field veterinarians have demonstrated the dual benefit of improving milk production and lowering feed costs when soy-products were included in dairy cow rations. This research project will study combinations of forage/soybean products to deduce the best expected outcome for rumen fermentation and dairy cow productivity. The study will also measure the methane and CO2 production in various forage-soybean product combinations fermentation.

Animal agriculture is the #1 customer of soybeans in Pennsylvania.

COLLABORATIVE RESEARCH

NORTH CENTRAL SOYBEAN RESEARCH PROGRAM

The Pennsylvania Soybean Board is the newest member of the North Central Soybean Research Program (NCSRP), originally established in 1992 by state checkoff organizations in the North Central states. This farmer-led organization invests soybean checkoff funds in university research and Extension programs to better understand and manage plant stressors that reduce soybean yield and farmer profitability. Their mission is to maximize

producer returns by coordinating regional research efforts, minimizing duplication of research, and assuring that regional research projects are targeted at problems of the soybean producer in member states.

“For Pennsylvania soybean producers, participating in the NCSRP provides a tremendous opportunity to leverage their checkoff investment into new areas of research,” says Penn State’s Dr. Paul Esker, who serves in an advisory capacity on the Pennsylvania Soybean Board. “Most projects are multistate, so we can compare and integrate results from across the region. This research can help farmers improve production and management decisions because they can see how various treatments or factors may perform in different soybean production areas.”

The NCSRP is recognized as a leader in multi-state collaborative research and outreach efforts to support soybean farmers and drive the soybean industry forward. NCSRP’s emphasis on enhancing and protecting soybean yield through genetics and agronomic practices contributes to soybean farmer success today and tomorrow.

The NCSRP Board approved new and ongoing research projects for funding for the 2020 fiscal year that focus on soybean diseases, soybean cyst nematode, soybean entomology, genetic studies toward the improvement of host resistance and yield, and outreach. Several of the projects are being jointly funded by the United Soybean Board and state checkoff boards.



BRINGING RESEARCH FINDINGS TO FARMERS

The findings from the research projects the soy checkoff invests in at the national and state levels can now be found on the Soybean Research & Information Network (SRIN) website.

The Soybean Research & Information Network is designed for farmers to read about all the benefits of checkoff-funded research projects. Videos summarizing the research are available as well.

- Read summaries and highlights of the latest research
- Discover resources and publications
- Explore topics including agronomics, diseases, and pests

Each article on the SRIN website provides insight and explanation on the research findings and links directly to the study in the research database for further exploration. Projects have sought to combat all sorts of challenges, from obstacles associated with unpredictable weather patterns to insect management and variety performance.

soybeanresearchinfo.com

SOYBEAN RESEARCH
AT YOUR FINGERTIPS.



CHECKOFF FUNDED AGRICULTURAL EDUCATION



MOBILE AG EDUCATION SCIENCE LAB

Pa. Friends of Agriculture

Things looked a little different as the Mobile Ag Education Program started the 2020-21 school year. Thanks to the support of donors like Pennsylvania Soybean Board, students continue to have the opportunity discover the importance of agriculture.

Due to school health and

safety guidelines caused by the COVID-19 pandemic, two alternative experiences were developed. The first option takes the ag lab experience into the classroom with lessons adapted to accommodate social distancing and sanitation procedures between each class.

The second option is for schools

to opt for remote or virtual instruction.

As an educational add-on to the program, virtual farm field trips are being offered. Classroom teachers receive digital ag lab lesson extensions to expand the ag learning experience beyond the visit.

The Mobile Ag Lab program has a fully equipped classroom on wheels where students in grades K-8 come to complete hands-on science experiments related to agriculture. The COVID-19 pandemic required a change in format, but ag education programs are still being delivered to students.

AG EDUCATION EXPANSION *Pa. FFA Foundation*

Of the 501 school districts in Pennsylvania, only 150 have ag education programs. The Pa. Soybean Board is helping fund the Pa. FFA Foundation's initiative to expand that number. Their plan is to encourage the implementation of ag education in middle schools to build interest in having high school FFA programs. High schools that don't currently have ag education programs are also being targeted.

Funding from the Pa. Soybean Board also supports professional development for the state's ag teachers. Ag education teaches students about agriculture, food and



natural resources through classroom instruction, experiential learning outside the classroom, and leadership education through the FFA and other student organizations. Through ag education, students learn a wide variety of skills, including science, math, communications, leadership, management, and technology.

PA. SOYBEAN YIELD CONTEST

Each year, thousands of farmers raise soybeans on Pennsylvania farms. The Pennsylvania Soybean Board's annual yield contest recognizes producers across the state who excel in soybean production.

In addition to the state champion, the yield contest includes regional competitions. Growers in each of five regions, based on agronomic zones, compete against each other for top yield in non-irrigated beans. The regional competition allows farmers to show their skills against others growing in similar soils and under similar weather conditions.

The top state and regional growers are awarded an educational trip to the Commodity Classic, the premier convention and trade show for cash crop producers.

While yields have always been important, the contest rewards quality as well as yield. The grower with the highest oil/protein in each region is recognized with a plaque. Plaques are also awarded for the highest irrigated bean yield in the state and for the 90 Bushel Club.

For complete contest rules, see pasoybean.org.

The Pa. Soybean Yield Contest is more than just friendly competition between growers. A summary of the crop production practices from the 2020 contest entrants will be available from Penn State Extension educators and online at pasoybean.org.



For the second consecutive year, Mike and Bob Shearer of Twin Lane Farm in Mt. Joy, Lancaster County, took top honors in the Pa. Soybean Yield Contest.

CONGRATULATIONS TO THE WINNERS OF THE 2020 PA SOYBEAN YIELD CONTEST!

Overall State & South Central Region

Twin Lane Farm
(Mike & Bob Shearer)
Lancaster County
100.69 bu/a

Central Region

Jim & Ward Chapin
Columbia County
90.05 bu/a

Northern Region

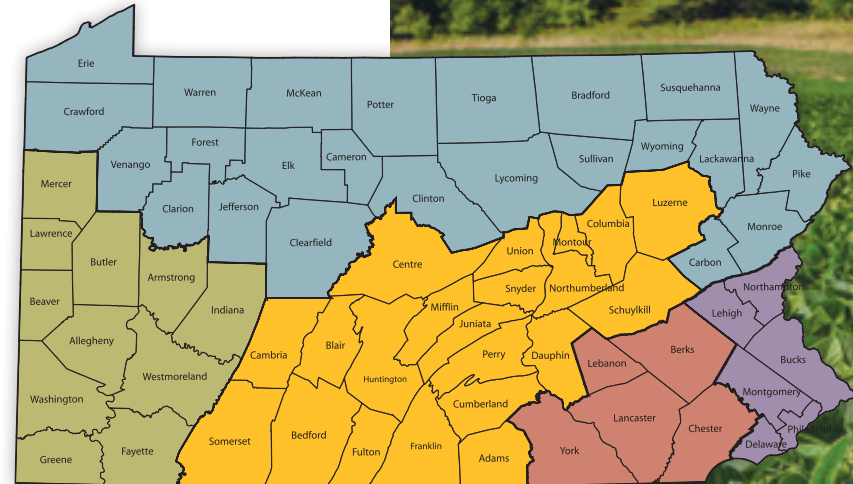
Justin Jones
Bradford County
45.15 bu/a

Southeastern Region

Brad Kiefer
Northampton County
94.07 bu/a

Western Region

Henry Sniezek
Lawrence County
68.45 bu/a



- Northern Region
- Western Region
- Central Region
- South Central Region
- Southeastern Region

PA. FARMER SERVES ON USB EXECUTIVE COMMITTEE



Andy Fabin, from Indiana, Pa., assumed a key position as one of the directors of the United Soybean Board's (USB) Executive Committee for Fiscal Year 2020. Fabin is also a director of the Pennsylvania Soybean Board and represents Pennsylvania growers on the United Soybean Board.

The USB Executive Committee, with oversight from USDA, guides the activity of the national soy checkoff in accordance with the strategy outlined by the 78-member board.

As part of the Executive Committee, Fabin acted as the Sustainability Target Area Coordinator. End users and their customers are increasingly demanding sustainably produced products to meet their sustainability and social responsibility goals. To increase preference of U.S. soy, the checkoff continues to make communicating about sustainability one of its three target areas.

NEW USE FOR HIGH OLEIC SOYBEANS

High oleic soybean oil went to work out on the road—literally. To promote new markets for U.S. soybean farmers, the checkoff joined forces with Iowa Soybean Association, Asphalt Paving Association of Iowa and a team of researchers at Iowa State University to debut an asphalt biobased polymer using high oleic soybean oil.

There are over 4 million miles of paved roads in the U.S. that require significant upkeep, opening the door to huge opportunities for farmers growing high oleic soy across the country.

Along with asphalt, high oleic soybean oil has had a significant role in industrial uses, hitting shelves in multiple products. Asphalt, oil and other industrial use products mark a significant milestone in checkoff-funded projects. From renewable and sustainable opportunities to new and expanding markets, checkoff funding has opened new doors for soybean farmers around the country as opportunities continue to drive demand for soybeans.

According to tests conducted at Iowa State University, high oleic soybean oil outperforms other oils — even petroleum- and formaldehyde-based lubricants — in asphalt application. High oleic oil increases the reuse rate on asphalt grindings from 17% to over 30%, so it's changed the chemistry of that mix, and it is very advantageous for the industry.



WIN THIS YETI COOLER

ATTENTION SOYBEAN PRODUCERS!

We want to know what you think about the work the soybean checkoff is doing on behalf of soybean farmers. Complete a short survey at pasoybean.org for your chance to win a Yeti Tundra 65 cooler.

Deadline for entry is January 20, 2021. Winner will be chosen at the February 2021 meeting of the Pennsylvania Soybean Board.



BIODIESEL

HEATS UP THE MARKET

Biodiesel is an important component of the soybean market and is one of the key strategic areas of focus for the Pa. Soybean Board. It's estimated that as much as a quarter of U.S. soybean oil is used for biofuels and Bioheat®.

Over 5 million U.S. households, primarily in Pennsylvania and other parts of the Northeast, warm their homes with heating oil. Biodiesel advocates see opportunities to become an increasing part of that mix with Bioheat, a blend of biodiesel and ultralow sulfur heating oil.

Biodiesel works for the U.S., for the country's rural economies, soybean farmers, and poultry and livestock farmers. Biodiesel production supports animal agriculture because soybeans can be crushed for both oil and meal. More demand for soybean oil to make biodiesel increases the supply of soybean meal that can be used to make animal feed, and that increased supply leads to lower feed prices for poultry and livestock producers.



Contact us at:

Pennsylvania Soybean Board
Northwood Office Center
2215 Forest Hills Drive, Suite 40
Harrisburg, PA 17112

Phone: (717) 651-5922
Fax: (717) 651-5926
contact@pasoybean.org
pasoybean.org

For the latest news, events, research updates and more:



Visit us at pasoybean.org



Like the Pennsylvania Soybean Board on Facebook



Follow us on Twitter @PaSoybean



Subscribe to the Pennsylvania Soybean Board YouTube channel

