



EASTERN REGION
SOYBEAN BOARD

ANNUAL REPORT

FISCAL YEAR 2021



What is the Eastern Region Soybean Board?

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.

The Eastern Region Soybean Board (ERSB) is the farmer-controlled Qualified State Soybean Board responsible for managing the West Virginia, Florida and New England states' share of funds received from the soybean checkoff program.

In order to maximize funds available for projects and to reduce overhead costs, the ERSB participates in a shared-executive arrangement with the Pennsylvania Soybean Board.

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2021 Recap

It's my privilege to represent the soybean growers in West Virginia, Florida, and New England on the Eastern Region Soybean Board and on the United States Soybean Board (USB).

Soybean growers throughout the East Coast are well-represented on the USB.

This year, our new chairperson is Ralph Lott, a farmer from New York. And of course, we have representatives from all the QSSBs (Qualified State Soybean Boards) providing their input and guidance in determining how to best leverage the checkoff to create value for U.S. soybean farmers.

We are committed to making thoughtful checkoff investments to address both immediate and long-term opportunities. One of the major trends we're noting is increasing demand for soy oil as a sustainable replacement for petroleum and fossil fuels.

The checkoff's initiatives on high oleic soybean oil and biodiesel have a big impact on our market for soybeans. Here in the Northeast, the demand for soy BioHeat®, a fuel that burns more cleanly and more efficiently than conventional heating oil, is growing. And with the expansion of high oleic varieties tailored to more geographic areas and growing zones, soon more farmers will be able to take advantage of the premiums for high oleic soy oil used for food and industrial purposes.

With last year's productive growing season, favorable soybean prices, and increased demand, this has been an exciting time for U.S. Soy. I look forward to continuing working with my fellow board members to identify initiatives that return value back to you, the farmer.

Nick Kercheval

West Virginia soybean grower and chair of the Eastern Region Soybean Board

ANNUAL FINANCIAL REPORT

Fiscal Year 10.1.20 to 9.30.21

CASH ASSETS:

Operating Funds	\$110,460
Emergency Preparedness Fund	\$77,556
Dissolution Fund	\$47,004
Equipment	-
Less: Liabilities	-
Net Assets at 9.30.20	\$235,020

REVENUE:

Assessment Income	\$80,688
Less: Assessments Paid to USB & QSSB's	(\$35,587)
Interest/Other Revenue	\$2,954

PROGRAM EXPENSES:

Communications	(\$15,177)
Promotion & Education	(\$5,500)
Research*	(\$40,163)
Administration/Audits/Compliance/Insurance/Other	(\$17,560)
Increase/(Decrease) in Net Assets	(\$30,345)

*This amount reflects the actual disbursement of funds allocated for research as of September 30, 2021.

Checkoff Dollars Invested in Research

The Eastern Region Soybean Board invests checkoff dollars from producers in the states of West Virginia, Florida, Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont in research that helps answer farmer questions to ensure they are viable and profitable. In Fiscal Year 21, the Board invested over \$45,000 for region-specific research.

Maximizing Soybean Production in a Changing Climate

Principal investigator: Dr. Heather Darby, Agronomic and Soils Specialist, University of Vermont Extension

FUNDED AMOUNT: \$25,976

Due to continued economic and climatic pressures, farmers in the Northeast are looking for ways to increase on-farm feed production and diversify their operations to increase resilience and profitability. However, farmers face challenges due to the relatively short growing season and limited research-based information available in this area.

The purpose of this project is to evaluate soybean yield and quality to determine cover cropping management practices that enhance soil health while supporting high soybean yields. Understanding how soybeans

perform under various cropping systems can help producers make important management decisions that lead to better crop success.

With a growing concern of agriculturally related water quality implications in waterways, farmers are now required in some instances to cover crop their annually cropped fields. However, with this increase in cover cropping there is a need to investigate potential impacts on following cash crops and best practices for establishing cover crops into and following soybeans.

Similarly, with the concerted effort to reduce nutrient loading in waterways due to soil erosion, farmers are becoming more interested in adopting reduced and no-till practices. Understanding how to best combine these two

practices into soybean cropping systems specifically for the Northeast is critical to the success of soybean crops.

Several soybean trials at Borderview Research Farm in Alburgh, Vermont, included a variety evaluation trial, a cover crop trial in which soybeans follow fall planted cover crops under varying tillage regimes, and a soybean interseeding trial.



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Impact of Cover Crops and Double Cropping on Soybean Yield and Profitability

Principal investigator & co-investigator: Dr. David Wright, Professor of Agronomy, University of Florida & Sheeja George, Agronomy Scientist, University of Florida

FUNDED AMOUNT: \$20,375

Improving productivity and profitability through sustainable means of production is one of the challenges that producers face in the midst of weather extremes and limited resources. Use of cover crops to enhance soil health and benefit the following crop is gaining importance. Cover crops prevent soil erosion, suppress pests, scavenge nutrients from the soil, and build soil organic matter.

In this project, researchers established and maintained a crop rotation including winter Brassica carinata (carinata), winter oats and a corn-soybean summer rotation. The rotation was established such that there were enough plots to represent all winter and summer crops in a given year. Soybean is being produced under three trial conditions: following winter carinata, following winter oats and following winter fallow. The benefits of a winter cover and double cropping on soybean yield, weed suppression and pest suppression are being evaluated. Soil health effects in terms of soil organic matter and effects on water use are also being monitored.

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Soy Innovation Fueled by the Checkoff

HIGH OLEIC SOYBEANS

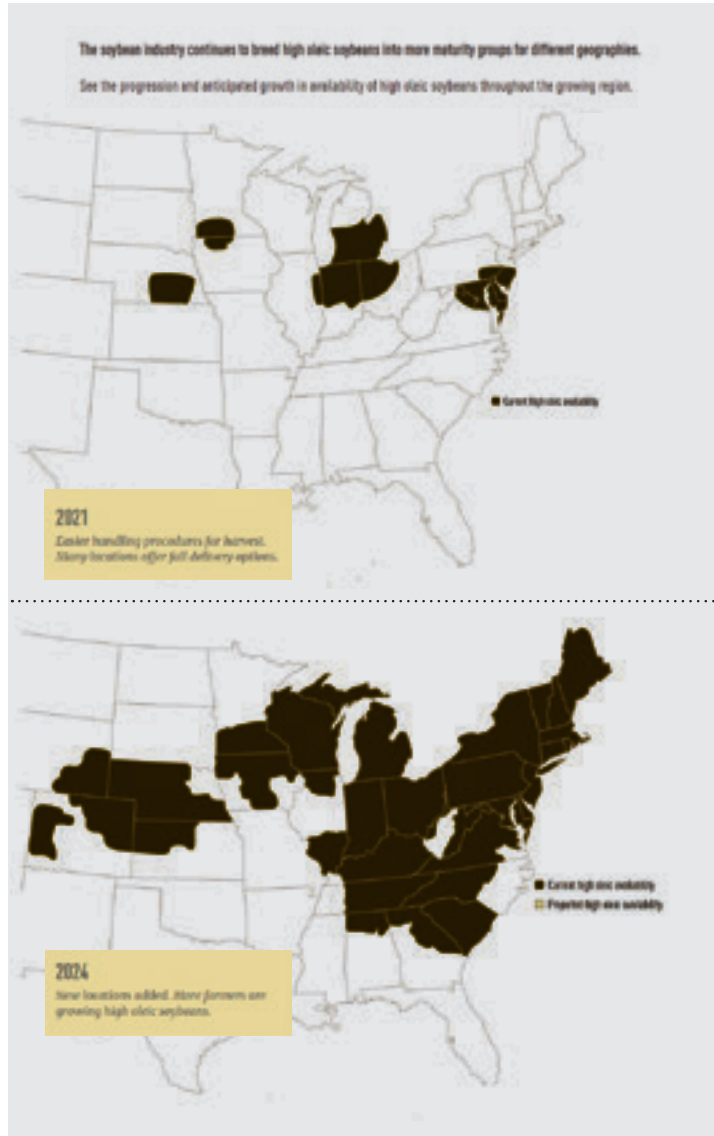
High oleic soybeans are a prime example of the soy checkoff working for all U.S. soybean growers. They're a product of decades of careful research to meet the end-user demand for better oil and have since been used in many applications.

High oleic soybeans are grown exclusively in the U.S. The oil produced from the crop provides increased functionality and improved shelf life for applications across the food and manufacturing industries.

Farmers in 13 states currently grow high oleic beans. That number is projected to increase in the next few years, as high oleic beans are expected to become available in a wider portion of the Eastern Region.

High oleic soybeans increase U.S. soy's global competitiveness by setting it apart from other vegetable oils and soy grown in other countries. Having high oleic soybean oil on the market increases the average value of all soybean oil, which helps to increase long-term demand for U.S. soybean farmers.

The soybean industry continues to breed high oleic soybeans into more maturity groups for different geographies. The maturity zones are expected to expand to 0 to 5 by 2023.



FOOD

High oleic soybean oil makes an excellent frying oil and shortening for food companies. As the name implies, high oleic beans are rich in oleic fatty acids, which commodity soybeans only produce in small amounts.

High oleic oil holds up well in frying and has a long shelf life, making it particularly appealing to food processors. For farmers, the selling point is equally straightforward. The beans are planted and managed like other soybeans, but they command a premium at the mill.

About 70 percent of this consumption is in food manufacturing, such as potato chips and other snack foods. These food businesses are turning to high oleic oil because it can fry two to three times longer than canola, corn, or traditional soybean oil before it needs to be replaced. High oleic oil also has long shelf stability. That alleviates the need for preservatives, a positive for consumers who value simple ingredient lists.





NEW & EXPANDING INDUSTRIAL MARKETS

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 as opportunities continue to drive demand for soybeans.

High oleic soy not only helps U.S. soybean farmers win a bigger share of the food oil market but also opens doors for new sustainable industrial uses that commodity soybean oil isn't suited to provide. High oleic soybeans provide industrial users with an oil that

require performance under high-heat conditions, such as synthetic motor oils and automotive lubricants. Work on nonfood uses for oleic oil that would replace petroleum products are expected to pay off in a big way by mid-decade.

In addition to helping manufacturers reduce their dependency on petrochemicals and insulate themselves from price fluctuations for raw materials, soybeans enable manufacturers to replace possible carcinogens and satisfy consumer demand for sustainable, environmentally friendly products.

ASPHALT

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 develop 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.

According to tests conducted at Iowa State University, high oleic soybean oil outperforms other oils — even petroleum and formaldehyde-based lubricants — in asphalt application.

MOTOR OIL

America's drivers have a new choice in motor oil that combines the consumer's need for performance and sustainability at a competitive cost. Biosynthetic Technologies released high-performing biobased synthetic motor oil using high oleic soybean oil from soybeans grown by U.S. farmers.



BIODEGRADABLE PLASTICS

The United Soybean Board provided a grant to expand Danimer Scientific's evaluation of high-oleic soybean oil as a feedstock in the production of polyhydroxyalkanoate (PHA), a sustainable biopolymer that serves as a biodegradable alternative to traditional plastic. Danimer Scientific is a pioneer in creating more sustainable, more natural ways to make plastic products.

The grant marks the continuation of Danimer's collaboration with the United Soybean Board after the successful completion of a one-year project to develop a practical model for using high oleic soybean oil as a feedstock in manufacturing Nodax. Nodax is Danimer's signature PHA, which is used to create a wide variety of biodegradable products, including straws, bottles, and flexible film packaging. The second year of the project will focus on scaling up the use of high oleic soybean oil on a commercial level.

Scan this QR code to learn more.

soyinnovation.com





Biodiesel Brings Added Value for Farmers

Through their investment in the checkoff, U.S. soybean farmers helped establish the biodiesel industry and have benefited from its growth. Increased demand for biodiesel boosts demand for soybean oil, the feedstock used in more than half the biodiesel produced in the U.S. In the last decade alone, biodiesel demand for soybean oil has grown 300%.

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

The National Biodiesel Board (NBB), supported in part by the soy checkoff, is on a mission to continue building demand for this domestically produced renewable fuel. NBB is the U.S. trade association representing the entire biodiesel and renewable

diesel value chain, including producers, feedstock suppliers and fuel distributors. The soy checkoff works closely with the association to fund research and promotion to help keep U.S. soybeans a top feedstock supplier for sustainable fuel whether that's filling your tank with biodiesel, heating homes with Bioheat® fuel or taking to the skies as sustainable aviation fuel.

“Our goal is to seize the opportunity ahead of the biodiesel and soybean industries by growing the market for biodiesel in its many forms,” National Biodiesel Board CEO Donnell Rehagen says. “Our vision is to exceed 6 billion gallons by 2030, potentially doubling the market from where it stands today at 3 billion gallons. And, with investments in feedstocks, to reach 15 billion gallons by 2050.

“As demand continues to rise, growth of biodiesel and renewable diesel production and use will be key to profitability at the farm level as well as throughout the value chain,” he continues. “The soybean industry will benefit directly as biodiesel and renewable diesel use increases.”

EAST COAST COMMITMENT EXPANDS FOR BIOHEAT®

In 2021, governors from Connecticut, Rhode Island, and New York signed graduated approaches to tackling carbon emissions into law through mandates requiring increased use of biodiesel/petroleum blended heating oil, also known as Bioheat® fuel, over the next decade. The bills highlight the growing momentum Bioheat fuel is experiencing in the region.

Each of the mandates differ slightly. Yet, each result in elevated blend levels of Bioheat fuel, including two of the mandates reaching B50 (a blend of 50 percent biodiesel, 50 percent petroleum diesel). In Connecticut, the mandate requires B5 by 2022, B10 by

2025, B15 by 2030, B20 by 2034 and B50 by 2035. In Rhode Island, the mandate expands Rhode Island's B5 mandate to B10 by 2023, B20 by 2025 and B50 by 2030. In New York, legislation mandates all heating oil sold within the state contain at least 5 percent biodiesel (B5) by July 2022. The requirement expands to 10 percent (B10) starting in July 2025.

“The momentum for biodiesel and renewable diesel as carbon-reduction strategies is continuing to grow and these policies help grow demand for our industries.” said NBB Director of State Governmental Affairs, Floyd Vergara.



BIOFUELS TAKE FLIGHT

Millions of bushels of soybeans could soon be used to power the jets that take us across the country and around the world. Sustainable aviation fuel (SAF), a clean substitute for the fossil fuels traditionally used for aviation, is poised to create new demand for soybeans and other feedstocks.

SAF is a fuel made from various feedstocks, including soybeans, cooking oil, waste oils from animals and municipal solid waste from homes and businesses. Other potential sources include forestry waste and fast-growing plants like algae.

“There are seven different pathways to make a renewable jet fuel or SAF today,” says Scott Fenwick, a chemist and technical director with the National Biodiesel Board. “Far and away, the most common that probably accounts for over 95 percent of all the SAF in the marketplace is fats and oils.”

SAF, just one of the sustainable fuels made from renewable biomass and waste resources, can deliver the same performance as petroleum-based jet fuel but with a fraction of its carbon footprint, giving airlines the ability to significantly reduce emissions, according to the U.S. Department of Energy.

Bringing Research Findings to Farmers

Check out the findings from all the research projects the soy checkoff invests in at the national, state and regional levels 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.

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

SRIN was launched to communicate checkoff-supported research projects to soybean farmers across the country and be a virtual resource full of information and toolkits for more efficient soybean production.

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.

Follow SRIN on social media: [Facebook.com/SoybeanResearchInformationNetwork](https://www.facebook.com/SoybeanResearchInformationNetwork) and [Twitter.com/SoyResearchInfo](https://www.twitter.com/SoyResearchInfo)



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