EASTERN REGION SOYBEAN BOARD

# ANNUAL REPORT

FISCAL YEAR 2022

OUR SOY CHECKOFF™

## 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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PRINTED WITH SOY INK

*Nick Kercheval*

## 2022 Recap

2022 turned out to be a pretty good year for soybean growers throughout the United States. In fact, as the harvest season started, the USDA expected soybean yields to average a record high of nearly 52 bushels per acre. That's good news for farmers, and good news for the soybean industry.

Production research funded by the checkoff has helped farmers increase yields. Each year, many proposals are presented to the farmer/leaders who serve on the national and state soybean checkoff boards. Every proposal is carefully evaluated with one thought in mind: how will this project advance the soybean industry and put more money into the pockets of producers.

Every member of the Eastern Region Soybean Board, and of the United Soybean Board, is a soybean grower, and we all pay into the checkoff. It's our duty to our fellow growers to invest checkoff funds wisely for maximum ROI. Whether it's supporting the animal ag industry (the largest customer for soy meal), researching best production practices, promoting biofuels or finding new uses and markets for soybeans, we put the farmer first.

This annual report showcases some of the initiatives that support the soybean growers in the Eastern Region. If you have any questions or suggestions of projects you'd like to see funded by the checkoff, please feel free to reach out to us.

**Nick Kercheval**

*Chair, Eastern Region Soybean Board*

ERSB EASTERN REGION SOYBEAN BOARD
Progress Powered by U.S. Farmers

# ANNUAL FINANCIAL REPORT

Fiscal Year 10.1.21 to 9.30.22

| CASH ASSETS: | |
|---|---|
| Operating Funds | $111,230 |
| Emergency Preparedness Fund | $77,550 |
| Dissolution Fund | $46,240 |
| Equipment | - |
| Less: Liabilities | - |
| Net Assets at 9.30.22 | $235,020 |

| REVENUE: | |
|---|---|
| Assessment Income | $92,363 |
| Less: Assessments Paid to USB & QSSB's | $(42,843) |
| Interest/Other Revenue | $1,467 |

| PROGRAM EXPENSES: | |
|---|---|
| Communications | $(14,066) |
| Promotion & Education | $(13,638) |
| Research* | $(28,738) |
| Administration/Audits/ Compliance/Insurance/Other | $(4,761) |
| Increase/(Decrease) in Net Assets | $(10,216) |

* This amount reflect the actual disursement of the funds allocated for research as of September 30, 2022.

# 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 22, the Board invested $25,500 for region-specific research.

## Stemming Stand Loss Caused by Slugs

They're ugly. They're slimy. And they love to munch on young soybean plants. They're slugs, and they're becoming an increasing problem for Northeast soybean growers.

Slug activity is picking up. The occurrence of slug damage to corn and soybeans is directly associated with the widespread adoption of reduced tillage farming. This conservation-based approach to managing farmland has many benefits such as reduced erosion, better water conservation, and improved soil health.

However, the increased soil surface residue associated with no-till cultivation has a downside: it provides the perfect environment for slug populations to develop, especially during wet, cooler years. And if a field is maintained under no-till practices for an extended period of time, the threat of increased slug populations is even greater.

*The slug shown here is a gray garden slug traveling on and eating a young soybean plant. Note the cotyledon-less stem to the right: this is a plant that is already doomed by slug feeding.*

While slugs are damaging to corn, they're even more damaging to soybeans. Corn damage is usually limited to defoliation of emerging leaves: an injury that corn can often outgrow. However, slugs in soybeans can cause greater damage because the growing point is above ground at an early stage, and slug feeding typically causes the plant to die.

There are currently no economic thresholds based on slug numbers or feeding damage. The primary management strategy for slugs is to employ a tillage practice that removes crop residue or incorporates it into the soil.

### MANAGEMENT CONSIDERATIONS

In fields with a history of slug damage, preventive practices to reduce risk of damage include:

- Zone tillage or row sweepers at planting may reduce slug damage by encouraging soybean growth and the drying of the soil.
- Delay planting until soils warm up for rapid germination and emergence.
- Poorly sealed seed furrows can result in severe slug damage and crop stand losses since it allows slugs to feed continuously, day or night.
- Slug severity usually tapers off quickly if periods of dry weather develop.
- Tile drainage on very heavy or poorly drained soils will help reduce excessive moisture, the preferred environment of slugs.
- Removing corn stalks for bedding also removes the heavy residue cover that helps keep soils moist, which is critical to a slug's lifecycle.
- Where replanting is necessary, the field or area should be tilled first to disrupt the slugs' environment.
- If chemical control is necessary, contact your state Extension office for recommended products and rates. Always read and follow label directions.

**Scan this QR code to learn more.**

*soybeanresearchdata.com*

# Soybean Variety Evaluation Trial

*Principal investigator:*
*Dr. Heather Darby, University of Vermont Extension Agronomist*

## RESEARCH SUMMARY

As farmers look to reduce feed costs or diversify markets, soybean acreage across Vermont is increasing. Local research is needed to identify varieties that are best adapted to this region. In an effort to support and expand the local soybean market throughout the northeast, the University of Vermont Extension Northwest Crops and Soils (NWCS) Team evaluated yield and quality of short season soybean varieties at Borderview Research Farm in Alburgh, Vermont, as part of a grant from the Eastern Region Soybean Board.

## FINDINGS

Overall, soybean varieties performed well averaging over 70 bu/ac this year. Under these conditions, all soybean varieties reached maturity and a harvestable moisture although harvest dates differed depending on the maturity group. Although little pest and disease pressure was observed, some differences were still observed and highlight the importance of local variety evaluation in soybean variety selection. These data suggest that soybeans in maturity groups 0, 1, and 2 can produce high yields under conventional management in Vermont's northern climate. It is important to remember that these data only represent one year at one location and therefore should not solely be used to make management decisions.

**Scan this QR code to learn more.**

*blog.uvm.edu*

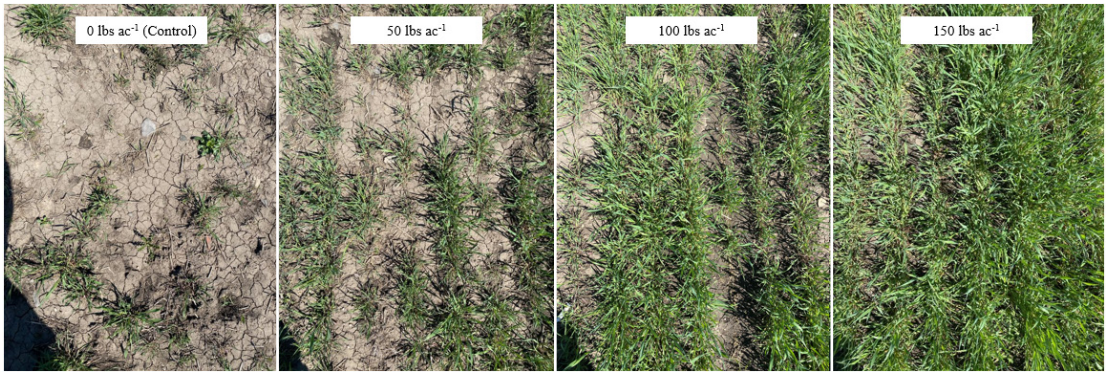
*Annual Field Day at University of Vermont research farm in Alburgh,Vermont.*

# Developing Soybean Cover Cropping Strategies that Maximize Yield and Enhance Environmental Conservation

*Principal investigator: Dr. Heather Darby, University of Vermont Extension Agronomist*

## RESEARCH SUMMARY

Soybean production in far northern regions has increased considerably in the last year as farmers respond to disruptive fluctuations in markets, climate, and farm economics. To overcome these economic and environmental challenges, farmers need region-specific agronomic information to maximize soybean yields while enhancing conservation efforts. The purpose of our trials is to develop and evaluate cover crop strategies for soybean systems that maximize both yields and conservation efforts.




*Winter rye spring ground cover by seeding rate in the soybean cover crop trial, Alburgh, Vermon, 2022.*

## FINDINGS

The 2022 season was cooler and wetter than normal. There 23.9 inches of rain (4.6 above average) and 2,501 accumulated Growing Degree Days (47 below average).

First, we evaluated winter rye cover crop termination strategies and their subsequent impact on soybean yield and soil health. In this trial, four seeding rates of rye (0, 50, 100, or 150 lbs ac-1) were planted in 2021 to produce varying levels of cover crop biomass leading to varying levels of residue prior to soybean planting in 2022.

Rye was terminated in the spring by one of three methods: tillage prior to soybean planting, herbicide application prior to soybean

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*blog.uvm.edu/outcropn*

planting, or soybeans were planted in living rye followed by herbicide application (plant green). Rye seeding rate had no impact on total rye biomass or ultimately soybean yield (Figure 1). As expected, the plant green treatment produced the most rye biomass compared to other termination treatments; however, termination treatment had no impact on soybean yields (Figure 2).

The plant green treatment also improved some aspects of soil health including the level of active carbon (32% increase) and the available water holding capacity (13% increase). In the plant green treatment, soil temperature was coolest 3-5 weeks after termination and soil moisture was lower at soybean planting compared to the other treatments, likely because rye terminated later produces more biomass, cooling the soil and tying up soil moisture.

Second, we evaluated the impact of winter rye planting date and seeding rate on the subsequent yield of no-till soybeans. Soybeans were planted into rolled and crimped rye that had been planted the previous fall, on five planting dates (September 20 to October 20) at six seeding rates (0, 15, 30, 60, 90, 120 lbs ac-1).

Due to adverse weather conditions soybeans were harvested from the September 20, October 7, and October 20 planting date treatments.

Rye biomass was greater in the highest seeding rate but similar to the first study, there was no impact on soybean yields. The earliest winter rye planting date had the greatest rye biomass and also resulted in the highest soybean yields.

Winter rye can reduce soil moisture which may improve soybean establishment especially in wet years like experienced in 2022.


*Figure 1. Impact of cover crop seeding rate on cover crop biomass and subsequent soybean yields, Alburgh, VT, 2022. There were no significant differences in cover crop biomass or soybean yield between seeding rate (p=0.10).*

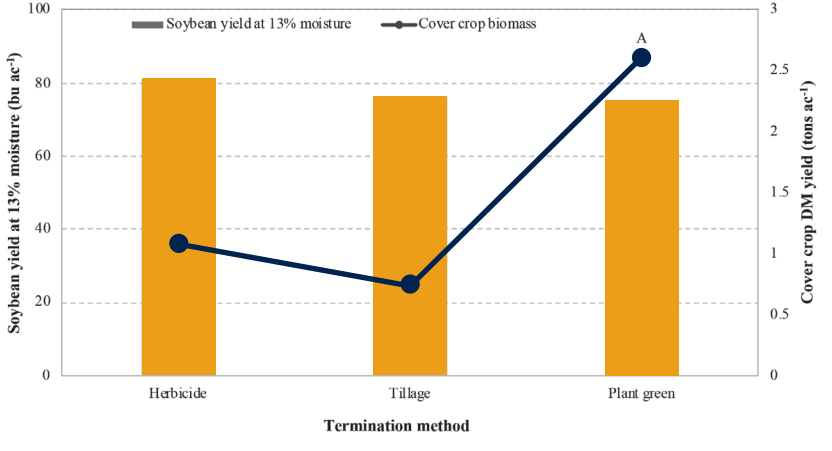
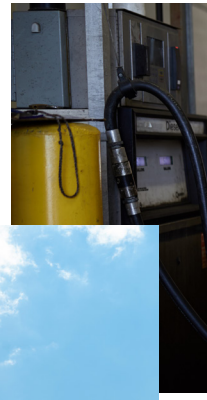



*Figure 2. Impact of cover crop termination method on cover crop biomass and subsequent soybean yields, Alburgh, VT, 2022. Cover crop termination treatments with the same letter had statistically similar cover crop biomass (p=0.10). There were no significant differences in soybean yield between termination methods.*

# Biodiesel Helps Fuel the Soybean Industry



**What started as a solution to use up excess soybean oil is now the answer to other prominent issues in the U.S. Through their investment in the checkoff, U.S. soybean farmers helped establish the biodiesel industry. Biodiesel production keeps demand strong for soybean oil, creating more value for soybean farmers. In the last decade alone, biodiesel demand for soybean oil has grown 300%.**

The relationship between U.S. soybean farmers and biodiesel is mutually beneficial

The Clean Fuels Alliance America (formerly known as the National Biodiesel Board), is supported in part by the Eastern Region soy checkoff. The organization is on a mission to continue building demand for this domestically produced green fuel, whether that's fueling vehicles with biodiesel and renewable diesel, 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," Clean Fuels Alliance America CEO Donnell Rehagen said. "Our vision is to exceed 6 billion gallons by 2030, potentially doubling the market from where it stands today. 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," Rehagen continues. "The soybean industry will benefit directly as biodiesel and renewable diesel use increases."

## BIOFUELS

Biodiesel products are popular with customers ranging from municipal fleets to farmers because they're cleaner than petroleum products. In fact, biodiesel is registered as a fuel and fuel additive with the Environmental Protection Agency.

These benefits don't come at the expense of performance. When compared with diesel fuel, B20 — a 20% blend of biodiesel with diesel fuel — provides similar fuel economy, horsepower, torque and haulage rates.

Sustainable aviation fuel (SAF) is poised to create new demand for soybeans and other feedstocks. SAF is fuel made from various feedstocks, including soybeans, cooking oil, waste oil from animals and municipal solid waste from homes and businesses. According to the U.S. Department of Energy, SAF 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.


## HOME HEATING

In particular, the home heating sector is benefiting from increased access to biodiesel. The Northeastern U.S. relies on heating oil to heat homes and, in many cases, domestic water heaters. With regulatory entities setting carbon-neutral goals, homeowners have two main options for low-carbon energy: Install air source heat pumps or transition existing equipment to biodiesel blends, called Bioheat® fuel, which is a lower cost carbon reduction pathway.

Residents with heating oil systems can transition to biodiesel without any capital investment. Transitioning to Bioheat® fuel can be optimized by the service technician during the annual tune-up and may be as simple as an adjustment to the air settings.

To increase clean fuels access, there is infrastructure that companies must put in place, such as storage tanks, pumps, values and blending equipment. The broader the infrastructure builds out, the more widely available Bioheat® fuel will become.

States across the Northeast are developing climate action legislation to reduce emissions, and Bioheat® fuel is becoming more and more prominent in these policies. Bioheat® fuel is a low-carbon heating option that can contribute to policy goals to fight climate change because it is affordable, accessible, and has a direct plan to continue to lower its carbon content until it reaches net-zero carbon emissions.

## *Bioheat® Fuel Requirements by State*

**Here's a list of the states that have current blending laws for liquid heating fuel.**

### RHODE ISLAND

All heating oil sold in the state must contain 5% biodiesel or renewable diesel currently, 10% biodiesel or renewable diesel by July 1, 2023, 20% biodiesel or renewable diesel by July 1, 2025, and 50% biodiesel or renewable diesel by July 1, 2030.

In the Northeast & beyond Similar legislation in other Northeastern states is likely to be on the horizon. Bioheat® fuel is gaining popularity and recognition in the Northeast because of the region's extremely cold climate and population of customers with existing traditional oil heating equipment. However, Bioheat® fuel and biodiesel are viable alternative energy solutions for other parts of the country, too.

### NEW YORK

On December 23, 2021, Governor Kathy Hochul signed a bill phasing in a requirement for all heating oil sold in the state to contain 20% biodiesel. All heating oil sold for use in any building in New York must contain at least 5% biodiesel by July 1, 2022, 10% by 2025, and 20% biodiesel by 2030. A 5% biodiesel blend standard has been in place for New York City and Long Island since 2017.

### CONNECTICUT

In Connecticut, all heating oil sold in the state must contain 5% biodiesel by July 1, 2022, 10% biodiesel by July 1, 2025, 15% biodiesel by July 1, 2030, 20% biodiesel by July 1, 2034, and 50% biodiesel by July 1, 2035.

*Source: mybioheat.com*

BIOHEAT®

# 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: Twitter.com/SoyResearchInfo and Facebook.com/SoybeanResearchInformationNetwork

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