



**NEW YORK CORN & SOYBEAN
GROWERS ASSOCIATION**

MAGAZINE

FALL 2025



ABOUT THE ORGANIZATION

The New York Corn & Soybean Growers Association (NYCSGA) is a grassroots organization representing corn and soybean producers' interests.

The Association works to develop and expand markets, educate members and consumers, and enhance public policy for corn and soybean growers in the Empire State. We also sponsor research on corn and soybean production, utilization, and marketing and host educational programs on management, production, and marketing. The Association is a Qualified State Soybean Board (QSSB) and administers New York's soybean checkoff.

NYCSGA has served as the QSSB for New York farmers as part of the national soy checkoff program since 2010. The farmer-driven board oversees and manages New York's share of funds received from the checkoff program.

Through the checkoff, each soybean farmer contributes one-half of one percent of the price of each bushel at the first point of sale. The NYCSGA Soybean Checkoff keeps one-half of the checkoff funds collected to conduct state-specific soy research and promotion activities on farmers' behalf.

2025-2026 BOARD OF DIRECTORS & STAFF

President

Tom Corcoran | T & D Corcoran Farms

Past President

Seth Pritchard | Catalpa Farms

Vice President

Brad Macauley | Merrimac Farms

Secretary

Emmaline Long | Yara North America

Treasurer

Mike Meisenzahl | Meisenzahl Farms

Board Members

Chris Bay | Bay Farms

Loren Herod | Rabo AgriFinance

Mark Humbert | Humbert Farms

Marc Kreiger | Willard Farms

Phil Panek | Panek Farms

Matt Toussaint | Toussaint Farms

Advisory Representative

Venancio Fernandez Diaz

Tim Winters | Western New York Energy

Staff

Colleen Klein | Executive Director

Leslie Hamilton | Contractor

New York Corn & Soybean Growers

Association Magazine is published quarterly by:

Amplify Association Management

Sydney Kaizer

1255 SW Prairie Trail Parkway,

Ankeny, Iowa 50023

(515) 334-1069 | amplifymyassociation.com

E-mail: sydney@amplifymyassociation.com

For advertising information, contact:

Colleen Klein at cklein@nycornsoy.com

Comments and statewide news articles should be sent to the above email address. Advertising space reservations must be made two months preceding publication. In consideration of the acceptance of the advertisement, the agency and the advertiser must, in respect of the contents of the advertisement, indemnify and save the publisher harmless against any expense arising from claims or actions against the publisher because of the publication of the content of the advertisement.



@NYCORNANDSOY



@NYCORNANDSOY



@NYCORNANDSOY

WWW.NYCORNANDSOY.ORG



NEW YORK CORN & SOYBEAN GROWERS ASSOCIATION

FALL 2025

TABLE OF CONTENTS

6 | NEONICOTINOID SURVEY

NY are farmers needed for a survey on neonicotinoid seed treatments.

8 | PARTNERSHIP WITH PURPOSE

If you purchase high-oleic soybeans directly from a grower, there are tools like Checkoff Pro that make it easy to submit your quarterly checkoff remittances.

9 | RENEWABLE FUEL STANDARD

Twenty years after the president signed into law the Energy Policy Act of 2005, we reflect on the impact of the Renewable Fuel Standard.

10 | THE NEW AMERICAN ENGINE

U.S. Soy fuels clean energy, biobased products, and farm resilience.

12 | NYCSGA HOSTS SUMMER CROP TOUR

Top-notch learning, cutting-edge equipment, and grower networking at the 2025 Summer Crop Tour in Seneca Falls.

16 | MANAGEMENT OF PALMER AMARANTH

Options for management of glyphosate-resistant Palmer amaranth in New York corn and soybeans.



**Tom Corcoran, President,
New York Corn & Soybean
Growers Association**

LETTER FROM THE PRESIDENT

Dear NYCSGA members,

As I write this, I am humbled to share that this will be my final letter to you as president of the New York Corn and Soybean Growers Association (NYCSGA). It has truly been an honor to serve in this role over the past two years.

After a challenging season—first with a wet spring and then a dry summer—I hope that as harvest begins, you and your families find your yields stronger than expected.

I would like to extend my sincere gratitude to our sponsors and growers who attended and supported this year's Summer Crop Tour. Your participation is what makes these events so valuable to our members and the industry.

While my term as president is ending, I will remain on the board in an advisory role for the next two years. I look forward to continuing to support the important work of our Association and the future of New York's corn and soybean farmers.

I also want to congratulate and welcome our newly elected board members. I am confident they will bring fresh energy and leadership, and I look forward to working alongside them.

Thank you again for the opportunity to serve. It has been a privilege to represent you and to advance the mission of our Association together. ■

With gratitude,

Tom Corcoran

SAVE THE DATE!



2026
SEEDS OF TOMORROW
Award

2026
NEW YORK
LEGACY FARMER
Award

Thursday, January 29, 2026 • Canandaigua, NY • nycornsoy.org



CornellIPM

New York State Integrated
Pest Management

Cornell
CALS
College of Agriculture
and Life Sciences

Birds and Bees Protection Act Timeline

DECEMBER 22, 2023—**Birds and Bees Protection Act** was signed into law, prohibiting the use of certain neonicotinoid insecticide-treated field and sweet corn, soybean, or wheat seeds and neonicotinoid pesticides for outdoor ornamental plants and turf, except those used for agricultural production, in an effort to protect birds, bees and other wildlife.

DECEMBER 31, 2024—The use of insecticides containing the active ingredients **clothianidin** and **dinotefuran** is **PROHIBITED** for outdoor ornamental plants and turf, except for use in agricultural production.

DECEMBER 31, 2026—The use of insecticides containing the active ingredients **imidacloprid**, **thiamethoxam**, and **acetamiprid** is **PROHIBITED** for outdoor ornamental plants and turf, except for use in agricultural production.

JANUARY 1, 2029—The sale, use, or distribution of any corn (**field and sweet corn**), **soybean**, or **wheat seeds** treated with neonicotinoid insecticides (**clothianidin**, **imidacloprid**, **thiamethoxam** or **any other neonicotinoid** as determined by the New York State Department of Environmental Conservation) is **PROHIBITED**.

- To access neonicotinoid-treated seeds after JANUARY 1, 2029, growers **must request a waiver**. Waivers will be good for two years and will be issued only upon completion of **Integrated Pest Management Training**, a **Pest Risk Assessment**, and a **Pest Risk Assessment Report**.





New York Farmers Needed for Neonicotinoid Seed Treatment Survey

**By Julie C. Suarez, Associate Dean & Graduate Student,
Department of Natural Resources and the Environment,
Cornell University College of Agriculture and Life Sciences**

I am writing to invite you to participate in a survey of farmers in New York State focused on farmer views, experiences, and usage of pesticides, specifically neonicotinoid seed treatments. The survey data will be utilized to better understand farmer's perspectives on the environment, the role of government in farming, trust in science, and knowledge and current practices of integrated pest management (IPM) to better inform the development of on-farm research trials and extension education programs in the future.

Neonicotinoid seed treatments are used to control soil-borne insects and include active ingredients such as clothianidin, imidacloprid, and thiamethoxam. In 2029, neonicotinoid seed treatments will be prohibited for corn, soybeans, and wheat seeds. After 2029, farmers who wish to plant with neonicotinoid seed treatments may request a waiver.

You are invited to participate in this survey as a result of your participation in Cornell NYS IPM's on-farm field crops research trial, and/or your membership in an agricultural trade association, and/or your attendance at a Cornell educational event. Your response to our survey is important so we can accurately represent the views of the full range of farmers. The survey should take about 20 minutes to complete.

We do not anticipate any risks from participating in this research. Your participation is voluntary, but we sincerely hope you will take just a few minutes to answer our questions. You may skip any questions that make you uncomfortable. Your identity will be kept strictly confidential and the information you give us will never be associated with your name. Responding to this survey is your implied consent to participate in the research.

Please complete this questionnaire as soon as you can by scanning the QR code and completing the questionnaire online. We look forward to receiving your completed questionnaire. You may choose to provide us with your e-mail, which will not be retained or disclosed further, to be entered into a raffle for a \$100 Visa gift card.

Thank you for your help with this important project. ■





NYCSGA thanks SETH PRITCHARD
For his many years of service on the
Board of Directors

WHERE THE RUBBER

MEETS THE ROW

The road is calling. And we answered it. Thanks to the checkoff, U.S. soy can be found in every Goodyear Assurance® WeatherReady® tire. But we didn't stop there. We've also developed a soy oil polymer to replace petroleum in asphalt, now gaining traction in 30 states. Want to see all the other ways we're driving U.S. soy demand?

CHECK OUT OUR SOY PROGRESS REPORT AT SOYPROGRESSREPORT.COM.





Partnership With Purpose

Thanks to the soybean checkoff, farmers can take advantage of new technology and markets like high-oleic soybeans. More than 100,000 acres of high-oleic beans were planted in New York in 2024—but we're just getting started. It's estimated that New York's dairy farmers have demand for 800,000 acres of high-oleic soybeans!

If you purchase high-oleic soybeans directly from a grower, federal law requires you to participate in the soybean checkoff as a **first purchaser**. This means you must collect the checkoff assessment (0.5% per bushel) at the time of purchase, remit it quarterly to the New York Corn & Soybean Growers Association (NYCSGA), and keep proper records for auditing.

The easiest way to stay compliant is to register with Checkoff Pro, NYCSGA's secure, mobile-friendly tool for reporting, remitting, and tracking your checkoff obligations. Late submissions are subject to a 2% per month penalty, so timely compliance is essential.

This simple software will outline federal soybean checkoff requirements and help with quarterly remittances. **Get started by registering at CheckoffPro.com or scanning the QR code.**

Thanks to the soybean checkoff, farmers can take advantage of innovations like high-oleic soybeans—improving feed quality, enhancing milk composition, and creating new markets. ■





**By Lesly McNitt, Vice President of Public Policy,
National Corn Growers Association**

Reflections on Birth of Renewable Fuel Standard Offer Direction for Advocates

Twenty years ago this month, the president signed into law the Energy Policy Act of 2005 establishing the Renewable Fuel Standard (RFS), a development that reshaped the rural economy and provided immeasurable benefits to people across the country.

The standard, which required fuel sold in the United States to contain renewable fuel blends (like ethanol) capped at 10%, was a boon to rural economies, a tool for policymakers and regulators seeking to lower greenhouse gas emissions, and a diversification strategy to those concerned about U.S. energy security.

The law's enactment established the corn grower community as a political powerhouse. As Jon Doggett, the vice president of public policy at the National Corn Growers Association (NCGA) at the time, recently noted, corn growers were united and motivated at the time and as a result caught the attention of Congress like never before.

I would eventually work for Jon when I first came to NCGA in 2017. By then, corn was a mover and shaker on every level politically, and the 10% cap on ethanol had long since been removed.

NCGA's power comes from the knowledge, among politicians and farmers, that our growers

can come together and mobilize quickly to make transformational change.

This is still a reality today, and the history of the RFS should serve as inspiration and a reminder of what is possible as we continue to work to shape public policy and regulations.

The effort to get this law passed also reminds us that advocacy can come with initial losses and setbacks. The bill was first introduced several years before 2005 and failed to advance. A promising effort in 2004, when the bill was close to passage, went down in flames, but growers redoubled their efforts to get the bill passed.

The lessons from the advocacy work have guided our efforts over the years, and we have had many other notable success stories since 2005. Wins continue to come in. As an organization, for example, NCGA recently pushed back successfully on Mexico's effort to ban certain forms of genetically modified corn and accomplished a long-term policy objective, doubling investment in United States Department of Agriculture's (USDA) MAP and FMD trade promotion programs in the One Big Beautiful Bill Act.

As corn farmers continue to face challenges and opportunities

alike, NCGA's policy team is laser focused on developing new markets for the massive corn crop projected for this fall's harvest. We hear the anxiety about corn prices that are way too low and input prices that are way too high. To that end, we have doubled down on our calls for policy action that increases ethanol sales and opens high-value export markets.

Congress has come close to passing legislation that would extend year-round consumer access to 15% ethanol fuel blends, or E15, only to come up short as we did last December when language from the bill was removed from a continuing resolution. The shortcoming provided echoes of the fight for the RFS. Just like NCGA did 20 years ago, we are calling on our members to redouble their efforts to get this legislation across the finish line this year.

This advocacy work comes during an increasingly polarized time for agricultural policy and all policy for that matter. But history tells us that, with farmer unity and perseverance, we can prevail once again.

While we celebrate RFS's 20th birthday this month, we acknowledge that its gifts keep on giving, and we continue to lay the groundwork for the next era of growth for ethanol demand. ■

The New American Engine: U.S. Soy Fuels Clean Energy, Biobased Products and Farm Resilience

By United Soybean Board

From your running shoes to the renewable fuels moving our trucks, trains, and ships, soybeans are quietly transforming America's economy and giving farmers new ways to stay competitive in a changing world. As soybean farmers navigate volatile export markets, they're leveraging homegrown innovation to build domestic demand across the food, energy and animal feed sectors. This U.S.-grown crop also provides a renewable alternative to petroleum in everyday products, which power a sustainable future.

"U.S. Soy is creating a big ripple effect with a \$120 billion impact on the U.S. economy, and it's our job as farmers to feed and fuel the world," said Philip Good, chair of the United Soybean Board (USB) and Mississippi farmer who raises soybeans, corn, cotton, beef cattle, and catfish. "As farmers, we know that challenges are also opportunities. Whether it's at the USB or on my farm, these domestic markets are an opportunity right now for us to develop and continually expand."

A Strategic Pivot Toward Domestic Resilience

About 60% of U.S. soybeans are exported, making farmers vulnerable to tariffs and shifts in global trade. Today, half a million U.S. soybean farmers collectively invest in U.S. markets—biofuels, biobased products, human nutrition, and poultry, dairy, and pig feed sectors that provide value through domestic channels and provide long-term stability. However, export markets and growing international demand for U.S. Soy still remain top of mind for the agriculture industry.

Domestic markets have always been on soybean farmers' radar. Thirty years ago, they created the biofuels market through the USB. In the last 15 years, soy usage in biofuels has grown from 80 million bushels to a staggering 1.2 billion bushels. This can be attributed to farmers' strategic foresight, and those numbers continue to grow.

From Fuel Tanks to Firefighting Foam

Soybean oil is now being used to fuel commercial trucks, school buses, and even trains, with all six

Class 1 railroads committed to expanding their use of soy-based biofuels. By 2030, clean fuels will eliminate over 50 million metric tons of CO₂-equivalent greenhouse gas emissions annually and already reduce emissions by more than 70% on average compared to traditional petroleum diesel.

The innovation doesn't stop at fuel. Soy is also found in more than 1,000 consumer products, from PFAS-free firefighting foam, which can potentially utilize the protein from 12 million bushels of soybeans, to synthetic turf, shoes, tires, plastics, plywood, and even emergency services (see infographic on the next page). A surge in demand for soy-based products across various sectors is helping to diversify markets and keep farm families in business.

"U.S. Soy is no longer solely an animal feed or export crop, it's a platform for American innovation," said Lucas Lentsch, CEO of the USB. "These investments aren't abstract. They're happening on the farm and in the market today, creating real impact and new value for companies, consumers, and farmers. This isn't niche, it's the future of American manufacturing and energy. With soy as a drop-in replacement, a petroleum use today is a soy innovation tomorrow."

Sustainable Production that Starts at the Source

U.S. soybean farmers are global leaders in sustainable production. Through cover crops, conservation tillage, and precision technologies, they're producing more with less while improving soil and water health. Initiatives like Farmers for Soil Health, funded by the U.S. Department of Agriculture (USDA) and led by the soy, corn, and pork commodity groups, aim to double cover crop acreage and reach 30 million acres by 2030.

"As farmers, we know sustainability isn't a buzzword, it's how we operate every day," Good said. "My 99-year-old father once taught me to treat our soil like a bank account and make more deposits than withdrawals, and that's stuck with me through my farming career. Whether it's reducing emissions through cleaner fuels or replacing

SOY BIOBASED RAPIDLY RENEWABLE PRODUCTS FOR EMERGENCY SERVICES

ABOUT BIOBASED

Across the nation, U.S. companies now offer hundreds of biobased products, ranging from safer firefighting foams to cabinets and flooring to road and parking lot rejuvenators, all made with rapidly renewable ingredients grown on American soybean farms.

Learn more at soybiobased.org



SOY-BIOBASED PRODUCTS HELP CARE FOR PEOPLE WITH JOBS THAT CARE FOR OTHERS

1 WOOD – FLOORING, STORAGE & MORE

Soy-biobased innovations are reshaping the wood industry with sustainable adhesives made without formaldehyde to improve air quality for customers as well as the people who make everything from cabinets to flooring to storage units for fire departments. **Columbia Forest Products** uses soy-biobased **PureBond®** technology in their plywood, replacing traditional adhesives with a healthier, formaldehyde-free solution. **1st in Emergency Products** uses this plywood for made-in-the-USA purpose-built storage solutions for fire command and law enforcement cabinets. **HempWood®** is a fast-growing, soy-biobased hardwood alternative for flooring, furniture, and more for construction.

2 FLEET OPERATIONS

Hydraulic fluids, greases, lubricants and more are available from multiple companies with U.S. Soy inside. **Goodyear®** soy-biobased tires provide enhanced traction and durability, offering a more sustainable option for fleet vehicles without sacrificing performance. Soy is used to manufacture **biodiesel** and **renewable diesel**, which boost performance, offer immediate cost savings, lower emissions and improve air quality. **BioHeat®** fuel is a blend of biodiesel and ultra-low sulfur heating oil.

3 ASPHALT REJUVENATORS & PAINT

U.S. Soy oil plays a vital role in infrastructure improvement and coatings. Asphalt rejuvenators, such as those made by **SoyLeak**, restore flexibility to aging pavement, extending its lifespan while reducing maintenance costs. **Axcel Corporation** incorporates soy into traffic paints and coatings, offering high-performance solutions with reduced environmental impact. **Advanced Polymer Technologies** is also working with soy for surface coatings. **Crafco's PoreShield™** is a cost-effective, soy-biobased concrete protectant that's proven to extend the life of concrete surfaces by 10+ years.

4 PFAS-FREE FIREFIGHTING FOAM

SoyFoam™ TF 1122 firefighting foam meets rigorous performance requirements at the same time it offers environmental and health benefits to first responders and their communities. SoyFoam™ is 100% free of intentionally added per- and polyfluoroalkyl substances (PFAS) and is made with no fluorines. SoyFoam™ is the first and only firefighting foam GreenScreen Certified® at the Gold level.

5 TOOLS & SHOP EQUIPMENT

From cleaning products to lubricants and adhesive removers, U.S. Soy boosts the sustainability and performance of a wide range of biobased solutions for the shop and the equipment that emergency teams need to perform their missions. **DeWalt's® Bar & Chain Oil**, developed in collaboration with **Dynamic Green Products®**, improves chainsaw performance while replacing the petroleum content that chainsaws routinely let fly off into soil and water.

6 SOY-BIOBASED ARTIFICIAL GRASS

SYNLawn® uses soy-biobased backing in its artificial turf, offering a durable, fire-resistant, and eco-conscious solution for both residential and commercial spaces. No more weeding, watering, fertilizer or pesticides, and it's recyclable. From playgrounds to putting greens to roof tops, soy-backed turf ensures safety, longevity, and sustainability. SYNLawn products undergo rigorous third-party testing to meet—and often exceed—industry fire safety standards.

04-25-25-1

petroleum in everyday products, we're showing how U.S. agriculture can drive innovation and protect the planet at the same time."

Big Numbers, Big Impact – U.S. Soy:

- Contributes \$124 billion to the U.S. economy and supports more than 500,000 on-farm jobs.
- Remains America's No. 1 agricultural export, adding more than \$31 billion to the U.S. economy.
- Adds \$9.8 billion to the GDP annually and generates \$1 billion in tax revenue.
- Displaces about 10.7 million barrels of oil a year through the biobased products industry.
- Surrounds us in more than 1,000 products in the streets we drive on, the shoes we wear, and the biofuels for our vehicles.

About United Soybean Board

USB's 77 volunteer farmer-leaders work on behalf of all U.S. soybean farmers to achieve maximum value for their Soy Checkoff investments. These volunteers create value by investing in research, education, and promotion with the vision to deliver sustainable soy solutions to every life, every day across the three priority areas of Infrastructure and Connectivity, Health and Nutrition, and Innovation and Technology. As stipulated in the federal Soybean Promotion, Research, and Consumer Information Act, the USDA Agricultural Marketing Service has oversight responsibilities for USB and the Soy Checkoff. ■

NEW YORK CORN & SOYBEAN GROWERS ASSOCIATION HOSTS 2025 SUMMER CROP TOUR IN SENECA FALLS

Top-notch learning, cutting-edge equipment, and grower networking highlight the annual event



The New York Corn & Soybean Growers Association (NYCSGA) welcomed farmers, agribusiness professionals, and research leaders from across the state to its annual Summer Crop Tour on August 6, a day-long showcase of innovation, technology, and collaboration.

“This event is as much about celebrating relationships as it is about learning,” said Colleen Klein, NYCSGA executive director. “The connections made here—between farmers, researchers, and industry partners—are the foundation for growth, innovation, and resilience in our agricultural community. This year we welcomed the return of live in-field equipment demonstrations; there’s nothing

like seeing the latest technology at work right in front of you and our growers really love that.”

A Full Day of Learning and Networking

The day kicked off with a welcome from Klein and NYCSGA President Tom Corcoran. The morning agenda featured engaging presentations, including:

- **Keynote—Chasing Water, Wind, and the Science of Weather Prediction:** **Matt Reardon**, Senior Atmospheric Scientist at Nutrien Ag, shared how AI and centuries of climate data inform modern forecasting, with a tailored weather outlook for the upcoming year.



- **ASA State Outreach—In Different Roles, Complementary Missions:** Tracy Snider, senior manager of state relations for the American Soybean Association (ASA), explained how ASA and the United Soybean Board (USB) collaborate to strengthen the soy supply chain, maximize checkoff investments, and align industry priorities.
- **Legacy Nutrient Deductions™—Unlocking \$1,700 Per Acre in Tax Deductions:** Tyler Bruch, Founder of Boa Safra Ag, described how farmland owners can leverage advanced analytics to secure significant tax benefits, drawing on his extensive international farming experience.

Afternoon Equipment Demonstrations

Following a lunch break featuring food trucks and exhibitor displays, attendees moved to the field for live demonstrations from leading equipment manufacturers—marking the much-anticipated return of in-person, in-field equipment showcases to the Summer Crop Tour.

- **Java Farm Supply:** Showcased a Fendt high horsepower tractor + Momentum Planter and a Massey Ferguson high horsepower tractor + Horsch tillage tool

- **O'Hara Equipment:** Demonstrated a John Deere Gator with advanced field boundary mapping technology
- **RangeLine Group:** Featured the Amazone Ceus combination cultivator and the K-Line Speedtiller® for high-speed, versatile tillage

Closing with Community

The day wrapped up with a Grower Hangout and Happy Hour, providing an informal setting for attendees to exchange ideas, share experiences, and strengthen the network of New York's corn and soybean community.

Expanding the Conversation on Day Two

This year's Crop Tour was part of a new two-day collaboration with the New York Soil Health (NYSH) Field Days, held the following day. Organized by NYSH, Cornell Cooperative Extension, and local partners, the event focused on soil health and climate resiliency, featuring presentations, farmer panels, and demonstrations on cover crops, compaction management, and nitrogen efficiency. The partnership between NYCSGA and NYSH reflects a shared commitment to advancing sustainability and profitability for New York's farmers. ■

THANK YOU TO OUR SPONSORS!

Presenting Sponsor

**NEW YORK
CORN & SOYBEAN
GROWERS**



soybean checkoff

Event Sponsors



Platinum Sponsors



GATEWAY CONSULTING & COACHING



Gold Sponsors



Silver Sponsors



FARM PARTS LLC



Management of Glyphosate-Resistant Palmer Amaranth in Corn and Soybean in New York

By Vipin Kumar, Associate Professor of Weed Science, Cornell University

Palmer amaranth (a native to the southwestern United States) is a summer annual broadleaf weed that has recently invaded into the Northeastern region, including New York. According to recent Weed Science Society of America (WSSA) surveys, Palmer amaranth was ranked first among the 10 most troublesome weeds in grass and broadleaf crops, pasture, turf, fruits and vegetable crops in the United States.

The evolution and widespread occurrence of herbicide resistance among Palmer amaranth populations makes it challenging for effective management.

Identifying Characteristics

Palmer amaranth is often confused with other pigweed species. The most prominent characteristics to identify Palmer amaranth seedlings include hairless leaves with petiole (stalk that connects the leaf to the stem) longer than the leaf blade. In addition, the seedhead of female Palmer amaranth is spiny, prickly that can grow up to 2 to 3 feet tall.

For more details on Palmer amaranth identification, read the Cornell University palmer amaranth identification fact sheet.

Palmer Amaranth Biology

Palmer amaranth is a dioecious weed species (separate male and female plants) with high outcrossing and hybridization potential. Palmer amaranth emerges best from the topsoil surface (0.5-inch depth) and exhibits an extended emergence period. Seedlings can grow 1 to 2 inches per day if the weather conditions are optimum (high temperature and sufficient



Palmer amaranth seeds (left) and seedling (right).



Fully grown female plant in soybean (left) and infestation in alfalfa/corn field border in New York (right).

soil moisture). Depending upon weather conditions and crop competition, matured Palmer amaranth plants can grow 1.5-6.5 feet tall with a single female plant capable of producing >0.5 million seeds. Most of the seeds produced are dormant and persist in the soil seedbank for 3 to 5 years.

Palmer amaranth competition can reduce grain yields by 91% in corn, 79% in soybeans, up to 40% in grain sorghum, and 77% in dry beans.

Herbicide-Resistant Palmer Amaranth in the United States and New York

Palmer amaranth populations resistant to up to 10 different herbicide site of action (SOA), including inhibitors of acetolactate synthase (ALS, Group 2), microtubule assembly (Group 3), synthetic auxins (Group 4), photosystem II (Groups 5 and 6), EPSPS (Group 9), glutamine synthetase (Group 10), protoporphyrinogen oxidase (PPO, Group 14), very long-chain fatty acid (VLCFA, Group 15), 4-hydroxyphenylpyruvate dioxygenase (HPPD, Group 27) have been reported in the United States. Glyphosate-resistant Palmer amaranth populations (42 to 67-fold resistant) have recently been identified from soybean fields in Genesee, Orange, and Stueben Counties of New York. The amplification of the target gene (25 to 135 more copies of the EPSPS gene) has been found to confer glyphosate resistance in Palmer amaranth populations. During the 2024 growing season, several additional Palmer amaranth populations were observed in corn, soybean, pumpkins, and alfalfa fields in Ontario and Yates Counties. In addition to glyphosate, resistance to ALS, PS II, and HPPD inhibitors have been suspected in these populations.

Management Options

- **Sanitation and cleaning.** Follow proper sanitation and cleaning of farm equipment after use in fields with Palmer amaranth infestation to prevent its further spread to new fields or areas.
- **Cultural practices.** Rotation of annual field crops with competitive perennials, cover crops, and use of inversion tillage can help to reduce Palmer amaranth populations significantly. The use of best agronomic practices, including proper selection of competitive crop variety/hybrid, optimum seeding rates, row spacing, planting times, and proper fertility and irrigation management

can increase corn and soybean competitiveness with Palmer amaranth.

- **Mechanical practices.** Two pre-sowing blind cultivations in combination with use of tine weed or rotary hoes can help reduce Palmer amaranth populations. Manual collection and destruction of Palmer amaranth seedheads can reduce subsequent Palmer amaranth infestations.
- **Chemical options.**
 - » *Soybean:* Preemergence herbicides which are premix of 2 to 3 active ingredients such as chlorimuron, S-metolachlor, acetochlor, metribuzin, flumioxazin and postemergence herbicides such as glufosinate (Liberty link soybean), 2,4-D (E3 soybean), lactofen, and fomesafen can effectively control glyphosate-resistant Palmer amaranth.
 - » *Corn:* Preemergence herbicides which are premix of 2 to 3 active ingredients such as atrazine, S-metolachlor, acetochlor, mesotrione, and postemergence herbicides such as glufosinate (Liberty Link corn), 2,4-D (Enlist corn), dicamba, tembotrione, tolpyralate, etc. can provide effective control of glyphosate-resistant Palmer amaranth.
 - » Soil residual herbicides (acetochlor, S-metolachlor) applied postemergence in corn and soybean can provide extended overlapping residual activity for season-long control of Palmer amaranth

More Information

Visit the weed management sections for corn and soybeans in the 2025 Cornell Guide for Integrated Field Crop Management.

For more information, please contact Vipin Kumar at vk364@cornell.edu. ■

Potential Public Health Risks of Avoiding Seed Oils



Scientific evidence supports the role of seed oils in reducing chronic disease risk, improving cardiovascular health, and providing essential fatty acids and nutrients. Avoiding seed oils could lead to negative public health implications.

Deficient in Fatty Acids Needed for Bodily Function

Seed oils are a primary source of the polyunsaturated fatty acids **linoleic acid (omega-6)** and **alpha-linolenic acid (omega-3)**, both essential for human health. Humans need to consume fat (along with carbohydrates and protein) daily to support bodily function. Seed oil helps us consume the fatty acids what we need.¹

Increased Cardiovascular Disease (CVD) Risk

Scientific evidence supports the replacement of saturated fats with **polyunsaturated fats (PUFAs)**, which lower LDL cholesterol and reduce heart disease risk.² The U.S. **FDA recognizes canola, corn, soybean, and olive oils**³ for their heart-protective benefits. Studies show that **consuming linoleic acid can decrease risk of coronary heart disease by 29%**.⁴

Higher Type 2 Diabetes Risk

Research suggests that linoleic acid improves **insulin sensitivity** and reduces **insulin resistance**, lowers risk of type 2 diabetes.⁵⁻¹¹ Studies suggest as linoleic acid intake increases, the risk of developing diabetes decreases.¹²

Loss of Essential Nutrients

Seed oils provide vital **vitamin E**, an antioxidant crucial for **immune function, vision, brain health, and skin protection**.¹³ Avoiding seed oils may lead to deficiencies in this essential nutrient.

Eliminating seed oils could result in higher cholesterol levels, increased CVD and diabetes risk, and essential fatty acid and vitamin E deficiencies. Maintaining a balanced intake of healthy fats, including polyunsaturated fats, is crucial for long-term health.



For a deeper dive into the scientific evidence, scan this QR code or visit www.SNIGlobal.org/seedoils.

The Soy Checkoff, in partnership with Soy Nutrition Institute, utilizes these fact sheets for outreach with consumers and health professionals. A seed oil economic impact study conducted by the Soy Checkoff and American Soybean Association found a seed oil ban would decrease demand for soy, lower farm income, increase food costs, and potentially limit consumer choice.

1. <https://www.ahajournals.org/doi/10.1161/circulationaha.108.191627>
2. <https://iris.who.int/handle/10665/375034>
3. <https://www.fda.gov/food/nutrition-food-labeling-and-critical-foods/qualified-health-claims-letters-enforcement-discretion>
4. <https://www.ahajournals.org/doi/10.1161/cir.00000000000000510>
5. <https://pubmed.ncbi.nlm.nih.gov/6783415/>
6. <https://pubmed.ncbi.nlm.nih.gov/20127308/>

7. <https://pubmed.ncbi.nlm.nih.gov/18042359/>
8. <https://pubmed.ncbi.nlm.nih.gov/10889798/>
9. <https://pubmed.ncbi.nlm.nih.gov/7926311/>
10. <https://pubmed.ncbi.nlm.nih.gov/16132958/>
11. <https://pubmed.ncbi.nlm.nih.gov/16895896/>
12. <https://pubmed.ncbi.nlm.nih.gov/31182488/>
13. <https://www.mayoclinic.org/drugs-supplements-vitamin-e/art-20364144>





YOU'RE RIDING WITH THE FIRST TO THE SCENE.

All soybean farmers, including you, are in the biodiesel and Goodyear® Eagle Enforcer™ tires on first responder vehicles. How? By pooling your resources through your soy checkoff. See all the ways your soy checkoff is helping your bottom line at unitedsoybean.org/hopper.

Moving Soy Forward. | Moving You Forward.





**NEW YORK CORN & SOYBEAN
GROWERS ASSOCIATION**

PO Box 133
Silver Springs, NY 14550

KNOW SOMEONE WHO SHOULD RECEIVE THIS MAGAZINE?



Encourage them to join the New York Corn & Soybean Growers Association (first year free!) to receive this quarterly magazine:
<https://nycornsoy.org/membership>



**NEW YORK CORN & SOYBEAN
GROWERS ASSOCIATION**