



# Organic Matters

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# Organically Speaking

**T**he holidays are right around the corner, and our staff would like to express our gratitude for your continued support. Your work to grow organic for the people and planet's health inspires us daily. You're our priority, and with so many regulatory changes in progress, we're working hard to keep customer service front and center throughout these changes.

As inspection season comes to a close and we move into certification review, we're looking ahead to 2024. Please watch your mail and inboxes for information that will further prepare you to address the changes and updates ahead of 2024's deadlines, particularly those related to the Strengthening Organic Enforcement (SOE) rule implementation. Please check out our dedicated webpage for updates, training resources, and steps to connect with your certification specialist as soon as possible if you have questions.

**NOTE: If your operation is connected with any part of the supply chain that needs new certification, please reach out as soon as possible so that we can get the application process started and the operation scheduled to be inspected by the March 2024 deadline.**

PCO has been honored to lead the Northeast/Mid-Atlantic Region in the USDA NOP's Transition to Organic Partnership Program (TOPP). Our region's work was featured in a report to the National Organic Standards Board (NOSB) meeting on October 24 in Providence, RI. With nine Core Partners in the region and 45 total, we've come a long way in a short time, roughly one year since the award was announced. For more information about TOPP nationally or regionally, including searchable events listings, please visit our new website.

Our Policy Advisor, Kyla Smith, who begins her fourth year in 2024 in the Accredited Certifier Agent seat, was voted in as Chair of NOSB for the upcoming year! This honor comes with great responsibility, and to have a certifier's point of view leading the discussion means that your feedback will have a seat at the table. Congratulations to Kyla, whose two decades of experience in the organic industry will serve her well. For a complete listing of past and upcoming NOSB meetings, the schedule can be found in the "Additional Information" box.

The Organic Livestock and Poultry Standards (OLPS) rule was finalized at the NOSB meeting, and compliance is required by **January 2, 2025**. The official announcement and fact sheet are available to view in the "Additional Information" box. Some exemptions will be required to comply by **January 2, 2029**. As time goes on, PCO will formally address the new changes OLPS will bring.

Next, I'd like to highlight how hard the PCO staff has been working to better acquaint themselves with the changes that

come along with these new regulations. Not only have they been updating forms, policies, and training for clients and staff alike, but they've also been participating in working groups with other certifying agents and keeping up with external communications.

They've also been doing a tremendous job caring for existing and new clients. It's a lot to juggle, but they are handling these tasks carefully under our new Certification Director, Sarah Brown. Sarah came to Pennsylvania to meet with staff and clients during our series of community town halls. The administrative team has been working just as hard, and I want to acknowledge their contributions under Diana Underwood, Director of Operations. I'm so proud of the entire PCO team and how we're all motivated by serving you!

Finally, I want to thank our board members, who volunteer their time guiding the organization and me to better serve all of you. It's been a difficult few years, and despite the challenges to lead any organization, their dedication, expertise, and care are evident in the successes we continue to have at PCO. I'm grateful to them and all of you for choosing PCO as your certifier.

In service,

Diana Kobus

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## Additional Info:

### ■ SOE Rule Update Resources:

<https://paorganic.org/strengthening-organic-enforcement/>

### ■ USDA NOP's Transition to Organic Partnership Program: <https://paorganic.org/topp/>

### ■ NOSB Meeting Signup: [www.ams.usda.gov/rules-regulations/organic/nosb/meetings](https://www.ams.usda.gov/rules-regulations/organic/nosb/meetings)

### ■ OLPS Announcement:

[www.federalregister.gov/documents/2023/11/02/2023-23726/national-organic-program-nop-organic-livestock-and-poultry-standards](https://www.federalregister.gov/documents/2023/11/02/2023-23726/national-organic-program-nop-organic-livestock-and-poultry-standards)

### ■ OLPS Fact Sheet:

[www.ams.usda.gov/sites/default/files/media/OLPS\\_Fact\\_Sheet.pdf](https://www.ams.usda.gov/sites/default/files/media/OLPS_Fact_Sheet.pdf)



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Katie Poppiti, *Program Coordinator*

#### PCO's VISION

A world where agriculture systems prioritize health, ecological balance, fairness and care.

#### PCO's MISSION

To uphold and advance organic principles and practices through certification, advocacy, and technical support.

#### PCO's CORE VALUES

1. **People & Service** – Keep people at the center of every action, interaction, and decision
2. **Organic Spirit & Environment** – Promote restorative practices that improve the world for future generations
3. **Honesty & Integrity** – Embrace transparency and integrity in all our work.

# Organic Matters

Fall 2023



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COVER PHOTO: Lancaster Farming



# Pennsylvania Flax Project Aims to Rebuild Domestic Linen Industry

BY ERIC HURLOCK, LANCASTER FARMING

SOUTH COVENTRY TOWNSHIP, PA.

**H**eidi Barr wants you to know that flax is linen and linen is flax. The word “linen” has been corrupted over the years to the point where most Americans, when they hear the word, often think of sheets and towels, things commonly found in a linen closet.

But those sheets and towels are more often made from cotton or synthetic fibers than flax, which is why Barr wants you to know what linen really is and what bringing flax back into production on the farm fields of Pennsylvania could mean for the economy and the environment.

A fiber artist based in Philadelphia, Barr co-founded the Pennsylvania Flax Project with Chester County farmer Emma de Long in 2020 “out of a desire to see a climate-beneficial textile crop produced regionally,” she said.

Flax fibers have been used as a raw material for textiles for a long time. The ancient Egyptians wrapped their mummies in linen, Barr said.

“The oldest known manmade flax fiber was discovered in the country of Georgia, and it was 37,000 years old,” she said. “So it’s thousands – tens of thousands of years – that we’ve been collaborating with this plant to meet our clothing needs.”

Flax was an important crop for Colonial America, too, Barr said, and was first brought to Pennsylvania in the 1690s from Germany and the Netherlands.

“Flax for linen was on every small farm,” Barr said. “Everybody grew a half of an acre of flax for linen for their clothing needs for the year, even to the extent that if a woman was widowed, she might lose her farm, but she would be left that half an acre to grow flax for linen so that she could have clothing.”

Homespun linen was eventually supplanted by cheap cotton, thanks in part to Eli Whitney’s cotton gin.

“And also cotton was heavily subsidized with the labor of

enslaved people,” Barr said, “so it sort of won the economic race.”

Flax for linen took another hit in the 20th century with the advent of synthetic fibers made from oil, such as polyester.

“The synthetic textile industry is the prime example of an industry that exploits both human labor and the natural world” and is responsible for a tenth of greenhouse gas emissions worldwide, Barr said.

“Crops like flax can be part of the solution to that,” she said.

## FLAX PROJECT

Emma de Long was getting married in 2020 and was looking for a local seamstress to make her wedding dress when she found textile artist Barr, owner of Kitchen Garden Textiles.

Barr wasn’t able to make the dress, but during the conversation, she somehow managed to convince de Long to grow flax for linen on her farm.

“From there, we planted an eighth of an acre of flax in 2020, and we’ve been planting at Kneehigh Farm ever since,” de Long said. “The PA Flax Project has just exploded from there.”

Kneehigh Farm is a small, diversified vegetable farm in South Coventry Township along the banks of the French Creek.

“We grow on 4 acres and have also incorporated flax for fiber and indigo as a dye plant,” de Long said.

Short-term goals of the PA Flax Project include educating the public about flax and “teaching people that there is currently no production of flax for refined linen from seed to spinnable fiber in North America, and educating about the benefits of revitalizing that industry,” Barr said.

Another goal, Barr said, is to purchase harvesting equipment “so that we can get our plants off the field. We have farmers ready to grow. We need mechanical harvesting equipment to get our plants off the field, ready to go into a mill.”

ABOVE: hester County farmer Emma de Long and Philadelphia fiber artist Heidi Barr founded the Pennsylvania Flax Project to revitalize the linen industry in Pennsylvania. Photo: Eric Hurlock



The long-term goal of the PA Flax Project is to build an operational long-line flax scutching mill that would produce a high-quality fiber ready to be spun into linen.

"Within all those goals, Barr said, "is building out our cooperative model and building out our co-ops so that our farmer members would benefit from it and to secure national and international contracts to sell that fiber."

What the organization needs most right now is funding, Barr said.

## FLAX HARVESTING EVENT

The need for harvesting equipment was made clear on a Saturday morning in late August when Barr and de Long co-hosted a harvesting educational event at Kneehigh Farm.

About 15 people attended to learn about flax and take part in the ancient tradition of harvesting flax by hand.

"We get a real cross-section of people, people who are interested in the textile, people who are interested in farming, people who just have never heard of flax for linen and think it would be a cool thing to do," Barr said.

Hand harvesting is pretty straightforward, pulling it out of the ground, roots and all, which Barr said serves two functions: "to preserve the moisture in the plant for the next step when you're laying it down for retting" and to preserve the full length of the fiber, which continues all the way into the root system.

Cutting the fiber off at the ground would also cut into your fiber yield, Barr said.

Alyssa Kariofyllis attended the event to learn more about flax.

"I sew clothing and quilts at home," she said, "and I use a lot of linen, so I was really excited to see this event and learn more about, you know, where my fabric started."

Roan Farnum is a member of the PA Flax Project and said harvesting this year was a bit easier than last when the crop was planted using a broadcast method. This year, the crop was planted in rows with a seeder.

"I think it's a little more organized when you can pull it in rows," Farnum said, "and it's also nice to have a lot of people helping."



Attendees bundle harvested flax on Saturday, August 26, at Kneehigh Farm in Chester County. Photo: Eric Hurlock



Flax is traditionally harvested by hand, leaving the roots intact to preserve the full length of the fiber. Photo: Eric Hurlock

## INTERNATIONAL FLAX INDUSTRY

According to USDA, 244,000 acres of flax were harvested in the U.S. in 2022, all of which were harvested for flaxseed and grown in North Dakota and Montana.

The domestic flax fiber industry is essentially nonexistent, but in Europe, the flax fiber industry is steadily growing. According to the Alliance for European Flax-Linen and Hemp, Europe produces about 75% of the world's long fibers of flax – roughly 360,000 acres – with France, Belgium, and the Netherlands as the main producers.

## SMITTEN WITH FLAX

Barr has developed a personal and intimate relationship with the flax plant.

"It's very seductive," she said. "It waves in the wind, and it gets a beautiful blue flower on it. It looks very delicate, but it grows straight and tall, up to about 2½ or 3 feet. And when it's in full bloom, it actually sort of looks like a rippling water in the field."

The flowers each only last one day, opening in the morning and closing by the afternoon and dropping to the ground.

"The first year, we had a flax flower dinner, which was hilarious because all the flowers were closed," Barr said. "So you got to have a brunch for that."



Scan the QR code below to listen to the Lancaster Farming Industrial Hemp Podcast.

### Additional Info:

- **Pennsylvania Flax Project:** <https://paflaxproject.com>
- **Kitchen Garden Textiles:** [www.kitchengardentextiles.com](http://www.kitchengardentextiles.com)
- **Kneehigh Farm:** [www.kneehighfarm.com](http://www.kneehighfarm.com)

## Board Corner

### Message from the President

JOE MILLER, BOARD PRESIDENT



Hello!

I recently had the privilege to attend the Natural Products Expo East again in Philadelphia, PA. As I walked through the aisles and conversed with food manufacturers, brand owners, and retailers, I heard from all areas of the food business how business is challenging right now. Everyone faces increased costs in raw ingredient supplies, packaging, and freight, and consumers are tightening their budgets as inflation increases. Businesses are also still determining what the financial outlook will look like. In other words, what an excellent time to sell more than just a food or fiber commodity!

Those in the industry have an excellent opportunity to engage our consumers to remind them that we offer more than that. It's more apparent now than ever before that we must be concerned about caring for our farms, communities, and planet. Consumers are making decisions about where they're spending their money, so it's important to remind them of the value products provide beyond just a source of nutrition or fashion.

I'm happy to announce this message is resonating! At Expo East, NielsenIQ reported that the number of environmentally-conscious 18- to 34-year-olds exceeds all other age groups. This age group is the current and the future generation of shoppers buying food and household supplies for decades to come. The top two definitions of "sustainability" to national and global consumers are products grown or raised in a way that's "better for the planet" and "protecting natural resources."

Finally, **I'm happy to report the best-recognized seal signifying sustainability is the USDA ORGANIC seal!** We all know this; however, as advocates for ORGANIC, it's always exciting to see it reported. Of course, there's room for additional certifications to serve their specific purpose, but the most well-recognized (and comprehensive) seal continues to be the USDA Organic seal.

To close my President's Message, I want to highlight our team at PCO! They're working hard to stay on top of current legislation and rules regarding your Organic Certification needs. You're missing out on valuable information if you are not receiving our monthly "What's Growing at PCO" e-newsletter. You can sign up on our website, [paorganic.org](http://paorganic.org), and if you have any questions, please don't hesitate to reach out.

As a quick closing note, another current looming topic that our team has been helping businesses and farmers be ready for is SOE. Our team has been happy to jump on a phone call with any brand or other supply chain partner to answer any SOE legislation questions. Please take a minute to reach out if you have any questions; we're ready to help.



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Managing Partner at Kalona Organics LLC

### PCO Core Values in Action

STEPHANIE JERGER, ORGANIC TRADE ASSOCIATION

*Special thanks to Stephanie Jerger, Vice President of Operations at the Organic Trade Association, for contributing to this issue's column. Ms. Jerger shares an overview of the work that OTA actively pursues to address the inequities that prevent all people and communities from being a part of organic agriculture.*

**W**hile the Organic Trade Association (OTA) continues to work towards growing organic agriculture and commerce, protecting the environment, and enhancing community well-being, it's clear food systems and social injustices are

deeply linked. Based on our experiences and member feedback, we make conscious efforts to ensure our successes in advocating for the organic movement don't unintentionally perpetuate social inequalities. We're committed to bringing awareness to the social inequalities that have been allowed to blur the edges of the organic movement. To realize our vision, we've begun to address the inequities that prevent people and communities from benefiting from organic food and farming.

Many barriers to organic certification have historically prevented minority-owned businesses from entering the organic industry, so OTA developed its JEDI Initiative. This initiative promotes diversity and inclusivity across the supply chain and industry sectors. Among the initiative's pillars, the Diversity and Entrepreneurship Program also supports BIPOC and women-owned businesses to overcome the barriers when they enter the organic market. The program offers a two-year membership to OTA and helps diverse businesses become organic certified, receive the premium on their product, and be business savvy. It enables valuable connections to organic stakeholders and experts and provides access to essential technical and

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# PCO Giving Back

APRIL KOCIS, MATERIALS SPECIALIST

You can find PCO Materials Specialist April Kocis on the trails volunteering her free time for the National Inter-scholastic Cycling Association (NICA) Girls Riding Together (GRiT) Program. GRiT is NICA's effort to recruit and retain girls and female coaches in NICA mountain biking programs, and it's all about encouraging empowerment, equity, community, and a good time. GRiT programs empower female student-athletes to make their mark, on or off the bike, and April has seen the results first-hand with her 8th-grade daughter, Tessa Fix. Tessa is a student-athlete in her third racing season on the Lehigh Valley Composite West team. Tessa has brought home three first-place medals and one second-place medal this season (so far) for NICA's Pennsylvania Interscholastic Cycling League (PAMTB). Even more importantly, she has gained confidence in herself and her riding, learned to self-advocate, and made many new friends.

April volunteered this past summer as a coach at the NICA West Virginia GRiT Camp at Big Bear Lake Mountain and her local Lehigh Valley Composite GRiT Camp at Jordan Creek Parkway. Big Bear hosted 53 student-athletes, ranging from rising 6th graders to seniors, and 19 coaches. Special guest Sue Haywood, World Champion mountain biker from Davis, WV, inspired campers and coaches alike, demonstrating on-the-bike skill sessions and an excellent TED talk emphasizing how taking care of your mind is as important as taking care of your bike. The WV and the PA camp created a supportive, inclusive, and welcoming environment where new and seasoned riders came together to have fun, improve their skills, support each other, and ride bikes in the woods.



April Kocis, PCO Materials Specialist, volunteers to coach the Lehigh Valley Composite team during a recent GRiT ride at Jordan Creek Parkway in Whitehall, PA.

April loves seeing the girls encourage each other to conquer their fears by trying a new skill, like riding over a big log or through a rock garden. Whether a novice or a seasoned rider, April encourages you to check out your local NICA program to discover how to get involved and support NICA's mission of building strong minds, bodies, character, and communities through cycling.

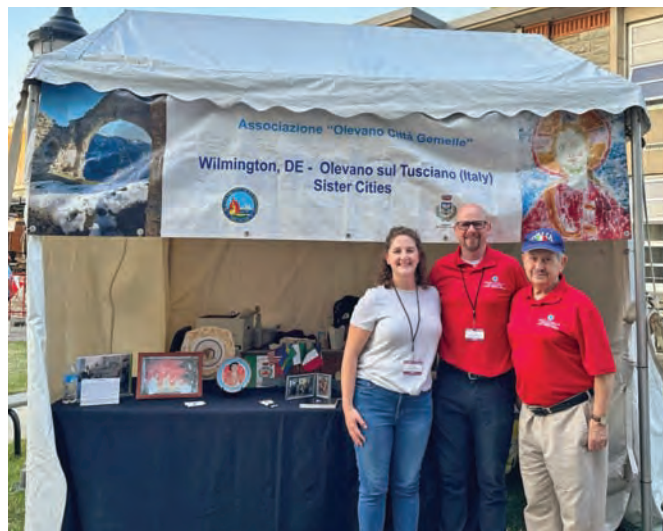
KATIE POPPITI, TOPP PROGRAM COORDINATOR

TOPP Program Coordinator, Katie Poppiti, has been volunteering with Sister Cities of Wilmington, Delaware (SCoW) since 2019. SCoW is a member of Sister Cities International. Founded by President Dwight D. Eisenhower in 1956, Sister Cities International is a nonpartisan 501(c)(3) nonprofit that serves as the national membership organization for individual sister cities, counties, and states across the United States. This network unites tens of thousands of citizen diplomats and volunteers in nearly 500 member communities with over 2,000 partnerships in more than 140 countries.

What is a sister city? A sister city, county, or state relationship is a broad-based, long-term partnership between two communities in two countries. A relationship is officially recognized after the highest elected or appointed official from both communities signs off on an agreement to become sister cities. SCoW's mission is to promote peaceful relations between the people of Wilmington and sister cities through educational, cultural, and artistic exchanges. Wilmington, Delaware, is home to five sister cities that include: Kalmar, Sweden; Fulda, Germany; Osogbo, Nigeria; Olevano Sul Tusciano, Italy; and Nemours, France.

Katie serves on the board for Wilmington-Olevano Sul Tusciano. Situated about 35 miles east of the Amalfi coast, many local area residents trace their ancestry to Olevano through documentation at the Ellis Island Museum, including Katie's

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Katie Poppiti (left), pictured with her uncle, Primus Poppiti (center), and her grandfather, Ciro Poppiti, promoting SCoW at the annual Italian Festival in Wilmington, Delaware (June 2023).

# Mycorrhizal Fungi:

## *The Colonizers, Mediators, and Protectors of the Ecosystem*

GLADIS ZINATI<sup>1</sup>, WADE HELLER<sup>2</sup>, JOE CARRARA<sup>3</sup>, AND AMIYA KALRA<sup>4</sup>

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### WHAT ARE MYCORRHIZAL FUNGI AND THEIR BENEFITS?

A mycorrhiza (from the Greek mykes for "fungus" and rhiza, for "root") is a symbiotic association in which the fungus forms with plant roots. It is called symbiotic because the association benefits both organisms involved; the mycorrhizal fungi scavenge and transport otherwise unavailable nutrients to their host plants in return for carbohydrates produced through photosynthesis. These nutrients include but are not limited to phosphates, nitrates, zinc, and copper, as well as organically bound nutrients (attached to carbon in large molecules that plants can't use) that are important for plant growth. Secondary benefits of the mycorrhizal relationship with the host plant also include increased resistance to diseases, drought, and salinity.

Almost all plants growing in a wide range of ecosystems, from deserts to forests to arable land, form a symbiotic association with mycorrhizal fungi. A few plant families, such as Brassicaceae (the mustard family) and Amaranthaceae (the goosefoot family), do not form mycorrhizal associations. This fungal association should not be confused with symbiotic relationships with soil bacteria called rhizobia resulting in nitrogen-fixing nodules in leguminous crops.

### TYPES OF MYCORRHIZAL FUNGI

Two major types of mycorrhizal fungi have been described based on their structure and function: ectomycorrhizal fungi and endomycorrhizal fungi. There are two other minor fungal types that associate themselves with orchids and ericoid plants (such as blueberry, cranberry, rhododendron, and azalea).

■ **Ectomycorrhizas (ECM)** are associated with temperate-zone woody trees (such as pine, poplar, and willow). They live on the surface of the epidermal cells of the plant roots, forming

dense hyphae covering and branching out to the rhizosphere but never entering the cell walls.

■ **Endomycorrhizas**, on the other hand, are associated with 80% of all plants on the planet and include arbuscular, ericoid, and orchid mycorrhizae. Endomycorrhizas are the only type of mycorrhiza that associate with herbaceous roots (including vegetables), living inside the host's plant root cells, forming densely branched structures called **arbuscules** (See Photo 1), and thus are known as arbuscular mycorrhizal **(AM)** fungi. Some species of AM fungi also form lipid storage **vesicles**; the name vesicular-arbuscular mycorrhizae **(VAM)** is sometimes used. The fungi grow filamentous structures out from the root into the soil environment called hyphae. The belowground mycorrhizal hyphal network expands the volume of soil that the plant root system can explore and has the potential to connect plants, allowing the movement of resources among plants. The richness and composition of AM fungi communities depend on the host plant, climate, and soil conditions.

### EFFECTS OF MYCORRHIZAL FUNGI ON CARBON (C) CYCLING

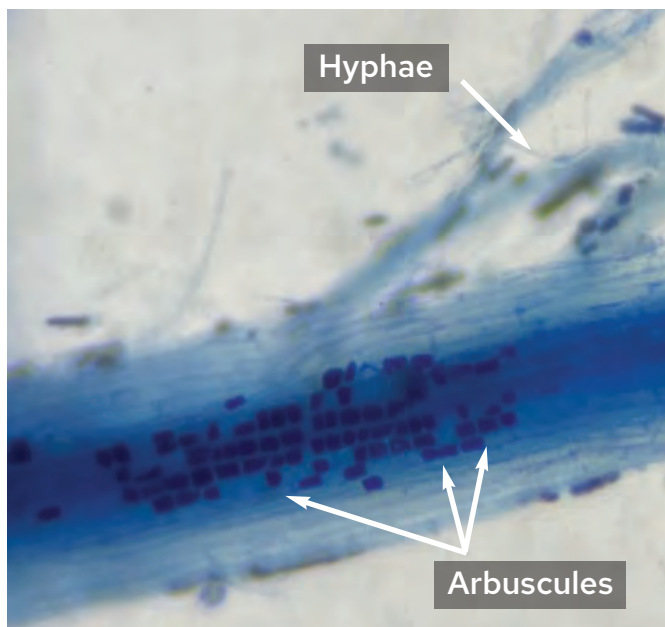
Research has shown that plants allocate between 10 and 20% of their photosynthates to AM fungi, while up to 20% and sometimes up to 50% of assimilates (organic substances made by the plant) can be allocated to ECM fungi and ericoid mycorrhizal fungi [1,2]. Almost all terrestrial and agricultural ecosystems are dominated by AM, ECM, and ericoid and form symbiotic associations with trees, shrubs, vegetables, and herbs, which demonstrates that mycorrhizal fungi play a key role in global carbon cycling.

### EFFECTS OF MYCORRHIZAL FUNGI ON NITROGEN (N) AND PHOSPHORUS (P) CYCLES

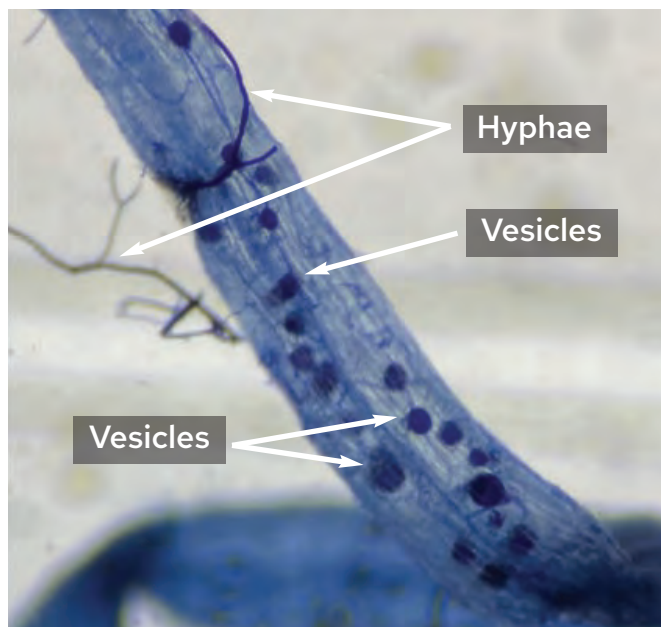
The AM fungi contribute up to 90% of plant P to host plants in ecosystems with reduced soil P availability; their contributions of plant nitrogen (N) are less pronounced and often depend on soil type, water content, and pH [3,4]. On the other hand, ECM fungi can acquire and immobilize significant amounts of organically bound N and P in the hyphae, representing up to 80% of plant N and P.

It is important to note that not all plants investing in large amounts of C into the mycorrhizal network receive large amounts of nutrients in return. Isotope studies [5] have shown that plants received up to 90% of plant N and P through mycorrhizal networks with little investment of C. In contrast,





Structures of AM fungi on colonized black bean roots using trypan blue staining under the microscope with 40x magnification: arbuscules, vesicles, and hyphae.



sorghum that invests large amounts of C receives little in terms of enhanced nutrient uptake. Such studies show an imbalance in resource exchange in mycorrhizal networks. Thus, certain plant species may benefit more from mycorrhizal networks than others.

In addition to contributing to plant nutrient uptake, **mycorrhizal fungi reduce soil nutrient losses** in the form of leaching or denitrification. Studies have shown that mycorrhizal fungi can significantly reduce N (up to 70 kg N/ha/yr) and P (up to 150 g P/ha/yr) leaching losses, including organic and inorganic mineral nutrients [6-9]. Thus, by minimizing nutrient losses, mycorrhizal fungi can enhance nutrient-use efficiency and ecosystem sustainability. These services are important, especially in nutrient-limited ecosystems. It has also been documented **that AM fungi reduce greenhouse gas nitrous oxide (N<sub>2</sub>O) emissions** by influencing bacterial communities in the rhizosphere and inducing shifts in denitrifying microbial communities [10].

Most plant roots are colonized (associated) by multiple species of mycorrhizal fungi at the same time. Several studies suggest that nutrients (e.g. N) move from one plant to another through hyphal networks [11]. This can be important for intercropping systems where N could potentially move from an N-fixing plant to a non-fixing plant.

## ECOSYSTEM FUNCTIONS

Mycorrhizal fungi provide a wide range of ecosystem functions, including enhancement in plant growth and productivity, seedling establishment, litter decomposition, soil formation and aggregation, and resistance to biotic and abiotic stressors (e.g. drought, heavy metals, pathogens, and pests). Mycorrhizal fungi are known to enhance plant growth and productivity in natural and agricultural ecosystems with low but sufficient levels of P in the soil or rooting medium. Under P limitation, plants actively signal to AM fungi via root exudates to increase mycorrhizal colonization and to increase plant P

concentration [12]. However, such benefit is reduced in high-input agricultural systems, particularly excess fertilizer P application. Growth responses depend on plant species; those with thick roots (such as shrubs and trees) rely more on mycorrhizal fungi than plants with fine roots (such as grasses). Usually, plant seedlings benefit more from symbiotic association with mycorrhizal fungi than mature plants.

Almost all ecosystems are dominated by mycorrhizal-associated plants except intensively managed arable fields and soils with extremely limited levels of P. Plant seedlings inoculated with AM fungi prior to transplanting into fields with low-P soils will associate effectively with AM fungi where the latter provides P and water, which are critical to plant growth and sustainability in dry conditions. Thus, inoculation with AM fungi will reduce fertilizer input and increase nutrient uptake efficiency, plant growth, and yield.

As a result of fungal hyphae exploration into soil-root surroundings, the AMF brings back water and nutrients to the host plant and improves the plant's tolerance to drought. Additional benefits include increased tolerance of host plants to soil salinity by keeping certain ions (such as Na<sup>+</sup> and Cl<sup>-</sup>) not reaching the root system but allowing K<sup>+</sup>, Mg<sup>2+</sup>, and Ca<sup>2+</sup>. The AM fungi contribute to soil aggregation by producing a sticky, sugary protein compound known as glomalin, which serves as a building agent by gluing the soil particles together [13], especially the aggregate fractions >2.00mm and macro-aggregates [14]. Building soil structure increases the capacity of water and nutrient retention [15]. The AM fungi increase the host resistance to soilborne diseases and pests by competition for nutrients in the rhizosphere, producing polysaccharides and phenolic compounds, thickening the plant's cell wall, and creating a mechanical barrier to the entry of root pathogens [16].

## MYCORRHIZAL INTERACTION NETWORK

Studies have shown that AM fungi interaction networks are nested, meaning that there are several generalist fungi that

associate with almost all plants. These fungi include *Rhizopagus irregularis* (formerly *Glomus intraradices*) and *Funnelformis mosseae* (formerly *Glomus mosseae*).

Root colonization of seedlings can be slow in the absence of mycelial networks, as in sites with annual plants that depend on intensively managed and tilled agricultural fields, long fallow arid environments, and sites disturbed by fire. The mycorrhizal network is low in such communities because of regular disturbance of the mycorrhizal hyphae and the vegetation cover that maintains the networks.

## FACTORS THAT LEAD TO REDUCTION IN ROOT COLONIZATION BY AM FUNGI

There are many factors that lead to a reduction in AM fungi plant root colonization. Below, we list the common factors that contribute to soil AM fungi decline:

- Increase in soil disturbance and intensity in both agricultural and unmanaged systems.
- Heavy fertilization.
- Cultivation of nonmycorrhizal crops (e.g. rapeseed, tillage radish, sugar beet) in a crop rotation where mycorrhizal association is required for next season's crops.
- Soils receiving runoff loaded with fungicides and herbicides, and
- Deforestation or clearcut harvesting of forest trees, which associate with AM fungi (such as maple, ash, birch, and dogwood).

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## METHODS TO ENHANCE MYCELIAL NETWORKS AND ROOT COLONIZATION

- Reduce soil disturbance by replacing intensive tillage with reduced or no-tillage practices to provide the host plants with greater chances to associate with soil mycorrhizal fungi and to allow for a buildup of hyphae to transport nutrients and water to plants throughout the growing season.
- Reduce the addition of fertilizer with P, especially in soils with low but sufficient levels of P. This will enhance the mycorrhizal mycelial network and increase root colonization of seedlings.
- Inoculate seeds and plant seedlings with mycorrhizal fungi species that are compatible with host plant species. Benefits to inoculation are greatest under marginal or sub-optimal field conditions, such as highly weathered or eroded soil, low rainfall, or limited irrigation. Inoculation of seedlings prior to transplanting in the field allows the roots to form mycorrhizal associations during the seedling growth phase (often in the greenhouse), providing advantages for nutrient and water uptake, which are critical at transplanting.
- Consider a crop rotation with plants that enhance indigenous mycorrhizal fungi already in the soil, such as onion, sunflower, sweet potato, potato, okra, and strawberry. Including non-mycorrhizal plants such as cabbage, broccoli, and spinach in a crop rotation may lead to low populations of indigenous mycorrhizal fungi that are needed for supporting mycorrhizal crops.

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*RULE XIX Gettysburg, PA Study Institute Group Photo.*

DIANA KOBUS, EXECUTIVE DIRECTOR

**D**oes Penn State rule? I grew up in a decidedly Pitt-supporting family, and that answer was often settled from year to year on the football field. For the last year and a half, I've been part of Penn State's Rural-Urban Leadership Program (RULE) under the guiding light of Program Director and Penn State Extension Senior Educator JD Dunbar and her management team of RULE alums. I'll forever say that Penn State rules for this fantastic program! Many of our staff at PCO are Penn State alums, so we're very grateful for all of the ways Penn State supports agriculture in Pennsylvania.

RULE started in 1985 and, to date, has over 700 alums. It was funded through public and private support, along with its predecessor program, the Public Affairs Leadership Program (PALP)<sup>1</sup>. I've been part of the 19th class of RULE (or RULE XIX). I was referred to the program by former PCO Board President Andrew Smyre, who completed the prior course, which overcame significant challenges to meeting in person during the pandemic.

The initial PALP class had no female participants, and now, our current RULE class has the most diversity the program has ever seen. The program brings together agriculture and communication organizations, companies and agencies who work adjacent to those fields, and professionals from all over the state. The result has allowed us to dive deep into our learnings. To view our current class listing, check out the webpage below for more information.

As a class, we explore the state in two-and-a-half-day institutes at various locations. We learn about the different sociology, ecology, economics, and history of places we might never

visit, even though we all reside in Pennsylvania. From Harrisburg to Pittsburgh and Leola to Gettysburg, we've met with manufacturers, legislators, community development professionals, historians, community service professionals, and many farmers.

In addition to intensive learning about the communities and people surrounding us, RULE is heavily leadership-focused. To us, leadership takes different forms, such as:

- **Logistics** – With significant support from the management team, the meetings are all coordinated through the active work of participants, from speaker introductions and thank-you gifts to transportation and timing.
- **Modalities and Styles** – We also explore leadership using different tools to understand better our strengths and areas needing development and how different leadership styles can be brought together to achieve goals in successful ways that a single style can't reach.
- **Stories** – As part of the program, we read keynote speeches and presentations from impactful leaders and changemakers at all levels and then discuss them.
- **Teamwork** – We work in small groups to prepare and create presentations for the rest of the class. We also use this time to explore content in a small group setting.
- **Personal development** – We attend development sessions to encourage us to look inward and understand how our individual development is connected and essential for workplace and community development.
- **Management Team** – RULE alums (or RULErs) are active participants in our work, each leading small groups and offer-

*continued on page 11*

# Organic Science & Research Investment Act

ANNIKA LA FAVE, POLICY & COMMUNICATIONS  
INTERNS

As the primary grant distributor for ag research, USDA's National Institute of Food and Agriculture (NIFA) is crucial to connecting the dots between the Farm Bill and the changing shape of the agriculture industry. The team at the Organic Farming Research Foundation (OFRF) has been working to secure federal support for the improvement and widespread adoption of organic farming systems since the establishment of the Federal Organic Foods Production Act (OFPA) in 1990.<sup>1</sup>

As a result of OFPA, NIFA's first awards for organic research were distributed in 2001. Since then, the U.S. organic industry has become the fastest-growing segment of U.S. agriculture, with sales of organic products reaching \$67.6 billion in 2022.<sup>2</sup> To sustain this growth, organic producers need an adequate share of resources dedicated to innovation, education, and market development in the next Farm Bill. The Organic Science and Research Investment Act (OSRI) addresses this by increasing agricultural and ecological resilience and fostering economic opportunity for producers.

The OSRI Act is led by Senator Fetterman and supported by Senators Casey, Booker, Brown, Gillibrand, Welch, and Wyden, and other organizations promoting sustainable agriculture, including Pennsylvania Certified Organic.<sup>3</sup> "We are excited to be able to work with Organic Champions in Congress to help ensure there are resources available to support the success of organic farmers and ranchers across the nation," commented Brise Tencer, OFRF Executive Director. "Over the last several years, OFRF has collected robust information from farmers about their research and education needs, and these bills would provide much-needed investment in solutions to these problems."

OFRF's 2022 National Organic Research Agenda reported on surveys and focus groups conducted with over 1,100 certified organic and 71 transitioning farmers and ranchers across North America. Participants provided input on their most pressing challenges and technical assistance needs. Among the participants' top five concerns were the availability of organic research funds (54%), access to knowledgeable agricultural service providers (53%), and the imbalance of organic supply and demand (58%).<sup>4</sup> These prominent concerns are all addressed in the OSRI Act's key objectives:

**1. Creating the Coordinating and Expanding Organic Research Initiative.** This initiative charges the USDA's

Research, Education, and Economics agencies to catalog the current, ongoing research on organic food and agriculture topics and provide a path to increase organic agriculture research conducted and funded by the USDA.

**2. Directing the USDA to develop a plan to increase organically managed research acreage.** This plan will formulate how the Agricultural Research Service (ARS), the sole in-house research operation at USDA, will dedicate a portion of its research fields to organic agriculture research.

**3. Bolstering programs operated by NIFA.** The OSRI Act would provide stair-stepped budget increases to the Organic Research and Extension Initiative and expand the statutory priorities to include climate change, organic alternatives to prohibited substances, and Traditional Ecological Knowledge. The bill would also provide first-time Congressional authorization for the Researching the Transition to Organic Program, currently known as the Organic Transition Research Program.

**4. Boosting funding for the Organic Production and Market Data Initiative (ODI).** The data produced through the ODI is essential for developing risk management products and targeted market development. The OSRI Act directs the Economic Research Service (ERS) to conduct a complete, systematic evaluation of organic agriculture's economic impact on rural and urban communities, considering economic, ecological, and social factors.

Last year, ERS reported that every dollar invested in agricultural research returns \$20 to the U.S. economy.<sup>5</sup> One of the aims of OFRF is to secure a proportionate amount of funding for organic research to reflect organic agriculture's contribution to the market. "While organic agriculture makes up more than 6% of the food sales market, ARS and NIFA devote less than 2% of their research dollars to organic research. The policies in the OSRI Act signal to researchers that organic agriculture research is valued," said Jaydee Hanson, Center for Food Safety. Other organic agriculture advocates have echoed this conviction that organic producers need adequate representation through federally funded research.

It's heartening to see the traction the OSRI Act and other organic bills supporting organic farming and agricultural research have gained. If you would like to join our cause, please take a moment to reach out to Senator Fetterman and Senator Casey to thank them for their sponsorship and for demonstrating Pennsylvania's support for organic agriculture.<sup>6</sup> To



learn more about the OSRI Act and discover other ways to get involved, check out the OSRI Act Toolkit.<sup>7</sup>

#### Additional Info:

<sup>1</sup> **OFPA:**

[www.nifa.usda.gov/grants/programs/organic-agriculture-program](http://www.nifa.usda.gov/grants/programs/organic-agriculture-program)

<sup>2</sup> **Organic Industry Survey:**

<https://ota.com/market-analysis/organic-industry-survey/organic-industry-survey>

<sup>3</sup> **OSRI Act Sign-on Letter:** <https://ofrf.org/wp-content/uploads/2023/07/OSRI-Act-Sign-on-Letter-FINAL.pdf>

<sup>4</sup> **2022 National Organic Research Agenda:**

[https://ofrf.org/wp-content/uploads/2022/08/OFRF\\_National-Organic-Research-Agenda-NORA\\_2022-report-FINAL.pdf](https://ofrf.org/wp-content/uploads/2022/08/OFRF_National-Organic-Research-Agenda-NORA_2022-report-FINAL.pdf)

<sup>5</sup> **U.S. Public Ag Research & Development:**

[www.ers.usda.gov/amber-waves/2022/june/investment-in-u-s-public-agricultural-research-and-development-has-fallen-by-a-third-over-past-two-decades-lags-major-trade-competitors/](http://www.ers.usda.gov/amber-waves/2022/june/investment-in-u-s-public-agricultural-research-and-development-has-fallen-by-a-third-over-past-two-decades-lags-major-trade-competitors/)

<sup>6</sup> **Contact Senators Fetterman & Casey:**

[www.fetterman.senate.gov/contact](http://www.fetterman.senate.gov/contact)  
[www.casey.senate.gov/contact](http://www.casey.senate.gov/contact)

<sup>7</sup> **OSRI Toolkit:** <https://docs.google.com/document/d/1TKfiks7R76FaT73pNA1Qn44RyN7zifPOGYdbC52W-SM/edit>

## Rural-Urban Leadership Program

*continued from page 9*

ing support and guidance from their experience in these explorations.

Participating in RULE wasn't a hard sell. When your board chair recommends you do something, it tends to carry a lot of urgency (thank you, Andrew!). At the first Study Institute, though, I questioned my commitment as we all participated in the workings of a mock community undergoing emergencies. We were assigned roles like media, mayor, teacher, town council member, etc. The process was chaotic, playful, and not my favorite, but many others enjoyed it immensely. That initial session helped me realize that many times, as leaders, we need to look at what other people need as the imperative and give our full participation to show our commitment to the group. I tend to be quite serious, so it was also a reminder that balance in learning sometimes means you have to have a little fun. Following that institute, I now lean on my staff members who are good at fun things to ensure we bring a balance to our organization that supports everyone, which is extra tough in a remote work environment.

On the other hand, hard conversations tend to bubble up consistently in our small groups. Still, we all find that successfully navigating these is integral to our personal and professional growth. I became particularly emotional when we toured Gettysburg with a historian and guide. While this was not my first time visiting the battlefields at Gettysburg, exploring that still very palpable history in the face of our current political discourse really hit me hard. Hearing stories and reading letters of

a time when our country had come apart before, in ways when brothers were fighting against each other on different sides of the war, really brought home the lesson of our own time. It made me wonder what could happen if we didn't do the hard work of engaging and working together in the community to resolve issues.

As part of this program, I've seen participants learn and grow in many ways with the full acceptance and support of other participants. Of course, JD and her team and their collective spirit of love hold us all in often uncomfortable spaces. There has been total vulnerability in discussions about race, class, and gender without sparing the hard and honest truths that are often necessary to see things differently. When we have a personal connection to a complex issue, we're invested in each other in a way that forces us to look inward for ways to open ourselves to others' truths. Some of these conversations happen as part of a structured experience, and other times, they occur randomly; no matter how they unfold, they do so with the respect and honor of the others involved.

Our recent institute was right in my hometown of Pittsburgh, and it was fascinating to see where I live through the eyes of those who had never been there before. I also got to visit and learn about new places or areas I would usually drive through without a second thought, including vacant lots in city neighborhoods growing native plants and a hilltop education farm on an old public housing development site. Though much of Pittsburgh is bustling and new, I built out some grittier history of how it was developed for my small group members with stories from my family's immigrant history about the rise and fall of the steel industry. There were also plenty of ways for me to point out some of PCO's certified organic clients in and around the area!

With our class graduating this spring, I encourage participation and support of this program and would be happy to talk more about it. If you'd like to refer a candidate or make a donation, please visit the web pages below for more details.

Lastly, I want to send out a very special thank you to Penn State Extension, JD and her team, and all of my classmates who RULE. And an extra special thank you to Tara Homan, who manages to keep us all on track from event to event and everywhere in between!

<sup>1</sup> *RULE's predecessor program, the Public Affairs Leadership Program (PALP), was one of four state leadership programs in the U.S. seeded by the Kellogg Foundation (cereal company) in the early '70s. The other three states besides Pennsylvania were California, Michigan, and Washington.*

#### Additional Info:

■ **Current PALP Listing Class:**

<https://extension.psu.edu/programs/rule/class>

■ **RULE Refer a Candidate:**

<https://extension.psu.edu/programs/rule/application/refer-a-candidate>

■ **RULE Donation:**

<https://secure.ddar.psu.edu/s/1218/2014/index.aspx?sid=1218&gid=1&pgid=658&cid=2321&did=2092&bledit=1&appeal-code=AD55K>

## Standards & Policy Update

Kyla Smith, Certification Policy Advisor  
NOSB Member, USDA Accredited  
Certifying Agent Seat, 2021–2026



### STRENGTHENING ORGANIC ENFORCEMENT UPDATE

The United States Department of Agriculture (USDA) and the Agricultural Marketing Service (AMS) have published the Strengthening Organic Enforcement's (SOE) final rule. Since the final rule was first published in 2002, it's the largest regulatory change to the organic regulations. Its purpose is to amend the USDA organic regulations to strengthen oversight and enforce the production, handling, and sales of organic agricultural products. **The implementation due date is March 19, 2024**, which means operations engaging in the organic supply chain must comply with the applicable parts of the regulation no later than this date.

PCO has created videos, resources, and other helpful information for certified operations and applicants located on PCO's SOE web page. These resources provide further detail of the information highlighted in this article.

To further detail, the following are the highlights of the SOE final rule:

#### WHO NEEDS TO BE CERTIFIED?

SOE adjusted which types of operations require certification and which are exempt. As stated above, the overall goal was to strengthen oversight and integrity of the organic supply chain. The best way to do that is full supply chain certification. Operations producing or handling organic products must be certified unless they meet one of the limited exemptions of operations that engage in low-risk activities. PCO has updated two of our forms for those relationships.

#### IMPORT REQUIREMENTS

Another central focus area of SOE was import oversight, specifically targeting import certificates. After **March 19, 2024**, ALL imports coming into the U.S. will be required to have an NOP Import Certificate (regardless of country of origin) generated in the Organic Integrity Database (OID) by the certifier of the organic exporter (located outside of the US). The organic exporter will then pass that import certificate to the importer. (Note: a physical copy doesn't need to accompany a shipment; an electronic transfer of records is already standard in the industry.)

Each import must be declared organic, and the importer must enter certification data into the U.S. Customs and Border Protection's Automated Commercial Environment (ACE) system. (The electronic system is where the trade community reports imports and exports, and the government determines admissibility.) If the importer is a licensed customs broker, they may upload the data themselves. The importer also verifies

import compliance, confirming the shipment has a valid import certificate and has not been fumigated or irradiated.

### SUPPLY CHAIN TRACEABILITY AND FRAUD PREVENTION

Organic fraud continues to be an area of concern for organic stakeholders. SOE aims to protect the organic seal and prevent fraudulent products and bad actors from entering the organic supply chain. The focus areas already discussed in this article will undoubtedly accomplish that. The requirement is to include procedures as part of an operation's organic system plan. This will direct organic operations to verify their suppliers and organic product status – otherwise known as the Organic Fraud Prevention Guide. These are likely procedures that are already occurring but perhaps aren't written down as standard operating procedures (such as ensuring organic operations have a valid certificate and the product being received matches what you think you purchased and correlates with the organic certificate and other audit trail documents (e.g., receipt, BOL, etc.)).

Or perhaps there are additional procedures that may be important to start doing, like mapping your supply chain or performing a vulnerability assessment to determine the place most vulnerable for fraud to occur in your supply chain. Then, it provides an opportunity to plan to prevent the risk or possibility of fraud, and the focus on fraud and supply chain traceability will not only fall to the certified operations. Certifiers like PCO will also be required to perform additional audits of operations and products that we determine to be high-risk. Together, we'll be able to determine which operations are following the rules and which are not and get those not out of the organic supply chain.

#### NONRETAIL CONTAINERS

SOE revised the requirements about non-retail containers, which now require that nonretail containers display the identification of the organic product and a lot code or other unique identifier that links the nonretail container to the audit trail documents associated with the container. Based on the rule text and preamble, PCO has determined that a nonretail container that doesn't move through the supply chain, such as a harvest bin that does not leave the operation, isn't required to contain the information specified for nonretail containers. These containers must still meet the requirements for preventing commingling and contamination. Nonretail containers moving through the supply chain must display the specified information (e.g., product identification as organic and lot code).

PCO has also determined that the word "display" in the rule text means "affixed to the nonretail container or the agricultural product in or on a nonretail container."

#### Examples might include:

- A stamp on a produce box or master case
- A pallet tag
- A seal, tag, or magnet on a railcar
- A truck/trailer number with "organic" directly on the truck or



some other signage

- A plastic doc holder on the outside of the shipping container with audit trail docs

## ON-SITE INSPECTIONS

Lastly, SOE incorporated long-standing practices related to inspections into the rule. The audits performed at inspections are now explicitly referenced, as is the requirement for certifiers to conduct unannounced inspections on at least 5% of our certified operations annually. These practices have been occurring, so there isn't anything new here. However, it's a good reminder of why these practices are part of the certification process – because they help strengthen the organic market and reduce fraud.

Check out the Certification Update for information about form update timelines. We're here to support you throughout this implementation process. Please contact your Certification Specialist with any questions.

## Legislative Update

Kyla Smith, Certification Policy Advisor  
NOSB Member, USDA Accredited  
Certifying Agent Seat, 2021–2026

On September 30th, Congress passed a continuing resolution to ensure the federal government remains open and operational until November 17th, 2023. Unfortunately, the Farm Bill wasn't passed and is part of the overall process and conversation of funding the government.

Now, Congress must pass an extension to the Farm Bill or a final version before the end of the year. If this doesn't happen, more of the old "permanent laws" will return. The Organic Cost Share Program (OCCSP) faces the greatest risk, given its reliance on Farm Bill funding; consequently, this program will be cut until Congress addresses the issue.

The Farm Bill is essential for every organic farmer. It sets the agenda for agriculture policy, USDA priorities, and spending levels. Every five years, Congress formulates and approves the Farm Bill, including various programs like crop insurance, organic EQIP, funding for the National Organic Program (NOP), and support for organic research. Organic agriculture now accounts for 6% of total food sales in the country; however, a mere .1% of the Farm Bill funding is allocated for organic programs and funding. That discrepancy is staggering.

The best way to move the needle is to contact your Congressperson and explain why organic food and farming are important to you. Below are bills introduced in the House or Senate that could influence the organic industry and provide opportunities for you to discuss and seek support.:

### 1. Organic Market Development (OMD) Act

This bill was introduced in the Senate (S 2936) and the House (HR 5763). It aims to leverage investments in new and expanded organic markets by funding and support-

ing increased processing capacity, market development activities, targeted equipment purchases, and other activities to increase consumption of domestic organic commodities.

### 2. Opportunities in Organic Act

This bill was introduced in the Senate (S 1582) and the House (HR 3650). The objective is to enhance the existing Organic Certification Cost-Share Program, add flexible funding to support organic transition and expansion, foster the development of organic supply chains, provide technical assistance, and prioritize resources for producers and regions that haven't received a fair share of agricultural public investments. It would increase cost-share reimbursements to \$1,500 per operation per scope each year and provide ongoing funding to build on USDA Organic Transition Initiative elements.

### 3. Organic Research Bills

The Strengthening Organic Agriculture Research (SOAR) Act was introduced in the House (HR 2720), and the Organic Science and Research Investment (OSRI) Act was introduced in the Senate (S 2317). Both bills aim to provide continued, needed investments into organic agriculture research and market analysis to increase the resilience of U.S. agriculture, create economic opportunity for producers, and improve the ecological vitality of the landscape.

*continued on page 15*



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## Certification Update

Sarah Brown  
Certification Director



Autumn is a unique season for the certification world, filled with retreat and acceleration. As many of our farm and producer operations take a step back from the fields after the bustling harvest season, the pace of inspection season also decelerates for us at PCO. However, it's also when our work gears up for the year ahead.

Our dedicated teams are diligently processing the inspection reports that have recently arrived and finalizing our certification reports for the year. Completing these tasks within the calendar year is no small feat, especially considering the intricate timing logistics involved in overseeing 1,600+ operations. We sincerely thank all our clients for opening your operations to our inspectors. As a farmer, I understand the challenges and burdens associated with these experiences. I'm truly impressed and appreciative of how people-centered our PCO team continues to be. Your willingness to collaborate, communicate openly, learn, and adapt together humbles us.

If you've been following our communications related to the Strengthening Organic Enforcement (SOE) final rule, we want to emphasize:

### YOUR ACTION IS REQUIRED

The USDA has issued the SOE final rule to enhance oversight and enforcement of organic products. PCO has been working closely with other certifiers to assess the rule's impact and adjust our forms and policies accordingly. As a result:

- We've completely revamped our Organic System Plans (OSPs), now including a newly required section on organic fraud prevention. **To maintain your certification, please complete the new OSP and submit it by March 1, 2023**, along with your standard annual renewal paperwork. These forms are available now in your online portal and have also been sent to our postal clients.
- Uncertified handlers in your supply chain likely need to become certified by **March 19, 2024**. We urge them to contact us immediately to avoid potential supply chain disruptions. Reach us at [cst@paorganic.org] with any questions.
- There was a significant change to how the percentage of organic content in multi-ingredient products is calculated, which may impact the labeling category of your product. New product profiles (revised to be called a Formulation Sheet), master ingredients, and product list forms are part of the required form revisions referenced in the first bullet point. PCO will evaluate these forms, and if the percentage of your product no longer aligns with the labeling category your product is certified for, PCO will issue a noncompliance. To update the noncompliance, operations must submit a corrective action plan indicating

when they will come into compliance.

- Inspections in 2024 may differ slightly in length and process due to the incorporation of SOE verification steps.

As we approach January, you'll receive the usual Annual Update materials to kick off the 2024 season. In the meantime, PCO is committed to providing support throughout this adaptation period. There's a comprehensive set of SOE-related materials available for reference on our website, and we encourage you to reach out to your Certification Specialist at any time with questions: we're here to assist you.

Throughout this journey of adapting to the organic regulatory changes, our primary goal at PCO has been to facilitate a smooth transition. We aim to minimize disruption while upholding the integrity of organic regulations and the remarkable market you've all contributed to. At the root of it, that's why we're here. We believe organic is one of the best solutions for addressing the challenges of these times. Thank you for your part in that.

These times at PCO have been transformative, and I'm delighted to be part of this journey. I look forward to getting to know more of you in the New Year!

## Materials Update

Sarah Brown, Certification Director &  
Hector Nunez C., Materials Program Asst. Manager

### NAVIGATING THE CONFUSION BETWEEN BIODEGRADABLE MULCHES AND BIOBASED MATERIALS

As we bid farewell to another successful season and embrace the joys of fall, we want to extend our heartfelt gratitude to all the operators, members, and partners within the organic industry; your dedication to our food system doesn't go unnoticed. Today, we wish to address two intricate topics that have posed challenges for the entire industry – biodegradable mulches and the emergence of a new Biopreferred® (Biobased) logo found on certain materials in stores. These subjects are undeniably complex, and mishandling them can lead to contamination on your farm, endanger your certification, and contribute to financial losses.

Biodegradable mulches have been in use for about a decade, offering promises of reduced labor in vegetable crop production and decreased environmental pollution stemming from agricultural practices. There are also claims that these mulches are being used as a soil nutrient while enhancing crop yields; this is done by selectively reflecting specific light rays back to plants. In the years since their introduction, the organic industry (including operators, regulators, the USDA NOP, certifiers, and the NOSB) has grappled with discrepancies in manufacturing standards and review criteria for these materials.

Similar challenges have arisen in Mexico, Canada, and Europe, each with its own standards and regulations for biodegradable mulches. In today's globalized market, where



international companies can deliver products to your doorstep within days, manufacturers often cite different regulations, some of which are not even applicable in the United States. This, unfortunately, contributes to the confusion and potential misguidance of consumers. Consequently, the agricultural supply market has seen the proliferation of petroleum-based biodegradable films that release synthetic prohibited substances into organic soils. These biodegradable mulches pose a significant concern for operators because they do not comply with USDA NOP standards, and the majority of them are not permissible in organic production.

Section 7 CFR Part § 205.2 of the National Organic Program defines biodegradable biobased mulch films as synthetic mulch films meeting specific criteria, including compostability specifications and biodegradation rates. PCO has not identified any biodegradable biobased mulches that meet these requirements. Other material review organizations and USDA-accredited certifiers have similarly not approved any materials under this category that align with the National List requirements. As a result, PCO allows synthetic mulches with the restriction that they must be removed from the field at the end of the growing or harvest season to prevent contamination. PVC, a common ingredient in plastics, is a primary concern for leaching into the soil.

Another related source of confusion is the USDA Biopreferred® Program (see logo at right for easy identification). These certifications and inputs are distinct from, and not interchangeable with the USDA National Organic Program. The USDA Biopreferred® Program operates independently, with key differences that could jeopardize organic certification. Using materials certified under this program, which may contain synthetic substances not on the National List, on an organic field, livestock, or product, can result in a 36-month transition period for the affected area and the loss of certification. While some USDA Biopreferred® Program certified materials may align with USDA NOP requirements, there are exceptions that require independent reviews by organizations such as OMRI, WSDA, CDFA, or PCO for approval.

When in doubt, please contact PCO to verify whether a material is allowed, restricted, or prohibited by PCO, OMRI, CDFA, or WSDA for its intended use. Manufacturers and suppliers invest in listing their materials to demonstrate compliance with USDA NOP standards, so please don't hesitate to request documentation of compliance for all purchases. Sellers are responsible for providing this documentation, and if they refuse, consider seeking alternatives elsewhere. Examples of compliance documentation include MRO certificates (OMRI, CDFA, and WSDA) and PCO material review decision letters. Reminder to consult PCO's Approved Material Lists for verification.

For updates and inquiries, please contact us at 814-422-0251. A Certification Specialist can assist in adding most materials and checking their status directly over the phone.



Remember to provide information about the intended use, the full material name, and the material manufacturer's name. For more technical questions, don't hesitate to reach out to your assigned Certification Specialist or email us at [materials@paorganic.org](mailto:materials@paorganic.org).

Your continued support and business are deeply appreciated!

## Legislative Update

*continued from page 13*

### 4. Continuous Improvement and Accountability in Organic Standards (CIAO)

CIAO was introduced in the House (HR 5973). The objective is to set up a framework to ensure the viability of the public-private partnership (i.e., a partnership between the government like the National Organic Program and certified businesses or certifiers) and continue to advance organic standards to keep up with the marketplace and maintain the credibility of the USDA organic seal. CIAO establishes a framework of accountability and transparency for future rulemaking, instituting a clear and consistent process to guarantee the ongoing relevance of organic standards.

If you have questions about the above bills or the Farm Bill, contact Kyla Smith, Certification Policy Advisor ([kyla@paorganic.org](mailto:kyla@paorganic.org) or 814-422-0251 x216) for more information.

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## TOPP Update

Leilani Durand  
TOPP Northeast/Mid-Atlantic  
Program Director



The Transition to Organic Partnership Program (TOPP) in the Northeast/Mid-Atlantic region is off to a strong start! TOPP is a new USDA initiative to provide educational resources, technical assistance, and mentorship support to producers interested in or currently transitioning to organic production.

This program was launched in November 2022, and in less than a year, the Northeast/Mid-Atlantic region has over 40 partner organizations engaged in supporting transitioning and organic farmers in our region. There are over 100 farmers signed up for the mentorship program as mentors or farmers seeking mentorship support.

### NEW TOPP WEBSITE

The TOPP program just launched a new website: [www.organictransition.org](http://www.organictransition.org). This website provides information about upcoming events, the TOPP mentorship program, program news, organic farming resources, and links to our partner organizations' websites. If you are interested in learning more about TOPP or attending any of the many upcoming events, please visit the TOPP website.

## FARMER TO FARMER MENTORING PROGRAM STARTS IN NOVEMBER

If you're an experienced organic farmer interested in becoming a mentor or a transitioning producer interested in working with a mentor, please contact PCO or visit the TOPP website to learn more about this program. Mentors receive a stipend for their work supporting mentees, and the program is free for all transitioning producers interested in receiving mentorship support.

To sign up for this program, fax your interest to PCO at 814-422-0255 or submit an interest form or application on the TOPP under the Mentorship Program link.

## NORTHEAST/MID-ATLANTIC TOPP HIGHLIGHTED AT THE NOSB MEETING

The fall 2023 National Organic Standards Board (NOSB) meeting was held in Providence, RI, from October 23 to 26th. PCO sponsored a reception at this event and presented highlights and success stories of the work in the region. Nine of the TOPP partner organizations in the region also attended the event to discuss their work on this new initiative. Please check the website for event highlights and photos!

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## Board Spotlight

JOE DICKSON, MEMBER OF THE BOARD OF DIRECTORS



I'm preparing to travel to PCO's annual board retreat in Pennsylvania, and I'd love to share a little about why I'm so excited to be a part of this board and support PCO in organic history.

I've been working on organic agriculture and standards for over 20 years. As the Director of Quality Standards at Whole Foods Market, I was responsible for the company's organic certification (including hundreds of stores, distribution centers, and kitchens) and along with the company's work to advocate for strict organic standards. From 2010 to 2015, I served as the retailer representative to the National Organic Standards Board, advocating for strong standards that build consumer trust in the USDA seal. In 2018, I left Whole Foods and co-founded Merryfield, a loyalty and rewards app for natural and organic brands that educates consumers about the benefits of organic and sustainable agriculture. Currently, I drive Merryfield's standards and partnerships while consulting with retailers, brands, certifiers, and non-profits on mission, standards, and certifications.

During my years in Texas, my husband and I operated a regenerative family farm, High Rock Ranch, where we bred and raised meat and dairy goats, laying hens, and countless vegetables. Through sustainable grazing and land management practices, we returned unproductive land to vitality, one of my proudest accomplishments.

In 2021, I returned to my native New England, settling in the Green Mountains of Southern Vermont. Around that time, I re-connected with my dear friend and fellow PCO board member Katherine DiMatteo, who encouraged me to apply for a board seat. I was very familiar with PCO's phenomenal work from my years in the organic industry. I was impressed by PCO's significant role as one of the nation's most respected certifiers, along with its role as the Northeast TOPP lead. I jumped at the opportunity to draw on my experience in organic to help promote the strength of organic in the Northeast and to boost organic farms, processors, and consumers.

One of my most important values is epistemic humility – being humble about what we know and how we know it and acknowledging that there's a lot we don't know. The last century has been rife with difficult examples of practices and chemicals that we thought were safe that turned out to be quite harmful (DDT, PFAS, Hydrogenated Oils, and many others.) These cases demonstrate that while science is powerful, it's subject to human cognition limits and our minimal visibility we have into the very complex and nuanced features of the natural world. One of many reasons I support the

precautionary principle regarding food and agriculture is because we should honor and prioritize natural systems and processes, using precaution when considering synthetic ingredients and practices. I believe deeply and fundamentally in organic agriculture as a powerful way to support individual and environmental health.

I've never been more optimistic about the future of organic, and I'm absolutely thrilled to work closely with PCO's board and outstanding staff to advance organic agriculture in the Northeast and beyond.

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## PCO Core Values in Action

*continued from page 4*

market resources. Currently, 62 companies are participating in this program, selling almost three million dollars worth of organic products.

The OTA hosts a Diversity Council with 26 of its sister companies. The council is committed to guiding this work and ensuring initiatives stay at the forefront of our work in the organic movement. We've also begun leveraging partnerships with organizations we've never partnered with but are certainly aligned with our efforts. Our most prominent partner of this kind is the Black Farmer's Index (The Index). The Index is the largest, free, public listing of Black agriculturalists in the U.S.

Together, the Index and OTA collaboratively created three main goals:

- **Enrolling more Black farmers into the OTA, specifically registering them into the Organic Trade Association Diversity and Entrepreneurship Program.**
- **Assisting farmers in becoming certified organic growers or as far as possible into the certification process.**
- **Developing strategies for U.S. agribusiness that are diverse, equitable, and inclusive.**

The partnership began in 2022, and since then, we've worked together on several diversity and equity efforts to ensure Black farmers are included.

The Index promotes OTA's Diversity and Entrepreneurship Program and is woven into the industry's fabric. Under the partnership with OTA, The Index provides a review of communication materials, adds clarity to public comments concerning BIPOC growers, provides updates to participants, and creates industry events. Also, The Index will work with The Organic Center (TOC) in collaborative efforts to highlight products and growing practices of Black farmers who participate in research opportunities.

OTA has made a serious commitment to expand our membership through this initiative, and it's our way of accepting our social responsibility in shaping a more inclusive agricultural future for the good of the organic market and our communities.

# Event Calendar

All times listed are Eastern Time Zone unless otherwise indicated.

\* Notes a TOPP Core Partner Regional Event

## DECEMBER

### Date: December 2

**Event:** Pasa Sustainable Agriculture, Small Engine Repair & Maintenance

**Location:** Hilltop Urban Farm, Pittsburgh, PA

**Time:** 9:00am-4:00pm

**URL:** <https://pasafarming.org/event/small-engine-repair-and-maintenance-western-pa/>

### Date: December 2

**Event:** Winter Open House

**Location:** Rodale Institute, Kutztown, PA

**Time:** 11:00am-4:00pm

**URL:** <https://rodaleinstitute.org/events/winter-open-house-2023/>

### Date: December 6

**Event:** Pasa Sustainable Agriculture, Advanced Grower Intensive  
**Location:** Nurture Nature Center, Easton, PA

**Time:** 9:00am-4:15pm

**URL:** <https://pasafarming.org/event/advanced-grower-intensive-2/>

### Date: \*December 12

**Event:** TOPP/Rodale Field Walk, Geothermal Greenhouse Tour  
**Location:** Shemp's Farm, Bellefonte, PA

**Time:** 11:00AM-3:00PM

**RSVP:** Contact Sage Dennis or Catherine Peebles at Rodale

## JANUARY

### Date: \*January 13

**Event:** NOFA Massachusetts Winter Conference

**Location:** Worcester State University, Worcester, MA

**URL:** [www.nofamass.org/home/-nofa-events/winter-conference/](http://www.nofamass.org/home/-nofa-events/winter-conference/)

### Date: \*January 19-21

**Event:** First Annual VABF/SFOP Summit

**Location:** Roanoke, VA

**URL:** <https://vabf.org/2024-vabf-sfop-summit/>

### Date: \*January 20

**Event:** NOFA New York - Winter Conference

**Location:** Syracuse, NY

**URL:** <https://nofany.org/2024conference/>

## FEBRUARY

### Date: February 8-10

**Event:** Pasa Conference

**Location:** Lancaster, PA

**URL:** <https://web.cvent.com/event/5dd78fd8-4ddb-4288-b005-f932257df582/summary>

### Date: \*February 10

**Event:** NOFA New Hampshire - Winter Conference

**Location:** Southern New Hampshire University, Manchester, NH

**URL:** [www.nofanh.org/nofa-winterconference](http://www.nofanh.org/nofa-winterconference)

### Date: \*February 17-18

**Event:** NOFA Vermont - Winter Conference

**Location:** University of Vermont - Burlington, Burlington, VT

**URL:** [www.nofavt.org/events/-annual-nofa-vt-events/winter-conference](http://www.nofavt.org/events/-annual-nofa-vt-events/winter-conference)

### Date: \*February 21-24

**Event:** West Virginia Food & Farm Coalition Winter Meeting

**Location:** Charleston, WV

**URL:** [www.wvfoodandfarm.org](http://www.wvfoodandfarm.org)

# New Members

PCO Welcomes 3rd Quarter New Members!

## NEWLY CERTIFIED ORGANIC

### Alex & Nikki Zepp

Kilbuck, OH

### Alpine Foods Inc.

Lakeville, MN

### Beekman Market

Garden LLC

Poughquag, NY

### Bella Bella Gourmet

Foods LLC

West Haven, CT

### Benjamin Sensenig

Shickshinny, PA

### Benuel G. King

Quarryville, PA

### Blue Oak Farms

Holtwood, PA

### Brian Boyd

Fredericksburg, PA

### Caleb Hoffman

Mount Pleasant Mills, PA

### Chris Strawser

Mount Joy, PA

### Clabaugh Homestead

LLC

New Oxford, PA

### Daniel Gaston

Moravia, NY

### Darrell L. Beidler

Granville Summit, PA

### Dave Zook

Middleburg, PA

### David Martin

Winfield, PA

### David N. Weaver

Fredericksburg, PA

### Donald Kauffman

New Oxford, PA

### Eli S. Beiler

Groton, NY

### Elmer S. King

Myerstown, PA

### Eric Moser

Milton, PA

### Freshpet, Inc.

Bethlehem, PA

### Henson Farms

Russell Springs, KY

### Hill Country Food

Works LLC

Lockhart, TX

### Israel S. Stoltzfus

Orangeville, PA

### Jacob K. Stoltzfus

Danville, PA

### Jay Lester Garman

Fredericksburg, PA

### Jordan B. Leid

Little Falls, NY

### Joseph Fernandez

Waymart, PA

### Joseph Nolt

Fredericksburg, PA

### Katydid Hill LLC

Orwigsburg, PA

### Kelvin Fox

New York, NY

### Ken Moyer

Fredericksburg, PA

### Lime Valley Mill Farm

LLC

Peach Bottom, PA

### Manatawny Farms Inc.

Oley, PA

### Mapeks USA

Allentown, PA

### Marvin Lee

Oberholtzer

Shippensburg, PA

### Merriment Afoot, LLC

Tulsa, OK

### Moses B. Glick

Mount Joy, PA

### Moses Glick

Telford, PA

### My Forest Foods

Green Island, NY

### Nelson Sensenig

Rock Stream, NY

### Paul Burkholder

Liberty, KY

### Phillip & Jennifer

Hockett

Kilbuck, OH

### R & S Flinchbaugh,

LLC

York, PA

### River Nutrition, LLC

Smoketown, PA

### Samuel S. Beiler

Spring Run, PA

### Samuel S. Fisher

Marshall, IN

### Shemps Farm LLC

Bellefonte, PA

### Stephen T. Geib

Elizabethtown, PA

### Sunberry Paw Paw

Beverages Limited,

LLC

Farmington Hills, MI

### Thomas Oryniak

Mount Laurel, NJ

### Thrushwood Farms

Quality Meats, Inc.

Galesburg, IL

### William and Kelly

Shaffer

Hunker, PA

### Windmill Farms

Sunnyside, WA



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## New Faces

### Brenda Gross

Originally from Bloomsburg, PA, Brenda moved to upstate New York in 2018. Since 2018, she's been a full-time organic inspector and owns a 120-acre certified organic produce and hay farm with her husband. Brenda and her husband also spend time raising beef cattle and pigs.

In her free time, she enjoys UTV rides, kayaking, and working in the garden.



### Jenny Rocco

Originally from Northern Ohio, Jenny attended college at Ohio State University, earning a BS in horticulture. Alongside her husband Courtland, she manages their certified organic farm, BlueLoon Farm, raising Jersey dairy cows, Tunis sheep, and an array of Heritage breed chickens.

Since 2016, Jenny has been an IOIA inspector, mainly working in the Mid-Atlantic and Midwest regions. She enjoys working on projects involving OSP development and being a part of ACA working groups. In her spare time, you can find Jenny chasing her sheep out of the herb garden, repairing fences, and adopting rescue dogs.





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## PCO Giving Back

*continued from page 5*



Flags of Wilmington's Sister Cities displayed in front of a banner representing Olevano Sul Tusciano, Italy.

great-grandparents, Ciro and Lidia Poppiti. Families began emigrating from Olevano in the late 19th century and settled in Wilmington, where they contributed to a vibrant Italian-American community. Today, their strong political, cultural, and economic influence, including the import of olive oil, is felt throughout the city and beyond.

The Wilmington and Olevano exchange programs have historically been youth-based, between elementary schools in Wilmington and schools from Olevano. In each respective community, exchange students (and chaperons) will be hosted by a resident family of that city. The following year, the same exchange repeats in the opposite city. While this aspect of the program is continuing, home exchanges have unfortunately decreased in a post-Covid environment. Katie is working with the Olevano committee to foster some new partnerships between SCoW and the University of Delaware. Katie hopes to partner with a current undergraduate student exchange program and/or develop an additional program/scholarship for students in the College of Agriculture and Natural Resources to explore food and agriculture across the Campania Region of Italy. This type of exploration hits home for Katie as her extended family/cousins grow olives and press olive oil. In addition, the Campania Region is also home to buffalo mozzarella cheese and Neapolitan pizza!

## Marketplace

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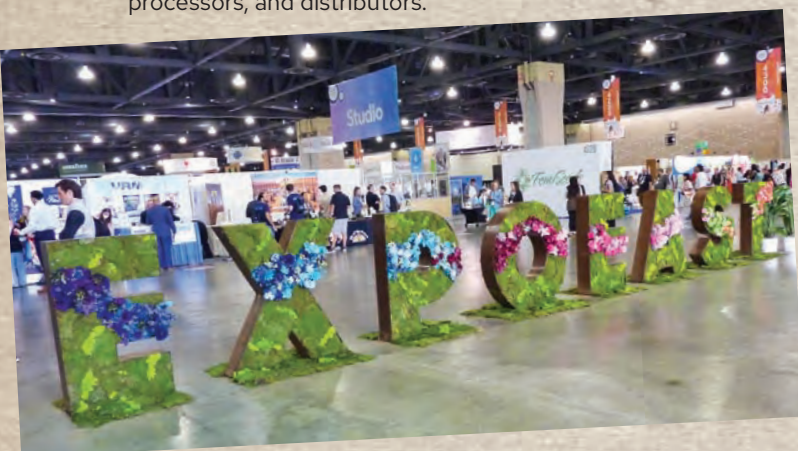
# PCO on the Road

KATIE POPPITI, TOPP PROGRAM COORDINATOR

## Natural Products – Expo East Philadelphia, PA

Natural Products Expo East, the East Coast's leading natural, organic, and healthy products expo, held its final event from September 20-23 at the Philadelphia Convention Center. The event will be replaced with Newtopia Now, to launch August 6-8, 2024, in Savannah, GA. PCO participated in a Transition to Organic Partnership (TOPP) Kickoff Event hosted by the Organic Trade Association (OTA).

The roundtable discussion included work priorities under OTA's TOPP project goals, including barriers to certification and the top tools and resources needed to support farmers, processors, and handlers. Attendees included participants from certifiers, researchers, association members, producers, processors, and distributors.



## SOE Town Halls PA & NY

Four Strengthening Organic Enforcement (SOE) town halls were held in late September and early October in Pennsylvania (Gap and Spring Mills) and New York (Penn Yan and Berlin).



PCO Policy Advisor Kyla Smith speaking about SOE in New Berlin, New York.

## Northeast Organic Dairy Producers Alliance (NODPA) Reedsville, PA



Herd at Sunny Crest Farm, Belleville, PA.

PCO's (TOPP) staff attended NODPA's 23rd Annual Field Day, held in Reedsville, Pennsylvania, on September 28 and 29th, with the theme "Farming with Financial Clarity." Farm/field walks were held at Sunny Crest Farm in Belleville and Saddlers Run Farm in Allensville. Alvin Peachey (Saddlers Run Farm) spoke to 100+ attendees about the six principles of soil health and the importance of using those principles for decision-making strategies.

A farmer panel discussion on farm profitability included the following farmers: Dwight Stoltzfoos (Springwood Organic Farm), Kirk Arnold (Twin Oaks Dairy), and Eric Sheffer (Sheffer's Grassland Farm). Ted Lebow of Kitchen Table Consulting delivered the keynote address, focusing on farm financial clarity.

## Pasa – Dairy Grazing Certifications Bird in Hand, PA

PCO's Materials Team Assistant Manager Hector Nunez C. participated in a grazing certification roundtable on October 4th. It was led by Lucas Waybright, Pasa Dairy Grazing Project Manager, with other organizational attendees including Michael Busselberg, Network Operations Manager at Origin Milk Co., and Sue Ellen Johnson, Regenerative Agroecologist at TeamAg Inc. Attendees discussed dairy certification options including Certified Organic, Organic Plus Trust Certified Grass-fed, Non-GMO Project, and Regenerative Organic Certified.



A group of individuals from dairy and organic industries gathered to discuss organic grazing certificates. Pictured at center, PCO Materials Assistant Manager Hector Nunez C. Photo: Rebecca Schweitzer, Lancaster Farming





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