

# Organic Matters

QUARTERLY NEWSLETTER • FALL 2021



**PCO**

**2** Protecting Biodiversity and Native Ecosystems

**4** Siting and Design for On-Farm Solar

**6** Direct-Market Vegetable Farming

**8** Crop Rotation Timing and Fertility Management



# Organically Speaking

**A**s any grower knows and sees daily, change is the only constant. If you've been following these messages from me over the past year, you know that's definitely also true of our work here at PCO. In nature and in business, when we resist the need for change, the need has a tendency to amplify and take more of our attention to manage. Our staff and clients have navigated quite a lot of change in the past year, and I want to thank you all for your patience, as we have all done our best to communicate well and navigate this time together. As we enter into the heavy part of inspections season this fall, you will see some new faces with the addition of inspectors and certification staff, as well as have the advantage of our new client portal to help speed up your certification processing.

The change from summer to fall is my favorite time of year, and here in my hometown of Pittsburgh, I think it's the most beautiful, as our very vibrant green and humid landscape of woodland, farmland, parks and trails changes to sunlit hues of autumn and cool, crisp air. Any peaceful transition of seasons has been interrupted a lot though, in this and recent years, with weather extremes, be it too much rain at one time, too much oppressive heat for too long, or worse the added stress of those things combined.

Driving my passion for organic is the understanding that the growth of regenerative agriculture is crucial to mitigating our climate crises, and the USDA Organic regulation is the touchstone standard upon which many other standards depend. Our role in upholding the integrity of that standard is crucial to supporting other certifications that go above and beyond the scope of the National Organic Program (NOP). Whether it's healthier soils helping crops to withstand flood and drought, the carbon sequestering capabilities of healthy soils, or the healthy water and nutrient management of organically farmed land, the day in and day out work of USDA Organic certified farming results in healthier people and a healthier planet.

Like any piece of legislation, there will be parts we don't fully agree with, and there will be parts that we wish were stronger or areas we wish had more room for interpretation. The great news is that unlike most all other federal regulation, multiple times per year there is an open public process for feedback on changing these rules, during the National Organic Standards Board (NOSB) meetings. Upcoming opportunities to make public comment include the Fall 2021 meeting in October and the Spring 2022 meeting in April. You can review proposed changes and other informational resources and get instruction for providing public comment, written or spoken, by going to the website here for the Fall 2021 meeting:

[www.ams.usda.gov/event/national-organic-standards-board-nosb-meeting-sacramento-ca](http://www.ams.usda.gov/event/national-organic-standards-board-nosb-meeting-sacramento-ca)

and here for the Spring 2022 meeting:

[www.ams.usda.gov/event/national-organic-standards-board-nosb-meeting-crystal-city-va-1](http://www.ams.usda.gov/event/national-organic-standards-board-nosb-meeting-crystal-city-va-1)

Our staff and sister organizations are always contributors, and I strongly encourage you to use your voice, as a PCO client or simply as a member of the public, and submit comments for consideration. I hope you will complete the circle of being USDA Organic certified by offering comments back to the USDA NOP for consideration to make the rules ever better!

**Fertile soil is an ancient and sacred responsibility, and your work is so important to all of us.** It is a heartfelt honor for me to continue to serve the board, staff, inspectors and clients of PCO, and I am always eager to hear from you and learn from your feedback.

Diana Kobus  
dkobus@paorganic.org • 814-571-3736



106 School Street, Suite 201  
Spring Mills, PA 16875  
phone: 814.422.0251  
fax: 814.422.0255  
email: pco@paorganic.org  
web: paorganic.org  
facebook.com/PAorganic

**OFFICERS**

**PRESIDENT** Andrew Smyre, *Lazy Dog Farms/ Tuscarora Grain Co. LLC/Belltown Farms*  
**VICE PRESIDENT** Ted LeBow, *Kitchen Table Consultants*  
**SECRETARY** Lisa de Lima, *MOMs Organic Market*  
**TREASURER** Dave Hartman, *PSU Extension*  
**MANAGING BOARD CHAIR** Joe Miller, *Kalona SuperNatural*

**ADVISORY BOARD**

Kristy Borrelli, *Penn State University*  
Katherine DiMatteo, *Independent Consultant*  
Bob Eberly, *Denver, PA*  
Tina Ellor, *Phillips Mushroom Farms*  
Betty Harper, *Penn State University*  
Denele Hughson, *Grow Pittsburgh*  
Samuel Malriat, *Rodale Institute*  
Spencer Miller, *Boyd Station, LLC*  
Chelsie Romberger, *Kellerman Consulting*  
Mike Spangler, *Indigo Ag*

**STAFF**

**LEADERSHIP TEAM**

Diana Kobus, *Executive Director*  
Diana Underwood, *Director of Operations*  
Kyla Smith, *Certification Director*  
Stacey Budd, *Executive Assistant/Outreach Coordinator*

**ADMINISTRATIVE TEAM**

Elizabeth Leah, *Accounting Manager*  
Shawnee Matis, *Staff Accountant*  
Lia Lopez, *Administrative Staff Assistant*  
Sandy Vandeven, *Human Resources Manager*

**CERTIFICATION TEAM**

Justine Cook, *Certification Program Asst. Manager*  
Cathy Jackson, *Certification Program Asst. Manager*  
Reva Baylets, *Operations Manager*  
Heather Donald, *Senior Certification Specialist*  
Cathy Colley, *Certification Specialist*  
Jordon Downton, *Certification Specialist*  
Lauren Lewis, *Certification Specialist*  
Kathryn Poppiti, *Certification Specialist*  
Dara Raidel, *Certification Specialist*  
Gabrielle Rovegno, *Certification Specialist*  
Lou Saunders, *Certification Specialist*  
Craig Shroyer, *Certification Specialist*  
Aleisha Schreffler, *Program Assistant*  
Kristin Getz, *Program Assistant*

**INSPECTIONS TEAM**

Corinne Wesh, *Inspection Program Assistant Manager*  
Stephen Hobaugh, *Inspection Program Coordinator*

**MATERIALS TEAM**

Jennifer Berkebile, *Materials Program Manager*  
Sabine Carey, *Materials Specialist*  
April Kocis, *Materials Specialist/Organic Matters Editor*

**QUALITY TEAM**

Angela Morgan, *Quality Systems & IT Manager*  
Garrick McCullough, *Systems Administrator*

**VISION**

All communities are enriched through organic food and farming

**MISSION**

To ensure the integrity of organic products and serve our farming community

**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 2021



14

Photo: Lou Sanders



2

Photo: Rodale Institute



8

Photo: Rodale Institute

**FEATURES**

**2 Protecting Biodiversity and Native Ecosystems in the Organic Rules**

NOSB recommendation to change regulation and eliminate incentive to convert native ecosystems stalled

**6 Can Direct-Market Vegetable Farmers Make a Middle-Class Income?**

PASA shares detailed financial benchmarks from 39 farms over 3 years

**8 Why You Should Always Be Thinking About Your Crop Rotation**

Tips on timing, volunteer issues, fertility planning and tillage

**STORIES**

**4 On-Farm Solar is on the Rise**  
Siting and design considerations for your agricultural operation

**14 PCO Core Values in Action**  
PCO staff participate in diversity, equity and inclusion training

**New Faces**  
Two new Certification Specialists join PCO

**COLUMNS**

- 10 From the Board**
- 12 Dear Aggy**
- 15 Updates**  
*Certification*  
*Legislative Materials*  
*Standards & Policy*  
*Quality*
- 18 New Members**
- 19 Organic Marketplace**
- 20 Event Calendar**



Cover photo: Sorghum Sudangrass research plot at the Penn State Southeast Agricultural Research Center in Lancaster County, PA. Photo: Rodale Institute.

# Protecting Biodiversity and Native Ecosystems in the Organic Rules

*Native ecosystems, like the one above, store carbon in woody plants, in the soil's duff layer and its deeper horizons. Converted land can never sequester this same amount.*

WRITER: HARRIET BEHAR, SWEET SPRINGS FARM AND JO ANN BAUMGARTNER, WILD FARM ALLIANCE

Our organic regulations mandate that soil and other natural resources are protected and enhanced over time. Yet one aspect of the USDA organic rule that works against environmental stewardship and promotion of biodiversity is the requirement that land cannot be certified for organic production until it has been free of prohibited substances for three years. While this rule makes sense on land that has been farmed conventionally, it is problematic because it incentivizes the destruction of native ecosystems.

When a farmer is looking to get into organic production, this three year wait time is a costly barrier, leading many to seek land that has been fallow and/or has otherwise not had the application of synthetic pesticides for three years. This chemical-free land gives immediate access to the certified organic marketplace. Unfortunately, this rule unintentionally hurts the integrity of the label in the eyes of the consumer who are paying extra for environmental protections, and it is unfair to those farmers who patiently waited three years for their land to transition to organic.

We all need to remember that our regulation is applied around the globe, so when the news reported the devastating fires in the Amazon rainforest by people wishing to remove the trees and plant crops, some of that land may have been immediately used to grow USDA certified organic soybeans or sugar. Here in North America and in other parts of the developed world, a larger amount of the forests, savannahs and meadows has already been altered, causing them to lose their designation as native ecosystems, whereas the developing world has the greatest conversion pressure.

Nonetheless, conversion does occur in the states. Despite information being kept confidential on whether newly entered

land into organic production was previously a native ecosystem, we have reports from organic inspectors who have seen them destroyed in order to grow organic crops. Through an informal survey, they shared many instances, including thousands of acres of short grass prairies in the Colorado Plains, of sagebrush steppe in Oregon and of oak woodlands in California being destroyed for organic production. Even though families may have enjoyed these areas for the wildlife and beauty they provide, when the land changes hands, new owners may only be seeking out a chance for high value crop production. Often, this land had been left undisturbed because it is too hard to farm – there's no water to irrigate, the soils are too wet, too steep or too rocky. Farming this difficult ground hampers beginning organic farmers who already have a steep learning curve.

Taking a closer look, native ecosystems are anything but wastelands. Instead, they are repositories of many beneficial organisms, from small pollinating insects to large predators, providing food and cover for them when they aren't on the farm. Reliance on nature's tools and mimicking the interaction and interdependency within native systems is a foundation of organic agriculture.

Native forests, grasslands, and wetlands offer refuge for many species, including those that are endangered, threatened and at-risk. Once extinct, plants, mammals, birds, reptiles, insects, fungi and more are lost forever, and their place in the elegant balance of nature has been annihilated, forever degrading the interacting functions provided in our world. Many plant species in these biodiverse areas could harbor the next miracle drug to cure a variety of human and livestock diseases. We are in the midst of the sixth mass extinction on this planet. In the past 50 years, animal populations worldwide have declined by 70%, songbirds in North America have decreased by 3 billion, and untold numbers of insects have been lost.

Organic farmers continually work to understand and use the

tools that nature provides in their production systems. Creating habitat for animal predators, such as owls, hawks, and coyotes can do wonders when field mice are eating a crop. Providing for insect parasitoids, such as beneficial wasps, can keep aphid and worm damage on crops to acceptable levels. Building a diverse and healthy soil food web teeming with soil biological life by growing diverse cover crop mixes or inter-seeding diverse species in cash crops increases organic matter and supports nitrogen fixation, carbon sequestration, and the smothering of weeds. Planting diverse strips of native prairie plants into large row crop fields provides habitat and food for pollinators and beneficial insect and bird predators, as well as protects soil and water quality. Much of our understanding of how each of these systems work is based upon knowledge gained by researching native ecosystems that have not been destroyed by agriculture, development or other means.

When considering climate change, there is no comparison between the superior capacity of perennials systems, such as forests and grasslands, to sequester carbon compared to annual cropping systems. When converted, these lands will lose 30 to 50 percent of their soils' carbon into the atmosphere over a 50-year period. We are all aware of our climate crisis and global warming in causing extreme weather events. Organic agriculture should not compound the problem by further adding carbon to the atmosphere through destruction of these native ecosystems.

We can protect native ecosystems through organic regulation. In May 2018, the National Organic Standards Board (NOSB) sent a formal near-unanimous recommendation to the National Organic Program that would change the organic regulation and eliminate the incentive to convert native ecosystems to organic production. To read the recommendation, please visit: [ams.usda.gov/sites/default/files/media/CACS-NativeEcosystems.pdf](https://ams.usda.gov/sites/default/files/media/CACS-NativeEcosystems.pdf)

This recommendation went through three NOSB public

comment periods over 18 months with overwhelming support from farmers, ranchers, certifiers, retailers, processors, environmentalists and consumers—basically all stakeholders in the organic community. The recommendation defines a native ecosystem as follows:

*Native ecosystems can be recognized in the field as retaining both dominant and characteristic plant species as described by established classifications of natural vegetation. These will tend to be on lands that have not been previously cultivated, cleared, drained or otherwise irrevocably altered. However, they could include areas that have recovered expected plant species composition and structure.*

The recommendation also proposed to add the following language to the organic regulations:

*A site supporting a native ecosystem cannot be certified for organic production as provided for under this regulation for a period of 10 years from the date of conversion.*

Numerous other organic certification bodies around the world have bans in place to keep recently destroyed native ecosystems from ever being able to grow and market certified organic crops from that area. The NOSB and the public felt the forever designation was too restrictive because, for example, a farmer may not have had control of their land when its ecosystem was destroyed, and they should be able to heal and improve it through the use of organic practices. A ten year waiting period was recommended as a strong disincentive. Allowing the converted land to eventually reap the benefit of organic certification in ten years was considered acceptable because it would not have to be conventionally managed forever.

Land that has been changed from a native ecosystem due to human use may or may not recover its biodiversity. In order for the native ecosystem to recover, it would depend on the severity of impact and if there are characteristic species

*continued on page 13*



**Left:** This forest might have been burned so that it could immediately produce organic crops. Until the NOP enacts the NOSB's recommendation to protect these critical areas of biodiversity, this scenario will continue to occur. **Right:** Make your voice heard. With enough pressure, the NOP will likely eliminate the incentive to convert native ecosystems like what is happening above. Submit comments to the National Organic Standards Board this fall in support of rulemaking. Photo: NRCS

# On-Farm Solar is On The Rise

## *Siting and design considerations for your agricultural operation*

STACEY BUDD, EXECUTIVE ASSISTANT/OUTREACH COORDINATOR

In a report released in early August by the United Nations Intergovernmental Panel on Climate Change (IPCC), scientists have confirmed that human activity has heated the planet consistently since the 19th century. We are now at a point where we need a concerted effort to stop adding carbon dioxide to the atmosphere if we want to level off global warming and its impacts on our environment.

Mitigating greenhouse gas emissions is vital to our health and our planet. Incorporating more solar energy is one viable way to help us trend toward net zero emissions. With more interest in clean solar energy, a growing debate revolves around the placement of solar arrays for the greatest impact, often focusing on large swathes of agricultural land. Some farmers see leasing land to solar companies as a way to diversify their business income, while the opposition view it as an eyesore to the agricultural landscape. When you have two public goods (food and alternative energy) competing for space, there are bound to be some varying opinions. Fortunately there are many win-win models out there that will help you to have successful projects.

Farm-based solar was the topic of a recent listening session hosted by Pasa Sustainable Agriculture. On Friday, August 20th, Pasa moderated a lunchtime conversation around possible rules and tools that should guide the development of alternative energy on farmland. Representatives from two Pennsylvania state agencies, along with PCO-certified operator Scott Case from Patchwork Farm, provided their insights on current uses of farm-based solar, state-wide Pennsylvania clean energy goals, and how to approach the conversations around the use of space and land.

Scott Case is entering his 31st year of farming. Patchwork Farm is a diverse greenhouse and produce operation in Central Pennsylvania. As an organic grower whose practices have always focused on sustainability, solar use seemed like a logical next step for their farm. After attending a Pasa conference workshop on energy conservation on farm operations and solar opportunities, he brought representatives from Penn College located in Williamsport, PA (who facilitated the workshop) to his operation to conduct an energy audit, which included an assessment of his electrical usage to determine the size of a potential solar system. All helpful information, but was put on the back burner as farming operations called for his attention.

He and his wife Eda finally decided to take the leap and pursue solar after being inspired by Greta Thunberg's speech (the young Swedish environmental activist) to the United Nations and had a solar array installed on his farm back in 2019.

As interest in alternative energy systems continues to grow, so do available resources. Federal funding, siting tools and contractor partnership resources are available to support interest in solar energy development. One incentive that made this shift possible for Scott and Eda was taking advantage of the USDA Rural Energy for America Program (REAP) that offset 25 % of the project costs and installation for agricultural producers with at least 50% of their gross income coming from agricultural operations. ([www.rd.usda.gov/programs-services/energy-programs/rural-energy-america-program-energy-audit-renewable-energy-development-assistance-grants](http://www.rd.usda.gov/programs-services/energy-programs/rural-energy-america-program-energy-audit-renewable-energy-development-assistance-grants)). USDA Secretary Tom Vilsak recently announced his department is investing \$464 million to build or improve renewable energy infrastructure, part of which reinvests in the REAP program.

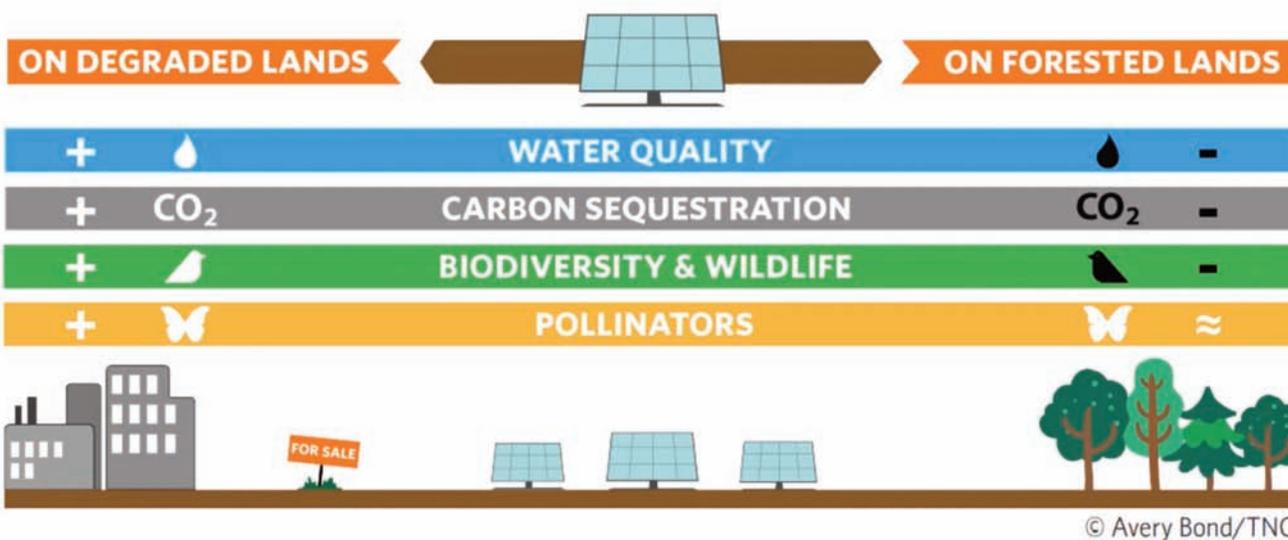
Solar siting is often where the controversy lies, as placement of the arrays can spark a debate. While many states are starting to set ambitious goals to address climate change by utilizing renewable energy systems, agricultural lands are often under consideration as a viable place to house solar systems. Sharing state agencies' perspectives, Nicole Faraguna from Pennsylvania Dept. of Conservation and Natural Resources (PA DCNR) and Michael Roth from Pennsylvania Dept. of Agriculture (PDA) offered their thoughts on solar energy development during Pasa's listening session.

Nicole is the Director of Policy and Planning with PA DCNR.



*Solar grazing is the method of vegetation control on a solar site using grazing livestock. Sheep are most often used for this work as they are best suited for solar installations due to their size and grazing behavior. For more information and for assistance in getting your flock started with solar grazing sites, contact the American Solar Grazing Association at [info@solargrazing.org](mailto:info@solargrazing.org). Photo: American Solar Grazing Association*

## The Effects of Solar Farm Development



Source: North Carolina TNC, Principles of Low Impact Solar Siting & Design

Her agency strives to educate landowners on the value of protecting our forest canopy and minimizing solar array's impacts on our natural resources. She suggested that best practices are taken into consideration when determining array locations and referenced The Nature Conservancy's siting principles which include: using disturbed, degraded/marginalized land or built environments; avoiding areas of high native biodiversity; allowing for wildlife habitat and connectivity; protecting water quality and avoiding erosion; and restoring native vegetation and grasslands. Nicole also noted the concern of the economic vitality and income generation of a region being impacted when a large swath of forests are cut or prime agricultural lands are utilized only for alternative energy production.

Since PDA's role is to support a sustainable and safe supply of food and agricultural products, Michael Roth, Policy Director, shared that farmland preservation is a focal point for his agency. It is important that prime farmland soil remains available for agricultural production. While PDA does not have jurisdiction over solar deployment, farms under preservation are restricted to onsite generation for solar power. Agricultural lands are being used for utility-scale solar generation to fill Pennsylvania Governor Tom Wolf's PA PULSE project (Project to Utilize Light and Solar Energy). In early 2021, Governor Wolf announced this GreenGov initiative to produce 50% of the state government's electricity through solar energy. Land was secured with farmers who sought to supplement their income beyond production revenue. Michael and PDA are encouraged by the research and advancement that dual-use solar opportunities present for agriculture producers who have opportunities and choose to lease their land to solar developers.

More and more research is showing that land can have dual-use for solar and certain crops or that solar grazing can be a

solution to meeting climate mitigation while still having agricultural income from the land. When considering solar energy on your farm/production operation, there are a couple things you should bear in mind:

- It is important to first explore what is permitted on your property. Challenges to implementation often revolve around township zoning ordinances and other municipality rules regarding solar development.
- Next, invest in assessing your energy needs by conducting an energy audit of your property's current/future usage. This audit can provide you with valuable information as you determine the size of array needed to achieve your energy goals.
- In addition, it is important to examine the financial implications in pursuit of renewable energy on your property. Cost-benefit analysis will help you in your decision making process.

If you are looking to be part of the solution to the impacts of climate change on our environment and agricultural production, solar energy opportunities may be a viable addition to your business while making an investment in our collective future. Renewable energy initiatives continue to dot our headlines, making more cost-effective tools available to the public. Smart solar siting will take collaboration among state, community and farm level stakeholders to create a balanced approach that achieves a desired win-win-win outcome.

### FURTHER READING AND RESOURCES

- American Farmland Trust: [www.farmlandinfo.org](http://www.farmlandinfo.org)
- American Solar Grazing Association: [www.solargrazing.org](http://www.solargrazing.org)

# Can Direct-Market Vegetable Farmers Make a Middle-Class Income?

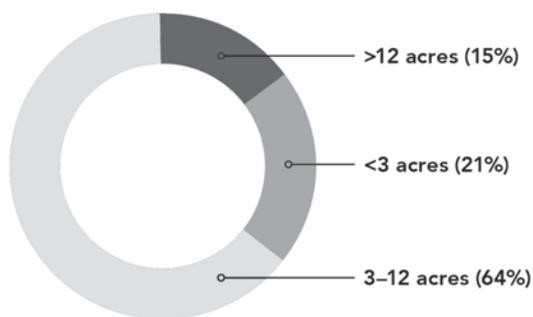
FRANKLIN EGAN, PASA SUSTAINABLE AGRICULTURE

Vegetable farms that sell their produce through farmers markets, CSA programs, on-farm stores, and other direct-market channels are the foundation of local food movements everywhere. Yet there is surprisingly little information available to help answer a basic question: Can farmers make a middle-class income selling vegetables through direct-market outlets?

We launched an ongoing study in 2017 to help fill this critical gap in information and provide insights that could help vegetable farmers start and grow their businesses. Our study offers the most comprehensive review of direct-market vegetable farm businesses to date, sharing detailed financial benchmarks from 39 farms collected over three years.

Participating farms were located in four Mid-Atlantic states: Pennsylvania, Maryland, Virginia, and West Virginia. Most had less than 15 acres in vegetables production; the largest had approximately 100. Farms studied had been in business for anywhere between one and 50 years.

STUDY PARTICIPANTS:  
ACRES IN VEGETABLE PRODUCTION

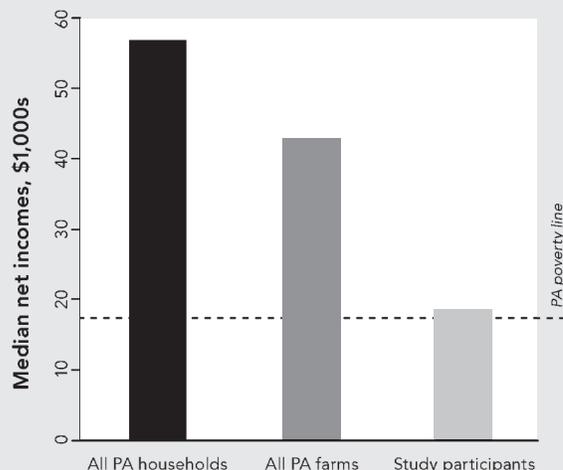


## FINDINGS

Our findings were consistent with structural challenges that negatively impact small- and medium-scale farms in a highly consolidated agriculture industry. In other words: They were sobering.

We found that the majority of direct-market vegetable farms were not earning a middle-class income. Participating farms had a median net income of \$18,500, which approximates the 2020 poverty rate in Pennsylvania for a two-person household. Further, the net incomes of more than 70% of the farms in our study were less than half the median net income for all Pennsylvania farms, which include among others dairy, row crop, and wholesale vegetable operations.

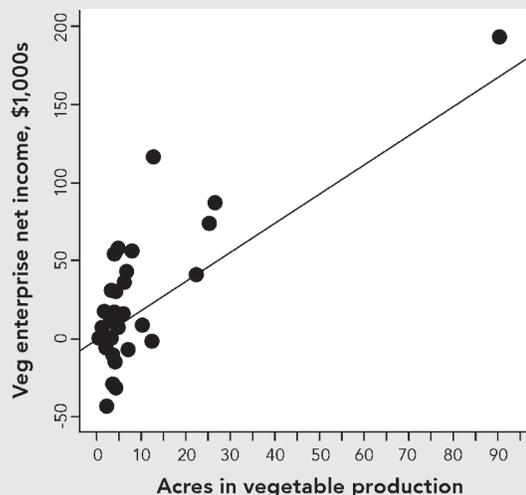
MEDIAN NET INCOMES FOR PA HOUSEHOLDS, FARMS & STUDY PARTICIPANTS



We did find some farms bucking the trend. A quarter of study participants had earned net incomes greater than the Pennsylvania median household annual income of \$57,000. These farms tended to be larger in scale than many market-garden-style farms—typically, ten acres or more in vegetable production—and often capitalized on diversifying their revenue streams, with reselling products produced by other local farms proving to be one of the more profitable added enterprises.

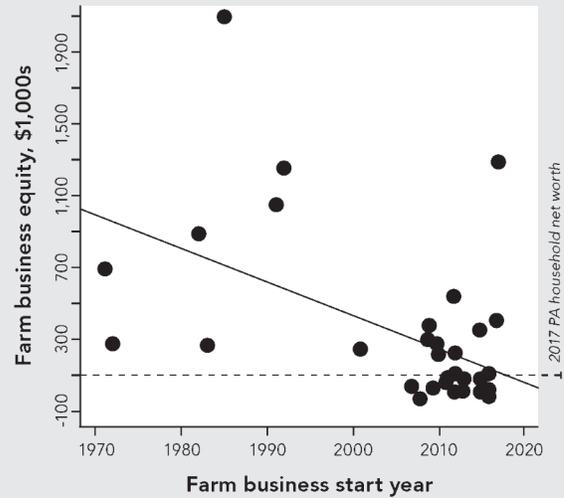
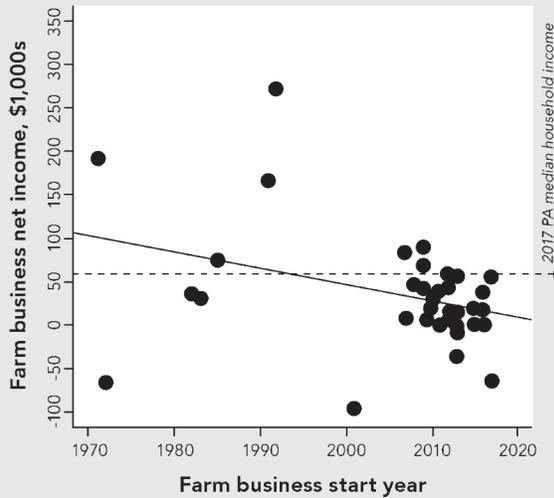
Notably, however, many of the owners of these high-performing farms partially attributed their success to good fortune, such as access to especially lucrative markets or reliable farmland arrangements.

VEGETABLE ENTERPRISE NET INCOME RELATED TO ACRES IN VEGETABLE PRODUCTION



We also found that farms steadily increased income and equity over time, generally becoming more profitable the longer they were in business. Most farms' net incomes exceeded the Pennsylvania median household income within 12 years of business, while accumulating equity in land, buildings, and equipment in the meantime.

**FARM BUSINESS NET INCOME (LEFT) & EQUITY (RIGHT) RELATED TO NUMBER OF YEARS IN BUSINESS**



Interestingly, no single direct-market channel consistently outperformed all others. We found that all of the major sales channels utilized by farms in the study—farmers markets, CSAs, and direct wholesale—had a mix of higher and lower income cases. For farmers wondering whether or not to focus on selling their produce through particular direct-market channels, this finding indicates there isn't a one-size-fits-all business model for financial success.

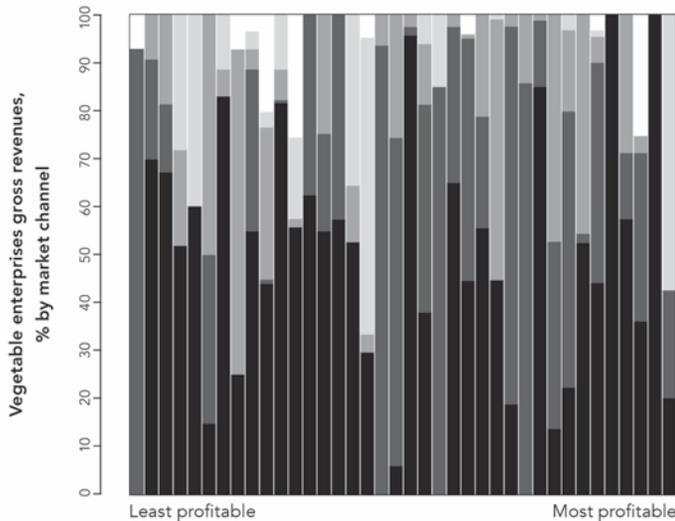
**PATHWAYS TO HIGHER INCOMES**

We identified three primary pathways for improving direct-market incomes:

- 1) increasing the number of acres in vegetable production;
- 2) growing more and higher-value crops per acre; and
- 3) developing more efficient production systems.

Still, the land, labor, and capital needed to pursue these strategies may be out of reach for farmers who are operating at a loss or aren't earning a living wage.

**NET VEGETABLE ENTERPRISE INCOME & MARKET CHANNEL COMPOSITION**



**KEY**

- % Intermediary wholesale
- % Other direct markets
- % Direct wholesale
- % Farmers markets
- % CSA

*Data are the mean values for each farm, averaged for all years over 2017–19 for which we have data for that farm.*

**SCENARIOS FOR ACHIEVING A NET INCOME GOAL (\$56,951) BY INCREASING SCALE, INTENSITY, OR EFFICIENCY**

Scenario	SCALE (acres in vegetable production)	INTENSITY (gross revenue per acre in vegetable production)	EFFICIENCY (vegetable net income to revenue ratio)	Vegetable enterprise net income
Baseline	10	\$27,589	12.5%	\$34,486
1. Increase scale	16.5	\$27,589	12.5%	\$56,951
2. Increase intensity	10	\$45,561	12.5%	\$56,951
3. Increase efficiency	10	\$27,859	20.4%	\$56,951

While all farmers want to operate profitable, self-sustaining businesses, the financial benchmarks identified by our study are consistent with industry structural challenges that negatively impact small- and medium-scale farms. Creating and expanding public and private programs and partnerships will be necessary to help direct-market vegetable farmers continue their essential work providing fresh, nutritious food for their communities.

These programs and partnerships should focus on equitably increasing farmland access, improving market opportunities, encouraging workforce development, reducing financial risk, and rewarding conservation best practices such as building soil health, protecting wildlife, and improving water quality.

*continued on page 19*

# Why You Should Always Be Thinking About Your Crop Rotation

*Buckwheat prior to flowering in July 2021 near Butler County, PA. Photo: Rodale Institute*

EMILY NEWMAN GANTZ, RODALE INSTITUTE

If anyone asked me what my favorite organic regulation is, I would tell them that it is 7 CFR 205.205, the Crop Rotation Practice Standard. I have to admit, not many people ask me what my favorite organic regulation is, but if they did, I would explain that this standard lays out the primary reasons why *all farmers* should plan and implement a crop rotation, not just certified organic farmers.

For those of you that do not spend your spare time mulling over the organic regulations, I'll remind you what it says:

**§205.205 Crop rotation practice standard.**

The producer must implement a crop rotation including but not limited to sod, cover crops, green manure crops, and catch crops that provide the following functions that are applicable to the operation:

- (a) Maintain or improve soil organic matter content;
- (b) Provide for pest management in annual and perennial crops;
- (c) Manage deficient or excess plant nutrients; and
- (d) Provide erosion control.

205.205(a) through 205.205(d) contains, in my opinion, some of the most important components of a healthy and profitable cropping system; so much so that when I'm working with farmers, I'm using this regulation as a checklist. Does this farm's crop rotation contain cover crops or green manure crops? Will it improve soil organic matter content? Does it pre-

vent pest issues? Will it help balance excess or deficient soil nutrients? Is the land being covered and managed to control erosion? If the answer is "yes" to all of these questions, farmers can have faith that their crop rotation is not only compliant with the organic regulations, but also improving soil health.

Though it may sometimes seem like a minor element, crop rotation is likely the most important part of your organic system – which is why you should always be viewing your decisions through the lens of crop sequence and timing. Not only will this keep your operation compliant, but it will also help you plan ahead to reduce issues with timing and 'volunteer' crops, influence fertility management, and shift tillage practices.

**TIMING**

Timing is directly related to crop growth and success in an organic system, and factoring this into your crop rotation plan is essential. It's important to work on putting plenty of 'space' into a crop rotation to allow for flexibility and likelihood of success of any given activity. For example, if you know clover puts on most of its biomass when planted early in the fall, don't push the envelope with a cash crop that typically gets harvested in October or November – leave more space than that and allow your cover crop to do its job. Crop rotations that are inflexible can result in cover crops planted too late to put on adequate biomass, or hay and pasture renovations left to compete with spring weed flushes.

If you're running a cash grain operation, be realistic about when your corn and soybeans will be harvested. The goal of a cover crop in a cash grain rotation is to provide biomass, break pest cycles, fix nutrients, and prevent erosion. By selecting a cover crop that may not establish well in late fall after corn or soybeans are harvested, you run the risk of losing out on most of the benefits of planting a cover crop in the first place. You might get lucky with good weather and temperature, but it is rarely worth taking the chance.



*Roller-crimped Cereal rye after one pass in May 2020 in York County, PA. Photo: Rodale Institute*

COOL-SEASON COVER CROPS	SEEDING DATES
Cereal rye	September to November 1
Triticale	September to November 1
Oats	August to September 15
Hairy vetch	August to early September
Crimson clover	August to early September
Austrian winter pea	August to early September

If a good crop rotation leaves ample room for cover crops, a great crop rotation uses those cover crops for specific purposes and builds on well-known practices. After a small grain harvest in the spring, you may have the opportunity to establish another summer annual or short-lived perennial to feed the subsequent year's crop or to diversify your revenue stream. Sorghum sudangrass harvested as a forage is a good example. Medium red clover can be planted following a small grain in the summer and can fix 70-120 pounds of nitrogen per acre; it may also overwinter, allowing you to feed next year's corn crop or graze it for forage. Another option for an intermediary cover crop is buckwheat, which can be established in spring through late summer; because of its 60-90 day growth window, it can be easily incorporated into a cropping system, keep weeds down at a critical point in the season, and still allow time to establish a winter cover crop.

## VOLUNTEER ISSUES

Crop rotations with ample space and timing can also help prevent 'volunteer' issues – that is, previously planted crops that become competitive weeds in a subsequent cash crop. In some cases, volunteer cover crop seeds in grains can cause harvests to be rejected. The two main issues that our consultants see is hairy vetch and cool-season grass species, like cereal rye, contaminating small grain harvests.

WARM-SEASON COVER CROPS	SEEDING DATES
Sudangrass	June to early August
Red clover	February to June
Cowpea	June to August
Sunn Hemp	June to early August
Buckwheat	Spring or late summer

Hairy vetch seed can contain what is known as "hard seed," or seed that does not immediately germinate when planted. Penn State approximates that hairy vetch can contain up to 25% hard seed. In a system where a hairy vetch cover crop is followed by a cash grain, then followed by a small grain, any ungerminated hairy vetch seed can start to set seed right around the time you plan to harvest your small grain, contaminating your harvest. In addition, that seed can live on the soil surface and become a volunteer issue for years to come (source: [extension.psu.edu/hairy-vetch-as-a-crop-cover](http://extension.psu.edu/hairy-vetch-as-a-crop-cover)). For this reason, unless it is managed with careful attention, hairy vetch should not be planted more than every three years and should be placed in a rotation that allows for mechanical termination during flowering.

Another volunteer issue is contamination of winter wheat with volunteer rye. Cereal rye, commonly used as a cover crop preceding organic soybeans, may not fully terminate when crimped or even mowed and tilled, causing a phenomenon known as 'feral rye'. This feral rye will mature prior to wheat harvest and can cause contamination and reduced quality of the winter wheat. To prevent this, make sure you have a sure-fire means of terminating this particular cover crop, and consider removing cereal rye from your crop rotation prior to the planting of a small grain.

## FERTILITY PLANNING

Crop rotation can also serve a host of other functions as it relates to cover cropping; in general, the most common cover crops used in the Northeast and Midwest are clovers, peas, and cereal grains. Taking into consideration timing and volunteer issues, selecting nitrogen-fixing covers prior to heavy feeding crops, like corn, can reduce nitrogen requirements and cut down on the number of field passes used to apply additional nutrients.

N-FIXING COVER CROPS	N-CAPTURE (LB/A)
Hairy vetch	80-160
Crimson clover	70-130
Red clover	80-120
Field peas	50-150
Sunn Hemp	0-100
Cowpea	50-100

COVER CROPS	SCAVENGER CAPABILITIES
Pearl millet	Excellent scavenger
Sudangrass	Excellent scavenger
Buckwheat	Scavenges P and Ca
Brassicac	Scavenge N, P, and Ca

Keep in mind that these fixed nutrients mineralize and become available at different rates depending on a number of factors, but local agronomy guides offer good estimates on what to expect out of certain cover crops.

## TILLAGE

Crop rotation and its ability to impact tillage is something we seek to highlight when speaking with farmers in both conventional and organic systems. There are practices such as rolling down cereal rye and planting soybeans that have proven effective, and the same method can be used in vegetable systems for vining crops such as winter squash, pumpkins, and melons. But reducing tillage without chemical intervention becomes more difficult as the diversity of crops increases; even with exceedingly popular commodities like corn, there aren't rotations or combinations of covers that have proven to be as effective as the rye/soybean combination. Frost-seeding medium red clover into small grains is a well-established practice that can reduce cultivation passes in the spring, but its success is largely weather-dependent. In general, having more room in a crop rotation to trial some of these practices is vital to discovering a system that works for multiple seasons in a row.

Though some may view the organic regulations as a series of hoops to jump through, they exist to help farmers be successful. The Crop Rotation Practice Standard sets a good precedent by outlining guidelines that every farmer should follow. By continually thinking about your crop rotation, you may find that you're better equipped to manage timing, eliminate risk of volunteer crops, manage soil fertility, and reduce tillage and field passes in the long run.

# From the Board

While it seems like change has been coming to PCO quickly in a number of different ways over the last year, it's important to note just how much work and planning precedes it. We've got a new database system and online portal for you, lots of new faces on staff, and it's new that we are a fully remote workforce. All of these efforts have come through hours of hard work and planning, and all of them have associated challenges. We would like to commend our clients and the PCO staff for your work and patience over the past year, as we hope you have found working with us to be more easeful and efficient.

An area that members of the PCO Board have been working on for a number of years is updating our bylaws. As a non-profit, our business and our board work is governed by these legally binding rules, and in general, the breadth of possibilities for bylaws is fairly wide. Over time, some parts can become outdated, or a business can outgrow them in any number of different ways. When PCO hired a new Executive Director, we took a deeper look at the previous draft revisions of the bylaws from the Governance Committee, along with some outside expert advice, and after a lot of discussions and edits, we'll be ready to circulate for your review in the near future. This is important, because as they are currently written, in order to make changes we need member approval at our next PCO Annual Meeting. As we enter the 25th year of our organization, we need to stay agile in order to adjust to the continuing changes in our industry in order to best serve you.

Service to our clients is the utmost priority, but the integrity of organic production is the foundation of our work. It is vital that we uphold integrity in every facet of our organization, including the rewrite of these essential governing documents. The relationship we create with our clients is at the heart of our decision-making process, demonstrating our core value of putting people first. We are committed to stewarding PCO into

its next phase of growth in a sustainable way, and these changes are one more way we are preparing for that growth. We look forward to hearing your thoughts and feedback as PCO continues to evolve and makes changes that will enable us, as a body accredited by the USDA, to efficiently do our part in upholding organic integrity, while meeting the needs of our clients and community.

It is an honor to serve you,



**Andrew Smyre,**  
Advisory Board  
President



**Joe Miller,**  
Managing Board  
Chair



**Diana Kobus,**  
Executive Director

## CALL FOR NOMINATIONS

### Consider an Application for a PCO Board Seat

As a member-based organization, we look to you to consider nominating yourself or others you feel would lead our work with the integrity we strive to uphold. PCO's Board is responsible for ensuring adherence to legal standards and ethical norms, overseeing the organization's financial health, monitoring and strengthening our programs and services, all while building a strategic plan to help us meet our goals. PCO values a diverse and inclusive board that supports the mission of PCO and represents the membership by having a balance of interests, backgrounds and perspectives.

If you are interested or know someone who would be a great addition to our board, please consider submitting your nominations to our Governance Committee for review. You can find out more about board terms and qualifications on our website: [paorganic.org/boardnominations](http://paorganic.org/boardnominations). **Nominations are due by October 31, 2021.**

## Advertise in Organic Matters

*Organic Matters* is the quarterly newsletter of Pennsylvania Certified Organic, a non-profit organization serving growers, processors and handlers of organic products. Issues contain articles on the latest news and research in the organic industry, often highlighting our certified members. Approximately 1,500 copies of each publication are distributed directly to members and those requesting information about organic agriculture, and made available to the public at conferences, exhibits and educational programs in the Mid-Atlantic region.

Ad size	PRICING		Dimensions (in)
	Single	4 Issue Sub.	
<b>Back cover (in color)</b>	\$572	na	8.5 × 9
<b>Full Page</b>	\$362.50	\$1,232	8 × 10
<b>Half Page</b>	\$242.50	\$824	7 × 4.5 (horizontal) 3.25 × 8.75 (vertical)
<b>Quarter Page</b>	\$152.50	\$518	3.25 × 4.5 (vertical)
<b>Eighth Page</b>	\$112.50	\$382	3.25 × 2.25 (horizontal)

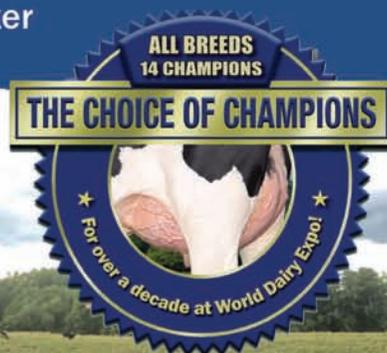
The above rates refer to a single-issue ad placement and a subscription for ad placement in four consecutive issues.

**A 15% discount is granted for the purchase of the 4-issue subscription.**

For more information, please contact [newsletter@paorganic.org](mailto:newsletter@paorganic.org) or call the PCO Office at 814-422-0251.

# “... good news for the rest of her lactation!”

— Bryce Windecker



**WINDEX FARM, FRANKFORT, NEW YORK**  
Dale, Deb, Bryce and Kayla Windecker  
100 Registered Holstein cows  
BAA 107.6, 7 EX, 47 VG, 28 GP  
65 lbs/cow/day, SCC 110,000  
Certified Organic grazing herd



Photos: Bryce, Deb and Dale Windecker with hay equipment. Bryce at 2019 Big E with his bred-and-owned show cow from a top cow family Windex Fremont Dandy EX94. She was nominated Jr. All-American 5-year-old.

“If you can get a cow rolling along when she freshens, it’s good news for the rest of her lactation. That’s why we use Udder Comfort™ on every fresh cow, especially heifers, 2x/day for 5 days after calving,” says Bryce Windecker, cowman in charge of the breeding program at Windex Farm, Frankfort, N.Y. He transferred to Cornell last fall.

Bryce explains how his family has used Udder Comfort for 10 years, since before being certified organic in 2017: “This product is better than anything else. It’s real prevention. We use the yellow sprayable Udder Comfort and we like to cover the udder on a fresh animal.

“This gets swelling out fast. That’s better for their comfort level and udder quality as a whole, to keep SCC low.”

## UDDER COMFORT™

Quality Udders Make Quality Milk

### Maximum Results Minimal Cost

1.888.773.7153 - 1.613.652.9086  
uddercomfort.com

Call to locate a distributor near you.



For external application to the udder only after milking, as an essential component of udder management. Always wash and dry teats thoroughly before milking.

# Dear Aggy



## Manure Pit Additives

Dear Aggy,

We're having crusting and odor issues with our manure pit, and we've had several salespeople try and sell us miracle products. Does PCO need to review these treatments? Please tell me that there are some products that I'm allowed to use!

— *Smell E. Pit*

Dear Smell E. Pit,

You'll be glad to hear that there are an assortment of pit additives that are allowed for your use. You can find them on the PCO List of Allowed Materials, under the Crop Production Aid: Compost/Manure Additive category. Manure and pit additives do need to be included on your annual Materials Used Form and reviewed for compliance by PCO prior to use. PCO will verify that any microbial ingredients are non-gmo, and that other ingredients are allowed.

Pit additives generally consist of a combination of bacteria and enzymes that liquefy the manure solids and decrease ammonia and hydrogen sulfide levels during the anaerobic phase of manure decomposition, greatly decreasing disagreeable odors and helping to reduce the crust formation.

## Fly Controls

Dear Aggy,

With the wet fall, the flies really bothered my cows this year. I'd like to have a better plan in place for next year — can you give me some pointers so next summer I'm not desperate for a last minute fly spray that works?

— *Flustered by flies*

Dear Flustered by Flies,

Controlling fly populations takes more than just finding an acceptable fly spray that works — it requires a holistic farm approach. Not only do excessive flies make cows uncomfortable, they also keep cows from grazing efficiently, resulting in

lower milk production, and can also play a part in spreading diseases such as pink eye.

Remember: in organic systems, cultural, biological, and mechanical methods of control should be used first before resorting to products such as botanical fly sprays.

Here are a few key components:

### CULTURAL CONTROLS

Make it a priority to keep the barn and feed areas dry and clean. Fix all dripping water leaks promptly. Flies need damp areas to reproduce, so having constant soggy silage around the feed bunks is an invitation to flies.

### BIOLOGICAL CONTROLS

Release parasitic flies near manure areas on a consistent schedule, about every 1-2 weeks starting in spring. It's important to start with a release program **before** the fly population becomes too high to give the parasitic flies a chance at control, and then to schedule releases at recommended intervals.

Barn swallows and Purple martins are excellent natural fly predators, and can be encouraged through the use of Martin house colonies.

Fly parasites are available from sources including, but not limited to: Spalding Labs, IPM Laboratories, Kunafin Insectary, BioSwat.

### MECHANICAL & PHYSICAL CONTROLS

- **Sticky Fly tape** — make sure to place sticky tape within 3 feet of the ground in sunlit areas to be most attractive to the flies.
- **Walk-through fly traps** work well for reducing populations of biting horn flies. If placed in the cow lane between the pasture and the barn the cows will be quickly trained to walk through them, dislodging and capturing horn flies. Plans for these are available online or from your local extension office.
- **Well-fitted screens** in your milk house windows will prevent flies from becoming a problem in this important area and are something your milk inspector regularly checks for.
- **Fans** — large fans moving air through the barn will prevent flies from taking up residence and will help dry out the facilities as well.

### FLY SPRAYS AND RUBS

Approved topical fly sprays can only be used after all other control options listed above are exhausted.

Insect sprays need to be reviewed and allowed by PCO before they can be used.

Back rubbers soaked with soybean or vegetable oil are allowed. Using synthetics such as diesel or fuel oil for this use is prohibited in organic production.

### HERE ARE SOME OF THE MORE COMMON PRODUCTS THAT ARE ALLOWED BY PCO

- **Ecto Phyte** by Agri-Dynamics
- **No Fly Repellent** (water and oil based) by Crystal Creek
- **PyGanic Livestock and Poultry Insecticide** by MGK Company

- **Shoo-Fly Spray and Shoo-Fly Concentrate** by Dr. Sarah's Essentials

These products can be found on the PCO List of Approved materials under the *Livestock External Pest Control category*.

## PROHIBITED

- Fly Bait – scattering toxic fly bait in or near organic production areas is prohibited.
- Insecticidal Ear Tags
- Synthetic Insecticides

## RESOURCES

- Integrated Pest Management (IPM) Guide for Organic Dairies – Cornell Cooperative Extension  
[www.nysipm.cornell.edu/organic\\_guide/dairy.pdf](http://www.nysipm.cornell.edu/organic_guide/dairy.pdf)
- University of Arkansas: Fly Control for Organic Dairies  
[www.uaex.edu/Other\\_Areas/publications/PDF/FSA-7072.pdf](http://www.uaex.edu/Other_Areas/publications/PDF/FSA-7072.pdf)

## Protecting Biodiversity

*continued from page 2*

nearby that could move into the disturbed area. Many ecosystems may never regain their original biodiversity, especially if the process of natural succession is hampered due to impacts to soil, water, or the availability of native species that could recolonize that area.

Some organic production could be allowed on lands with native ecosystems, as long as their dominant and characteristic plant species are kept intact and the lands are not irreparably damaged. Low-impact grazing, hay production late in the season, mushroom or maple syrup production, rubber tree tapping, and the harvest of wild medicinal crops are all examples that could be compatible with the protection of native ecosystems, when done correctly.

Some organic production could be allowed on lands with native ecosystems, as long as their dominant and characteristic plant species are kept intact and the lands are not irreparably damaged. Low-impact grazing, hay production late in the season, mushroom or maple syrup production, rubber tree tapping, and the harvest of wild medicinal crops are all examples that could be compatible with the protection of native ecosystems, when done correctly.

Wild Farm Alliance, who is the lead nonprofit guiding the education and outreach on this issue, has published an **Organic Native Ecosystem Application and Verification Toolkit** which lists the best online tools for determining if a native ecosystem is or was present, most with analog counterparts for those lacking internet access. The toolkit can be found at: [tinyurl.com/3h3xxr97](http://tinyurl.com/3h3xxr97). The toolkit gives examples of how to use the tools in different types of operations around the country and world. Many tools provide easy-to-access aerial photos before and after the 10 year waiting period. Once this regulation is implemented by the National Organic Program, certifiers would review only the new areas being requested for organic certification, not all fields currently certified. This proposed rule would not be difficult to implement or enforce.

The National Organic Program told the public in April of 2021 that this recommendation was not considered high priority and they would not make it part of the USDA organic regulations. We later heard they are willing to reconsider. Many stakeholders are pressing the NOP and Secretary of Agriculture Tom Vilsack in the fall of 2021 to make this important recommendation part of our organic requirements. The Organic

Farmers Association and the Organic Trade Association, along with many other organizations, support this improvement to our organic rules. A short statement to the National Organic Standards Board supporting rulemaking on the disincentive to destroy native ecosystems would be helpful to this cause. Make your voice known here: [regulations.gov/document/AMS-NOP-21-0038-0001](https://www.regulations.gov/document/AMS-NOP-21-0038-0001). For more information and to sign a petition, go to the Wild Farm Alliance page here: [wildfarmalliance.org/native\\_ecosystems\\_petition](http://wildfarmalliance.org/native_ecosystems_petition).



Wild Farm Alliance's mission is to promote a healthy, viable agriculture that protects and restores wild nature.

**Jo Ann Baumgartner.** Jo Ann is Executive Director of Wild Farm Alliance (WFA) and the author of many farm publications on birds, biodiversity, and organic agriculture. Before joining WFA in 2001, she received her Master's researching birds eating codling moths in apple orchards, worked for other sustainable agricultural nonprofits, and was an organic farmer for over a decade.

**Harriet Behar.** Harriet is a long time organic advocate, organic farmer, organic educator and organic inspector. She was a member of the National Organic Standards Board and served as the chair in 2019, and was employed by the Midwest Organic and Sustainable Education Service and the University of Wisconsin-Madison to teach organic production. She and her husband sell organic bedding plants, organic culinary and medicinal herbs, organic vegetables, organic eggs, and honey from their Wisconsin farm.

**75TH ANNIVERSARY**  
**Fertrell**  
SINCE 1946  
Better Naturally!

**OCTOBER SPECIAL**

**FREE FORAGE TESTING AND 50% OFF GRAIN TESTS**

- **Profitability**
- **Animal Health**
- **Understanding Performance**

Fertrell Animal Nutrition team offers custom feed formulations for all types of farm livestock and poultry. Call today for the best utilization of your grains and forages.

Request more information & our NEW catalog by calling 800-347-1566, emailing [info@fertrell.com](mailto:info@fertrell.com) or writing to PO Box 265 Bainbridge, PA 17502

*Discounts apply during the month of October*

# PCO Core Values in Action

## PCO Staff Participate in Diversity, Equity, and Inclusion Training

DIANA UNDERWOOD, DIRECTOR OF OPERATIONS

As we approach fall, the year seems to pass even more quickly. It is hard to believe leaves will soon fall, freezing temperatures are on their way, and many other changes will occur. Just as the season change may also lead to changes with your operation and production, at PCO it is a time of shifting to finalize all inspections and complete certification reports.

So how does Diversity, Equity, and Inclusion training impact our day to day work as a certification agency? Let's take a look at the trainings that PCO staff and board have engaged in thus far:

- **Cognitive Diversity** (staff): Explores participants' preferred thinking style preference for giving and receiving information. Explains how to "speak the language of others first" to establish a foundation of trust.
- **Connected Communication** (staff): Builds upon Cognitive Diversity in how we communicate and express ourselves and the importance of having diverse thinking styles as we approach problem solving.
- **Creating a Culture of Respect** (staff & board): Discover characteristics of an organization that creates and sustains a culture of respect where everyone feels welcomed and like they belong.
- **Conflict** (staff): Enhances participants' comfort and skill in managing and mitigating conflict and increases the understanding of the five (5) specific modes of interpersonal conflict behavior.

These instructional classes, led by an outside facilitator, fulfill several important purposes: support the current work of our core values, expand our knowledge to apply in our day to day work, and set a foundation for discussion and action on addressing social injustices.

PCO has been clear about our statement of solidarity with those calling for social justice and our intolerance for discrimination of any kind (inside or outside the organization). Our learning so far is setting us up for success so we can continue to take important steps towards action. Because this is such important work to our organization, our industry, and society as a whole, we are taking our time to get it right, which means it will be an ongoing process and journey.

Without this foundational learning, PCO would not be the organization we are today and would not be set up for success

in the organization we want to be in the future. Learning, growing, and improving are all part of the important work we do to support a vision where **all communities** are enriched through organic food and farming. We hope you will join us on this journey! How are you learning, growing, and developing yourself and applying this learning in new ways?

We would love to hear from you. Please contact: Diana@pa-organic.org, 814-422-0251 ext 215).

### CALL TO ACTION

Are you a BIPOC (Black, Indigenous, Person of Color) farmer or producer in our organic community open to sharing your story? We want to elevate your voice in an upcoming publication. Interesting in participating? Please contact Stacey Budd (sbudd@paorganic.org or 814-422-0251 ext 230)

## New Faces



### Cathy Colley, Certification Specialist

Cathy joined the PCO team as a Certification Specialist in August 2021. Cathy has worked for PCO since 2018 as an independent contract inspector inspecting processing and handling operations. Previously she worked in a food manufacturing facility in the quality and regulatory departments. Cathy has a BS in Chemistry from the University of Pittsburgh. In her free time, Cathy enjoys hiking, cooking and making quilts.



### Lou Sanders, Certification Specialist

Lou joined the PCO team as a Certification Specialist in July 2021. They previously worked for three years as the Materials Specialist at the Ohio Ecological Food and Farm Association. Lou currently lives in Athens, OH in an off-the-grid tiny house with their two cats. When not working they enjoy tromping through the wilderness of Appalachia, reading on the porch, and working on homestead improvement projects.



The AmazonSmile Foundation will donate 0.5% of the purchase price from your eligible AmazonSmile purchases to PCO at no additional cost to you. Simply go to [www.smile.amazon.com](http://www.smile.amazon.com) from your web browser. Then select "**Pennsylvania Certified Organic**" using your existing Amazon.com account.

## Certification Update

Kyla Smith  
Certification Director



### REMINDER: CERTIFICATION FEE REIMBURSEMENT (COST SHARE) APPLICATIONS ARE DUE!

The deadline to apply for certification fee reimbursement is quickly approaching. PCO would like to remind you to submit your application if you haven't done so already. Our goal is to ensure that all clients are supported in submitting their application as soon as possible since these limited funds are available on a first come, first served basis.

The Organic Certification Cost Share Program (OCCSP) provides financial relief to producers and handlers who are obtaining or renewing their certification under the National Organic Program (NOP). Eligible producers include any certified producers or handlers who have paid organic certification fees to PCO during the 2021 program year. Producers can be reimbursed for expenses made between Oct. 1, 2020, and Sept. 30, 2021, including application fees, inspection costs, fees related to equivalency agreement and arrangement requirements, travel expenses for inspectors, user fees, sales assessments, and postage.

For 2021, OCCSP will reimburse 50% of a certified operation's allowable certification costs, up to a maximum of \$500 for each of the following categories (or "scopes"):

- Crops
- Wild crops
- Livestock
- Processing/handling
- State organic program fees

This funding will be complemented by an additional \$20 million for organic and transitioning producers through the Pandemic Assistance for Producers initiative. More information on that funding will be available in the coming weeks.

#### How to apply:

**Contact:** Apply through your **state agency or local FSA office.**

**Information needed to apply:** Complete cost share application, listing PCO as your certifier; include copies of paid invoices from 10/1/20-9/30/21 and your existing Organic Certification.

**When:** Apply as soon as possible but no later than November 1, 2021.

PCO is here to help! Contact us for assistance in locating an application for your state or supplying you with your paid invoices. More information can be found by visiting our website page: [paorganic.org/certification/get-started/fees](https://paorganic.org/certification/get-started/fees)

STAY CONNECTED, VISIT:  
[paorganic.org](https://paorganic.org)

## 2021 CERTIFICATION CYCLE WRAP UP

As we are entering into fall PCO is nearing the end of our inspection season. The inspection season this year has been extended to December 1, 2021. If you haven't had your inspection yet, you can expect to hear from your inspector soon. If your inspector has been in touch to schedule your inspection and you haven't responded, please do so immediately. PCO has already begun to issue noncompliances to operations that have been unresponsive to inspectors attempting to schedule inspections.

## Legislative Update

Kyla Smith, Certification Director

### UNDER SECRETARY FOR MARKETING AND REGULATORY PROGRAMS CONFIRMED

In August Jenny Lester Moffitt was confirmed to serve as the Under Secretary for Marketing and Regulatory Programs at United States Department of Agriculture (USDA), where she will oversee the Agricultural Marketing Service (AMS) and Animal and Plant Health Inspection Service. The National Organic Program is a part of AMS.

Agriculture Secretary Tom Vilsack stated "Congratulations to Jenny Lester Moffitt on being confirmed to serve as Under Secretary for Marketing and Regulatory Programs. Jenny's experience and dedication to her craft, including growing up and working on an organic farm, will help elevate USDA's work to support our producers and protect the health and value of America's agricultural and natural resources, and animals and plants. With her guidance and leadership, USDA will help to build more robust and resilient local and regional food systems that support new, more and fairer market opportunities for American producers and food companies. We are glad to have her on the team."

## Materials Update

Jen Berkebile  
Materials Program Manager



The PCO Materials Team is hard at work on your material review requests. Remember, if you have any outstanding material reviews, don't hesitate to contact us at 814-422-0251 for an update.

### STATUS CHANGES

Please note the following status changes for materials reviewed by PCO for use by certified operations:

**PROHIBITED** – Operators must immediately discontinue use of these products unless otherwise noted.

*continued on page 16*

## Materials Update

continued from page 15

### ■ Crop Materials

- **Pelletized High Calcium Limestone** by Shelburne Limestone Corporation is prohibited for use as a fertilizer/soil amendment

### ■ Livestock Materials

- **BVS Vitamin & Electrolytes Concentrate** is prohibited for use as a livestock feed additive/supplement

## NOP UPDATES

The National Organic Program (NOP) published a final rule that amends the National List of Allowed and Prohibited Substances. Full text of this document is available in hard copy by contacting the PCO office, or at the following link:

[bit.ly/3CdpAJi](https://www.ecochem.com/bit.ly/3CdpAJi)

**Effective July 26, 2021:**

- **Oxalic Acid Dihydrate** was added to §205.603 as a synthetic substance allowed for use in organic apiculture (bee-keeping) only.
- **Non organic pullulan** was added to §205.605(a) as an ingredient allowed only in products labeled, "Made with organic (specific ingredients or food group (s))". The final rule only permits nonorganic pullulan in tablets and capsules for dietary supplements.
- **Collagen gel** was added to §205.605(b) as a nonorganic nonagricultural ingredient allowed in organic handling. The final rule only permits nonorganic collagen gel as a casing.

Please contact the PCO Materials Team at the PCO office (814-422-0251) if you have any questions. Thank you.

## Standards and Policy Update

Kyla Smith, Certification Director

### NEW REQUIREMENTS FOR PRODUCTS EXPORTED TO KOREA

There are two upcoming changes to the requirements for products being exported to Korea, which include labeling and Korea's import certificate.

In December 2020, Korea published its new Enforcement Rule of the Act on Promotion of Environmental Friendly Agriculture and Fisheries and Management and Support for Organic Food, etc. (Environmental Friendly Act). This rule contains organic labeling requirements that may impact U.S. operators exporting organic products under the U.S.-Korea Organic Equivalence Arrangement. Enforcement of these new labeling requirements will begin on **January 1, 2022**. This allows time for operators that need to update their labels. Korea also clarified that compliance with its labeling requirements can be demonstrated on an imported product's original label or on a Korean language sticker affixed to the product.

**The key changes in the rule impact organic products that contain non-organic ingredients.** For these products, the new rule requires that:

- The non-organic ingredient name cannot be part of the product name.
- The total percentage of organic ingredients or the percentage of each ingredient used in the product must be indicated in ingredients list.

To illustrate the above changes, let's look at an example using an organic apple strawberry puree. Below shows two ways of labeling to comply with the second bullet point.

- A. Ingredients list: organic apple (78%), organic strawberry (21%), natural flavor (banana flavor), ascorbic acid
- B. Ingredients list: \*apple, \*strawberry, Natural flavor (banana flavor), ascorbic acid. \*Contains 99% organic ingredients

To comply with the first bullet point using the same organic apple strawberry puree example, the banana flavor cannot be used as part of product name.

The two new labeling requirements do not apply to organic products that contains 100 percent organic ingredients.

Additionally, as a reminder, the use of organic seals under the U.S.-Korea Organic Equivalence Arrangement is as follows:

- USDA organic products that comply with the U.S.-Korea Organic Equivalence Arrangement may display the USDA organic seal and/or Korea's Ministry of Agriculture, Food and Rural Affairs (MAFRA) organic seal. USDA organic products traded under the U.S.-Korea Equivalence Arrangement cannot display the organic seal of other countries. The only exception to this is in cases where the USDA product is also directly certified under another country's organic standards. In these cases, the relevant organic certificate is required for Korean customs clearance.

Lastly, the e-NAQS Import Certificate System (electronic import certificate system) is developed and ready for use. PCO is beginning to transition to this new system for issuing Korea import certificates (for products being exported from the US to Korea). Until December 31, 2021, the NAQS Import Certificate is still allowed to be issued on paper. Furthermore, until further notice (even after fully transitioning to the e-NAQS system), the original copy of the NAQS Import Certificate, which is printed through the new system, must be presented together with the exported products to the point of entry. Only certification bodies (e.g. PCO) and inspectors will have access to the new e-NAQS system; certified operations will not. Therefore, PCO is developing a NAQS Certificate Request Form for PCO certified operations to complete including various pieces of information and documentation so that PCO can enter this information into the e-NAQS system, verify compliance and issue the certificate. If you will be exporting to Korea, please let PCO know with as much advanced notice as possible so that we can ensure:

- PCO has enough time to set up certified operations in the e-NAQS system

■ Timely completion of the NAQS Request Form by the PCO certified operation

■ Timely completion and issuance of the e-NAQS Import Certificate by PCO (using the info provided by the PCO certified operation via the request form

For more information visit NOP's Korea International Trade webpage ([ams.usda.gov/services/organic-certification/international-trade/Korea](https://ams.usda.gov/services/organic-certification/international-trade/Korea)). You may also contact your Certification Specialist if you have additional questions.

## REMINDER: NOSB MEETING SCHEDULED OCTOBER 19-21, 2021

The NOSB will meet virtually on October 19-21, 2021 to discuss substances petitioned for addition to or deletion from the National List of Allowed and Prohibited Substances (National List), substances due to sunset from the National List in 2023, and recommendations on organic policies.

In addition to the virtual public meeting, the board will also hear public comments via webinar on October 13 and 14, 2021 from 12:00-5:00 pm EST.

The meetings are open to the public, and no registration is required, except to sign up for oral comments. Links to the virtual comment webinars will be provided approximately one week before the webinars.

Detailed meeting information, including agendas, location, proposals and how to participate will be posted on the NOSB Meetings page as it becomes available. Please visit the NOSB Meetings page for further information and instructions:

[ams.usda.gov/event/national-organic-standards-board-nosb-meeting-sacramento-ca](https://ams.usda.gov/event/national-organic-standards-board-nosb-meeting-sacramento-ca)

## Quality Update

Angela Morgan  
Quality Systems & IT Manager



### PCO MID-TERM AUDIT

In order to maintain NOP accreditation, certifying agents are audited by the NOP during their five-year accreditation cycle. A mid-term audit is conducted 2-3 years from the certifying agent's accreditation renewal to assess continued compliance with the NOP regulations and standards. PCO's mid-term audit was conducted last year, November 16-20, 2020. During a typical mid-term audit, an audit team from the NOP's Accreditation and International Activities (AIA) Division reviews PCO's key certification activities, verifies the implementation and effectiveness of corrective actions, conducts witness audits and review audits onsite at various certified operations, interviews certification personnel, reviews certification files, and conducts any other activity as deemed necessary to assess PCO's compliance with the general requirements for accreditation as detailed in §205.501 of the USDA regulations to maintain continued certifier accreditation.

Given travel and in person restrictions mandated by the COVID-19 pandemic, PCO's mid-term audit was a desk audit

with staff interviews and certification file reviews conducted via Zoom. The PCO team, consisting of the Certification Director, Certification Program Assistant Managers and other staff, deftly answered questions, clarified procedures and led the two NOP auditors through various PCO processes. Under normal circumstances an accredited certifier could typically expect the results of such an audit within a few months of the audit itself, but unforeseen challenges caused delays in receiving the final audit report. PCO, always looking to strengthen its certification program, proactively built in several process improvements before receiving the results of the mid-term audit. While awaiting the findings of the audit PCO switched to a new database, Intact, and designed it to create consistency in certification reviews, promote process efficiency, assign and track task distribution and enhance customer service. Many of these pro-active changes were already being implemented when PCO received the results of our mid-term audit in August and will continue to be implemented throughout the course of the certification cycle. Although PCO was issued four noncompliances, we are well on our way to enacting new procedures to address the noted issues. Revised standard operating procedures, additional staff training, as well as frequent quality checks will ensure that PCO fulfills all expectations for sound certification decisions and upholds industry standards. Frequent and updated client communication will help PCO and its certified operations meet and maintain regulatory compliance and support organic integrity. We are confident that as we work to correct these noncompliances we will be better poised to continue our mission to ensure the integrity of organic products and serve our farming community.

**Calcium Sulfate**  
**USA Gypsum®**

**pH Shield™**  
**Organic Ammonia Control**  
Superior ammonia control for organic growers. Improves litter condition, composting & reduces phosphorous runoff.

**Gypsum Products**  
**Soluble Calcium Sulfate**

- Damp for broadcasting
- GripX2 Barn dry
- Bedding additives
- Compost additives
- Water Clarification

[usagypsum.com](https://usagypsum.com) • Denver, PA • 717-335-0379

# New Members

PCO Welcomes 3rd Quarter  
New Members!

## NEWLY CERTIFIED ORGANIC

**Amos B. Fisher**  
Parkesburg, PA

**Amos K. and Martha Z. Allgyer**  
Parkesburg, PA

**Barry C. Imes**  
Mifflin, PA

**Brad Dalton**  
Upper Sandusky, OH

**Brynn Bower**  
Hughesville, PA

**Clair F. Martin**  
Fleetwood, PA

**Clair Garman**  
Annville, PA

**Courtney Coddington**  
Hinton, VA

**Daniel N. Nolt**  
New York, NY

**Daniel S. Mast**  
Bombay, NY

**David G. King**  
Coburn, PA

**Don Cotner Farms LP**  
Danville, PA

**Emil Gallo & Sons Inc.**  
Greenwood, DE

**Eric Peck**  
McGraw, NY

**Ervin Fox**  
Lititz, PA

**Fields Farm LLC**  
Killbuck, OH

**Fields Farm LLC**  
Killbuck, OH

**Fin Irene LLC**  
Blue Grass, VA

**Gerald S. Smith**  
Bedford, PA

**Henry F. Stoltzfus**  
Brogue, PA

**Hostetler Poultry Farm**  
Smithville, OH

**James T. Sheeder**  
Somerset, PA

**Joe Hostetler**  
Upper Sandusky, OH

**John K. Jr. & RoseMary E. Lapp**  
Ephrata, PA

**Jonas J. Stoltzfus**  
Rebersburg, PA

**Joseph Borntreger**  
New York, NY

**Joshua L. Renno**  
Mifflintown, PA

**Kevin C. Brown**  
Cincinnati, NY

**Larry Schmidt**  
New York, NY

**Lewis S. Fox**  
Himrod, NY

**Luckenbill Farms LLC**  
Hamburg, PA

**M&K Fields Farm LLC**  
Killbuck, OH

**Marcus J. Zook**  
Mifflin, PA

**Nathan R. Zimmerman**  
Penn Yan, NY

**Paul Stoltzfus**  
Telford, PA

**Paulk Family Farm, LLC**  
Leonardtown, MD

**Philip Borntreger**  
New York, NY

**Philip W. Kurtz**  
Mifflinburg, PA

**Pureriti LLC**  
Charlotte, NC

**Ralph & Alvin Nolt**  
Fleetwood, PA

**Reuben E. Lantz**  
Millersburg, PA

**Rocky Ridge Goat Dairy LLC**  
Lykens, PA

**Stone Hill Trust**  
Colts Neck, NJ

**Swallow Hill Farm**  
Ottsville, PA

**Sweet Note Bakery, Inc.**  
Bensalem, PA

**Teatulia PBC**  
Denver, CO

**Travis Albaugh**  
Upper Sandusky, OH

**Travis Belmore and Wes Belmore**  
Ontario, NY

**Washington Bottom Farm – Ridgedale, LLC**  
Springfield, WV

**Wilbur Byler**  
New York, NY

**WNY Custom, LLC**  
Wyoming, NY

## ORGANIC PLUS TRUST

**Daniel S. Mast**  
Bombay, NY

**Eric Peck**  
McGraw, NY

**Harry E. Strite**  
Williamsport, MD

**Myron Martin**  
Knoxville, MD

**Travis Belmore and Wes Belmore**  
Ontario, NY

## BUSINESS MEMBER

**Indian Rock Farm LLC**  
Stahlstown, PA

## ADVOCATE MEMBER

**Agri-Dynamics Inc.**  
Martins Creek, PA

**PCO**  
**A Full-Service  
Certification Agency**

**USDA ORGANIC** **CERTIFIED GRASS-FED ORGANIC DAIRY**

"Great certifying agency that is small enough to be able to have a personal feeling, but large enough to give you great service!"

814-422-0251 • paorganic.org

# Marketplace

## CROPS

Certified Organic meadow grass hay. Large square bales. Contact for pricing at 717-476-1220. York County.

## EQUIPMENT

Farm cultivators for sale. Four and six rows; John Deere and IH, ready to go to work (both rebuilt). Contact Carl Modica for prices. 814-267-5640. Somerset County.

## SERVICES

Ag plastic recycling – I can use black and white bunker covers, bale wrap, plastic twine, clear stretch film, greenhouse covers, flats, and pots. Call for details. 717-658-9660. Franklin Co., PA.

## LAND FOR SALE/RENT

Certified Organic Land for Sale – 17-acre parcel with a carriage house, horse shed, and fenced pasture (in grass). \$350,000  
40-acre parcel (30 acres in grass) \$650,000. Contact 717-476-1220. York County.

Organic Grassfed dairy prime grazing country for sale. Owner relocating. Mohawk Valley, Little Falls, NY. 315-867-7414. Herkimer County.

## Direct Market Vegetable Farmers

*continued from page 7*

### WHAT'S NEXT?

Our financial benchmarking research is ongoing. Since compiling the findings detailed in our new report, we've partnered with peer organizations in New England (Community Involved in Sustainable Agriculture) and the Carolinas (Carolina Farm Stewardship Association) to expand the scope of our study to include data from vegetable farms located outside of the Mid-Atlantic region. We will also be analyzing the impact the coronavirus pandemic has had on study participants.

*Our Financial Benchmarks Study was initially made possible with investments from Lady Moon Farms, the Jerry Brunetti family, the Shon Seeley family, and more than 120 private donors committed to strengthening local and regional food systems. Additional support was provided by a Pennsylvania Department of Agriculture Specialty Crop Block Grant and a Pennsylvania Department of Agriculture Research Grant.*

### WANT TO JOIN THIS STUDY?

If you are a direct-market vegetable farmer and are interested in joining this study, email us at [research@pasa-farming.org](mailto:research@pasa-farming.org). Participating farms get custom financial benchmark reports and access to a learning community of their peers.



**LAKEVIEW  
ORGANIC  
GRAIN**

Box 361, 119 Hamilton Place  
Penn Yan, NY 14527  
315-531-1038  
[mh@lakevieworganicgrain.com](mailto:mh@lakevieworganicgrain.com)

for Northeast Organic Farmers . . .  
. . . from Northeast Organic Farmers  
Organic Feed, Seed and Community



**VETERINARY  
DAIRY LINIMENT™**

**CONTRAST THERAPY**  
WARM soothing comfort followed by COOL lingering relief

- Anti-inflammatory
- Analgesic pain relief
- Economical
- Spray and Cream Available

Visit Us At World Dairy Expo  
Tue., Sep. 28 - Sat., Oct 2, 2021  
Trade Center Booths #536 & #537  
Receive a FREE Sample of Liniment

**CRYSTAL  
CREEK** 1-888-376-6777

Order online [www.crystalcreeknatural.com](http://www.crystalcreeknatural.com)

# Event Calendar

NOTE: With all in-person events, it is advised that participants follow current CDC and COVID-19 safety protocol and guidelines.

## OCTOBER

### OCTOBER 6

Rodale Institute  
Webinar

#### **Research Update – Organic Control Strategies for Swine Parasites in Organic Pastured Pork Systems**

2:00–3:00 pm ET

[rodaleinstitute.org/education/webinars](http://rodaleinstitute.org/education/webinars)

### OCTOBER 12

Organic Trade Association  
Webinar

#### **United States of Organic: Introducing the State Organic Network**

1:00–2:00 pm ET

[ota.com/programs-and-events/ota-calendar](http://ota.com/programs-and-events/ota-calendar)

### OCTOBER 13 & 14

National Organic Standards Board (NOSB)

#### **Virtual Public Comment Days**

12:00–5:00 pm ET

[ams.usda.gov/rules-regulations/organic/nosb/meetings](http://ams.usda.gov/rules-regulations/organic/nosb/meetings)

### OCTOBER 19–21

National Organic Standards Board (NOSB)

#### **Virtual Public Meeting Days**

12:00–6:00 pm ET

[ams.usda.gov/rules-regulations/organic/nosb/meeting](http://ams.usda.gov/rules-regulations/organic/nosb/meeting)

### OCTOBER 20

Rodale Institute  
Webinar

#### **Research Update – Nutrients and Soil Health in Vegetable Systems Trial**

2:00–3:00 pm ET

[rodaleinstitute.org/education/webinars](http://rodaleinstitute.org/education/webinars)

### OCTOBER 31

*Deadline for cost-share application  
Check with your local USDA Farm Service Agency for submission requirements*

## NOVEMBER

### NOVEMBER 2

Pasa Sustainable Agriculture  
On-Farm Workshop

#### **Two-Wheel Tractor Operation & Maintenance**

1:00–6:00 pm ET

Hilltop Urban Farm, Pittsburgh, PA  
[pasafarming.org](http://pasafarming.org)

### NOVEMBER 5–14

Caroline Farm Stewardship Association  
**2021 Sustainable Agriculture Conference** – Virtual Event  
[carolinafarmstewards.org](http://carolinafarmstewards.org)

### NOVEMBER 10

Rodale Institute  
Webinar

#### **Industrial Hemp – Cultivating a New Industry**

2:00–3:00 pm ET

[rodaleinstitute.org/education/webinars](http://rodaleinstitute.org/education/webinars)

### NOVEMBER 11 & 12

#### **Organic Farming Conference**

Mt. Hope Event Center  
Mt. Hope, OH  
[organicfarmingconf.com](http://organicfarmingconf.com)

### NOVEMBER 17

Rodale Institute  
Webinar

#### **Research Update – Diversifying Organic Inputs & Improving Soil Health at the Southeast Organic Center**

2:00–3:00 pm ET

[rodaleinstitute.org/education/webinars](http://rodaleinstitute.org/education/webinars)

### NOVEMBER 19

Pasa Sustainable Agriculture  
Listening Session – Webinar

#### **Climate Impacts on Farmworkers**

12:00–1:00 pm ET

[pasafarming.org](http://pasafarming.org)

### NOVEMBER 25 & 26

*Thanksgiving holiday  
PCO Office will be closed*

## DECEMBER

### DECEMBER 1

Pasa Sustainable Agriculture  
Webinar

#### **Alley Cropping: Planting Trees for Economic & Ecological Diversity**

12:00–1:15 pm ET

[pasafarming.org](http://pasafarming.org)

### DECEMBER 1

Pasa Sustainable Agriculture  
Webinar

#### **Designing Your Wash-Pack Station for Food Safety**

6:30–8:00 pm ET

[pasafarming.org](http://pasafarming.org)

### DECEMBER 6–9

ACRES USA

#### **2021 Eco-Ag Conference & Tradeshow**

Cincinnati, OH

[ecoag.acresusa.com](http://ecoag.acresusa.com)

### DECEMBER 8

Pasa Sustainable Agriculture  
Webinar

#### **How (& How Not) to Apply for Agricultural Grants**

7:00–8:30 pm ET

[pasafarming.org](http://pasafarming.org)

### DECEMBER 24–JANUARY 1

*Christmas–New Year’s holiday  
PCO Office will be closed*



Plans are underway to bring us together throughout the year to celebrate our clients and their contributions to the organic industry. Keep your eyes open for announcements in our Winter issue of **Organic Matters** and our monthly electronic **E-news**.



# FARM *vitality* GRANTS

*Grants to* enhance the long-term health and vitality of Pennsylvania's farms through grants for business planning, farm transition and expansion, diversification, financial, and technical assistance.

*Available to* farmers and prospective farmers.

*Maximum grant* amount is \$7,500 and is limited to 75% of project costs.



Pennsylvania farmers: YOU can apply for grants of up to \$7,500 through the #PAFarmBill's \$1 million Farm Vitality Grant Program for organic production and transition planning assistance.

This program provides reimbursement grants for a variety of business planning services, efficient transitions of farm ownership, strategic farm expansion, diversification of agricultural production and building a team of financial and technical expertise because success for PA's family farms is success for Pennsylvania.

All farmers and prospective farmers are eligible!



[www.agriculture.pa.gov](http://www.agriculture.pa.gov)



106 School Street, Suite 201  
Spring Mills, PA 16875

Non-Profit Org  
US POSTAGE PAID  
STATE COLLEGE, PA  
PERMIT NO. 21

# You have Options!

## Crop Guard *Forage Inoculants*

- Latest Technology
- Superior Performance
- Carefully Selected Strains
- Maximum Forage Quality



## Quantum - Organic Light™ & Organic VSC®

*Spore Forming & Photosynthetic Bacteria*



- Mitigates Moisture to Prevent Disease
- Enhanced Plant & Root Development
- Faster Seed Germination



### Manure Treatment that:

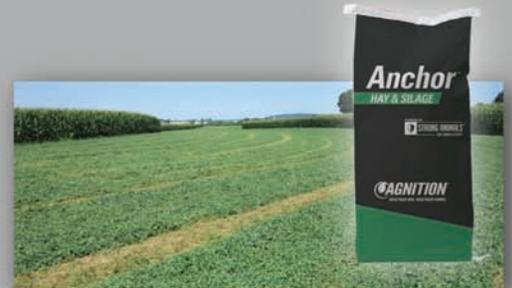
- Controls Odors
- Breaks Down Solids
- Requires Less Agitation
- Retains High Levels of Nitrogen

## Anchor™

**FOR HAY**

*Dry Granular Product*

- Bale Higher Moisture Hay
- Save More Leaves
- Reduce Heating
- Preserve Nutrients



New Holland, PA  
(717) 354-4398  
[www.HomesteadNutritionInc.com](http://www.HomesteadNutritionInc.com)