Third Party Audit, Food Safety Modernization Act Inspections or On-Farm Readiness Reviews: What’s the difference?
Wesley Kline

There is continued confusion among growers about the differences between a Third-Party Audit, an inspection for the Food Safety Modernization Act and an On-Farm Readiness Review. So, what are the differences?

Third-Party Audits: Required by buyers not the government

Third-party audits (USDA Gap, USDA Harmonized, USDA Harmonized Plus, Primus, Global GAP, etc.) are not a government requirement. They are voluntary audits required by the buyer of the produce. Often this applies to wholesale growers. Which audit a grower gets depends on the buyer and negotiations between the buyer and grower. The big difference among the audits is some audits go into more detail on the social issues which have little if anything to do with food safety. The other issue is cost for the audit. There are big differences among the audits depending on location of the auditor and the base fee. A grower should get those cost estimates up front before agreeing to a specific audit company.

Food Safety Modernization Act (Produce Safety Rule) Inspections: Inspections conducted and required by the government.

The Food Safety Modernization Act (FSMA) was passed by Congress in 2010 to improve the safety of all foods regulated by the Food and Drug Administration (FDA), including fruits and vegetables. FSMA requires that growers subject to the rule attend food safety training recognized by FDA. FSMA also requires that farms be inspected by FDA or in the case of New Jersey the Department of Agriculture. There are differences between FSMA and a third-party audit in that a written food safety plan is not required for FSMA, there are less records required, it will not be an annual inspection, it covers the whole farm and it is free. Buyers may or may not accept the FSMA inspection as acceptable for food safety and in most probably will not still requiring the grower to get a Third-Party Audit.
When a grower needs to start complying with FSMA depends on the size of the operation. Operations over $500,000 in produce sales were required to comply January 2018; operations between $250,000 and $500,000 January 2019 and operations between $25,000 and $250,000 January 2020. The New Jersey Department of Agriculture (NJDA) started inspection for operations over $500,000 in 2019. They did two to three inspections a week throughout the summer and fall. These are “educational inspections” where they will evaluate the farm and make suggestions for changes to be able to comply with the rule. In 2020 they will do the same for the $250,000 group and the following year $25,000. Once the educational year is over enforcement inspections will take place. We do not know what that means at this point. FDA is still working on the enforcement options. The one exception is if they find an egregious condition which is a situation on a farm or packing house that is reasonably likely to lead to:

- Serious adverse health consequences or death from the consumption of or exposure to covered produce;
- An imminent public health hazard is posed if corrective action is not taken immediately (example: edible portions of produce contacting a potential source of contamination).

Egregious conditions are rare, but when they occur it is a serious matter and a grower must take action to correct the situation!

Do third party audits take the place of the inspection? No, a grower may have both in the same year. Remember one is government regulation and one is at the buyer’s request.

**On-Farm Readiness Review (OFRR): Voluntary and Free**

With any law, education increases the likelihood of compliance. For FSMA, growers need to know what works, why it works, and how to implement those practices. To further enhance the ability of farmers to comply with the regulations, the National Association of State Departments of Agriculture in collaboration with Extension, state departments of agriculture, FDA, USDA and the Produce Safety Alliance developed the OFRR program. The idea for the OFRR is to demystify FSMA for growers before an inspector shows up and to provide the opportunity to evaluate food safety practices on the farm. Why would a grower want an OFRR?

- It is voluntary, free and confidential
- It helps growers align what they are doing with what is required in the Produce Safety Rule
- It helps growers determine what they are missing regarding on-farm produce safety
- Notes taken during the OFRR remain the property of the farmer

The OFRR team is made of one person from Cooperative Extension and one from NJDA. The team walks around with the grower and evaluates the operation then goes over any suggestions for changes. Most OFRRs take about two hours. If you want to sign up for an OFRR contact Charlotte Muetter at 856-839-3388 or charlotte.muetter@ag.nj.gov.

The first step in getting ready for the OFRR and an inspection is to take the Produce Safety Alliance training which we offer throughout the winter across New Jersey. This provides the grower the basic information about food safety and FSMA. This training is required by FDA to comply with FSMA and is the only training recognized by FDA at the present time. There is a list of training dates later in this newsletter.
Hemp Approval

Jeff Wolfe, NJDA

TRENTON, N.J. — New Jersey Secretary of Agriculture Douglas H. Fisher announced today that New Jersey’s plan for the production and testing of hemp and hemp products has been approved by the USDA. New Jersey was among the first three states to have their plans authorized.

“This is exciting news as New Jersey is adding an alternative crop for our state’s agricultural community,” Secretary Fisher said. “The approval by the USDA of New Jersey’s hemp production plan is the culmination of more than three years of hard work by many members of our staff who have recognized this important and wide-ranging new market for our Garden State growers.”

In a letter informing the NJDA of the approval, USDA Deputy Administrator Sonia N. Jimenez stated: “With the approval of your hemp plan, New Jersey has assumed primary regulatory responsibility for hemp production within its jurisdiction.”

New Jersey hemp legislation at the state-level was signed into law by Governor Murphy on August 9, 2019, after which followed the process of New Jersey filing for USDA approval.

“The (NJDA’s) Division of Plant Industry will be responsible for inspecting hemp-growing facilities and testing hemp varieties to ensure that the THC content is within the limits set by the USDA,” Division Director Joseph Zoltowski said. “The manufacturing of products for human and animal consumption derived from hemp remains the purview of the Federal Food & Drug Administration.”

The 2020 New Jersey Hemp Program rules and regulations are posted at https://www.state.nj.us/agriculture/divisions/pi/prog/nj_hemp.html. Applications for participation in the 2020 New Jersey Hemp Program are expected to be available and posted on that site within the next week.

Industrial hemp (cannabis sativa) was a major crop grown in America starting in the Colonial period, and was used for textiles, paper and rope, and continues to this day to be used in fiberboard, construction materials, protein for both humans and livestock, lubricating oils and energy-producing biomass.

Mass production of hemp ended in 1970 with the passage of the Controlled Dangerous Substances Act, under which hemp was classified as an illicit drug due to its relationship with its cousin, marijuana. In the federal 2018 Farm Bill, hemp was re-classified as an agricultural crop and, through that action, hemp farming was once again made legal in the country.
**Tomato Brown Rugose Fruit Virus Threat to United States Tomato and Pepper Industry**

Effective November 22, 2019, the USDA’s Animal and Plant Health Inspection Service (APHIS) will restrict the importation of tomato (*Solanum lycopersicum*) and pepper (*Capsicum* spp.) hosts of Tomato brown rugose fruit virus (ToBRFV).

ToBRFV is a recently described member of the Tobamovirus genus. This virus genus also contains other economically important pathogens that infect vegetable crops, including Tobacco mosaic virus (TMV), Tomato mosaic virus (ToMV), and Cucumber green mottle mosaic virus (CGMMV). The disease caused by ToBRFV was first reported in 2014 in tomatoes in Israel. Since then, ToBRFV has been reported in China, Mexico, Germany (eradicated), Italy, Jordan, Turkey, Greece, the United Kingdom, and the Netherlands. Given the global nature of seed production and the international movement of seeds, the distribution may be greater than reported.

Tomato and pepper are the two main hosts. Symptoms caused by ToBRFV include bubbling and mosaic on leaves of susceptible pepper, and fern leaf and mosaic on tomato leaves. On fruit, symptoms include smaller fruit size with a rough surface, fruit drop, delay in ripening, and fruit discoloration including blotching, pale color and/or brown necrotic spots. Infected tomato fruits can be unmarketable or reduced in quality. Necrosis can occur on susceptible pepper fruit.

Tobamoviruses are mechanically transmitted and seedborne viruses. ToBRFV is mechanically transmissible through infected sap of both tomato and pepper. Transmission occurs through touching and manipulating infected plants. Transmission is common during transplant productions or in crop production systems in which plants are regularly handled, such as greenhouse operations.

To safeguard against the introduction of ToBRFV into the United States, APHIS is restricting the importation of tomato and pepper by requiring imported plants and plant products to be free of evidence of ToBRFV. Currently, propagative hosts are considered high risk pathways for the introduction of ToBRFV and under the conditions of the Federal Order, imports of propagative material must be free from ToBRFV based on origin from an area where the pest is absent or based on negative results of diagnostic testing.

APHIS is placing restrictions on imports of fresh tomato and pepper fruit from those countries where ToBRFV is present and that are approved to export to the United States. Although the phytosanitary risk associated with infected fruit is historically considered to be low, in light of reports of the transmission of the virus from fruit, these interim measures are necessary to safeguard U.S. tomato and pepper production while APHIS fully evaluates emerging scientific evidence on ToBRFV. Specifically, APHIS will require tomato and pepper fruit imported from Mexico, Israel, and the Netherlands (countries approved to export tomatoes where ToBRFV is present) to be inspected at the point of origin to ensure it is free of disease symptoms. Because Canada imports tomato and pepper fruit from Mexico that are re-exported to this country, APHIS will also require tomato and pepper fruit from Canada to be inspected at the point of origin to ensure it is free of disease symptoms. In addition, U.S. Customs and Border Protection (CBP) will increase inspections at U.S. ports of entry to ensure imported tomato and pepper fruit entering from Mexico, Israel, the Netherlands, and Canada do not show any signs of disease upon arrival.
Cumberland County Board of Agriculture Scholarship

Student must be a Cumberland County resident pursuing a degree in Production Agriculture/Horticulture, Agricultural Education, Agronomy or related field.

The purpose of this scholarship is designed to support the general welfare of agriculture in Cumberland County. Through this program, the board wishes to encourage the scientific study of agriculture and promote as a useful, profitable, and dignified career. Education in production agriculture is a necessary tool in today’s intensified agriculture field. The scholarship program hopes to encourage students to avail themselves of agriculture and related programs in higher education.

$2,000 Scholarship

Return to:
Cumberland County Board of Agriculture 291 Morton Ave. Millville NJ 08332 by April 15th

Name: ___________________________ Age: ________
Address: _____________________________
High School / College: __________________________ GPA: ______
Phone: __________________________ Email: __________________________
Clubs and or volunteer work in the community: __________________________

Name of College or Technical School: __________________________
Address: __________________________
Course of Study: __________________________
Why have you chosen a career in agriculture:

____________________________________
What are your plans after college:

Why should the scholarship committee select you for this scholarship:

References: (at least 3)

Name: ___________________________ Phone: _______________________
Name: ___________________________ Phone: _______________________
Name: ___________________________ Phone: _______________________

Please provide one letter of recommendation

Payment of the scholarship will be made directly to the college or technical school pending acceptance and enrollment

Signed: ___________________________ Date: _______________________
(Applicant)

Signed: ___________________________ Date: _______________________
(Parent/Guardian)
Upcoming Cultivating Cumberland Subscription Renewal

If you wish to continue receiving “Cultivating Cumberland” and other educational mailings from our office, now is the time to renew your subscription.

If you are not already receiving the newsletter via email, please consider doing so. The email comes with all the same information and in full color. If you are already receiving the newsletter via email, thank you for helping us go green.

Reactivation forms (for mailed newsletters only) are due back to our office no later than February 14th, 2020. We will begin using the updated mailing list for the March 2020 issue.

You can reactivate your subscription to “Cultivating Cumberland” in one of the following ways:

- Call Katie at 856-451-2800 x1
- Email: KatieSi@co.cumberland.nj.us
- Fax this form back to 856-451-4206
- Return this form by mail to
  ATTN: Katie Silvers, Agriculture Department, 291 Morton Ave, Millville, NJ 08332

Don’t miss out on all the up-to-date information. Be sure to renew your subscription to “Cultivating Cumberland” by February 14th. If you have any questions, please feel free to contact Brandi or Katie at the Extension Office at 856-451-2800 x1 for assistance.
Purchasing Pesticide Manuals Online

Visit https://ce-catalog.rutgers.edu/checkoutsigin.cfm

1. Create an account
2. Sign in
3. Click on “Products” on the left hand side
4. Click the manual you need
5. Select if your tax exempt or if you will pay sales tax
6. Click “Add to Cart”
7. Click “Checkout”
8. You will enter your tax exempt number or type “N/A” if you are not tax exempt. Click “Next”
9. Check the box “General Refund Policy” after you have read the terms and conditions
10. Click “Place Order”
11. Review your cart and click “Continue”
12. Click on how you would like to pay: “Pay with Bank Account” or “Pay with Card”
13. Enter your payment information

Purchase manuals in our office or purchase pesticide manuals online through Rutgers and have them shipped to you. Orders will be fulfilled Wednesday and ship on Thursday of each week.

Shipping UPS 2nd Day.

Please note, manuals can still be purchased in our office.
Calendar of Important Events

✓ Indicates a newly added event since the last calendar

January 17-19, 2020
North Jersey Orchid Society; Douglass Student Center, Rutgers University, 100 George Street, New Brunswick, NJ; 10:00 AM—4:00 PM; Free admission and free parking, breathtaking orchid displays, world-renown vendors, orchid workshops and education, “Ask the Orchid Doctor”; Visit njorchids.org for more information and registration.

January 28-30, 2020
2020 Mid-Atlantic Fruit and Vegetable Convention; Hershey Lodge, 325 University Dr, Hershey, PA 17033; A premier grower meeting in the Northeast combining three days of six or more concurrent educational sessions with a large industry trade show and numerous networking opportunities. Find more information and registration details at http://www.mafvc.org/Registration

February 4-6, 2020
2020 NJ Agricultural Convention & Trade Show; Harrah’s Resort Hotel Convention Center, 777 Harrah’s Blvd, Atlantic City, NJ 08401; Convention, trade show, and educational sessions. Find more information and registration details at http://www.njveggies.org/convention.htm

February 5-8, 2020
2020 Sustainable Agriculture Conference: Lancaster County Convention Center, Lancaster, PA; Food and farming workshops, vendor trade show, seed swap, receptions and tastings, farm innovation show, social and networking events; Find more information and register online at pasafarming.org/conference or by calling 814-349-9856

February 12-13, 2020
Women in Ag Conference 2020; Dover Downs Hotel & Casino, Dover, DE; The full conference agenda and additional details will soon be available at https://extension.umd.edu/womeninag/annual-conference/2020-conference

February 19, 2020
✓ CORE Pesticide Training and Testing in one day; FREE; 8AM—12PM (before pesticide exam, check-in at 7:45AM); Klem Building at the Rutgers Cooperative Extension Office of Cumberland County, 291 Morton Avenue, Millville, NJ 08332; This course satisfies New Jersey’s requirement of attending a basic pesticide training course for new applicants. February 19th is a scheduled testing date with the NJDEP at our office for the Pesticide Exam. You must be registered for the NJDEP Exams by February 5th to receive a testing time for this date. The registration paperwork can be obtained online at: http://www.nj.gov/dep/ (Register for a test time of 12 or 2PM, indicate that you are taking this class) Instructor: Wayne Knerr; Register for this training (before the exam) by Feb. 17th, 2020, call 856-451-2800 x1

February 26-27, 2020
Delmarva Soil Summit; Delaware Technical Community College, Georgetown, DE; Join fellow farmers, researchers, and other experts to learn about the latest innovations in soil health and fertility. Learn more and sign up at DelmarvaSoilSummit.com
TRAININGS

Food Safety Modernization Act (FSMA):
Produce Safety Alliance Grower Training and Third Party Audits

February 6, 2020  ATLANTIC CITY, NJ
Register by 01/31/20

March 3 & 4, 2020  MILLVILLE, NJ
Register by 02/28/20

March 18, 2020  CHATSWORTH, NJ
Register by 03/13/20

FSMA Produce Rule Training is required by the FDA on all farms that aren’t exempt or qualified exempt. For more information on FSMA visit our website at onfarmfoodsafety.rutgers.edu
9 AM - 4 PM - Lunch Provided - $50 Day 1 - $25 Day 2

REGISTRATION AND MORE DETAILS
HTTPS://RUTGERSONFARMFOODSAFETY.EVENTBRITE.COM
IF YOU ARE UNABLE TO REGISTER ONLINE CONTACT KATIE AT (856) 451-2800 X 1 OR KATTIESL@CO.CUMBERLAND.NJ.US
North Jersey Orchid Society
Rutgers University SEBS
Floriculture and Teaching Greenhouse
Annual Show & Sale
January 17-19, 2020

Free Admission & Free Parking
Breathtaking Orchid Displays
World-Renown Vendors
Orchid Workshops & Education
Two Daily Drawings for Free Orchid Plants
“Ask the Orchid Doctor”

Douglass Student Center, Rutgers University
100 George Street, New Brunswick NJ
Friday & Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM
For parking, register online at http://njorchids.org/showparking/
Visit us online at njorchids.org
Contact us at njorchids@gmail.com
INTRODUCTORY FISHES SCIENCES FOR STAKEHOLDERS (IFISSH)

Rutgers Cooperative Extension (RCE) will be hosting our Introductory Fisheries Science for Stakeholders (IFISSH) course during the winter of 2020.

https://ocean.njaes.rutgers.edu/marine/IFISSH.html

The objective of this course is to educate stakeholders of New Jersey’s commercial and recreational marine fisheries so that they will better understand and make progress on issues impacting their industries, including the science, management, and responsible stewardship of fishery resources.

See reverse for schedule, course topics, and confirmed speakers.

The course is open to all who are interested. Classes will meet from 6:30 - 9:00 PM every Tuesday from January 28 – March 31, 2020 at the RCE of Ocean County in Toms River, NJ. Two optional fields trips will occur spring 2020.

“HyFlex” classes for live participation in-class or remotely via webinar.

Cost: $60.00/person

Register before January 24, 2020 by contacting:
Kelly Jurgensen, Admin. Assist., RCE of Ocean County kjurgensen@co.ocean.nj.us | 732-349-1152

For more information, please contact:
Douglas Zemeckis, Ph.D., County Agent III (Asst. Prof.)
Dept. of Agriculture and Natural Resources
Rutgers Cooperative Extension
zemeckis@njaes.rutgers.edu | 732-349-1152

Rutgers Cooperative Extension is an equal opportunity program provider and employer. Contact your local Extension Office for information regarding special needs or accommodations. Contact the State Extension Director’s Office if you have concerns related to discrimination, 848-932-3703.

Cooperating Agencies: Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and County Boards of Chosen Freeholders. Educational programs are offered without regard to race, sex, disability, color, national origin, or age. Rutgers Cooperative Extension is an Equal Opportunity Employer.
Introductory Fisheries Science for Stakeholders (IFISSH)
2020 Course Schedule

All classes meet on Tuesdays from 6:30 - 9:00 PM at the Rutgers Cooperative Extension of Ocean County (1623 Whitesville Road, Toms River, NJ 08755). Two optional field trips are described below.

“HyFlex” classes so that people can participate live in-class or remotely via webinar.

To register, please contact Kelly Jurgensen (Administrative Assistant, Marine Extension Program): kjurgensen@co.ocean.nj.us, 732-349-1152. Make checks payable to “Ocean County Board of Agriculture” and mail to: RCE of Ocean County, 1623 Whitesville Road, Toms River, NJ 08755, ATTN: Kelly Jurgensen

Class Sessions and Confirmed Speakers

(1) January 28: Overview of Fisheries Science and New Jersey’s Marine Fisheries
    Dr. Douglas Zemeckis (Rutgers University)
    Dr. Eleanor Bochenek (Rutgers University)

(2) February 4: Fisheries Biology, Life History, and Migration Patterns
    Dr. Thomas “Mctz” Grothues (Rutgers University)
    Dr. Douglas Zemeckis (Rutgers University)

(3) February 11: Climate Change Impacts on Marine Resources and Fisheries
    Dr. Douglas Zemeckis (Rutgers University)
    Dr. Chris Chambers (NOAA Northeast Fisheries Science Center)

(4) February 18: Fisheries-Independent Data: Bottom Trawl and Other Surveys
    Dr. Gregory DeCellies (MA Division of Marine Fisheries)
    Gregory Hinks (NJDEP Division of Fish and Wildlife)
    Dr. Douglas Zemeckis (Rutgers University)

(5) February 25: Fisheries Oceanography
    Dr. Travis Miles (Rutgers University)
    Sarah Borsetti (Rutgers University)

(6) March 3: Fisheries-Dependent Data (e.g., Observers, VTRs, VMS, MRIP)
    Josh O’Connor (NOAA Greater Atlantic Regional Fisheries Office)
    Dr. Douglas Zemeckis (Rutgers University)
    Dr. Richard Cody (NOAA Fisheries)

(7) March 10: Introduction to Stock Assessment
    Dr. Douglas Zemeckis (Rutgers University)
    Dr. John Wiedenmann (Rutgers University)
    Dr. Jason Morson (Rutgers University)

(8) March 17: Federal and International Fisheries Management
    Brandon Muffley (Mid-Atlantic Fishery Management Council)
    Dr. Jeff Kneebone (New England Aquarium)

(9) March 24: Social and Ecological Factors in Fisheries Science and Management
    Dr. Olaf Jensen (Rutgers University)
    Dr. Bonnie McCoy (Rutgers University)
    Dr. Roger Locandro (Rutgers University)

(10) March 31: State Fisheries Management, Current Issues, and Cooperative Research
    Mike Celestino (NJDEP Division of Fish and Wildlife)
    Dr. John Manderson (Open Ocean Research)
    Dr. Douglas Zemeckis (Rutgers University)

Optional Field Trips

(1) Tour of Viking Village Commercial Fishing Docks, Barnegat Light, NJ
    Date to be scheduled, included in program fee

(2) Fishing trip aboard the F/V Voyager, Point Pleasant Beach, NJ
    Date to be scheduled, cost is not included in program fee
Available Credits:
- Pesticide
- Industry
- ICPI, LTE/LTCO, ASLA, APLD, NALP, CNLP, FERT, ISA, BLIC, BMCA, & NJUCF

Strawberry Substrate Workshop
February 11-13, 2020

An in-depth strawberry substrate workshop will be held February 11–13, 2020 at the Moakley House, Ithaca, NY.

Growing strawberries in substrate (soil-less media) can help prevent soil-borne diseases. It can also increase yields, improve quality, and reduce the costs associated with pesticides, fertilizer, and water. In this 3-day workshop, led by Dennis Wilson of Delphy, a worldwide leader in food and flower production based in the Netherlands, we’ll combine classroom and hands-on sessions in Cornell’s greenhouses to learn about the most effective methods for strawberry substrate production.

*Breakfast, lunch, and printed handouts included.*

The workshop is limited to 35 participants, all of whom will walk away with the skills and knowledge they need to grow strawberries on substrate.

Register here: [https://www.nysbga.org/products/strawberry-substrate-intensive](https://www.nysbga.org/products/strawberry-substrate-intensive)

$195 NYSBGA members | $245 nonmembers
Cover Crops in Vegetable Production Systems: 
Tools and Techniques for Building Soil Health to Maximize Profits

SAVE THE DATE • Tuesday February 25, 2020 • 9:00 am to 3:00 pm
USDA Service Center • 51 Cheney Road, Woodstown NJ 08098

Want to learn more about incorporating cover crops, minimum or no-till planting, or companion cropping for your vegetable crops? New Jersey farmers are invited to attend a technical and educational workshop detailing best management practices to improve soil health and profitability in vegetable cropping systems.

Join extension agents and industry representatives in sharing new techniques, equipment upgrades, and discuss firsthand experiences with local growers.

Lunch will be provided
Pesticide CEU’s available
Full agenda to come in February newsletter

For more information contact Brittany Dobrzynski, New Jersey Audubon
Office: 609-400-3826 Email: brittany.dobrzynski@njaudubon.org

GAPs Online Produce Safety Course

The next English GAPs Online Produce Safety Course will begin on January 8, 2020 and run through January 28, 2020. This course is intended to improve your understanding of GAPs to guide assessment of risks and implementation of practices to reduce risks on fresh produce farms. We have additional GAPs Online Produce Safety Course sessions scheduled for 2020 on the following dates:

March 4 - March 24, 2020
May 6 - May 26, 2020
July 8 - July 28, 2020
September 2 - September 22, 2020
October 28 - November 17, 2020

Taking this course will not result in your farm being "GAPs Certified". GAPs certification is done by a third party (e.g. USDA, Primus, Global GAP) and involves the successful completion of an on-farm audit. It is also important to consider that the GAPs Online Produce Safety Training Course is not currently equivalent to the required supervisor training described in the FSMA Produce Safety Rule 21 CFR Subpart C §112.22(c). This GAPs Online Produce Safety Training Course may, however, satisfy training requirements as described in the FSMA Produce Safety Rule in §§112.21(a) and (b).

The Produce Safety Alliance website maintains a list of upcoming Grower Training Courses that meets the requirement in §112.22(c) of the FSMA Produce Safety Rule.

To register for any session of the GAPs Online Produce Safety Course, visit the National Gaps Program eCornell registration

A minimum of 10 people must be registered for us to offer the course and class size is limited to 25 people. The course price is $225.
2020 DELMARVA SOIL SUMMIT- AGENDA
February 26 & 27, 2020 | Georgetown, DE

PRE-CONFERENCE WORKSHOP: PURPOSEFUL COVER CROPPING TRAINING
With Chris Lawrence and Sarah Hirsh
This special pre-conference workshop will help take your cover cropping to the next level! In this workshop, Chris Lawrence and Sarah Hirsh will walk you through the cover crop planning process, describing new tools and strategies to help you make sense of cover crops: 30+ species, 10+ purposes, 6 seasonal niches and 3 functional groups. They’ll also share case studies to open your mind to new options... and to help you see those you ought to avoid!

$20 to Register --- 9:00 - 12:00 in Room #535 A/B

Registration for this preconference workshop is limited to 50 people!

DAY 1: RESEARCH, & NETWORKING

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>12:00</td>
<td>Lunch</td>
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GENERAL SESSION

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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| 1:00 – 1:30 | Official Kickoff of the Delaware Soil Summit  
Welcome and Housekeeping    |
| 1:30 – 1:45 | Introduction                                |

RESEARCH UPDATES- EARLY AFTERNOON BREAKOUT SESSIONS

<table>
<thead>
<tr>
<th>Room #</th>
<th>Event</th>
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<tbody>
<tr>
<td>535C/D</td>
<td>Extending multi-species cover crop growing season for enhanced function and soil health. Ray Weil, UMD</td>
</tr>
</tbody>
</table>
| 535A/B  | Saltwater Intrusion & Salt Tolerant Crops  
Dani Weisman, UMD                          |
| 535A/B  | ARS Cover Crop Decision Making Tools       
Victoria Ackroyd, USDA                      |
| 535A/B  | How to Get SARE Farmer/Partnership Research Grants  
Lisa Garfield, Farmer and Nevin Dawson, SARE |
| 535A/B  | Carbon Sequestration-Potential of Different Production Types & Practices  
Sara Via, UMD                               |

2:50 – 3:20 Break & Visit with Exhibitors

RESEARCH UPDATES- LATE AFTERNOON BREAKOUT SESSIONS

<table>
<thead>
<tr>
<th>Room #</th>
<th>Event</th>
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| 535C/D  | Evaluating Single & Mixed Species Cover Crops  
Mark Reiter, VT                            |
| 535A/B  | Updates from ARS in Beltsville  
Ginny Moore, USDA ARS                       |
| 535A/B  | Glyphosate Use & Impact on Soil Biology    
Stephanie Yarwood, UMD                      |
| 535A/B  | Long-Term Research on Organic and Conventional Systems  
Michel Cavigelli, USDA ARS (tentative)      |
| 535A/B  | Quantitative Decision Making for Cover Crops  
Charlie White, PSU (Remote Presentation via Zoom) |
| 535A/B  | Phosphorus in Delmarva Soils & Implications for Soil Health  
Amy Shober, UD                              |

GENERAL SESSION

Main Room (540s)

4:20 – 5:20 Planting Green and Managing Slugs  
John Tooker, PSU (tentative)  
Lobbies, Hallway & Lounge

5:30 – 7:30 Networking Event w/ Research Posters
# DAY 2: PLENARIES & BREAKOUTS

## PLENARY SESSION

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30 - 8:40</td>
<td>Welcome and Housekeeping</td>
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<tr>
<td>8:40</td>
<td>Intro 1 (TBD)</td>
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<tr>
<td>8:50</td>
<td>Intro 2 (TBD)</td>
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<tr>
<td>9:00 - 10:00</td>
<td>Carbonomics (Keith Berns, Farmer &amp; Co-owner of Green Cover Seed)</td>
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<tr>
<td>10:00 – 11:00</td>
<td>Understanding Soil Biology &amp; How It Works (Kristine Nichols, KRIS Systems)</td>
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<tr>
<td>11:00 – 11:30</td>
<td>Break &amp; Visit with Exhibitors</td>
</tr>
<tr>
<td>11:30 – 12:30</td>
<td>Economics of Soil Health (Rob Myers, SARE)</td>
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<tr>
<td>12:30 – 1:15</td>
<td>Lunch</td>
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</tbody>
</table>

## EARLY AFTERNOON BREAKOUT SESSIONS

<table>
<thead>
<tr>
<th>Time</th>
<th>Large-Scale/Commodity Production Track</th>
<th>Small Scale/Diversified Production Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:20 – 2:20</td>
<td>Room #540s/Main Area</td>
<td>Room #535A/B</td>
</tr>
<tr>
<td></td>
<td>Farmer Panel</td>
<td>Weeds as Soil Health Indicators</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Ben Beale, UME)</td>
</tr>
<tr>
<td></td>
<td>Room #535C/D</td>
<td>Cover Cropping</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Efficiently on Biointensive Farms</td>
</tr>
<tr>
<td></td>
<td>Room #555A/B</td>
<td>Small-scale equipment options</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Chuck Schuster, UME)</td>
</tr>
</tbody>
</table>

## MID-AFTERNOON BREAKOUT SESSIONS

<table>
<thead>
<tr>
<th>Time</th>
<th>Large-Scale/Commodity Production Track</th>
<th>Small Scale/Diversified Production Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30 – 3:30</td>
<td>Room #535A/B</td>
<td>Room #535C/D</td>
</tr>
<tr>
<td></td>
<td>Machines &amp; Equipment Modifications</td>
<td>Beyond Rye and Clover: An Overview of</td>
</tr>
<tr>
<td></td>
<td>(Steve Groff, Farmer &amp; Cover Crop</td>
<td>Cover Crop Options (Keith Berns, Farmer)</td>
</tr>
<tr>
<td></td>
<td>Coach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Room #555A/B</td>
<td>Room #540s/Main Area</td>
</tr>
<tr>
<td></td>
<td>Separating Fact from Fiction in Soil</td>
<td>Farmer Panel</td>
</tr>
<tr>
<td></td>
<td>Health Claims</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Bob Kratochvil, UMD)</td>
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</tr>
</tbody>
</table>

## LATE AFTERNOON BREAKOUT SESSIONS

<table>
<thead>
<tr>
<th>Time</th>
<th>Reading and Interpreting Soil Tests</th>
<th>Room #535A/B</th>
<th>Room #535C/D</th>
<th>Room #555A/B</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:00 – 5:00</td>
<td>Bill Rohrer, AgroLab</td>
<td>No-till Veggies &amp; No-Till Organic</td>
<td>Amendments &amp; Biological Activity for Small Scale Operations</td>
<td>Grazing Management &amp; Regenerative Ag</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Steve Groff, Farmer &amp; Cover Crop Coach)</td>
<td>(Daniel Sweeney, Seven Springs Farm)</td>
<td>(Brian Campbell, NRCS &amp; Farmer)</td>
</tr>
</tbody>
</table>
SAVE THE DATE

South Jersey Nursery Meeting
March 12th, 2020
9 AM - 4 PM

Meet the new Rutgers Extension Agents working with the nursery industry:

Tim Waller
Cumberland County

Bill Errickson
Monmouth County

Educational presentations on spotted lantern fly, pesticide safety and regulations, irrigation scheduling, weeds, and pathogens.

Pesticide credits requested for: CORE, PP2, 1A, 3A, and 10

More details to follow.

Rutgers Cooperative Extension
of Cumberland County
291 Morton Avenue
Millville, NJ 08332
**REGULARLY SCHEDULED MEETINGS**

✓ Indicates meeting will be held at RCE of Cumberland County

<table>
<thead>
<tr>
<th>Cumberland County Pesticide Certification Exam Schedule</th>
<th>Cumberland County Agriculture Development Board</th>
<th>Cumberland County Board Of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCE of Cumberland County 291 Morton Avenue Millville, NJ 08332 (Between Rosenhayn &amp; Carmel)</td>
<td>County Administration Bldg. Freeholder Room 164 W. Broad Street Bridgeton, NJ 08332</td>
<td>RCE of Cumberland County 291 Morton Avenue Millville, NJ 08332 (Between Rosenhayn &amp; Carmel)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>2020</th>
<th>2020</th>
<th>2020</th>
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<tbody>
<tr>
<td>Jan 15</td>
<td>Jan 14</td>
<td>Jan 16</td>
</tr>
<tr>
<td>Feb 19</td>
<td>Feb 11</td>
<td>Feb 20</td>
</tr>
<tr>
<td>Mar 25</td>
<td>Mar 10</td>
<td>Mar 19</td>
</tr>
</tbody>
</table>

To Register call 609-984-6614
Information call 856-451-2800

Reg. Meetings start at 7 p.m.
Information call 856-453-2211

Meetings start at 7 p.m.
Information call Lew DePietro, President at 856-981-9843

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The program in Cumberland County is suspended until further notice.

**Cumberland County Improvement Authority (CCIA)**
**Pesticide Container Recycling**
9:00 a.m. to 12 Noon
Cumberland County Solid Waste Complex
169 Jesse’s Bridge Rd. (located off Route 55 Exit 29)
Deerfield Township, New Jersey

Questions? Call Division of Ag & Natural Resources, NJ Dept. of Ag 609-292-2242

_Sincerely,_

Salvatore S. Mangiafico, Ph.D.
County Agent II/Associate Professor
Environmental & Resource Management
Email: Mangiafico@njaes.rutgers.edu

Wesley L. Kline, Ph.D.
County Agent II/Associate Professor
Vegetable & Herb Production
Email: wkline@njaes.rutgers.edu

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**Pesticide User Responsibility:** Use pesticides safely and follow instructions on labels. The user is responsible for the proper use of pesticides, residues on crops, storage and disposal, as well as damages caused by drift.

**Use of Trade Names:** Trade names are used in this publication with the understanding that no discrimination is intended and no endorsement is implied. In some instances the compound may be sold under different trade names, which may vary as to label.
Have you visited the Cumberland County website for the Present and/or past issues of “Cultivating Cumberland”? It’s a great resource for information and dates...

http://Cumberland.njaes.rutgers.edu/

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Cooperative Extension of Cumberland County

1915-2019