## Communicating the Value of COVID-19 Vaccines With Your Farm Employees

April 21, 2021 Rick VanVranken

In an effort to increase participation in the COVID-19 vaccination program among farm workers, the Centers for Disease Control (CDC), through the national Extension Foundation, is working with Cooperative Extension across the country to help spread the word about the importance of getting vaccinated. Rutgers Cooperative Extension Director Brian Schilling has enlisted a team of County Agents and Specialists to answer the call from the CDC to participate in this EXCITE program. Through a variety of communications channels we will be providing informational posters and other educational materials in several appropriate languages that you can hand out or post in locations where your workers can easily read them (like on or near your Worker Protections Standards bulletin boards or in your labor camps).

"Vaccines (shots) are one of the tools we have to fight the COVID-19 pandemic" posters from the CDC are now available on the COVID-19 page of the Rutgers NJAES On-Farm Food Safety website <https://onfarmfoodsafety.rutgers.edu/covid-19-information/> with the direct links to these multiple language editions:

- English
- Spanish
- Simplified Chinese
- Traditional Chinese
- Haitian Creole French
- Korean

You can also share this Spanish language video https://wecandothis.hhs.gov/un-rayo-de-esperanza from the US Dept. of Health and Human Services with your workers to help explain where they can get more information about COVID-19 vaccines. There are several other informational videos available at https://wecandothis.hhs.gov/filter/format/Video, as well as posters/fliers from https://wecandothis.hhs.gov/filter/format/Poster%20%20%20%20%20%20Flyer (mostly English), and factsheets at https://wecandothis.hhs.gov/filter/format/Fact%20Sheet.

This article is from the Plant and Pest Advisory website.
High Performance Equals High Payment for CSP
Apply today for 2021 funding

SOMERSET, N.J., April 2, 2021 – USDA’s Natural Resources Conservation Service (NRCS) in New Jersey is now accepting applications through May 7, 2021 for the Conservation Stewardship Program’s (CSP) FY21 funding. The program not only helps producers maintain and improve their existing conservation efforts but assists them in adopting additional conservation activities to strengthen their operations all at the same time. With CSP, the higher the conservation performance – the higher the payment.

“Our farmers and landowners continuously deliver on their promise to practice good conservation throughout the state,” said New Jersey State Conservationist Julie Hawkins. “Through CSP, we get to reward them for that and help them strengthen their operation by building on those efforts. To me, that’s a win-win.”

For producers who are already taking steps to improve the condition of their land, CSP can help them find ways to meet their goals.

CSP is for working lands including cropland, pastureland, nonindustrial private forest land and agricultural land under the jurisdiction of a tribe. Participating farmers will further address priority resource concerns related to soil quality, water quality, air quality, and plant health. On-farm benefits include increased crop yields, decreased inputs, wildlife population improvements, and better resilience to weather variables.

Through updates to the 2018 Farm Bill, New Jersey farmers will also benefit from:

- Increased payment rates for certain conservation activities, including the adoption of cover crop rotations and resource conserving crop rotations.
- Provided specific support for organic and transitioning to organic production activities.

NRCS provides financial and technical assistance to help agricultural producers address resource concerns through conservation programs authorized by the Farm Bill. NRCS accepts applications for conservation programs year-round and are processed when funding becomes available. Interested producers should contact the local NRCS service center.

NRCS Service Center
1318 South Main Rd. Bldg. 5 Suite A
Vineland, NJ 08360
Phone: (856) 205-7678
Fax: 855-305-7259
New Harmonized and Harmonized Plus+ Standards go Into Effect May 1

This is the time of year when growers start to think about scheduling their USDA Harmonized and Harmonized Plus+ Audits. There have been changes to both audits which take effect May 1. Growers should download the latest versions from https://www.ams.usda.gov/services/auditing/gap-ghp/harmonized. The Harmonized Audit is version 2 dated February 8, 2021 and the Harmonized Plus+ with the same date is version 3. If anyone is still getting the GAP/GHP audits there are no changes.

There are changes to both the Harmonized and Harmonized Plus+. New questions for the Harmonized Audit include: G-8.2, G-10.7, G-12.1, G-12.2, P-3.1, P-8.2 and P-8.4. Amended questions include: G-3.2, G-10.1, G-10.3, G-10.6, G-10.8, G-10.10, G-10.12, G-10.16 and G-10.19. All of these apply to the Harmonized Plus+ in addition to four new questions: F-8.2.c, P-6.5.a, P-3.1.a and P-9.4.a. Two questions were also amended: G2.2.2 and G-6.1.a.

Other than the new questions which must be reviewed and addressed in the food safety plan there are certain things audits will be stressing this year. One is G-3.2 related to documentation and protection of those documents. Documents must be maintained for two years and be available for review. The one document which has not been assessed in the past is the portable toilet record. This year they will be checking for it. There are two ways growers can comply. First make sure the starting and ending dates are on your contract for the portable toilets. Also, take a picture of the log inside the toilet door at least at the end of the season. It may make sense to do it mid-season and at the end. Maintain those photos with your other documents.

The second is F-8.2 related to cleaning and sanitizing equipment, vehicles, tools and utensils and their storage. There needs to be a schedule for those activities and records must include the date and method of cleaning and sanitizing. One thing that gets overlooked at times are knives for field harvesting of vegetables and herbs. These must be included, and the auditors will be looking for the logs this year.

Example templates are being updated on the Food Safety website https://onfarmfoodsafety.rutgers.edu/ that will include most of what would be needed for an audit. These can be modified to fit any operation.

No Changes to the Migrant and Seasonal Farmworkers Guidance

The New Jersey Department of Health (DOH) and the New Jersey Department of Labor (DOL) do not anticipate any changes at the Federal level that would require any changes to the 2020 “Guidance Document for Migrant and Seasonal Farmworkers, their Employers and Housing Providers” so the 2020 document will continue to be in effect. The document is available on the front page of the food safety website at https://onfarmfoodsafety.rutgers.edu/. If there are any changes in the future, they will be posted on the website.

For those who may have questions about the guidance document a conference call will be held for the agriculture community hosted by DOH, DOL and NJDA sometime in early May. No date or time has been set at this point.
Scheduling a USDA Harmonized and Harmonized Plus+ Audit

Before scheduling an audit review the standards to understand what is required. Go to https://www.ams.usda.gov/services/auditing/gap-ghp/harmonized and download the latest versions dated February 8, 2021. There have been changes since the 2018 version so review carefully. Compare the new version with your written food safety plan and make the necessary changes. If you need technical assistance or want to discuss parts of the audit email “Ask the Experts” at onfarmfoodsafety@njaes.rutgers.edu. The on-farm food safety team can be contacted at the same address to schedule a walkthrough to assess your readiness for an audit if requested.

Once the food safety plan is complete and you are ready for an audit email fvinspection@ag.nj.gov to schedule the audit. You will receive an agreement to review and check which audit and audit sections you want audited. You will be asked to send certain documents for review prior to the on-site audit. This reduces the amount of time the auditors are on the farm for Covid considerations. The auditors want to see at least 10 days of records prior to the audit.

Again, this year the Harmonized and Harmonized Plus+ audits in New Jersey will be reimbursed 100% through the USDA Risk Management Agency. Once the audit is finalized, USDA will generate a bill to the auditee which summarizes the cost breakdown of the audit, and then showing a credit for that same amount. A note will be added to the bill stating, “Cost of your 2021 USDA Harmonized GAP Audit covered by a bill credit made possible through a grant from the USDA Risk Management Agency Agricultural Management Assistance Program”. For more details and frequently ask questions visit the AMS website mentioned above and look under resources.

Once the audit is complete it will be reviewed by USDA personnel and a certificate will be sent to the grower. Also, the farm name, address, date and commodities audited will be posted on the USDA AMS website.

On-Farm Readiness Reviews (OFRR) Available to Produce Growers

As part of the Food Safety Modernization Act (FSMA) the New Jersey Department of Agriculture in coordination with Rutgers Cooperative Extension are again offering an OFRR to any operation that has taken the Produce Safety Alliance (PSA) Training. The PSA training is required for fresh produce operations to comply with FSMA with sales over $25,000. We have been doing OFRRs over the last two years (approximately 100) and want to continue this service during 2021. So, what is the OFRR? It is a walkthrough of the farm operation to assess where it may need for make changes to comply with FSMA prior to an inspection. Generally, two individuals will be on the assessment team one from Extension and one from the New Jersey Department of Agriculture. These reviews take approximately 2 hours and is scheduled to fit into the grower’s time. To schedule a review email Charlotte Muetter at charlotte.muetter@ag.nj.gov. She will then contact the farm operation to schedule the review.
What Water Test Do You Need and How Often Do You Need to Do It?
Meredith Melendez

FSMA Produce Safety Rule compliance, third party audit standards, and general best practices all include the need for irrigation, harvest, cleaning, sanitation, handwashing, pesticide application, drinking and postharvest water testing. Not all tests are the same, but all cost money, so make sure what you're paying for meets your needs.

Here are the questions we commonly get from produce growers and answers that we hope you find helpful:

What water test do I need for a water source that is used only for irrigation of crops and/or pesticide applications?

- This water should be tested for generic E. coli, acceptable results give you a number answer of 126 CFU (colony forming units) or MPN (most probable number) or less. You do not want a presence/absence (P/A) test. A P/A test would not be sufficient for a third-party audit requirement or the FSMA PSR.
- Most water testing labs on the NJ Water Testing Lab Map (link below) offer the EPA 1603 analysis, which satisfies both the FSMA PSR anticipated requirements and third-party audit requirements.
- Other acceptable analysis methods are described on the Produce Safety Alliance Water Analysis Method Requirement fact sheet.
- Well water sources used for irrigation should be tested once a year.
- Surface water sources should be tested at least three times during their period of use, ideally when starting irrigation, mid-season, and close to harvest. Surface water sources include irrigation ponds (spring fed, well fed, or other ponds), streams, rivers, and other bodies of water that are exposed to the surface.
- Municipal water sources used for irrigation should have a copy of the water testing record on file. These testing records are often found online or are available upon request. Make sure that generic E. coli is listed on the report.

What water test do I need for a water source that is used during the harvest process?

Handwashing water? Cleaning and sanitizing use? Postharvest washing and cooling water?

- To comply with a USDA third party audit this water should be tested for the microbial standards of drinking water, showing the absence of total coliforms.
- To comply with the anticipated FSMA Produce Safety Rule you would need a non-detectable generic E. coli test result. You can use the same water test that you would use for irrigation water if the water is from the same source and if lab results show non-detectable generic E. coli. The generic E. coli test does not meet USDA third party audit requirements.
- This test should be completed once a year.
- You do not need a full drinking water test to use this water for harvest water, icing, hand washing, cleaning, sanitation, and postharvest washing and cooling.
What water test is needed for drinking water sources?
You must have a full drinking water test completed that meets the minimum standards according to NJDEP.

What do you do when you have a test result that is above the accepted threshold?
1. Switch to an alternative water source when possible
2. Inspect the water system to find potential issues causing the presence of total coliforms or generic E. coli
3. Consider water treatments to adjust the total coliforms or generic E. coli presence to an appropriate level
4. Retest the water once you’ve adjusted the system and/or treatments

Do I need to have multiple copies of my water test to satisfy third party audit standards?
Audit standards ask for proof of water test results in multiple areas, but you only need to have one copy of the water test report for each of your water sources in your food safety plan. Auditors will ask you about how water is used on the farm, the sources of that water, and will ask to see results for each of the water sources you have. If you are using surface water the auditor will want to see the results of three tests during the production season for each surface water source.

Should I have the lab pull the samples?
You are not required to have the water testing lab pull the water samples from your farm, but you may choose to. If you opt to pull the samples yourself you will want to follow the very specific instructions that the lab provides you with, including the maximum amount of time allowed between pulling the water sample and dropping it off at the lab. Water testing labs will provide you with the water collection containers, and a chain of custody form. Make sure you get all the details on how to pull the water sample before you commit to doing so. Some general pointers:
1. Do not open the sampling bottle until you are ready to collect the water sample.
2. Water should be collected directly from the water source into the sampling bottle.
3. When collecting water from a riser or spigot the water should be run for at least one minute before collecting the water into the bottle. This allows for dirt and debris to be flushed out of the system.
4. When collecting water from a surface water source attach the bottle to a sampling pole, plunge the bottle into the water near your irrigation pump intake hose or filter, avoiding plants, bottom sediments, and algae.
5. Place the water bottle on ice and deliver to the lab within the specified amount of time, usually within 6 hours.

Need help finding a lab that can conduct the needed water tests near you? Visit our NJ Water Testing lab map for agricultural testing webpage at https://onfarmfoodsafety.rutgers.edu/resources/#water-testing
A Spray Tank’s Last Check List Visual Aide for Corn and Soybean Weed Management

April 11th, 2021, Melissa Bravo

Back in March, regional weed extension professionals discussed creating a visual aide chart for herbicide selection for the big three problematic weeds (palmer amaranth, common ragweed and marestail) in corn and soybean.

Below are two url links to “A Spray Tank’s Last Checklist in Soybean”; and “A Spray Tank’s Last Checklist in Corn” courtesy of Mark VanGessel, Extension Weed Specialist, University of Delaware Research and Education Center.

Note, these are not meant to replace anything extension has available already, rather to supplement and be coupled with herbicide resistance charts in the Agronomy Guide and the 2021 Mid-Atlantic Field Crop Weed Management Guide noted in this MARCH 5, 2021 post by Thierry Besancon, Rutgers Extension Weed Specialist.

These supplemental charts are meant to be used as the spray tank is being filled, to ensure the right products are in the tank – thus the title “Last Check Chart”. These are not meant to be comprehensive for all herbicides and weeds, rather what extension weed experts in our region are recommending for the BIG 3 in corn and soybean. Always refer to the individual product label for weed and crop height and growth stage restrictions.

Ultimately plans are to have a wall-chart that can be distributed next extension season.

Soybean: http://www.udel.edu/008288
Corn: http://www.udel.edu/008287

The following updated bulletin is now available on NJAES Publications:

E625 Commercial Blueberry Pest Control Recommendations for New Jersey, 2021
Besancon, T., Oudemans, P., Pavlis, G., Polk, D. and Rodriguez-Saona, C.
Tractor Safety – “No Seat, No Rider”
April 15, 2021, Kate Brown

There is no argument that tractors have forever changed agriculture. The use of tractors has long replaced the presence of draft horses on almost every farm in America. It is estimated that cultivation of land with a modern tractor allows 64 acres to be plowed in the time it took to cultivate one acre with a draft horse. The use of tractors also comes with a dark side. As long as farmers have been using tractors they have been injured and killed by them. The Bureau of Labor Statistics reports 274 transportation related deaths, which includes tractor deaths in 2018. In any given year half of all tractor fatalities are from overturns, almost another one-fourth are from runovers. Many have a tradition of allowing extra passengers to ride on tractors. Sometimes trying to transport a worker from one task to the next or possibly saving them from walking back to the barn. Some even allow children to come along for a ride – a very dangerous practice. Whether it be on the tongue, side steps, fender or extra passenger in the cab, remember these places are not designed for riders. As we enter one of the busiest seasons in agriculture remember one of the most important safety rules

NO SEAT, NO RIDER!

- Riders that fall off are immediately in danger of being run over by a tractor wheel
- On rough or uneven ground, riders are first to bounce off (especially children)
- Riders distract the driver and can bump controls
- Rollover Protective Structures are designed to protect drivers, not riders

Do not ever think “it won’t happen to me.” Every farmer can tell a story of an incident that happened to someone they know in the farm community that involves a tractor. Make sure everyone makes it through the harvest – NO SEAT, NO RIDER!

Posted on behalf of Bill Bamka, Agricultural Agent, RCE-Burlington County.

2020-2021 Mid-Atlantic Commercial Vegetable Production Recommendations

- Hard copies of the “Guide” is available in our office including the 2021 updates. They are $25 each. An online version is available at https://njaes.rutgers.edu/pubs/publication.php?pid=E001. The total guide can be downloaded or by individual crop.

Plant and Pest Advisory

- Do you want the latest information for commercial growers on pest, disease and weed management for vegetables, fruit, field, forage and livestock or landscape, ornamentals, nursery and turf? What about food safety information for audits or covid-19? Then signup for the Plant and Pest Advisory which is free and sent by email when new information becomes available. You can sign up for separate all or individual categories.

Go to https://plant-pest-advisory.rutgers.edu/ and signup today!
RU READY 2 FARM?

The Rutgers Cooperative Extension Beginner Farmer Training Program

Learn to be a farmer. It’s not just a job, It’s a way of life.

Get in touch: beginnerfarmer@njaes.rutgers.edu

Join us for a free online information session:
May 1, 2021 from 10 a.m. to 12 p.m.
Register at: https://go.rutgers.edu/db88up1r
Calendar of Important Events

- Indicates a newly added event or more information since the last calendar

May 3-17
- Bee-ginner's Beekeeping: The Basics of Apiculture; Self Paced Online Class, Learn how to be a beekeeper in this self-paced online course that teaches students how to start, maintain, and care for a honeybee colony. The course content will take approximately 14-15 hours to complete, and participants will have 2 weeks to complete the coursework at their own pace. [http://www.cpe.rutgers.edu/courses/current/ae0401wc.html](http://www.cpe.rutgers.edu/courses/current/ae0401wc.html)
  
  Pamela Springard-Mayer, Program Coordinator, Rutgers NJAES - Office of Continuing Professional Education, 848-932-7463 | pspring@rutgers.edu

- May 13
  - Basic Pesticide Training / CORE - Webinar; 9:00 AM– 1:00 AM; NJDEP Credits - CORE - 8.0; Government issued photo ID is required and will be verified prior to and immediately after the meeting; Call-ins (audio only) are not eligible for pesticide recertification credits; you need a computer/phone/tablet with *live* video capability; Register online and find more information at [https://njpma.com/classes/basic-pesticide-training-course-for-core-certification/](https://njpma.com/classes/basic-pesticide-training-course-for-core-certification/)

- May 26
  - Basic Pesticide Training / CORE - Webinar; 9:00 AM– 1:00 AM; NJDEP Credits - CORE - 8.0; Government issued photo ID is required and will be verified prior to and immediately after the meeting; Call-ins (audio only) are not eligible for pesticide recertification credits; you need a computer/phone/tablet with *live* video capability; Register online and find more information at [https://njpma.com/classes/basic-pesticide-training-course-for-core-certification/](https://njpma.com/classes/basic-pesticide-training-course-for-core-certification/)
<table>
<thead>
<tr>
<th>REGULARLY SCHEDULED MEETINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pesticide Certification Exams</strong></td>
</tr>
<tr>
<td>Testing is currently being held virtually because of the COVID pandemic.</td>
</tr>
<tr>
<td>Rutger will be taking over the pesticide exam program.</td>
</tr>
<tr>
<td>Sign-up and find more information at <a href="https://pacer.rutgers.edu/">https://pacer.rutgers.edu/</a></td>
</tr>
</tbody>
</table>

**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,

Wesley L. Kline, Ph.D.
Cooperative Extension Agent
Vegetable Production and Food Safety
WKline@njaes.rutgers.edu

Timothy J. Waller, Ph.D.
Cooperative Extension Agent
Nursery Production
TWaller@njaes.rutgers.edu

Salvatore Mangiafico, Ph.D.
Extension Department Head &
Environmental and Resource Mgt. Agent
Mangiafico@njaes.rutgers.edu

**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/

Cooperative Extension of Cumberland County

Since 1915
MEETING RECAP

April 5, 2021

The second meeting of the newly formed South Jersey Poultry Association met virtually Monday evening.

Formational Survey Responses:
Twenty-six producers expressed interest in the following topics:
- What groups of birds interest you?
  - Layers
  - Broilers
  - Turkeys
  - Hatchery

What advanced farmer topics would you like to see this association focus on:
- Infection control
- Co-op processing
- Processing regulations
- Compost feeding
- Pest management
- Minority group outreach
- Dietary science of feeding different groups
- Fodder feeding
- Breeding superior

What beginning farmer topics would you like to see the association focus on:
- Pasture poultry
- Marketing
- Regulatory compliance

99% of respondents indicated they see the value in linking with other producers to promote, educate and problem solve
82% of respondents are already pasturing chickens

EDUCATIONAL OUTREACH

Members discussed the educational topics of the last two meetings. Future topics for discussion include: Learning more about the fly-way of migratory birds and when waterfowl diseases are more likely, or less likely to impact pastured poultry in the parts of the county where migratory birds congregate. Learning and demonstrating how to implement biosecurity measures related to on-farm tourism, on-farm in person sales, that could accidentally introduce pathogens and what types of commercial scale netting and other deterrents to exclude wild birds are available. Reaching out to back yard flocks about these diseases.

Members discussed upcoming economic development opportunities directed to identifying Food Deserts and how producers can contribute to alleviating food deserts if SNAP, WICK, TANF and other related programs were adapted to fit on-farm ‘cash in hand’ sales.
MEETING MINUTES

Ten members attended:
Riley Quirk, President
Rachel Sickler, Vice-President,
Kyle Smith, Membership outreach
Ervin Green, Membership outreach
Andrew Sell, Business plan ideas and identification of regulatory compliance educational needs
Ashley Jackson, Business plan ideas and identification of regulatory compliance educational needs
Alyssa Rupp, member at large
Sidney Gavanelli, Organic representative
David Watts, Organic representative
Melissa Bravo, advisor

NEW BUSINESS

Members agreed to meet monthly at 7:30 pm on the first Monday of the month until processing season.

Members like the idea of hosting an educational component every month except during processing season.

Educational needs identified to pursue in 2021 focused on regulatory compliance related to the processing, disease prevention planning, business plan market development planning, and working together to identify base price and margins to align with market supply and demand.

Absent: Sydney Browning, Resource tracking. Sid has been helping Melissa track outreach resources for a forthcoming Poultry Business Plan fact sheet.

FUTURE PLANS

We would like to visit and tour other farms in NJ or neighboring states that are processing poultry and other fowl species. We are willing to go in small groups to be Covid responsible.

We are very interested in connecting with folks who want to support our businesses processing and feed needs. Please join us as at large members.

Any one interested in starting their own hatchery give us a call! We need you!
**INVITED REGULATORY GUEST SPEAKER**

Elisha M. Wall, DVM  
Veterinary Medical Officer  
USDA APHIS Veterinary Services (VS)  
Field Operations (FiOps), District 1 (D1)  
C: 609-221-2483  
Elisha.m.wall@usda.gov  
320 Corporate Blvd  
Robbinsville, NJ 08691

“We are USDA APHIS VS, which is the United States Dept. of Agriculture, Animal Plant Health Inspection Services, Veterinary Services. Quite the mouth full, but as mentioned we are the Veterinary Services branch of USDA. We would be involved in aspects regarding any farm animals and livestock; such as poultry, sheep, goats, pigs, horses, cattle, and others.

**Topic:** Disease history, routes of entry, symptoms and rapid response measures

**Talk Highlights:**
- New Castle Disease
- Low pathogenic avian influenza
- High pathogenic avian influenza
- On farm biosecurity to protect flock
- Your biosecurity when handling waterfowl or own birds
- World organization for animal health monitoring of migratory bird outbreaks
- Free laboratory testing of dead birds

**FUTURE TOPICS**

Regional panel with local board of health officials and demonstration of permit and inspection steps and time lines by county followed by a panel discussion around differences, similarities, gaps and needs.

https://www.sare.org/publications/profitable-poultry/poultry-processing/

“The Pioneer Valley Open-Air Mobile Poultry Processing Unit (MPPU) is the first MPPU in Massachusetts to be approved by the state department of public health. It has operated under different management models, traveling between farms either as a rental operated by the farmer or with a trained crew.”

https://www.mobileprocessingplant.com/for-sale.html

“Mobile Processing Trailers provides a practical solution to independent farmers, ranchers and education programs looking to build sustainability in the food economy”.

**FUTURE GUEST SPEAKER**

USDA Wildlife Services,  
Division of Migratory Bird Management Biologist  
New Jersey Field Office  
4 E. Jimmie Leeds Road, Suite 4  
Galloway, New Jersey 08205

“Birds of Management Concern

As a subset of the species protected under the Migratory Bird Treaty Act, Birds of Management Concern [PDF] are protected species that pose special management challenges because of a variety of factors (e.g., too few, too many, conflicts with human interests, societal demands).

These species are of concern because of documented or apparent population declines, small or restricted populations, dependence on restricted or vulnerable habitats, or overabundance to the point of causing ecological and economic damage. The Service has also initiated a Focal Species Strategy to better measure success in achieving its bird conservation priorities and mandates.” - https://www.fws.gov/northeast/njfieldoffice/migbirds.html
During the Covid crisis of 2020, many farms and homeowners made the decision to focus on sustainable locally grown and sourced agriculture commodities. Our interests include pasture poultry production and traditional hatchery, layer, and broiler management.

We are interested in any breeds and our cooperative approach to helping each other get started in this business is not limited to just chickens. Many people in NJ also raise ducks, guinea fowl, ostriches, quails, pheasants, turkeys and grouse. All are welcome.

**INTERESTED IN JOINING?**

quirk.r11@gmail.com
RACHEL@SHOPSLICKLERSCIRCLEVIEW.COM

Several producers in Salem, Cumberland and Gloucester counties have expressed interest in forming a pasture poultry association as a means of networking and sharing beginning farmer skills.

If this is something you would be interested in, please take this short survey. Go to Salem County Crop Talk link.

https://sites.rutgers.edu/salem-county-crop-talk/interest-information-of-a-pasture-poultry-association/

Then contact Melissa Bravo by email and she will add you to the e-list for future communications on this topic.

Email: Melissa.bravo@njaes.rutgers.edu
Cell: 856.340.6582
Nursery, Conifer, and Landscape Pest Scouting Guide: 150 – 600 GDD$_{50}$

The information provided here gives scouting ranges for insect pests. This document supports scouting, it does not replace it. Keeping good notes on pest development will help dial in scouting and treatment efforts at your local level. Location specific GDD$_{50}$ models can be obtained at: (USPEST.org/dd/model_app and http://newa.cornell.edu/). Please contact Tim Waller (twaller@njaes.rutgers.edu) for more information.

### Nursery and Landscape Pest Scouting - Growing Degree-day Ranges

<table>
<thead>
<tr>
<th>Crop type</th>
<th>Common name</th>
<th>Latin name</th>
<th>GDD$_{50}$ Range</th>
<th>GDD$_{50}$ Reference</th>
<th>Developmental / Target Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prunus, Prunus, many</strong></td>
<td>Eastern tent caterpillar</td>
<td>Malacosoma americanum</td>
<td>90 190</td>
<td>2</td>
<td>Larvae treatment before tents apparent (near 150-GDD$_{50}$)</td>
</tr>
<tr>
<td><strong>Elm, Service berry</strong></td>
<td>Woolly elm aphid</td>
<td>Eriosoma americana</td>
<td>121 246</td>
<td>2 (6)</td>
<td>Control target</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Hemlock woolly adelgid</td>
<td>Adelges tsugae</td>
<td>150 150</td>
<td>RU</td>
<td>Eggs and 10% hatch</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Spruce spider mite</td>
<td>Oligonyx ununguis</td>
<td>150 175</td>
<td>4</td>
<td>1st egg hatch</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Spruce needleminer</td>
<td>Endothenia albo-linea</td>
<td>150 200</td>
<td>4</td>
<td>1st larvae active</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Balsam gall midge</td>
<td>Paradiplosis tumifex</td>
<td>150 300</td>
<td>4</td>
<td>Adults laying eggs</td>
</tr>
<tr>
<td><strong>Witchhazel, River birch</strong></td>
<td>Spiny witchhazel gall aphid</td>
<td>Hamamelis spinosa</td>
<td>171 - 6</td>
<td>Control target</td>
<td></td>
</tr>
<tr>
<td><strong>Birch</strong></td>
<td>Birch Leafminer</td>
<td>Fenusa pusilla</td>
<td>175 215</td>
<td>4</td>
<td>1st adults active</td>
</tr>
<tr>
<td><strong>Birch</strong></td>
<td>Birch leafminer</td>
<td>Fenusa pusilla</td>
<td>190 290</td>
<td>RU</td>
<td>Larvae (1st generation)</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Spruce needle mite</td>
<td>Oligonyx ununguis</td>
<td>190 363</td>
<td>RU</td>
<td>Immatures/Adults</td>
</tr>
<tr>
<td><strong>Honeylocust</strong></td>
<td>Honeylocust pod gall midge</td>
<td>Dasiineura gleditchiae</td>
<td>192 229</td>
<td>RU</td>
<td>Larvae</td>
</tr>
<tr>
<td><strong>Holly</strong></td>
<td>Holly leafminer</td>
<td>Phytomyza illicis</td>
<td>192 290</td>
<td>RU</td>
<td>Egg hatch</td>
</tr>
<tr>
<td><strong>Holly</strong></td>
<td>*Native holly leafminer</td>
<td>Phytomyza illicola</td>
<td>192 298</td>
<td>2</td>
<td>Egg hatch</td>
</tr>
<tr>
<td><strong>Rhododendron</strong></td>
<td>Rhododendron borer</td>
<td>Synanthedon rhododendri</td>
<td>192 298</td>
<td>2</td>
<td>Typical treatment window</td>
</tr>
<tr>
<td><strong>Larch</strong></td>
<td>Larch sawfly</td>
<td>Pristophora erichsonii</td>
<td>192 299</td>
<td>2</td>
<td>Typical treatment window</td>
</tr>
<tr>
<td><strong>Andromeda</strong></td>
<td>Andromeda lacebug</td>
<td>Stephanitis takeyi</td>
<td>192 303</td>
<td>RU</td>
<td>Adults</td>
</tr>
<tr>
<td><strong>Rhododendron</strong></td>
<td>Rhododendron gall midge</td>
<td>Clinodiplosis rhododendri</td>
<td>192 363</td>
<td>RU</td>
<td>Larvae</td>
</tr>
<tr>
<td><strong>Willows, Cottonwood, Poplar</strong></td>
<td>Imported willow leaf beetle</td>
<td>Plagiocera versicolora</td>
<td>192 448</td>
<td>RU</td>
<td>Larvae/Adults</td>
</tr>
<tr>
<td><strong>Privet</strong></td>
<td>Privet thrips</td>
<td>Dendrothrips ornatus</td>
<td>192 618</td>
<td>2</td>
<td>Typical treatment window</td>
</tr>
<tr>
<td><strong>Lilac, ash, privet, many</strong></td>
<td>Lilac / Ash Borer</td>
<td>Podosesia syringae</td>
<td>200 299</td>
<td>RU</td>
<td>Adults - 1st Treatment</td>
</tr>
<tr>
<td><strong>Spruce</strong></td>
<td>Spruce budworm</td>
<td>Choristoneura fumiferana</td>
<td>200 300</td>
<td>5</td>
<td>Larvae</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Cooley spruce gall adelgid</td>
<td>Adelges cooleyi</td>
<td>200 310</td>
<td>4</td>
<td>1st galls visible - Spruce</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Douglas fir needle mite</td>
<td>Contarinia pseudotsugae</td>
<td>200 400</td>
<td>3</td>
<td>Adults emerge from soil</td>
</tr>
<tr>
<td><strong>Elm</strong></td>
<td>Elm leafminer</td>
<td>Fenusa ulmi</td>
<td>215 240</td>
<td>5</td>
<td>Adult emergence</td>
</tr>
<tr>
<td><strong>Wild and cultivated roses</strong></td>
<td>Roseslug sawfly</td>
<td>Endelomyia aethiops</td>
<td>230 - 6</td>
<td>Egg hatch / early instars</td>
<td></td>
</tr>
<tr>
<td><strong>Deciduous, many</strong></td>
<td>Hawthorn lacebug</td>
<td>Corythucha cydoniae</td>
<td>239 363</td>
<td>RU</td>
<td>Nymphs/Adults</td>
</tr>
<tr>
<td><strong>Many</strong></td>
<td>Redheaded flea beetle</td>
<td>Systena frontalis</td>
<td>242 600</td>
<td>Unv. Del</td>
<td>First control target - egg hatch / larval activity</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Arbor vitae leafminer</td>
<td>Argyresthia thuiella</td>
<td>245 360</td>
<td>RU</td>
<td>Larvae Treatments (1st generation)</td>
</tr>
<tr>
<td><strong>Prunus</strong></td>
<td>American plum borer</td>
<td>Euzophera semifuneralis</td>
<td>245 440</td>
<td>5</td>
<td>Adult flight, egg laying</td>
</tr>
<tr>
<td><strong>Boxwood</strong></td>
<td>Boxwood mites</td>
<td>Eurytetranychus buxi</td>
<td>245 600</td>
<td>RU</td>
<td>All Stages</td>
</tr>
<tr>
<td><strong>Lilac</strong></td>
<td>Lilac leafminer</td>
<td>Caloptilia syringella</td>
<td>246 363</td>
<td>5</td>
<td>Larvae Treatments</td>
</tr>
<tr>
<td><strong>Holly</strong></td>
<td>Holly leafminer</td>
<td>Phytomyza illicis</td>
<td>246 448</td>
<td>RU</td>
<td>Larvae Treatment</td>
</tr>
<tr>
<td><strong>Yew</strong></td>
<td>Taxus mealybug</td>
<td>Dactynococcus westrae</td>
<td>246 618</td>
<td>RU</td>
<td>Adults/Crawlers</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Pine sawflies (Red-headed)</td>
<td>Neodiapion lecontei</td>
<td>246 1388</td>
<td>RU</td>
<td>Larvae (1st generation)</td>
</tr>
<tr>
<td><strong>Boxwood</strong></td>
<td>Boxwood leafminer</td>
<td>Monarthropalus flavus</td>
<td>249 -</td>
<td>6</td>
<td>Adult emergence</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Eastern spruce gall adelgid</td>
<td>Adelges abietis</td>
<td>250 310</td>
<td>5</td>
<td>Egg hatch, galls begin forming (not a control target)</td>
</tr>
<tr>
<td><strong>Birch</strong></td>
<td>Birch Leafminer</td>
<td>Fenusa pusilla</td>
<td>275 375</td>
<td>4</td>
<td>Adults laying eggs</td>
</tr>
<tr>
<td><strong>Boxwood</strong></td>
<td>Boxwood Psyllid</td>
<td>Cacopsylla busi</td>
<td>290 440</td>
<td>RU</td>
<td>Nymphs</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Pine Needle Scale</td>
<td>Chionaspis pinifoliae</td>
<td>298 448</td>
<td>RU</td>
<td>Crawlers (1st generation) - control target</td>
</tr>
<tr>
<td><strong>Locust</strong></td>
<td>Locust leafminer</td>
<td>Odontota dorsalis</td>
<td>298 533</td>
<td>5</td>
<td>Typical treatment window</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Pine earchyphid mites</td>
<td>Eriophydae</td>
<td>298 533</td>
<td>5</td>
<td>Typical treatment window</td>
</tr>
<tr>
<td><strong>Malus</strong></td>
<td>Redbanded leafroller</td>
<td>Aragartaenia velutinana</td>
<td>298 618</td>
<td>5</td>
<td>Typical treatment window</td>
</tr>
<tr>
<td><strong>Privet</strong></td>
<td>Privet Rust Mites</td>
<td>Aculus ligustri</td>
<td>298 802</td>
<td>RU</td>
<td>All stages</td>
</tr>
<tr>
<td><strong>Oaks</strong></td>
<td>Kermes oak scale</td>
<td>Allonkermes spp</td>
<td>298 912</td>
<td>5</td>
<td>Typical treatment window</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Pine root collar weevil</td>
<td>Hylobius radicis</td>
<td>300 350</td>
<td>4</td>
<td>1st adults active</td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Turpentine beetle</td>
<td>Dendroctonus terebrans</td>
<td>300 350</td>
<td>4</td>
<td>Parent beetles colonizing brood material</td>
</tr>
<tr>
<td><strong>Spirea</strong></td>
<td>Spirea aphid</td>
<td>Aphis spireae</td>
<td>326 - 6</td>
<td>Adults/nymphs</td>
<td></td>
</tr>
<tr>
<td><strong>Conifer</strong></td>
<td>Hemlock Woolly adelgid</td>
<td>Adelges tsugae</td>
<td>350 350</td>
<td>RU</td>
<td>Eggs and 50% hatch</td>
</tr>
<tr>
<td>Crop type</td>
<td>Common name</td>
<td>Latin name</td>
<td>GDD50 Range</td>
<td>Developmental / Target Stage</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>------------</td>
<td>-------------</td>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td>Malus, Prunus, many</td>
<td>Lesser peach tree borer</td>
<td>Synanthedon pichtes</td>
<td>350 - 375</td>
<td>Adults flight, egg laying</td>
<td></td>
</tr>
<tr>
<td>Rhododendron</td>
<td>Azalea Lacebug</td>
<td>Stephanitis pyrioides</td>
<td>350 - 646</td>
<td>Adults (1st generation)</td>
<td></td>
</tr>
<tr>
<td>Dogwood, apple, pecon, elm, hickory, willow</td>
<td>Dogwood borer</td>
<td>Synanthedon scitula</td>
<td>350 - 850</td>
<td>adults, eggs, caterpillars</td>
<td></td>
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<tr>
<td>Conifer</td>
<td>Elongate Hemlock Scale</td>
<td>Fiorinia externa</td>
<td>360 - 700</td>
<td>Crawlers (1st generation)</td>
<td></td>
</tr>
<tr>
<td>Elm</td>
<td>Elm Leaf Beetle</td>
<td>Xanthogaleruca luteola</td>
<td>363 - 530</td>
<td>Larvae treatment (1st generation)</td>
<td></td>
</tr>
<tr>
<td>Conifer</td>
<td>Larch casebearer</td>
<td>Coleophora laricella</td>
<td>363 - 618</td>
<td>Nymphs active - typical treatment window</td>
<td></td>
</tr>
<tr>
<td>Many</td>
<td>Oystershell Scale</td>
<td>Lepidosaphes ulmi</td>
<td>363 - 707</td>
<td>Crawlers</td>
<td></td>
</tr>
<tr>
<td>Walnut</td>
<td>Walnut blister mite</td>
<td>Eriophyes erineus</td>
<td>363 - 707</td>
<td>Typical treatment window</td>
<td></td>
</tr>
<tr>
<td>Beech</td>
<td>Woolly beech aphids</td>
<td>Gryllodoprociphilus imbricatus &amp; Phyllyphis lapi</td>
<td>363 - 7070</td>
<td>Typical treatment window</td>
<td></td>
</tr>
<tr>
<td>Conifer</td>
<td>Pine needle midge</td>
<td>Thecodiplosis brachyteraoides</td>
<td>400 - 500</td>
<td>Crawlers (1st generation)</td>
<td></td>
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<tr>
<td>Conifer</td>
<td>Pine tortoise scale</td>
<td>Toumeyella parvicornis</td>
<td>400 - 1000</td>
<td>Crawlers</td>
<td></td>
</tr>
<tr>
<td>Yews, Rhododendrons, many</td>
<td>Black Vine Weevil</td>
<td>Otiorhynchus sulcatus</td>
<td>400 - 2800</td>
<td>Adults treatment</td>
<td></td>
</tr>
<tr>
<td>Basswood</td>
<td>Basswood lacebug</td>
<td>Gargaphia tiliae</td>
<td>415 -</td>
<td>Adults/nymphs</td>
<td></td>
</tr>
<tr>
<td>MANY</td>
<td>Fourlined plant bug</td>
<td>Pecillocapaus lineatus</td>
<td>435 -</td>
<td>Egg hatch / early instars</td>
<td></td>
</tr>
<tr>
<td>Many</td>
<td>Two-Spotted Mite</td>
<td>Tarachyphus urticae</td>
<td>437 - 997</td>
<td>Adults (build-up activity)</td>
<td></td>
</tr>
<tr>
<td>Birch</td>
<td>Bronze Birch Borer</td>
<td>Agrius anxius</td>
<td>440 - 880</td>
<td>Adults (egg laying)</td>
<td></td>
</tr>
<tr>
<td>Boxwood</td>
<td>Boxwood Leafminer</td>
<td>Monarthropalpus flavus</td>
<td>448 - 700</td>
<td>Larvae treatment</td>
<td></td>
</tr>
<tr>
<td>Rhododendron</td>
<td>Azalea whitefly</td>
<td>Paeonius ozoeae</td>
<td>448 - 700</td>
<td>Adults/nymphs</td>
<td></td>
</tr>
<tr>
<td>Oak</td>
<td>Oak skeletonizer</td>
<td>Buccklaria ainslia</td>
<td>448 - 707</td>
<td>Typical treatment window</td>
<td></td>
</tr>
<tr>
<td>Conifer</td>
<td>Hemlock looper</td>
<td>Lamboldia fiscatoria</td>
<td>448 - 707</td>
<td>Typical treatment window</td>
<td></td>
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<tr>
<td>Conifer</td>
<td>Pine shoot beetle</td>
<td>Tomicus pinipera</td>
<td>450 - 500</td>
<td>Adults emerge - begin shoot feeding - control target</td>
<td></td>
</tr>
<tr>
<td>Conifer</td>
<td>Pine Chafer (Anomala Beetle)</td>
<td>Anomala obliqua</td>
<td>450 - 600</td>
<td>Adults (1st generation)</td>
<td></td>
</tr>
<tr>
<td>Many</td>
<td>Gypsy moth</td>
<td>Lymantria dispar</td>
<td>450 - 900</td>
<td>Caterpillar to pupation - control target missed</td>
<td></td>
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<tr>
<td>Juniper</td>
<td>Maskell scale</td>
<td>Lepidosaphes pollida</td>
<td>470 -</td>
<td>Crawlers (1st generation)</td>
<td></td>
</tr>
<tr>
<td>Conifer</td>
<td>European pine shoot moth</td>
<td>Rhyacionia buoliana</td>
<td>480 - 710</td>
<td>Larvae Treatment</td>
<td></td>
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<tr>
<td>Malus, Prunus, many</td>
<td>Peach Tree Borer</td>
<td>Synanthedon sp.</td>
<td>500 - 600</td>
<td>Adults - emerge (1st treatment both types)</td>
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<tr>
<td>Rhododendron</td>
<td>Rhododendron Borer</td>
<td>Synanthedon rhododendri</td>
<td>509 - 696</td>
<td>Adults emerge</td>
<td></td>
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<tr>
<td>Many</td>
<td>White prunicola scale</td>
<td>Pseudaulacaspis prunicola</td>
<td>513 -</td>
<td>Crawlers (1st generation)</td>
<td></td>
</tr>
<tr>
<td>MANY</td>
<td>Redhead flea beetle</td>
<td>Systena frontalis</td>
<td>517 - 1028</td>
<td>Univ. Del. Adults - feeding / laying eggs</td>
<td></td>
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<tr>
<td>Many</td>
<td>Cottony camelia / taxus scale</td>
<td>Pulvinaria fiscatoria</td>
<td>520 -</td>
<td>Crawlers (1st generation)</td>
<td></td>
</tr>
<tr>
<td>Birch</td>
<td>Birch Leafminer</td>
<td>Fenuia pusilla</td>
<td>530 - 700</td>
<td>Larvae (2nd generation)</td>
<td></td>
</tr>
<tr>
<td>Conifer</td>
<td>Arborvitae Leafminer</td>
<td>Aegyria thiauella</td>
<td>533 - 700</td>
<td>Adults (egg laying) - larvae treatments</td>
<td></td>
</tr>
<tr>
<td>Euonymus</td>
<td>Euonymus Scale</td>
<td>Unapsis euonymi</td>
<td>533 - 820</td>
<td>Crawlers (1st generation)</td>
<td></td>
</tr>
<tr>
<td>Oak</td>
<td>Oak bichot leafminers</td>
<td>Cameraia spp. ; Toheria spp.</td>
<td>533 - 912</td>
<td>Typical treatment window</td>
<td></td>
</tr>
<tr>
<td>Maple</td>
<td>Greenstriped mapleworm</td>
<td>Dryocampa rubicunda</td>
<td>533 - 1645</td>
<td>Control target</td>
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</tr>
<tr>
<td>Conifer</td>
<td>Balsam gall midge</td>
<td>Paradiplosis tsubex</td>
<td>550 - 700</td>
<td>Galls apparent</td>
<td></td>
</tr>
<tr>
<td>Conifer</td>
<td>Juniper scale</td>
<td>Carulasip juniperi</td>
<td>550 - 700</td>
<td>Egg hatch</td>
<td></td>
</tr>
<tr>
<td>Malus, Prunus, many</td>
<td>Greater peach tree borer</td>
<td>Synanthedon exitiosa</td>
<td>575 - 710</td>
<td>Adult emergence</td>
<td></td>
</tr>
<tr>
<td>Conifer</td>
<td>Cryptomeria scale</td>
<td>Aspidiotus cryptomeriae</td>
<td>600 - 800</td>
<td>1st crawler emergence</td>
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<tr>
<td>Conifer</td>
<td>Bagworm</td>
<td>Thyridopteryx ephemeraeformis</td>
<td>600 - 900</td>
<td>Larvae (early instars) - ONLY CONTROL WINDOW</td>
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</tr>
<tr>
<td>Conifer</td>
<td>Cooley spruce galt adelgid</td>
<td>Adelges cooleyi</td>
<td>600 - 1000</td>
<td>Nymphs active - Douglas fir (control target)</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Growing degree-day values utilize daily average air temperatures with a minimum temperature threshold (a.k.a. ‘base’) of 50°F = GDD50 (max. temp. threshold set at 95°F). These values are accumulated from a biofix date, such as January or March 1st in the NE USA. Provided GDD50 are scouting ranges and should be used. **Daily GDD50 =** (Max + Min temp.) / 2 - 50 (min temp. threshold)

**References**

1. Rutgers Cooperative Extension - Landscape IPM Notes
2. https://ccetompkins.org/resources/using-growing-degree-days-for-insect-management
3. https://extension.psu.edu/ipm-basics-for-christmas-trees#section-2

**Compiled 4-26-2021 - Timothy J. Waller, Ph.D. - Rutgers Cooperative Extension, Cumberland County Nursery Crops - twaller@njaes.rutgers.edu

**Note:** Many of these insects are not specifically pest species, but are commonly seen in the landscapes in the northeastern United States. However, they are included in this list due to their role in landscape plant health and management.
Redheaded Flea Beetle (RHFB) Considerations

Ideally when controlling high-density populations of RHFB, fall applications of long-lasting systemic materials can provide a strong knock-down of larval populations destined to emerge in the following spring. Establishing a reserve of systemic materials in the soil and root zone late-season or early this season will greatly increase control efforts made later and can reduce the number of overall applications made specifically for RHFB. A two-pronged approach of systemic and contact insecticides can manage active adults and larvae throughout the season. For current season control: systemic insecticide drench or ‘sprunch’ (consider backpack units) near planting / potting-up, or a month prior to adult emergence (now for southern NJ), will provide the reserve of systemic activity required to reduce larvae and adult populations later. Contact material applications should also be considered for adult and larval treatments but must be made at sufficient volumes to guarantee ‘contact’. Contact-only driven spray regimes can provide good results, however the need to protect new growth will be ever present. When choosing materials, also consider other pests targeted by that compound to maximize the value of your investment. Targeting the larval stage will reduce the number of adults present to lay the next generation of eggs.

1st generation larvae: 242-600 GDD<sub>50</sub>
Observation of larval activity on the outside of root balls occurs during this timeframe, meaning they may be active earlier. Systemic treatments should be initiated late fall or immediately on susceptible hosts (southern NJ) to guard plants from adult feeding later this season.

Materials containing neonicotinoids [4A] and cyrantraniliprole [28] (Mainspring) are considered particularly fast and effective, however lack the staying power of similar chemicals such as Chlorantraniliprole [28] (Aceleproyn) that takes longer to translocate from soil reserves.

Organophosphates (18) Acephate (Orthene, Acephate 97UP) are also a systemic option. During larval development contact materials containing bifenthrin, azadirachtin, tolfenpyrad, cyclaniliprole + flonicamid, entomopathogenic fungi (Beauveria bassiana) or beneficial nematodes should be seriously considered when attempting to knock-down forthcoming adult populations.

1st generation adults: 517-1028 GDD<sub>50</sub>
Feeding damages will be apparent on susceptible hosts, scout to determine best time of day for applications, materials such as Captiva Prime or another agitator may be useful in driving the beetles out of hiding (which they do EXTREMELY well). Continuation of systemic materials, use contact materials to directly target the adults.

Keep weed populations to a minimum, adults may feed on nearby weed species such as dog fennel, pigweed, and knotweed, thus avoiding pest control efforts on susceptible crops.

2nd gen. larvae: 1570-1860 GDD<sub>50</sub>
Potential for considerable overlap of larval-adult developmental stages
Continuation of systemic materials, use contact materials to directly target the larvae and adults.

2nd gen. adults: 1878-2318 GDD<sub>50</sub>
Continuation of systemic materials, use contact materials to directly target the larvae and adults. Keep weed populations to a minimum.

A third generation is suspected to be possible in the southern and central regions of New Jersey.
Phytophthora in Conifers
Rutgers Cooperative Extension
Specialty Crop Block Grant Project
Timothy Waller – Cumberland County & Bill Errickson – Monmouth County

We are looking to select 30 NJ conifer producers to participate in a statewide Phytophthora project in order to characterize what pathogen species are present and how to ultimately manage them more effectively in our nurseries. The agents will schedule one to three visits this growing season to collect samples from roots, bark, soil, irrigation systems, and will perform soil testing.

Phytophthora in Conifers - Sample Location Participants Survey

1. Please provide the following information:
   - Farm name: __________________________
   - County: __________________________
   - Town: __________________________
   - Contact number: __________________________
   - Contact email: __________________________

2. Do you have conifers with suspected Phytophthora issues?
   - (YES) (NO) (circle one)

3. Do you have broadleaf evergreens with suspected Phytophthora issues?
   - (YES) (NO) (circle one)

4. Please rate perceived damages due to Phytophthora at your operation.
   - Low - (1) (2) (3) (4) (5) - High (circle one)

5. Percentage of profits lost to Phytophthora?
   - _____________%

6. Would you participate in the Phytophthora project?
   - (YES) (NO) (circle one)

7. If selected for the initial sample collection, would you be interested in follow-up studies?
   - (YES) (NO) (circle one)

Please visit https://go.rutgers.edu/parhgf1u or use the QR CODE to fill out this form online or complete this form and mail, fax, drop-off, or call the number below to be considered.

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