Crop Conditions

With the Thanksgiving rush behind us we enter into a slower time on most farms. The Persephone period, when daylight hours dip below 10 per day, is upon us and winter crops will grow only very slowly until about February 1, when day length will be more than 10 hours again. So, folks are working their way through stores of carrots and beets, cabbage, leeks and onions, potatoes, and squashes. Because of the wet season which delayed planting of fall storage crops and caused more disease than usual, many harvests were smaller than anticipated and folks are hoping to make it through winter with strong sales and good prices. Some have already started making plans for next season, evaluating which crops did best and how they will adapt and change their growing practices or business models to build more resilience in the face of continued challenges. We are traveling further afield this winter to learn as much as possible from farms and scientists from outside our region that we can bring back to growers in MA and New England. We recently attended the Great Lakes Expo and heard some great talks on pepper pests, tomato nutrition, bee-friendly insecticide programs for cucurbits, and onion thrip control using silver and red mulches. There are lots more conferences and events like this coming up, check out the events section for a complete list, and hope we see lots of you at our next educational meeting for growers which is January 5 in Northampton! We will all be there, including some new UMass Extension specialists you can read about below!

With our last Veg Notes issue of 2023, we want to thank you for reading, even if you never make it past Crop Conditions and Pest Alerts during your busy days in the field! Our goal is to provide vegetable growers with timely, science-based information, and we hope we’ve met that goal this year. Much of our work within the Vegetable Program is grant-funded, which means we have funding to do specific research and educational activities, but the production of Veg Notes does not receive any grant support. If you’d like to support 2024 Veg Notes production, we greatly appreciate any and all donations! Click the button below to make a donation by check or card.

See you in 2024!

-Sue Scheufele, Lisa McKeag, Genevieve Higgins, Hannah Whitehead, and Maria Gannet, UMass Extension Vegetable Program
**Pest Alerts**

**Winter cutworms** are continuing to cause feeding damage in tunnels of winter greens. Small larvae feed on leaves and larger larvae feed on roots and petioles, cutting seedlings off near the soil line. Larvae feed at night and hide within the canopy during the day. Control is warranted if overall plant stand or survival is threatened. Seduce is an OMRI-approved spinosad bait that can be sprinkled over the crop and left on the soil surface. If using labeled synthetic pyrethrins which are contact insecticides, make applications between midnight and dusk when caterpillars are actively feeding and not protected beneath leaves and in the soil. Bt products (e.g. Javelin, Dipel, XenTari) and diamides (e.g. Coragen, Exirel, Harvanta) applied to the foliage should also be effective and are labeled for spinach.

**Bottom rot** was reported last week in lettuce in several high tunnels across the region. Bottom rot is caused by the fungus *Rhizoctonia solani*, which can also cause damping off in seedlings, wirestem in brassicas, and other seedling diseases. *Rhizoctonia solani* is present in most soils, but it is not a strong pathogen so it only causes disease when plants are somehow weakened, like in the cold, dark winter when lettuce crops are growing slowly. Rhizoctonia survives in the soil, as mycelium or sclerotia, and infects lettuce leaves that are in contact with the ground. Infected leaves turn brown and then melt. Bottom rot is most commonly seen affecting older lettuce plants. Measures that can help prevent bottom rot include tilling under summer crop residues well, using raised beds with good drainage, and taking measures to reduce leaf wetness (ventilate the tunnel when it’s warm enough to do so, use drip irrigation instead of overhead, avoid using row cover unless needed to prevent frost damage, control weeds). Few fungicides are labeled for bottom rot and there is little efficacy on their performance. For a list of labeled products, see the lettuce disease section of the New England Vegetable Management Guide.

**Welcome Maria and Arthur!**

Arthur Siller is the new Soil Health Educator with UMass Extension. They are excited to work with farmers, gardeners, and other land managers to maintain and improve Massachusetts dirt. Arthur worked in production vegetable farming for more than ten years in Connecticut and Massachusetts and has spent the last four years researching cover crops and forage production systems as a graduate student at UMass. As an Extension educator, Arthur is looking forward to connecting practical concerns with scientific research to develop beneficial soil management techniques that support a wide range of goals. They will be working across all the Extension programs to answer questions concerning the effect of soil on plant health and productivity, environmental quality, and climate change. Please reach out to Arthur at asiller@umass.edu to discuss any soil health related ideas and with any questions about taking care of your dirt!
Maria Gannett is the new weed specialist working with the Vegetable and Fruit Extension teams. Maria grew up on Cape Cod, MA, and became hooked on agricultural Extension at the UMass Cranberry Research Station. Her first project focused on using a pathogenic fungus to control dodder weeds on cranberry bogs. For several years she worked as an Agroforestry Extension Agent for the Peace Corps in Senegal, grafting mangos and planting thorny hedgerow species. When she returned to the U.S. she continued working in horticultural science, studying the effects of tillage and mulch types on soil health in matted row strawberries during a Master’s program at Cornell University. She stayed at Cornell as a lab manager in a soil microbial ecology lab where several of the projects she supported focused on non-herbicidal weed control strategies. To combine her interests in soil microbial ecology and weed management she began a PhD program exploring nitrogen immobilization as a weed management tool in silage corn and soybean crops. She’s excited to now come full circle and work in fruit and vegetable crops again at UMass. She plans to continue her research on alternative methods of weed control and to collaborate with the IR-4 program to increase herbicide options for MA growers. As someone who believes Extension is equal parts education and collaboration, she’s looking forward to working together with growers to translate research into practical short- and long-term solutions.

**Basil Downy Mildew Resistance**

Most basil growers are familiar with basil downy mildew and the resistant varieties that were released from multiple breeding programs in 2018. Basil downy mildew (BDM) is a disease that produces fuzzy gray sporulation on the undersides of basil leaves, rendering the plants unmarketable. It first appeared in the US in 2007 and is now the most damaging basil disease in the country. Generally, the pathogen is not active in the Northeast until July. However, we have observed it earlier in the growing season in indoor production systems and garden centers, moving with potted plants. Active basil downy mildew can be reported, and alerts can be set for specific regions here: [https://basil.agpestmonitor.org/](https://basil.agpestmonitor.org/). This timeline allows us to recommend growing susceptible varieties earlier in the growing season, starting preventative spray programs once pathogen activity is observed in the region, and introducing resistant varieties as soon as possible for optimal pathogen control.

Plant breeders have been working since BDM arrived to develop basil varieties that are resistant to this disease. In 2018, the Rutgers basil breeding program released the cultivars ‘Devotion’, ‘Passion’, ‘Obsession’, and ‘Thunderstruck’, and Genesis Seeds Ltd. released the Prospera® F1 series. More recently, ‘Amazel Basil®’ and ‘Pesto Besto’ have been released by Proven Winners. These varieties were developed at the University of Florida’s Institute of Food and Agricultural Sciences (IFAS) and have performed similarly to the Prospera series in UMass trials.

‘Evi’ and ‘Giuletta’ have also been developed by breeder Olaf Kunzemann at Enza Zaden. These two varieties stood up well in a UMass Extension Vegetable Program field trial in 2023 (Figure 1). In this trial, ‘Giuletta’ had no BDM 2.5 weeks after BDM was first observed on susceptible varieties in the trial, and ‘Evi’ had only very low levels of BDM. Not much is known about the source of BDM resistance in these two varieties, just that it is from a combination of BDM breeding lines and wild basil species. These two varieties haven’t been evaluated in the rigorous way that the Rutgers and Prospera varieties have been, but they are interesting new prospects.

There are also several older resistant varieties, including ‘Eleonora’, ‘Emma’, and ‘Everbright’, which have largely been discounted...
as no longer having significant resistance to BDM, however, ‘Eleonora’ has shown intermediate resistance to some strains of BDM in UMass trials – keep reading for more details!

The newer BDM-resistant varieties will continue to produce for several weeks in the presence of BDM, but we have observed breakthroughs against resistance in all varieties in multiple locations since 2018. We’ll explain why we’re seeing those breakthroughs, some background of the development of the resistant varieties, and best practices for managing basil downy mildew.

Basil downy mildew is caused by the oomycete pathogen *Pero nospora belbahrii*. Oomycetes, a group that includes Phytoph thoras, Pythiums, and the downy mildews, are challenging to control. The downy mildews are particularly stubborn due to their persistent survival on living plant material and polycyclic disease cycle, meaning many infection events can occur and recur in a single growing season. BDM survives on living plants where basil production occurs for extended periods, e.g. in Florida or, less often, in climate-controlled greenhouses. It has been reported to be infrequently seedborne, although the importance of the seedborne spores is not well understood. BDM causes interveinal chlorosis (yellowing between the veins of the leaves), which corresponds to fuzzy gray sporulation on the undersides of leaves after high humidity periods, and infected leaves will eventually turn brown, desiccate and fall off.

Like most downy mildews, there is a lot of variation within the BDM pathogen, and growers will see different varieties become infected in different years, depending on what strain (often called a “race”) of the pathogen is present. This is similar to cucurbit downy mildew, where different races infect different cucurbit crops, and spinach downy mildew, where different races infect different spinach varieties. Researchers are actively working right now to establish a “differential panel” in order to formally distinguish between races. A differential panel is a set group of basil varieties that can be inoculated in the lab with a single isolate of a pathogen. The pattern of which varieties develop disease or not tells us what race the isolate is.

Currently, the only well-established race for BDM is race 1, which is defined as anything that infects ‘Prospera®’, regardless of how the isolate behaves on other varieties. In other words, the original Prospera® series is susceptible to BDM race 1. UMass research has shown that the Rutgers variety ‘Passion’ and ‘Eleonora’ have intermediate resistance to multiple race 1 isolates. This is exciting because as an older variety, ‘Eleonora’ has been largely discounted as not having significant resistance anymore. In these trials, ‘Eleonora’ has shown split resistance to race 1, which means that when inoculated with a race 1 isolate, some ‘Eleonora’ plants will develop disease and some will not. This implies that the mechanism of resistance in ‘Eleonora’ is different than the other resistant varieties and that Eleonora’s resistance is somewhat unstable.

BDM races develop over time based on what resistant varieties BDM isolates are exposed to. A spore that lands on ‘Prospera®’ and happens to have mutated to overcome the ‘Prospera®’ resistance will not necessarily also have overcome the resistance in ‘Passion’, ‘Thunderstruck’, ‘Obsession’, ‘Devotion’, or ‘Eleonora’. This means that there’s potential for many combinations of infection patterns and races.

The four Rutgers varieties originated from the same parent cross—their parents, going back many generations, are a Fusarium wilt-resistant sweet basil and ‘Mrihani’, a BDM-resistant, frilly-leaved licoricey basil relative native to Zanzibar. Many plant generations later, the Rutgers breeders selected four distinct basil varieties, all with resistance to BDM that originated from the ‘Mrihani’ parent. Because of the way that genes are combined and passed down to offspring, these
four varieties have distinct resistance genetics; i.e. the resistance genes in Obsession are not identical to those in Passion. All of the Rutgers varieties have multi-gene resistance to BDM. Multi-gene resistance is generally harder for pathogens to fully overcome than single-gene resistance. In UMass trials, Rutgers varieties (particularly ‘Passion’) have been shown to potentially have partial resistance to multiple BDM races.

Genesis Seeds’ Prospera® series originated from an interspecific hybrid cross between a sweet basil variety and a BDM-resistant wild American basil (a different species from sweet basil). Once the resistance was established by this cross, the breeders selected for growth habits and other desired characteristics, resulting in 5 Prospera® varieties – Cut Genovese (CG1), Italian Large-Leaf (ILL2), Potted Large-Leaf (PL4), Potted Small-Leaf (PS5), and Red. In comparison to the multi-gene resistance present in the Rutgers varieties, the resistance in the Prospera series is controlled by a single dominant resistance gene, but is susceptible to BDM race 1. However, Genesis recently announced the release of a new line called ‘Prospera Active’ with a second source of BDM resistance, giving it resistance to race 1 isolates.

**Best practices for managing basil downy mildew:**

- Grow multiple resistant varieties for mid- and late-season basil. The best defense may be to grow ‘Prospera’ and ‘Passion’, and introduce ‘Prospera Active’ later in the season.
- Grow your favorite, maybe more unique but BDM-susceptible varieties early in the season (before mid-July).
- Increase protection with fungicides (conventional growers). The materials in the table below have been shown to effectively control BDM. Apply on 7-day intervals. Resistance to mefonoxam (e.g. Ridomil) has been recorded. No OMRI-listed materials have been shown to be effective.

<table>
<thead>
<tr>
<th>Active ingredient</th>
<th>Example material name</th>
<th>Resistance Group</th>
<th>Max # applications before rotating</th>
<th>PHI</th>
<th>Greenhouse/high tunnel use allowed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azoxystrobin</td>
<td>Quadris</td>
<td>11</td>
<td>2</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Fenamidone</td>
<td>Reason</td>
<td>11</td>
<td>1</td>
<td>2d</td>
<td>No</td>
</tr>
<tr>
<td>Mandipiprolin</td>
<td>Revus</td>
<td>40</td>
<td>2</td>
<td>1d</td>
<td>No</td>
</tr>
<tr>
<td>Oxathiapiprolin</td>
<td>Orondis Gold 200</td>
<td>49</td>
<td>2</td>
<td>0d</td>
<td>Yes</td>
</tr>
<tr>
<td>Oxathiapiprolin + mandipiprolin</td>
<td>Orondis Opti</td>
<td>49 + 40</td>
<td>2</td>
<td>1d</td>
<td>No</td>
</tr>
<tr>
<td>Phosphorous acids</td>
<td>Many</td>
<td>33</td>
<td>0d</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Cyazofamid</td>
<td>Ranman</td>
<td>21</td>
<td>3</td>
<td>0d</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**More Resources**

- Read more about [Basil Downy Mildew here](#)

---

**N E W S**

**UMASS EXTENSION IS HIRING! IPM Extension Educator III**

The Extension Educator III - Integrated Pest Management develops and delivers Extension educational programs, publications, and services, and conducts applied research, to meet the needs of commercial agricultural producers
statewide with emphasis on Integrated Pest Management (IPM) of weed, insect, and/or disease challenges to managers of fruit, vegetable, and diversified cropping systems at a range of scales, including indoor environments. The application will remain open until the position is filled. Click HERE for more information and to apply.

**Provide Feedback for MDAR’s Language Access Plan**

In accordance with Executive Order #615, MDAR is in the process of creating a Language Access Plan to minimize language access barriers and ensure all persons have equitable access to MDAR’s programs and services. In order to identify the language needs of our constituents, MDAR is presenting a draft plan for you to read and react to in a time that makes sense for you. You can provide input in the following ways:

- Virtual session on December 14th at 5:30 PM. To register, please email Rebecca.Davidson@mass.gov or Olivia.Palmer@mass.gov
- Survey input. All responses should be submitted before Sunday, December 17.

Once the Language Access Plan is published, we will continue to welcome your feedback so that the plan reflects your needs, and the needs of the people you serve.

If you have any additional comments or concerns, please reach out MDAR’s Environmental Justice Team: Rebecca Davidson: Rebecca.Davidson@mass.gov or Olivia Palmer: Olivia.Palmer@mass.gov.

**Updated Guide to Agricultural Composting from MDAR**

MDAR has recently developed an updated version of its “Guide to Agricultural Composting”. The revised edition contains sections on the most recent MDAR regulations, composting basic science, recipe development, operation and maintenance, preparing an odor management plan, and more.

Click here for the online version of the Guide to Agricultural Composting.

**Spotted Lanternfly Confirmed in Additional MA Towns**

As of November 2023, MDAR has confirmed the presence of additional populations of spotted lanternfly in Massachusetts. This brings the total established populations of spotted lanternfly in Massachusetts to those in the following communities: Agawam, Springfield, Holyoke, Worcester, Shrewsbury, Fitchburg, Southborough, Ashland, Wellesley, Weston, and Chelmsford, MA. Click here for a map of these locations.

As a reminder, there is no reason to be preemptively treating for this insect in other areas of Massachusetts. If you suspect you have found spotted lanternfly in additional locations, please report it immediately to MDAR here. Click here for more information.

**Updated 2023 USDA Plant Hardiness Zone Map**

The U.S. Department of Agriculture (USDA) today released a new version of its Plant Hardiness Zone Map (PHZM), updating this valuable tool for gardeners and researchers for the first time since 2012. USDA’s Plant Hardiness Zone Map is the standard by which gardeners and growers can determine which plants are most likely to thrive at a location. The new map—jointly developed by USDA’s Agricultural Research Service (ARS) and Oregon State University’s (OSU) PRISM Climate Group—is more accurate and contains greater detail than prior versions.

It is available online at https://planthardiness.ars.usda.gov/. In addition to the map updates, the Plant Hardiness Zone Map website was expanded in 2023 to include a “Tips for Growers” section, which provides information about USDA ARS research programs of interest to gardeners and others who grow and breed plants.

The 2023 map is based on 30-year averages of the lowest annual winter temperatures at specific locations, is divided into 10-degree Fahrenheit zones and further divided into 5-degree Fahrenheit half-zones. The 2023 map incorporates data from 13,412 weather stations compared to the 7,983 that were used for the 2012 map.
Still seeking the perfect gift for your favorite farmer (or gardener)?

Crop-by-crop growing info

Tips on disease resistance and variety selection

Organic and conventional pest management guidance

Tools for managing soil health and fertility

Give the gift of science!
(or, at least, the latest science-based recommendations for vegetable production and pest management)

2023-2024 New England Vegetable Management Guide

CLICK HERE TO ORDER $40
EPA Requesting Feedback on Plan to Adopt Digital Pesticide Labels

The U.S. Environmental Protection agency is requesting feedback on its plan to adopt digital pesticide labels that will make labeling information clearer, more consistent, and more accessible to users. The Agency is specifically requesting feedback on the proposed organization of digital labels and the proposed phases of developing these labels.

EPA's plan for digital labels covers the creation of both a structured label—which would provide a framework for consistently placing and ordering label information—and a digital label, which would organize the label information as electronic data. Currently, the pesticide product label registration process is mostly manual, with EPA staff reading through long, detailed label submissions to pull out specific information, like application rate, to enter into the EPA's Pesticide Product and Label System. This has led to time consuming reviews and high cost to registrants and regulators. Further, the increasing complexity of pesticide labels and lack of standardized label format and language can create challenges for pesticide users and the public seeking information about which products to use and how to use them. The easier it is for users to find and understand label information, the better they can follow instructions to protect their safety and health and their environment.

Moving from traditional labels to digital labels and providing a database of accepted label language would make submitting label content simpler and more consistent for all pesticide registrants and would improve the Agency’s ability to review and access submissions efficiently.

EPA is requesting public comment on all aspects of structured digital labels, including anticipated benefits, risks and challenges, key information fields, and potential phases of adoption.

The whitepaper will be open for 120 days for comment at www.regulations.gov on docket EPA-HQ-OPP-2023-0562.


The second edition of the Strawberry Production Guide for the Northeast, Midwest, and Eastern Canada is now available online and available as a free downloadable pdf with a downloadable Microsoft Excel workbook. A limited number of hard copies will be available; please contact your local Extension specialist for information.

Click here for more information.

UMass Research & Extension Experience for Undergrads Now Accepting Applications

REEU is a program under the Stockbridge School and Agriculture in partnership with UMass Extension. It aims to provide research training, professional development, and Extension experience to undergraduate students while reaching out to community colleges through paid full-time summer internships. For 2024, we expect to accept 6-7 interns.

Applications will begin being reviewed in January 2024, with priority given to applications received before January 5. If you will have trouble meeting this deadline, please email Elizabeth Garofalo at egarofal@umass.edu. Applicants will be interviewed by mentors at the end of February, offers will be made in early March, and the program will begin May 30.

Click here for more information on the REEU program.

Click here to apply to the 2024 REEU Program.
Click here to list to the REEU PODCAST!

This work is supported by Agricultural and Food Research Initiative grant no. 2022-67037-36619 from the USDA National Institute of Food and Agriculture.

USDA Discrimination Financial Assistance Program

Have you experienced discrimination in USDA farm lending? Section 22007 of the Inflation Reduction Act (IRA) provides $2.2 billion in financial assistance for farmers, ranchers, and forest landowners who experienced discrimination in USDA’s farm lending programs prior to January 1, 2021. Distribution of these funds is one step in the long march towards justice and an inclusive, equitable USDA. The program complements other assistance made possible through the IRA, including assistance for distressed borrowers.
The application process is now open—the **deadline to apply is January 13, 2024**. Applications for this program are free, and do not require a lawyer.

For more information and to apply, see the USDA’s website at [Inflation Reduction Act Assistance for Producers Who Experienced Discrimination in USDA Farm Loan Programs](https://www.usda.gov/).  

**MA Farm Action Plan Released**

The Massachusetts Farmland Action Plan is a long-range strategic initiative intended to address the farmland needs and goals of the Commonwealth including but not limited to increasing farmland conservation and production, addressing farmland access (including urban farmland), food security, climate resiliency, environmental justice, and preserving and expanding the economic and environmental viability of farms across all regions in the Commonwealth of Massachusetts.

The Massachusetts Farmland Action Plan is centered on addressing the challenges of farmland protection, access, and farm viability through a long-range strategic initiative intended to address the farmland needs and goals of the Commonwealth. It makes policy and fiscal recommendations, enumerates the steps private sector stakeholders can take to support these goals, and builds upon numerous existing frameworks to integrate farmland and farming issues with other key sector and administration priorities. A healthy agricultural sector is essential to food security, climate resiliency, environmental justice, and preserving and expanding the economic and environmental viability of the Commonwealth.

[Click here to view the MA Farmland Action Plan.](https://www.mass.gov/)

**UMass Extension Garden Calendar Now Available!**

A renewal of a long-standing annual tradition - a useful, stimulating, and educational monthly wall calendar from UMass Extension. Give it as a gift and enjoy one yourself all year!

Our 2024 calendar includes guidelines for preparing the planting hole, avoiding problems with circling roots, amending the soil before planting, and shares the results of a two-year UMass study looking at plant establishment success using different root preparation methods at planting.

Each month of UMass Extension’s Garden Calendar features:

- One large, inspiring garden image plus information about the image
- Daily gardening tips for Northeast growing conditions
- Daily sunrise and sunset times
- Phases of the moon
- Plenty of room for notes
- Low gloss paper for easy writing

[Click here for more information and to order.](https://www.umassextension.org/)

**Events**

**607th Meeting of the New England Vegetable and Berry Growers’ Association**

**When:** Friday, January 5, 2024, 9am-3:15pm  
**Where:** Blue Bonnet Diner Northampton, MA  
**Registration:** Non-members welcome! $20 registration fee, waived for members of NEV&BGA. Lunch buffet is an additional $25. Please RSVP to 978-423-6694 or [secretary@nevbga.org](mailto:secretary@nevbga.org) by January 3.

**Speakers & Presentations:**

- Soil Health & Erosion – Chad Cochrain, NRCS Resource Conservationist in Agronomy
- Harvest Aids for Efficiency Panel Discussion
MA Farmer Peer Support Network Informational Session

When: Sunday, January 7, 2024 at 6pm
Where: Zoom
Registration: Email greg.porell@mass.gov to receive the meeting link.

A significant finding of a recent MassGrown Wellness survey of Massachusetts farmers and agricultural community supporters was the desire to discuss mental health and wellness concerns with family, friends or someone that understands the farming life. In an effort to connect farmers with people of lived experience, MassGrown Wellness has been training a group of 10 farmers to be peer support network leaders. The peer support training group includes farmers across a range of the state’s agricultural products, including cranberries, dairy and poultry, vegetables, bees and two farmers from an urban food justice organization. Support leaders will be a contact for the state’s farmers who would like to discuss any mental health and wellness concerns with a friendly ear of someone in a position to understand the farmer’s concerns.

Click here for a recorded zoom meeting with an overview of the peer support network.

2024 CT Vegetable & Small Fruit Growers Conference

When: Tuesday, January 9
Where: UConn Student Union
Registration: Early registration $40, ends December 20. Normal registration $60. Online registration will close on January 3 at noon. Lunch and parking included in registration. Click here to register.

For more information and a full agenda, please see here.

4 pesticide recertification credits will be offered.

Cornell Vegetable Seed Production Course and Mentorship

When: Wednesday, January 10 - March 13, 7:00pm-8:30pm
Registration: Free. If interested, click here to fill out our intake form.

To increase the number of growers able to produce high quality regionally adapted vegetable, herb, and flower seed in the northeast a group of educators, experienced seed producers, and regional seed companies is working together to offer a training in seed production and connect participants to markets for their seed. The course is free through generous support of a Northeast SARE Research and Education grant, but we expect participants to fully engage in the course and to share their experiences with us at the end of the course.

The online course is designed to help growers determine whether seed production is a good choice for their farm and then to guide them in selecting an initial seed crop to grow for sale, on-farm, or community use. Each week will feature guest speakers with expertise in seed production, plant pathology, seed economics, and more. During the course participants will form learning cohorts and will work with a mentor throughout the 2024 growing season to successfully produce a quality seed crop. The cohorts will have monthly group check-ins via Zoom and one-on-one access to a grower mentor experienced in producing their chosen seed crop. At the end of the season, participants can sell their marketable seed crops back to the companies that provided stock seed.

Questions? Contact Crystal Stewart Courtens, cls263@cornell.edu.
For more information about the course, please reference the course syllabus.

**Wholesale Readiness Program**

**When:** January 12 – May 17

**Where:** Online

**Registration:** Free! Application deadline December 8. [Click here to apply.](https://fccdc.org/food_process_center/wholesale-readiness-program/)

Are you an early-stage, but established food entrepreneur selling a consumer packaged good or a farmer with a value-added product line? Are you primarily selling direct to consumer and ready to begin selling to stores in your region? Join the [Franklin County Community Development Corporation](https://fccdc.org) and the [Sustainable Business Network of Massachusetts](https://sustainablebusinessnetwork.org) from January to May 2024 to learn from industry experts and entrepreneurs like yourself who have grown their CPG brands in the Northeast. The program is entirely virtual and consists of a mix of presentations, panel discussions and Q&A with a variety of industry experts.

Learn more: [https://fccdc.org/food_process_center/wholesale-readiness-program/](https://fccdc.org/food_process_center/wholesale-readiness-program/)

Participants will learn about:

- Creating a strong brand for their business and developing effective marketing strategies to reach customers
- Increasing production capacity and controlling costs in order to hit a reasonable price point on the shelf
- What to expect and best practices when approaching potential store buyers and food distribution partners

**Questions?** Contact Kate Minifie at [katem@fccdc.org](mailto:katem@fccdc.org) or 413-774-7204 ext. 104.

**New England Crop Insurance Informational Webinars**

- **Crop Insurance 101: An Introduction**
  
  **When:** Tuesday, January 16, 2024, 10am-11am
  
  **Where:** Online. [Register here!](https://fccdc.org)

  An overview of insurance programs relevant to vegetable and small fruit producers in New England. This workshop is intended for those with little to no prior experience with insurance and wondering what the options are and if they are right for your farm. Or for those looking for a refresher or updates. We will hear about Farm Service Agency’s Non-Insured Crop Disaster Assistance Program (NAP) and Risk Management Agency’s Whole-Farm Revenue Protection and Micro-Farm Revenue Protection Programs.

  **Speakers:** Bailey Albert, MA-FSA Outreach Coordinator and Alex Sereno, Northeast Regional RMA Director

- **Crop Insurance 301: Demystifying The How and Why Behind Each Program**
  
  **When:** Thursday, January 18, 2024, 10am-noon
  
  **Where:** Online. [Register here!](https://fccdc.org)

  A deeper dive into each individual program, one at a time, to help you decide which program is right for your farm. Regional experts from FSA and RMA will provide tips and tricks on how to be successful applying for coverage and getting a claim, including what records you need to keep and why. We will do our best to answer questions during a facilitated Q&A.

  **Speakers:** Julie Jacque, VT-FSA Agricultural Program Specialist and Alex Sereno, Northeast Regional RMA Director

These webinars will be recorded.

**Upcoming Tree Fruit Mass Aggie Seminars for Home Orchardists**

- **Disease in the Orchard**
  
  **When:** Saturday, February 10, 2024, 10:30am-noon
  
  **Where:** Online

  **Registration:** $35 registration fee. [Click here to register.](https://fccdc.org)
Join Extension Educator Elizabeth Garofalo and learn about disease management for tree fruit. Key disease concepts will be discussed. Identification, biology and management of a selection of common tree fruit diseases will also be presented.

• **Orchard Establishment**
  
  **When:** Saturday, February 17, 2024, 10:30am-noon  
  **Where:** Online  
  **Registration:** $35 registration fee. [Click here to register](#).  

  Extension Educator Jon Clements covers horticultural topics including: basics of planting apple trees, including site selection, choice of variety and rootstock, planting best practices, tree training and pruning, fertilization, and ongoing fruit tree care. This session focuses primarily on apples but most concepts can be applied to other tree fruit.

• **For the Love of Pollinators**
  
  **When:** Saturday, February 24, 2024, 10:00am-2:00pm  
  **Where:** In person at UMass, Amherst campus Fernald Hall room 201  
  **Registration:** $60 registration fee. [Click here to register](#).  

  The process of pollination, facilitated by insects such as bees, butterflies, beetles, and flies, is the backbone of the reproduction of flowering plants. Caro Munoz Agudelo will lead a discussion about the importance of pollinators; identification, health concerns, protective measures and ways to increase habitat.

• **Integrated Pest Management & Insect ID**
  
  **When:** Saturday, March 2, 2024, 10:30am-noon  
  **Where:** Online  
  **Registration:** $35 registration fee. [Click here to register](#).  

  Join Extension Faculty Dr. Jaime Piñero and learn about integrated pest management and identification of insect pests in the orchard.

• **Orchard Pruning**
  
  **When:** Saturday, March 9, 2024, 10:30am-noon  
  **Where:** Online  
  **Registration:** $35 registration fee. [Click here to register](#).  

  The joy of growing apples in the home garden is enjoying a renaissance. One of the key steps in successful apple growing is the act of pruning the trees. This can seem daunting and complicated, but it’s not! Not once you understand the principles involved. Join Extension Educator Jon Clements online and learn how to properly prune your fruit trees. The focus of this session is primarily apples. The concepts discussed apply to pears, peaches and other tree fruit.

For more information and a full agenda, please see [here](#).

**Fundamentals of Organic Production Workshop Series**

**When:** 10:00am - 1:00pm on the dates listed below  
**Where:** Brigham Hill Community Farm, 37 Wheeler Rd., North Grafton, MA. Zoom livestream also available, pre-registration required.

Are you looking to increase or improve your organic growing methods? Join UMass Extension and NOFA/Mass for a series on fundamentals of organic vegetable and small fruit production. This series is part of the USDA Transition to Organic Partnership Program (TOPP). To learn more about the UMass & NOFA/Mass programming, check out the [NOFA/Mass TOPP web page](#). To learn more about the national TOPP program, visit [www.organictransition.org](http://www.organictransition.org).  

These workshops are intended for commercial vegetable and small fruit growers. See the links below for information.
and registration for each workshop.

• February 14: Fundamentals of Fertility Management
• February 28: Cover Cropping
• March 14: Organic Small Fruit Production
• March 27: Organic Greenhouse Production
• April 10: Organic Management of Vegetable Pests
• April 24: Organics and Food Safety

Stay tuned for several on-farm field walks coming in summer 2024, as well as one-on-one consultations with UMass Extension specialists in fall 2024! Visit the NOFA/Mass TOPP web page for more ways to get involved!
Vegetable Notes. Genevieve Higgins, Lisa McKeag, Susan Scheufele, Hannah Whitehead co-editors. All photos in this publication are credited to the UMass Extension Vegetable Program unless otherwise noted.

Where trade names or commercial products are used, no company or product endorsement is implied or intended. Always read the label before using any pesticide. The label is the legal document for product use. Disregard any information in this newsletter if it is in conflict with the label.

The University of Massachusetts Extension is an equal opportunity provider and employer, United States Department of Agriculture cooperating. Contact your local Extension office for information on disability accommodations. Contact the State Center Directors Office if you have concerns related to discrimination, 413-545-4800.