



UMass
Extension

Vegetable Notes

For Vegetable Farmers in Massachusetts since 1975



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Fall brassica root crops are sizing up, in fields like this one of radishes and turnips in Hampshire County. Photo: R. Santizo

CROP CONDITIONS

We are back to some cooler, fall-like weather this week, as we head into September. Most of the state is still in at least a severe drought, with some/all of Worcester, Middlesex, Essex, Suffolk, Norfolk, and Bristol Counties classified as being in Extreme Droughts. A reminder that the USDA has designated all MA counties except for Berkshire Co. as primary or contiguous natural disaster areas due to the drought, giving growers the option to apply for FSA Emergency Loans and to postpone some payments on existing FSA loans (some eligibility requirements apply). For more information, see the [FSA Disaster Assistance Programs website](#), or contact your [county FSA office](#).

Some summer crops are winding down – cucumbers, squash, zucchini, watermelon – and others like eggplant, tomatoes, and peppers are still going strong. Fall crops like leeks and storage root crops like carrots, beets, and potato are starting to come in. A few growers we’ve heard from this week are now feeling the pinch of crops lost or finished early due to the drought. Garlic seed is being prepped for planting in a few months. Cornell Cooperative Extension has done lots of work looking at cultural practices to optimize garlic yields over the last several years and have discovered some useful take aways that are worth keeping in mind as you prep garlic seed and fields for planting this fall. Their research has found that 100 lbs/A of fall-applied, slow-release nitrogen results in optimized yields for garlic. This rate provides enough N for the garlic when foliar growth takes off in the spring. If a field is deficient in N in the spring, you can instead/also put down 50 lbs/A of quick release N. Optimiz-

ing N fertility will optimize yield, although clove size is also an important factor in determining yields, with larger seed cloves resulting in higher yields. With increasingly warm and inconsistent winter temperatures, it’s becoming more common for frozen ponds to form in even well-drained fields, which can result in significant damage to overwintering garlic cloves. Raised beds can be a useful tool to avoid underwater garlic, both with and without plastic mulch.

We hope to see many of you on Thursday next week at Harvest Farm of Whately, for a twilight meeting all about postharvest handling. See the Events section for more information, and [pre-register here](#) so we can get a head count for pizza!

PEST ALERTS

There’s not much new to report for Pest Alerts this week — at this point in the season, most pests that are present in fields have been there for a while. If you’re seeing something you don’t recognize in one of your crops, you’re always welcome to reach out to us at umassveg@umass.edu. Two other good resources for identifications are our fact sheets (available at <https://ag.umass.edu/vegetable/fact-sheets>) and the [Northeast Vegetable & Strawberry Pest Identification Guide](#), and man-

CONTACT US:

Contact the UMass Extension Vegetable Program with your farm-related questions, any time of the year. We always do our best to respond to all inquiries. **Office phone:** (413) 577-3976 *We are currently working remotely but checking these messages daily, so please leave us a message!* **Email:** umassveg@umass.edu

Home Gardeners: Please contact the UMass GreenInfo Help Line with home gardening and homesteading questions, at greeninfo@umext.umass.edu.

agement recommendations can always be found in the disease and insect management sections of the appropriate crop pages of the [New England Vegetable Management Guide](#).

Alliums

Allium leafminer: The fall flight of ALM is expected to begin in the next few weeks. Fall leeks are generally the only allium crop remaining in fields, so that is where to keep an eye out for the straight lines of white feeding/oviposition marks in the leaves starting soon. ALM has only been confirmed in Berkshire and Hampshire Cos. in MA but it's likely present in many other counties. If you see signs of ALM—either feeding/oviposition marks or, later on, tunneling maggots or pupae in the stem—in your fall leeks in another MA county, please send us a photo at umassveg@umass.edu so that we can confirm and track this important new pest! See the article in this issue for more information on ALM, including management options.

Cucurbits

Squash vine borer: A second generation of SVB appears to be flying in some locations in eastern MA, posing risk to squash and pumpkin fruit. We only see a second generation of SVB some years in the Northeast. GDDs base 50°F in eastern MA are around 2200-2400, which is in line with the last 5 years, but we did not see second generations of SVB in the last 5 years. This generation of moths lays eggs on fruit and the larvae will tunnel into fruit, making them unmarketable and also providing entry points for secondary rot pathogens. If it's possible to get into fields with a sprayer, insecticide sprays can be made to target fruit. Conventional materials include Assail or pyrethroids (Brigade EC, Asana, Warrior, Perm-up/Pounce)—check labels to make sure you're not exceeding maximum applications for the season. Organic growers can apply spinosad (e.g. Entrust).

Table 1. Squash vine borer trap captures for week ending September 1	
Whately	0
Leominster	4
Sharon	20



Squash vine borer larva. Photo: J. Boucher

Sweet Corn

Levels of corn caterpillar pests remain similar to last week—low [European corn borer](#) and [fall armyworm](#) trap captures, with some reports of FAW damage in pre-tasseling corn, and [corn earworm](#) numbers putting most growers on 4-day spray schedules. Some farms are nearing the end of their sweet corn season and may have made their last corn earworm spray already. For corn that will be harvested in September and October: if maximum daytime temperatures drop to 80°F and below for a few days in a row, caterpillar development will slow, and cooler nighttime temperatures will limit moth activity, so spray intervals may be extended for 1-2 days. ECB will overwinter in infested corn stalks, so chop residues promptly after harvest is complete to reduce this overwintering population as we move into fall.



Tassel-ear on a tiller of corn. Photo: R. L. Nielsen

Tassel ears: We received a report of tassel ears—kernels that form in the tassel—in

sweet corn last week. Corn tassels are made up of male flowers that produce pollen, and developing ears are made up of female flowers that receive pollen and develop into kernels. Both types of flowers actually start out having both male and female reproductive parts—as the plant develops, however, the female parts of the tassel and the male parts of the ears abort, resulting in the familiar “unisexual” flowers that make up the tassels and ears. In some cases, the reproductive parts do not fully abort, and some female flower parts remain in the tassel and develop into funky ears on top of the plant. Some varieties are more prone to developing tassel ears, and the disorder may be linked to environmental triggers, but this phenomenon is generally poorly understood. It most commonly occurs on tillers and in plants on edges of fields.

Table 2. Sweetcorn pest trap captures for week ending September 1						
Location	GDD¹ (base 50°F)	ECB NY	ECB IA	FAW	CEW	CEW Spray Interval
Western MA						
Deerfield	-	-	-	0	73	4 days
Feeding Hills	2478	0	0	0	30	4 days
Granby	2397	0	0	3	14	4 days
Whately	2480	0	0	0	51	4 days
Central MA						
Leominster	2370	0	0	1	26	4 days
North Grafton	2189	1	0	0	16	4 days
Sutton		1	0	0	6	5 days
Spencer	2292	0	0	0	40	4 days
Eastern MA						
Bolton	2398	0	1	5	32.5	4 days
Concord	2384	1	0	0	40	4 days
Haverhill*	2498	0	0	2	20	4 days
Ipswich*	2244	2	1	0	10	4 days
Littleton	-	0	0	0	2	6 days
Millis	-	6	2	n/a	54	4 days
Sharon	2413	0	1	1	109	3 days
Sherborn	2449	1	1	1	20	4 days
Seekonk	2666	1	0	7	103	3 days
Swansea		8	1	3	136	3 days
- no numbers reported for this trap						
n/a - this site does not trap for this pest						
¹ GDDs are reported from the nearest weather station to the trapping site						
*Trap counts are from the previous week						

PREPARING FOR THE FALL FLIGHT OF ALLIUM LEAFMINER

--Written by Ethan Grundberg, Cornell Cooperative Extension. Adapted for Massachusetts growers.

The invasive fly pest, allium leafminer (*Phytomyza gymnostoma*), has been established in the Northeast since 2016 and has caused crop damage as far north as Washington County, NY, as far east as central Connecticut, and as far west as the Finger Lakes region of NY (see map on next page for known distribution). In research trials, the fall flight has caused damage to over 98% of leeks that were not covered or managed with insecticides, so now is the time to plan for managing allium leafminer (ALM) in the coming weeks.

Lifecycle: Though we still do not have accurate phenology models to allow us to predict the emergence of the fall flight, fall ALM adult activity has begun in early- to-mid-September the past five years (September 19, 2017, September 11, 2018, September 9, 2019, September 8, 2020, and September 3, 2021), so we anticipate a similar emergence time this year. Adults are active for approximately 7 weeks, or through the end of October. Emerged adults create the diagnostic line of oviposition puncture marks on allium leaves during feeding and egg-laying. Larvae that hatch from eggs eat their way down the inside of the leaves toward the bulbs opening up physical wounds where soft rot pathogens often enter. The larvae then pupate either inside the bulb and stem or in the soil around the plants for the winter and early spring. The spring generation typically emerges in mid-April and is active for about 5-6 weeks.



Allium leafminer feeding/oviposition marks in scallion. Photo: G. Higgins



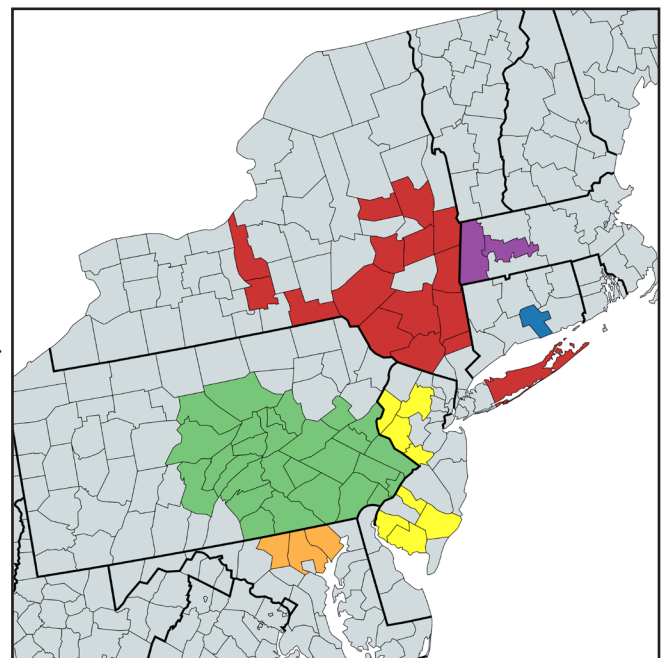
Allium leafminer pupa in leek. Note the soft rot in the larval mines. Photo: T. Rusinek

Damage: Since there are typically fewer cultivated and wild alliums in the environment in the fall, growers in Pennsylvania and New York have experienced a “concentration effect” with their fall-grown alliums. Leeks that were not treated with insecticides averaged over 40 maggots and pupae per plant, with a high of 160, in research trials conducted by Teresa Rusinek and Ethan Grundberg of Cornell Cooperative Extension in the fall of 2020. Much smaller populations of allium leafminer can still be problematic, causing cosmetic damage to scallion foliage and opening physical wounds in leeks where soft rot bacteria can ruin the crop.

Cultural Controls: Growers relying on row cover to exclude adult flies from host crops should install the covers before the flight begins. Field trials funded by Northeast SARE in 2020-21 demonstrated that waiting until two weeks after the fall flight had begun to cover leeks resulted in much higher densities of ALM larvae and pupae in the plants (see more information from the trials [here](#)). Growers have had success using insect netting, like Protek-Net, to reduce the risk of heat stress associated with spun bond covers. Both spun bond row cover and insect netting must be well-anchored to prevent gaps between the ground and the crop in order to be effective.

Rusinek and Grundberg have also found that ALM severity was reduced by about 33% in both spring and fall scallions and well as fall leeks when those alliums were planted on reflective plastic mulch compared to either black or white plastic. However, unsprayed fall leeks on reflective mulch in 2019 still had, on average, over 30 ALM maggots and pupae per plant, so using reflective mulch alone does not appear to provide sufficient suppression. Rusinek and Grundberg have found that combining reflective plastic mulch with two carefully timed applications of Entrust with M-Pede (see chemical controls below) has resulted in up to a 92% reduction in the number of ALM maggots and pupae in leeks compared to unsprayed leeks on white plastic mulch.

Chemical Controls: Cornell entomologist Dr. Brian Nault has been conducting insecticide efficacy trials for ALM management since fall 2017. Based on preliminary findings from those trials, it appears as if a number of conventional chemistries are effective at



Confirmed distribution of allium leafminer as of fall 2021. Figure: E. Grundberg

reducing damage from ALM on transplanted onions and scallions.

- **Scorpion 35 SL** (dinotefuran, IRAC Group 4A) has been the most effective at reducing damage from ALM in both NY trials and in Pennsylvania. It is registered for use in all New England states but is *not* registered for use in New York State. Scorpion is labeled for foliar and soil applications, but foliar applications at 7 fl oz/acre were found to be significantly more effective than drip applications.
- **Exirel** (cyantraniliprole, IRAC Group 28). 2(ee) label required for NY growers -- available here: <https://www.dec.ny.gov/nyspad/products?3>. 13.5 fl oz/acre
- **Radiant** (spinetoram, IRAC Group 5) at 8 fl oz/acre
- **Warrior II with Zeon Technology** (lambda-Cyhalothrin, IRAC Group 3A) at 1.6 fl oz/acre.

Growers who have been spraying leeks all summer for onion thrips need to make sure that they have not already reached the maximum annual application rate of Radiant and Exirel (cyantraniliprole, the active ingredient, is also in the pre-mix product Minecto Pro and counts toward maximum active ingredient application rates).

Organic growers unable to use row cover are encouraged to use **Entrust** (spinosad, IRAC Group 5) at the 6 oz/acre rate mixed with a 1%-1.5% v/v solution of **M-Pede** (potassium salts of fatty acids) for better penetration of the waxy cuticle. Given the resistance management restrictions on the Entrust label, growers are only able to make 2 sequential applications of spinosad before rotating to an insecticide in a different IRAC group. Given these restrictions, Rusinek and Grundberg designed trials in 2018 and 2019 in an effort to identify the most effective timing of 2 applications of Entrust plus M-Pede on leeks. This research found that **focusing those 2 sprays 2 to 4 weeks after first detected ALM emergence provided the best control in fall leeks**. As mentioned above, combining those two insecticide applications with reflective plastic mulch provided the largest numeric decrease in ALM maggots and pupae per leek in trials in 2019 (see graph). Pyganic, Surround, and Aza-Direct did not provide any statistically significant reduction in ALM damage in trials conducted by Dr. Nault. However, Rusinek and Grundberg will be evaluating adding a spray of Azera to a program with two applications of Entrust in 2021 to compare ALM suppression to two sprays of Entrust with M-Pede alone. Dr. Nault also compared the efficacy of Entrust with Nu-Film P to the performance of Entrust with M-Pede in at least one of his trials and found that adding Nu-Film, an aggressive sticker, resulted in more allium leafminer damage.

We suspect that the current geographic distribution of ALM in MA is wider than reported, and also that the distribution will continue to expand this fall, so growers across MA and CT, in the Hudson Valley, and north of the Capital District in NY should be on the lookout for signs of activity. We are recommending that growers thoroughly inspect allium leaves for the linear adult oviposition marks of at least 10 plants on each field edge on a weekly basis beginning the first week of September until activity is observed. If you have any questions about what you are seeing in your fall alliums, please contact your state Extension specialists. For MA growers, the UMass Extension Vegetable Program can be reached at umassveg@umass.edu or (413) 577-3976.

Additional Resources:

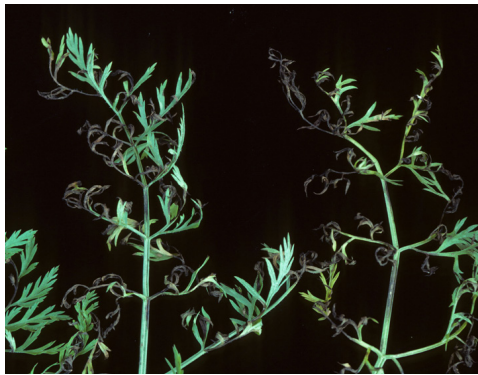
- [Eastern New York Vegetable News Podcast Allium Leafminer Update](#)
- [UMass Pest of the Year Allium Leafminer Presentation](#)

IDENTIFYING DISEASES OF CARROTS

Storage crops of carrots are sizing up now, putting energy into root growth as we enter fall. Carrots can be affected by many bacteria, fungi, and nematodes in the field or while in storage. Foliar diseases may cause lower yields due to loss of photosynthetic ability, difficulty harvesting if the tops are weakened, and lower marketability if the carrots cannot be sold in bunches. Root diseases can lower yields of fresh eating carrots and can spread in storage, drastically reducing sales through later markets. Root diseases are caused by soil-dwelling organisms and therefore their incidence may vary considerably from farm to farm or even from one side of a field to the other. Proper disease identification will help you to prevent future outbreaks by adjusting crop rotations accordingly, and prevent moving infested soil from field to field. Some of the major carrot disease symptoms are described below. If you are noticing foliar or root symptoms like those described, send a sample to your state diagnostic lab to confirm, and take steps to protect current and future crops. See the [UMass Diagnostic Lab website](#) for their sample submission instructions.

Foliar Diseases

Alternaria leaf blight (*Alternaria dauci* and *A. radicina*) symptoms first appear along leaflet margins as greenish-brown, water-soaked lesions, which enlarge, turn brown to black, and often develop a yellow halo. Older leaves are more susceptible to infection. Leaves often appear singed or burned from afar. When about 40% of the leaf is infected, the leaf yellows, collapses, and dies. Lesions on petioles are also common and can quickly kill entire leaves. *A. radicina* can also produce a dry, mealy, black decay on known as **black rot on carrot roots** held in storage.



Alternaria leaf blight (left) and bacterial leaf blight (right). Photos: R. L. Wick

Lesions on petioles are also common and can quickly kill entire leaves. *A. radicina* can also produce a dry, mealy, black decay on known as **black rot on carrot roots** held in storage.

Bacterial leaf blight (*Xanthomonas campestris* pv. *carotae*) symptoms initially look similar to those of *Alternaria* leaf blight; symptoms appear primarily on leaf margins as small, yellow, angular leaf spots, which expand, turn brown to black with a yellow halo, and become dry and brittle. Leaflets may become distorted and curled. Symptoms can extend into petioles where they produce a yellow-brown, gummy exudate, and may also occur on flower stalks. Infected umbels can be completely blighted and seed infection can occur—use treated seed to prevent introducing this disease.

Root Diseases

Root knot nematode (*Meloidogyne hapla*) forms galls or root thickenings of various sizes and shapes. Where soil populations of *M. hapla* are high, symptoms include stunted plants, uneven stands, premature leaf death, and forking and swelling of both lateral and tap roots, which can significantly reduce marketable yield. *M. hapla* persists in the soil and has a very wide host range so rotation can be difficult, but grasses are non-hosts so small grains, corn, and grassy cover crops like Sudangrass can be grown in rotations to reduce the size of the population.



Root knot nematode. Photo: R. L. Wick

Black root rot (*Thielaviopsis basicola*) occurs primarily in storage when conditions are not ideal and temperature and humidity are too high. The fungus causes superficial, irregular, black lesions on roots. The discoloration, caused by masses of dark brown to black chlamydo spores, is limited to the skin. The pathogen rapidly invades wounded tissue and is favored by long post-harvest periods without cooling, so careful harvest and immediate cooling (< 41°F) can minimize the impact of this disease.



Black root rot. Photo: R. L. Wick

White mold (*Sclerotinia sclerotiorum*) affects many vegetable crops but carrots are particularly susceptible, especially late in the season and during storage. The fungus may be present in soil, storage areas, or containers. Symptoms include characteristic white mycelial growth and hard, black sclerotia (masses of fungal tissue that serve as long-term survival structures), which may be seen on the crown of infected carrots. In storage, carrots develop a soft, watery rot, and fluffy, white mycelia and sclerotia can also develop. Sclerotia can persist in soil for many years and the fungus has a very wide host range, making this disease difficult to manage. Grasses and onions are non-hosts that can be used in rotations, and a commercially available biocontrol product, Contans, has been shown to be effective in parasitizing overwintering sclerotia. Contans should be incorporated into infested soils in the fall to give the biocontrol fungus time to infect the sclerotia.



White mold. Photo: W. Brown

Cavity spot and root dieback (*Pythium* spp.) Infections from several

Pythium species can occur during early root development and are favored by moist soil conditions. Root dieback symptoms appear as rusty-brown lateral root formation, or forking and stunting; symptoms that can be easily confused with damage from nematodes, soil compaction or soil drainage problems. Cavity spot often shows up later in the season, closer to harvest. Horizontal, sunken lesions varying in size from 1-10 mm appear on the surface of the root and can provide an ingress for secondary fungal or bacterial infections.



Cavity spot. Photo: S. Livingston

Crown rot (*Rhizoctonia carotae*) Early symptoms are horizontal dark brown lesions around the root crown. As the crop matures, the tops may die in patches in the field and as the disease progresses, lesions coalesce to form large, deep, rotten areas on the crown of the root. *R. carotae* can also cause crater rot and violet root rot, but these diseases are less common in MA. Crown rot is favored by moist conditions, so planting on raised beds and/or in well-drained fields can minimize disease incidence.

Scab (*Streptomyces* spp.) can cause both raised and sunken, dry, corky lesions on the carrot root. This disease is less common and when it does occur symptoms are rarely severe enough to cause major losses in yield or marketability. Avoid planting carrots in alkaline soils, which are known to favor the incidence of scab, or in potato fields with high incidence of scab, as the species that infects potatoes can also infect carrots.



Scab. Photo: R. L. Wick

Bacterial soft rot (*Pectobacterium carotovorum* subsp. *carotovorum*) is a common disease in storage where it infects roots that were previously wounded or diseased. It occurs in the field only rarely, under extremely wet soil conditions. Symptoms start as small, water-soaked lesions that quickly spread and cause affected areas to become mushy, though the skin may remain intact over the liquefied flesh underneath. To avoid problems in storage, avoid wounding carrots during harvest and washing and maintain proper storage conditions.

To avoid losses in storage, try to achieve optimum storage conditions of 32-34°F (essential to minimize decay and sprouting during storage) and high relative humidity (required to prevent desiccation and loss of crispness). Mature topped carrots can be stored for 7-9 months at 32°F with 98-100% RH. Those ideal conditions are difficult to achieve and topped carrots are often successfully stored for 5-6 months at 32-41°F with 90-95% RH. Prompt cooling of harvested carrots to below 41°F also helps maintain crispness. Carrots produce very little ethylene (a byproduct of respiration) themselves but are sensitive to ethylene produced by other crops in storage and exposure causes production of the bitter compound isocoumarin, which is concentrated in the peel—peeled carrots are not affected. Unless outside temperatures are very low or very high, ventilation is an inexpensive method of reducing ethylene levels. Ethylene can also be absorbed on commercially available potassium permanganate pellets.

--Written by Susan B. Scheufele, UMass Extension

NEWS

CORNELL COOPERATIVE EXTENSION SEEKING DOWNY MILDEW SAMPLES ON BRASSICAS

Late summer into fall is when conditions are most favorable for downy mildew to develop on brassica (cruciferous) crops. Meg McGrath from Cornell University is very interested in hearing if you are growing any of these crops and you see symptoms, especially on collards and arugula. Knowing about on farm occurrences will help in determining degree of host specialization in the pathogen causing DM on all the brassica crops. She'd also be interested to hear at season end if you don't see any symptoms of DM on your brassica crops to provide perspective for how widespread the disease occurs. **Samples are needed for research, so if you see DM and can make the time to collect and box up some leaves, she would love to receive them. Pre-paid label will be provided. Email mtm3@cornell.edu to report disease, and to get more information on shipping.** If you don't know what downy mildew in brassicas looks like, check out some photos at <https://blogs.cornell.edu/livepath/gallery/>.

NORTHEAST SUSTAINABLE AGRICULTURE RESEARCH AND EDUCATION (SARE) CALLING FOR 2023 FARMER GRANT PROPOSALS

The Call for 2023 Northeast SARE Farmer Grants is now available. Awards typically range from \$5,000 to \$30,000, depending upon a project's complexity and duration. Northeast SARE Farmer Grants provide the resources farmers need to explore new concepts in sustainable agriculture conducted through experiments, surveys, prototypes, on-farm demonstrations or other research and education techniques. Northeast SARE funds projects in a wide variety of topics, including marketing and business, crop production, raising livestock, aquaculture, social sustainability, climate-smart agriculture practices, urban and Indigenous agriculture and more. The Northeast region includes Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, West Virginia, Vermont, and Washington, D.C.

The online system for submitting proposals will open on Oct 1, 2022. Proposals are due no later than **5:00 p.m. EST on November 15, 2022**. An [informational webinar](#) featuring multiple Farmer Grant recipient Tommye Lou Rafees will take place at 12:00 p.m. on October 4, 2022.

- Learn more about Farmer Grants – northeast.sare.org/farmer
- View the full call for proposals – northeast.sare.org/farmergrantcall
- Register for the webinar – northeast.sare.org/farmergrantwebinar
- View previous SARE Projects – <https://projects.sare.org/search-projects/>

MDAR LAUNCHES LOCAL FOOD PURCHASE ASSISTANCE COOPERATIVE AGREEMENT PROGRAM (LFPA)

MDAR is soliciting proposals for projects that specifically address the goals of the USDA Local Food Purchase Assistance Cooperative Agreement Program (LFPA). The purpose of this program is to maintain and improve food and agricultural supply chain resiliency.

MDAR is seeking projects to purchase domestic food from local and regional producers, target purchases from Socially Disadvantaged farmers/producers, and distribute food to underserved communities. Preference will be given to applications that demonstrate how relationships and distribution channels will continue past the conclusion of this program. The suggested dollar value of projects is between \$50,000 and \$750,000 and this program does not have a Federal cost sharing or matching requirement. [Click here to watch an informational webinar about the program](#). You can also [check out an updated FAQ here](#), and [submit additional comments and questions via this form](#).

To apply: Applications are due by 2pm on September 16, 2022, and must be submitted to LFPAGrant@mass.gov

To learn more: [LFPA Program website](#)

To access the Request for Responses: [COMMBUYS - Bid Solicitation](#)

Questions? Applicants may submit questions regarding the RFR and application process. Please submit questions by email to: LFPAGrant@mass.gov.

MDAR NOW ACCEPTING APPLICATIONS FOR THE AG FOOD SAFETY IMPROVEMENT PROGRAM

The goal of the Ag Food Safety Improvement Program (AFSIP) is to support **produce and aquaculture** operations that are looking to upgrade their food safety practices that work towards minimizing the risk of microbial contamination and food-borne illnesses, meet regulatory requirements, and improve market access. AFSIP is a competitive, reimbursement grant program that funds 80% of total project costs up to \$50,000.

Applications are due by 4:00PM on Friday, September 30, 2022. Please refer to the AFSIP website for more information and a copy of the application: www.mass.gov/how-to/agricultural-food-safety-improvement-program-afsip

EVENTS

NEXT THURSDAY! TWILIGHT MEETING AT HARVEST FARM

When: Thursday, September 8, 2022 from 4-6 pm, followed by food and refreshments

Where: Harvest Farm, 125 Long Plain Rd., South Deerfield, MA 01373

Registration: [Click here to register.](#)

Harvest Farm in Whately/South Deerfield will host us for a twilight meeting on the cold chain--keeping produce cold from harvest to market. Chris Callahan from UVM Extension Ag Engineering will join us to talk through harvest strategies, pre-cooling techniques and equipment, and produce storage including cooler maintenance. We'll tour the farm's post-harvest facilities and see the vacuum cooler that Harvest Farm recently purchased with a MA Food Security Infrastructure Grant.

POLLINATOR HEALTH AND DIVERSITY IN THE GARDEN AT GROW FOOD NORTHAMPTON

When: Thursday, September 15, 2022 from 5:30-7:00pm

Where: Grow Food Northampton Community Garden, 140 Meadow St., Northampton MA.

Registration: \$10 per participant. Space is limited, registration required. [Click here to register.](#)

Join us for an interactive workshop about pollinator health and diversity in your garden with UMass Extension and the Western Massachusetts Master Gardeners. We will start with a tour of the Pollinator Garden managed by members of the Western Mass Master Gardener Association. UMass Extension Educator Hannah Whitehead will talk about native bee diversity, and demonstrate a common bee monitoring protocol. Participants will have a chance to practice this technique in different sections of the GFN Community Garden, and we will compare our findings. Space is limited, registration required. [For more info and to register, click here.](#)

POLLINATOR HABITAT WORKSHOP AT JUST ROOTS FARM

When: Thursday, September 22, 2022, 4:30-6:30pm, including food and refreshments

Where: Just Roots Farm, 34 Glenbrook Dr, Greenfield, MA 01301

Registration: Free! Please register in advance. [Click here to register.](#)

Come learn about the nuts and bolts of installing pollinator habitat on your farm, including where to find funding and who to contact for assistance. Includes presentations by Dan Pratt (Astarte Farm) and NRCS biologists Michelle Cozine and Rose Schwartz. Presentations will be followed by a Just Roots farm tour and meet-and-greet with local service providers. This event is co-hosted by UMass Extension, CISA, NOFA Mass, Greening Greenfield and Just Roots.

[See event flyer here for more information!](#)

MDAR'S AGRICULTURAL BUSINESS TRAINING PROGRAM – SPOTS STILL AVAILABLE FOR FALL COURSES

Exploring the Small Farm Dream Course

When: Wednesdays, October 5 to November 2, 2022, 6-9pm

Where: Western MA location TBD (tentatively MDAR West Springfield office)

Registration: \$100 for up to 2 participants per enterprise, as space allows. To be considered for the upcoming session, please complete the [brief course application](#) and email it to Jessica.Camp@mass.gov or mail a hard copy to: MDAR, Attn: Jessica Camp, 138 Memorial Ave, Suite 42, West Springfield, MA 01089.

[This 5-session course](#) provides guidance to aspiring farmers through the decision-making process of whether to start a farm business. Participants will learn about the many aspects of starting a farm business, assess their own skills and knowledge, and get help finding resources for support, including marketing, financing, and regulations. The Exploring the Small Farm Dream course utilizes the curriculum and workbook developed by the New England Small Farm Institute. Through four guided group sessions and a farmer panel session, participants will analyze the feasibility of their small farm dream and clarify their vision together with other class participants. This course is sponsored and financially supported by the Massachusetts Department of Agricultural Resources and is intended for new agricultural entrepreneurs intended to start their farm business in Massachusetts.

*Plans are for an in-person class with the location to be determined based on interest from those who submit an application and are added to the waiting list. For more information (including a more detailed course description), see the ABTP [program webpage](#) or contact Jess Camp at 617-823-0871.

Growing Your Farm Business Planning Course

When: Tuesdays, October 11 – November 29, 2022, 5:30-8:30pm

Where: MDAR Southborough office, 225 Turnpike Rd, Southborough, MA 01772

Registration: \$150 per farm. If interested, please complete the brief [course application](#) and email it to Diego.Irizarry-Gerould@mass.gov or mail a hard copy to: MDAR, Attn: Diego Irizarry-Gerould, 138 Memorial Ave, Suite 42, West Springfield, MA 01089.

A hands-on course to help established farmers develop a business plan and financial projections for their farm business. This course covers topics including resource assessment, marketing strategy, financial management, risk management, quality of life, and goal setting. The course is taught by a professional business planner with years of experience working with Massachusetts farms and guest speakers on topics such as succession planning and online marketing. Enrollment is open to farmers who have been operating a farm business in Massachusetts for at least the two prior years. Eight weekly classes will be held on Tuesday evenings starting October 11 and ending November 29. The course fee, subsidized by MDAR, is \$150 per farm.

The Growing Your Farm business planning course has been approved as a certified USDA Farm Service Agency (FSA) borrower training for financial management. For more information, or to access a Growing your Farm application to sign up for the upcoming session, please see the ABTP [program webpage](#) or contact Diego Irizarry-Gerould at 857-248-1671.

LET'S TALK GMOs: CREATING CONSISTENT COMMUNICATION MESSAGES – UCONN ONLINE COURSE

When: Available on-demand

Where: Online

Registration: \$49. [Click here to register.](#)

UConn Extension is offering an online course, *Let's Talk GMOs: Creating Consistent Communication Messages*. Participants are introduced to the basics of genetically modified organisms (GMOs). They will learn how to create consistent communication messages and manage dialogue processes about GMOs with various audiences. The asynchronous course is available on-demand; it has eight online modules with instructors from UConn. The fee is \$49. Learn more at s.uconn.edu/gmocourse

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