UMass Extension
Vegetable Notes
For Vegetable Farmers in Massachusetts since 1975

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In this issue:

The warm fall may be pushing spinach growth along for early fall harvest...

Crop conditions

Growers have told us that they've been surprised by how long and productive this fall season has been. With severe drought conditions through August, it seemed that many fall crops were doomed from the start. But rain in September came just in time and the prolonged warm weather gave fall roots, greens, and brassicas a second chance - and the bounty keeps on rolling in! This year we've also seen a lot of late (hail Mary!) cover crops going into the ground. As long as rye has some green growth, it can usually survive the winter and start growing again in spring. This week, the unseasonably warm weather finally broke and it's starting to feel like fall again. The first real hard frost hit most of the state Tuesday night and, as they do every year, folks scrambled to get crops harvested or covered after letting them grow as long as possible. Here is a factsheet on the cold hardiness of various vegetables, to help you prioritize which crops need to come in and which can tolerate some freezing. Storage crops have gone into coolers for winter sales, and winter markets and CSAs are preparing to start in time for Thanksgiving. With ongoing inflation and talk of recession, there's a lot of uncertainty about holiday produce sales this year, but folks are hopeful given the fall's unexpected bounty.

Keep an eye out for the 2022 Census of Agriculture this month. The census will be mailed in phases, starting with an invitation to respond online in November followed by paper questionnaires in December. Farm operations of all sizes, urban and rural, which produced and sold, or normally would have sold, $1,000 or more of agricultural product in 2022 are included in the ag census. Ag census results affect funding and resources available for our state, so please take the time to make sure your farm is counted! You can find more information (and sign up to be counted for the first time) here.

As the weather shifts, we are transitioning into meeting season - you'll see many educational opportunities in the "Events" section of this issue and throughout the winter. We're especially excited to see many of you in person December 13-15 at the New England Vegetable and Fruit Conference in Manchester, NH! Read more about the program and register here.

Pest alerts

As we mentioned last week, stay on the lookout for **spotted lanternfly,** which is a new pest in Massachusetts. You can report sightings using this reporting form. Reporters are asked to take photos and collect specimens if possible. Follow this link for Spotted Lanternfly ID information. UMass is hosting a webinar series on invasive insect pests, including spotted lanternfly, beginning January 2023--see the Events section of this issue for more information.

Spotted lanternfly at rest. Photo Mass NRC

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.

Alliums

Adult ALM oviposition marks on onion leaf. Photo: E. Grundberg

Allium leafminer is a relatively new pest in the Northeast and we're still learning about when and where it occurs. This week we got reports of active larvae tunneling within scallion leaves in Franklin County, MA. In MA, the fall flight of allium leafminer (ALM) is believed to start in mid-September, but can last anywhere from 5-7 weeks. Since we are seeing larvae now, it seems the fall flight ended in mid- to late-October. Host plants include all the alliums (onion, garlic, shallots, leeks, chives, green onions, etc.). ALM overwinters as pupae in plant tissue and surrounding soils, emerging the following year around March and into spring (4 to 5-week period) as adult flies. Larvae develop to the pupal stage during summer, but do not emerge until September for a 5 to 7-week flight due to summer estivation. If you see signs of ALM—either feeding/oviposition marks or, later on, tunneling maggots or small brown pupae between leaves—in your fall alliums please send us a photo at umassveg@umass.edu so that we can confirm and track this important new pest!

Chenopods

Different species of cutworms on spinach. Photo: G. Higgins

We've seen evidence of **cutworm** activity in our high tunnel winter spinach production trial. Small holes in the leaves, damage at the base of the spinach, as well as curled up larvae when soil is disturbed are signs that cutworms are having a field day. Different cutworm species are generally similar in appearance, with smooth, hairless bodies, but can range from brown to green to black in color. The larvae roll into a C-shape when disturbed and tunnel into the soil during the day, emerging at night to feed. **Variegated, winter,** and **black cutworms** can all affect winter spinach in New England. **Winter cutworm** is the dominant species we are seeing right now.

We are also seeing **black cutworms** and **armyworms** of different species, but we believe that **winter cutworm** will stick around throughout the whole winter season. It's not too important to figure out which exact species they are, since any insecticide labeled for caterpillar on spinach should work. **Armyworm**, like other caterpillars, can be controlled by *Bacillus thuringensis* subsp. *kurstaki* or *aizawai* (e.g. Dipel and Javelin or Xentari) or spinsoad (as Entrust for foliar spray or Seduce as soil bait). For conventional growers diamides could also be an option (e.g. Coragen or Exirel).

If you struggle with caterpillars in your winter tunnels, contact Anna Wallingford, State Specialist in Entomology & Integrated Pest Management at the University of New Hampshire Extension, at Anna.Wallingford@unh.edu.

Compost Analysis and Interpretation

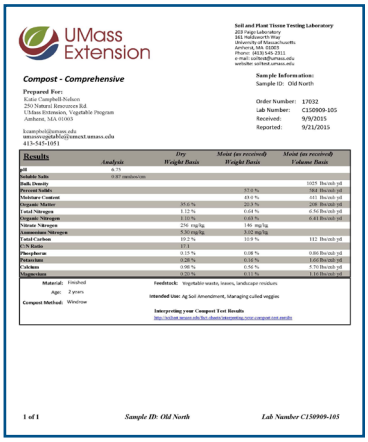
Compost users have many goals; sanitation (eg: kill pathogens, insect larvae, intestinal parasites, weed seed); bioremediation (eg: pesticides, petroleum contamination, sewage sludge); building soil organic matter, improving soil structure and moisture holding capacity, enhancing soil microbial activity, and/or fertilizing crops. These goals can be achieved when compost goes through the stages of decomposition and is properly cured, matured or finished. It can take anywhere from three months to a year or two to complete the composting process. Decomposition begins when sow bugs, dung beetles, millipedes, centipedes, beetles, mites, springtails, earthworms etc. start to break down larger pieces of organic debris. Bacteria and fungi then decompose the matter further. During the **mesophilic** (40-100°F) stage of decomposition, proteins, sugars, and starches are oxidized, the microbial population increases rapidly and the compost begins to heat up. The **thermophilic** (100-140°F) stage of decomposition is the most rapid, since this is the temperature where most heat-loving bacteria, such as the actinomycetes, are active and the most microbial activity in general occurs. One way to monitor your compost during the decomposition process is to smell it. If it smells like 'earth' that is a good sign that the actinomycete filamentous bacteria are producing geosmin (the fresh earth smell) as they die off. If the compost smells like sulfur, then the pile is likely too anaerobic and sulfur respiring bacteria are active. Finally, compost must cure and will be ready for use when it is about 86°F. Keep in mind that vermicomposting occurs at cooler temperatures as it is driven by worm activity. Studies have shown that a long period (30-50 days) is required to kill any human pathogens that may be present in the parent material of the compost.

Several regulations impact the way that compost is made and used. If producing compost for commercial use, the EPA definition requires that a compost **must stay at 104°F for 5 days and reach at least 131°F for 4 hours during that time.** The FSMA Produce Safety Rule Regulations state that animal-based composts must be similarly treated to kill pathogens. Regulations governing the heavy metal content of composts made from feedstocks have been promulgated at the state and federal levels as well. In 2014, Massachusetts placed a ban on the disposal of commercial organic wastes into landfills by businesses and institutions producing one ton or more of these materials per week. This month (November 2022), the ban threshold was lowered to those facilities generating more than **one-half ton** of these materials per week. Also, no leaves or yard waste are allowed in landfills. This regulation has increased the amount of municipal and institutional composts being produced and used across the state, especially in municipalities such as Worcester and Boston, which require soil for growing food crops to be built on top of existing soils due to frequent lead contamination. Massachusetts also requires that any farm that composts organic materials other than those that are generated on their own farms to register their operation with MDAR (310 CMR 16.00)—more information and registration form are available at the MDAR Agricultural Composting Program website. Finally, 330 CMR 31.00 Plant Nutrient Application Regulations, which went into effect December 2015, requires that all sources of plant nutrients applied, including composts, be recorded for all-sized operations and test results be kept as part of a nutrient management plan for farms growing on 10 acres or more at a time.

There are many agricultural, environmental, and regulatory reasons to get a compost analysis and interpret results for plant available nutrient content. Here's how it's done:

Compost Sampling for Analysis:

Take samples with a shovel or trowel from uniform parts of the pile. Take 10-15 subsamples total from the top, middle and core of the compost pile, mix together and submit 2 liters for analysis (approx. 1 gallon ziplock bag). Two liters are needed to determine bulk density. Submit the samples as soon as possible rather than drying them ahead of time. The samples should be less than 60% moisture when submitted (should not form a ball in your hand). If it has less than 40% moisture the compost may be too dry to finish curing; more than 80% moisture and it likely does not have enough oxygen to finish curing. The UMass Soil Testing Lab does not currently accept compost samples for analysis. Compost samples can be submitted to the UMaine Analytical Lab.


UMass Extension

Soil and Plant Tissue Testing Laboratory
Compost - Comprehensive

Sample Information:
Sample ID: Old North

Order Number: 17032
Lab Number: C150909-105
Received: 9/9/2015
Reported: 9/21/2015

Results	Analysis	Dry Weight Basis	Moist (as received) Weight Basis	Moist (as received) Volume Basis
pH	6.75			
Soluble Salts	0.87 mmhos/cm			
Bulk Density				1025 lbs/cub yd
Percent Solids			53.0 %	384 lbs/cub yd
Moisture Content			48.0 %	611 lbs/cub yd
Organic Matter		35.6 %	18.8 %	288 lbs/cub yd
Total Nitrogen		1.12 %	0.64 %	6.56 lbs/cub yd
Organic Nitrogen		1.10 %	0.58 %	6.41 lbs/cub yd
Nitrate Nitrogen		256 mg/kg	146 mg/kg	
Ammonium Nitrogen		5.50 mg/kg	3.05 mg/kg	
Total Carbon		19.2 %	10.9 %	112 lbs/cub yd
C:N Ratio		17.1		
Phosphorus		0.15 %	0.08 %	0.86 lbs/cub yd
Potassium		0.28 %	0.16 %	1.60 lbs/cub yd
Calcium		0.98 %	0.56 %	5.70 lbs/cub yd
Magnesium		0.20 %	0.11 %	1.14 lbs/cub yd

Material: Finished
Age: 2 years
Compost Method: Windrow

Feedstock: Vegetable waste, leaves, landscape residues.

Intended Use: Ag Soil Amendment, Managing culled veggies

Interpreting your Compost Test Results
http://soiltest.umass.edu/fact-sheets/interpreting-your-compost-test-results

1 of 1 | Sample ID: Old North | Lab Number C150909-105

Sample compost analysis.
Click for larger image

Calculating nutrient application rates from compost:

Refer to the compost test report on this page to follow along with the examples. Note that this sample report is from the UMass Lab, which is currently not accepting samples; reports from the UMaine lab should report the same kinds of information referred to below.

Mature Compost has approximately:

pH 7

Total N 1% Ammonia content <100mg/kg

C:N ratio 15-20:1

Soluble salt <3.5 mmhos/cm (<2mmhos/cm in greenhouses)

Maturity test: Place 2 liters of compost in a sealed container with a thermometer for 2-3days at room temperature. Mature compost should be

Useful Conversions:

Parts per million times 2 = lbs/acre

1 ton = 2,000 lbs

1 acre = 43,560 ft^2

Cubic yards of compost required to cover a specific area: _____ ft^2 x _____ inches of compost x 0.0031 = _____ yd^3

Example: 43,560 ft^2 x 1 inch of compost x 0.0031 = 135 yd^3 per acre

The compost test used in this article is from a vegetable farmer who manages his culled vegetables carefully to make compost; letting one pile cure for a year before use while making a new pile each year, so he always has 2 piles in production. They use yard waste from local landscaping companies who do not use herbicides and do not add any manure feedstock to their compost. Manure-based composts are also common and will typically have higher nutrient content (sometimes more P in particular) and higher pH of 7.5-8.

A) Volume method

1) Calculate cubic yards of compost applied per specific area (see useful conversions above)
2) Determine lbs nutrients applied per specific area:
   a. Compost application rate (yd^3/area) x nutrient content (lbs/yd^3)
   = lbs of nutrient/specific area
   b. **Example:** 135 yd^3/acre x 6.56 lbs N/yd^3 (from test) = 885.6 lbs Total N/acre

B) Weight method

1) Convert compost application rate from cubic yards to pounds:
   a. Compost application rate (yd^3/area) x compost bulk density (lbs/yd^3)
   = lbs of compost/specific area
   b. **Example:** 135 yd^3/acre x 1025 lbs/yd^3 (from test) = 138,375 lbs moist compost/acre
2) Determine compost application rate (per area) on a dry weight basis:
   a. Application rate (lbs/specific area) x dry solids content of compost (%)
   = lbs of dry compost applied
   b. **Example:** 138,375 lbs compost/acre x 0.57 = 78,873 lbs of dry compost applied
3) Determine nutrient application rate:
   a. Lbs of dry compost applied x percent nutrient on dry weight basis
   = lbs (total) of specific nutrient applied
   b. **Example:** 78,873 lbs dry compost x 0.0112 Total N (from test) = 883.4 lbs Total N/acre

Calculating Soluble Nitrate in compost.

Soluble Nitrate represents what is immediately plant available at the time of application, making compost a helpful 'starter fertilizer'.

1) Convert moist weight mg/kg to %: 146 mg NO_3/kg (from test) x 0.0001 = 0.0146 %

2) Calculate lbs NO_3 /yd^3 of compost: 0.0146% NO_3 x bulk density 1,025 lbs/yd^3 (from test) /100 = 0.15 lbs NO_3/ yd^3.

3) Calculate soluble nitrate available to your crop at the time of application: 0.15 lbs NO_3/yd^3 x 135 yd^3/acre = 20.25 lbs NO_3/acre

Calculating Plant Available Nitrogen (PAN) from compost:

In most New England soils, a common mineralization rate is 10-15% N made available to the crop in the first year following application. Each subsequent year, half the amount mineralized in the year prior will be available. For example:

First season: 10% (885.6 lbs Total N/acre x 0.1) = 88.56 lbs PAN

Second season: 5% (885.6 lbs Total N/acre x 0.05) = 44.28 lbs PAN

Third season: 2.5% (885.6 lbs Total N/acre x 0.025) =22.14 lbs PAN

If applying compost annually, don't forget to account for the nitrogen being made available from the prior year's application!

Calculating Plant Available Phosphorus from compost:

See nutrient removal rates from soil for vegetable crops in the New England Vegetable Management Guide and you will notice that vegetable crops remove less P than is recommended for applications as a fertilizer. For example, broccoli removes approximately 10 lbs/acre of P from the soil while the recommended fertilizer application for soil with "optimum" P levels is 50lbs/acre for that crop. This is because in the first season following application, only 15-20% P is available; the rest precipitates as sparingly soluble iron, aluminum and calcium phosphates when incorporated into the soil. Once these binding sites are full, phosphorus will leach or run off. It is easy to over-apply phosphorous while achieving the nitrogen demands for a given crop when using compost. One strategy to remedy this problem is to apply less compost by calculating crop P needs, then supplementing the crop with N only fertilizers to meet N needs. Topdressing compost also increases the risk of leaching because the compost needs to be incorporated with iron, aluminum, calcium or magnesium in order to form phosphates and remain fixed in soil rather than in soluble form. Applying P in starter fertilizer or to the crop root zones is the best management strategy for using P fertilizers. In the example below, a 135 yd^3/acre application rate of this compost would result in an excess of 66 lbs P (116 lbs P/acre – 50 lbs P/acre) applied for a broccoli crop.

Example: 135 yd/acre x 0.86 lbs P/yd^3 (from test) =116.1 lbs P/acre

116.1 lbs P/acre x 0.15 = 17.4 lbs P available

You may also choose to use the table below to estimate compost application rates for P management based on soil test results in the future. The compost example used for this article has 0.15% P and falls into the "Low" category in the table below.

Maximum Compost or Organic Amendment Application and total P_2O_5 per Soil Test Category and P_2O_5 Concentration[1]

	Soil Test Phosphorus Category				
Compost/organic amendment P_2O_5content	Very Low/Low Optimum		Optimum		Above Optimum
% P_2O_5 (dry wt.)	P_2O_5 (lbs/acre)	Compost (tons/acre)	P_2O_5 (lbs/acre)	Compost (tons/acre)	
Low (0.1 to 0.5%) 0.25%[2]	330	120	82	30	No application
Medium (0.5 to 1.5%) 1%	330	30	55	5	No application
High (1.5% to 3.0%) 2%	330	15	No application		No application

[1] Assumes moisture content of the compost or organic amendment of 45%.

[2] Percentage used to calculate amounts of P2O5 applied for various rates of compost applications.

Resources:

- Field Guide to Compost Use, 2001: http://www.mncompostingcouncil.org/uploads/1/5/6/0/15602762/fgcu.pdf
- US Composting Council: http://compostingcouncil.org/tmecc/
- UMaine Analytical Lab and Maine Soil Testing Service
- New England Vegetable Management Guide - Compost

-- Written by K. Campbell-Nelson (formerly of UMass Extension) with special thanks to Bill Obear of Bear Path Farm Compost (www.bearpathfarm.com) and Iken Marjo of Greenfield, MA Water and Sewage for reviewing.

PREPARING YOUR PESTICIDE SHED FOR WINTER

It's been a warm fall but freezing temperatures are finally in the forecast. Just like all of your storage crops that require the right conditions to make it through an unpredictable Massachusetts winter, pesticides also need to be kept out of the cold. Now is a good time to make sure that unused pesticides are either stored or disposed of properly.

Ideally, you will have purchased only enough pesticides to get you through a single season. These products can degrade over time, as can their containers, especially under extreme temperatures. The safest way to dispose of these chemicals is to use them up, applying them to their intended targets according to the label's instructions. If you find that you're routinely storing pesticides over multiple growing seasons, talk to your dealer about special ordering smaller sized containers, or work with other growers in your community to share a larger container—be sure all parties are certified applicators if using restricted-use products. However, if you do need to store pesticides through the winter, proper storage will help them to be usable into the following season.

The first step is taking an inventory of your pesticide shed. This will help you with making purchasing decisions for next season, and would be very useful in the event that there is a spill, fire, or other emergency.

- **Record what you have and in what quantities,** as well as purchase or delivery dates to be sure you know how old your materials are. The average shelf life of many of these products is two years. Write purchase dates on containers with waterproof ink.
- **Read the label for special storage instructions.** Also be sure that the label and all of the use instructions are in good condition and are legible. Labels may be updated over time to reflect current research, such as the product's environmental or pollinator precautions. New, current labels can be obtained from your pesticide dealer, or can be found on-line at manufacturer's websites or the Crop Data Management Systems searchable database.
- **Make sure that all the products you have on your farm are registered by the EPA**, and in Massachusetts, by the Massachusetts Department of Agricultural Resources (MDAR). State registrations are typically renewed on an annual basis. Remember, it is illegal to use or store any pesticide that is not currently registered in the state. Besides, if there is a chance that a pesticide that you already have is not registered, there's also a good chance that it's no longer effective, and may even be hazardous. Verify again before using any stored product that its registration status has not changed. Materials that are not registered are immediately reclassified as waste, and paying to get rid of waste can be more expensive than purchasing the product in the first place!

You can check the registration status of a product or active ingredient with these searchable databases. Below are the links for Massachusetts:

- National Pesticide Information Retrieval System (NPIRS)
- Pesticide Product Registration Information at Kelly Solutions

Avoid temperature extremes and excess humidity. Pesticides should be stored between 40° and 80°F in a lockable room or cabinet that is clearly marked for pesticide storage, on plastic or metal shelves; wood is not ideal as it will absorb spills.

- **Liquid formulations** should be stored inside of metal or plastic bins in case their original containers break or corrode. Liquids should never be stored above powders as they may leak and cross-contaminate these products. Allowing liquid pesticides to freeze can result in separation or inactivation of the ingredients. This guide to Cold Weather Storage and Handling of Liquid Pesticides from Montana State University provides a chart of many common pesticides and

their tolerances for freezing/thawing, as well as how to handle frozen products to maximize their efficacy.

- **Powders, dusts, and granules** must be kept dry. Excess humidity will cause wettable powders to harden and prevent them from properly going into suspension. If a dry product may be damaged by moisture, a quick way to check if it will go into suspension is by adding a small sample to water in a mason jar at the same rate that you would apply it in the field, capping it tightly, and shaking it. You will be able to see if it is able to dissolve. If it won't dissolve in the jar, it won't dissolve in a tank mix either, and you would end up spraying weak or inconsistent concentrations on your crops.
- **Herbicides**, especially hormone-like weed killers such as 2,4-D, should not be stored with other pesticides (primarily insecticides and fungicides) as they can volatize and be absorbed by other pesticides.

After freezing, place pesticides in warm storage (50º-80º F). Shake or roll container every few hours to mix product or eliminate layering. If layering persists or if all crystals do not completely dissolve, do not use product. If in doubt, call the manufacturer.

Look for these signs of product deterioration before using pesticides after they've been stored:

Formulation	Signs of Deterioration
Emulsifiable concentrates (EC)	Evidence of separation of components such as sludge or sediment. Milky appearance does not occur when water is added.
Oils	Milky appearance does not occur when water is added.
Wettable powders/suspendable powders (WP, SP)	Excessive lumping; powder does not suspend in water.
Dust (D), Granular (G)	Milky appearance does not occur when water is added.

Make arrangements to dispose of unwanted or unusable pesticides. Currently Massachusetts does not have an active statewide pesticide disposal (or Clean Sweep) program. It may be necessary to contract a licensed hazardous waste facility to dispose of unregistered or otherwise unusable pesticides. See here for a list of MassDEP licensed hazardous waste facilities.

Additional Resources

- New England Vegetable Management Guide – Pesticide Safety and Use
- Massachusetts Department of Agricultural Resources (MDAR) – Pesticide Storage and Disposal

--Written by Lisa McKeag, UMass Vegetable Program

UPDATES TO CROP INSURANCE PLANS BROADEN ACCESS FOR SPECIALTY CROP, ORGANIC, DIRECT MARKET AND OTHER PRODUCERS

--USDA Risk Management Agency News Release, Contact: FPAC Press Desk, FPAC.BC.Press@usda.gov

WASHINGTON, Aug. 31, 2022 - The U.S. Department of Agriculture (USDA) is improving two of its most comprehensive risk management safety net programs, Whole-Farm Revenue Protection (WFRP) and Micro Farm, making them more accessible to America's agricultural producers. This includes doubling the maximum insurable revenue under WFRP, now $17 million, more than tripling the size of farm operations eligible for Micro Farm, now $350,000 and reducing paperwork requirements for WFRP. These improvements are in direct response to feedback from stakeholders as USDA's Risk Management Agency (RMA) recognizes the important role these insurance options play for many producers, including specialty crop, organic and direct market producers.

Listening to farmers and ranchers, learning about their needs and increasing access to resources are all priorities for us at RMA," said RMA Administrator Marcia Bunger. "Over the past year and a half, we have rolled out a number of improvements to WFRP, as well as introduced the new Micro Farm program, and through updates to Whole Farm Revenue Protection and Micro Farm, RMA can now help even more local food, direct market, specialty crop and organic producers protect their operations.

Whole-Farm Revenue Protection

The WFRP program provides protection for all eligible commodities on a farm under one insurance policy. Now, producers can insure up to $17 million in revenue (formerly $8.5 million).

Other updates to WFRP include:

- Allowing a producer to report and self-certify yield at the beginning of the year for commodities without other insurance options in a way similar to those with individual crop policies. This will significantly reduce the amount of paperwork required to apply for WFRP.
- Eliminating expense reporting to reduce paperwork burden. In place of expense reporting, WFRP will reduce the expected revenue of commodities a producer is unable to plant to 60%, similar to prevented planting for other programs.

These updates build on others recently made to WFRP, including expanded coverage and flexibilities for organic producers.

Micro Farm

The Micro Farm program, offered through WFRP, provides a risk management safety net for all eligible commodities on a farm under one insurance policy, but on a smaller scale. Now, producers with farm operations up to $350,000 in approved revenue (formerly $100,000) can get coverage. RMA introduced the new Micro Farm program in 2021 to better serve direct market and small-scale producers. While the program is well received and feedback has been largely positive, industry partners and small, diversified producers have informed RMA that the current limit is too low to meet the needs of many interested producers. In response, the FCIC approved the increase in size for eligible farm operations.

The updates to WFRP and Micro Farm take effect in crop year 2023.

More Information

Crop insurance is sold and delivered solely through private crop insurance agents. A list of crop insurance agents is available at all USDA Service Centers and online at the RMA Agent Locator. Learn more about crop insurance and the modern farm safety net at rma.usda.gov.

USDA touches the lives of all Americans each day in so many positive ways. Under the Biden-Harris administration, USDA is transforming America's food system with a greater focus on more resilient local and regional food production, fairer markets for all producers, ensuring access to safe, healthy and nutritious food in all communities, building new markets and streams of income for farmers and producers using climate smart food and forestry practices, making historic investments in infrastructure and clean energy capabilities in rural America, and committing to equity across the Department by removing systemic barriers and building a workforce more representative of America. To learn more, visit usda.gov.

USDA is an equal opportunity provider, employer, and lender.

News

Northeast Sustainable Agriculture Research and Education 2023 Farmer Grant Proposals Due

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.

- 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/

Pesticide License Renewal Time

Please be reminded that Massachusetts Pesticide Licenses expire each calendar year. MDAR uses the publicly accessible online system known as the EEA ePLACE Portal and no longer sends the hardcopy renewal forms via U.S. Mail. Please renew your license online using this system. You should have received an email reminder on Sunday, October 2nd asking you to renew your pesticide license. If you have not done so, please visit the EEA ePLACE Portal, log into your account, and complete your renewal. If you forgot your password or security questions or otherwise need help logging into your account, please contact the ePLACE Help Desk at (844) 733-7522. If you have questions or issues renewing your pesticide license, please send email to pestexamlicense@mass.gov. You may also leave a voice message at on the Pesticide Examination and License Hotline at (508) 281-6787.

New pesticide license applicants will need to create an EEA ePLACE Portal Account and register for their exam. Creating an account in the Portal is a simple process. Each account is specific to the individual applicant. While companies may sponsor their employees, they CANNOT create a company account on behalf of their employees. Follow the instructions in this presentation to register. Please visit MDAR's Examination and Licensing website to find helpful step-by-step guides and information for all your pesticide examination and licensing needs.

EEA ePLACE Portal - https://eplace.eea.mass.gov

Agricultural Composting Improvement Program

MDAR is now accepting applications for the Agricultural Composting Improvement Program. This grant program provides funding towards the purchase of equipment or projects designed to improve agricultural composting operations and facilitate the agricultural use of compost. The Request for Response (RFR) and application are both attached and a link to the COMMBUYS Bid Solicitation.

Applications MUST be sent electronically (via email) to Dorothy.Du@mass.gov. The deadline for response is November 30 at 4:00. Late applications will not be accepted.

Massachusetts Food Ventures Program Seeks Proposals

MDAR seeks proposals for funding projects that will advance the Massachusetts Food Ventures Program ("MFVP"), help to implement the objectives of the Massachusetts Local Food Action Plan and provide economic opportunities that promote job creation enterprises or new businesses. MDAR is seeking to award grants statewide, primarily in communities of low or moderate income, to individuals or entities with experience developing and supporting food businesses. Application deadline is 4:00 PM on Monday, December 5, 2022. For more information, click HERE.

Questions regarding the RFR, contact Rose.Arruda@mass.gov

*Awardees from Round 1 of this program, FY23, are not eligible. Direct link: COMMBUYS - Bid Solicitation BD-23-1002-1003-001-81243

UMass Extension 2023 Garden Calendar is Now Available!

Each month features an inspiring garden image, daily gardening tips for Northeast growing conditions, sunrise and sunset times, phases of the moon, and room for notes. Cost: $14.50, with special pricing available on order of 10 copies or more.

Click here for images in the calendar, details, and ordering info.

FREE Soilborne Disease Testing for High Tunnel Vegetable Growers

If you grow high tunnel veggies and have been experiencing disease issues or are wondering if there are soilborne pathogens present, here's an opportunity to find out for free! Samples are wanted for a multi-state USDA funded project on soilborne diseases occurring in high tunnel vegetable crops. Samples accepted through February 2023. Click here for instructions.

Questions? Contact Anna Testen (Plant Pathologist, USDA ARS) at Anna.Testen@usda.gov or 330-641-2862.

Seeking commercial farmers to trial advanced kiwiberry selections

The University of New Hampshire Kiwiberry Research and Breeding Program is now 10 years old, and we have nearly 20 advanced breeding lines ready for multi-locational testing. We're looking for 25 farmers across the northeast who are interested in participating in a grant-funded project that will support participatory evaluation of these potential new varieties, starting Spring 2023. If you are a current or aspiring kiwiberry producer, have an interest in new varieties, wish to receive more technical training, and have room for at least 12 vines, please complete this short questionnaire*.

To be eligible to participate, you must be a commercial producer, either with kiwiberries currently as one of your enterprises or as an enterprise you are interested in integrating into your system. Specific experience with kiwiberries is not required, as one of the goals of the program is to train farmers in their production. Participating growers will be compensated for their time.

If you would like to learn more about kiwiberry, a production guide developed by our program is available online at: http://www.noreastkiwiberries.com/

* Questionnaire link: https://unh.az1.qualtrics.com/jfe/form/SV_3aSbLzVNjJ1R3Se

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/livegpath/gallery/.

Food Security Infrastructure Grant (FSIG) Program Experience Survey

The Joint Committee on Environment, Natural Resources and Agriculture is conducting an online survey in order to increase their understanding of the impact of the Food Security Infrastructure Grant (FSIG) and identify areas for program improvement.

Since the program's inception, the Legislature has appropriated $100,570,000 in funds for its operation. Throughout two application rounds since June 2020, the FSIG program has awarded over $62 million to over 500 applicants from nearly every municipality in the Commonwealth. Your responses will help us assess the program.

All information collected will confidential and individual answers will not be linked with any name in any reports. Participation is voluntary. If there's a question you would rather not answer, please skip it and move on to the next question.

COMPLETE THE SURVEY HERE -- This survey will close end of day Friday, December 16, 2022.

Questions:
Shannon Emmett, Research Director, Joint Committee on Environment, Natural Resources & Agriculture
State House Room 473F | Boston, MA 02133
shannon.emmett@mahouse.gov (O): 617-722-2210

Events

Fall 2022 Virtual Greenhouse Education Program

When: Thursday, November 17, 2022, 8:30 AM – 12:00 PM

Where: Online

Registration: Click here to register

Join the UMass Extension Floriculture team online on November 17, 2022 for this virtual education program that will feature presentations on greenhouse sanitation, PGRs, and control of insects and mites. Click here for complete info and registration instructions. Gracious support from the Massachusetts Flower Growers Association has reduced participation fees for this event as a benefit to the industry. Sign up today to get a head start on preparations for the 2023 growing season!

Topics include greenhouse sanitation, PGRs (knowing the tools & how to use them effectively), best management practices for greenhouse insect and mite control. *Three (3) pesticide credits in Massachusetts categories 26, 29, 31 and 000 (Licensed Applicator) have been approved for this program. Credits are valid for equivalent categories in all New England states.*

Questions? Contact Geoffrey Njue at gnjue@umass.edu or 617-243-1932.

Massachusetts Food Policy Council Meeting

When: November 17, 10am-noon

Where: Room 428 , MA State House, 24 Beacon St, Boston or REMOTE

Details here

New England Vegetable and Fruit Conference 2022 - Registration open!

When: December 13, 14 & 15, 2022

Where: DoubleTree Hotel and Conference Center, 700 Elm Street, Manchester, New Hampshire

The New England Vegetable & Fruit Conference Steering Committee is excited to announce that the conference will return **in person** this December! The NEVF Conference includes more than 25 educational sessions over three days, covering major vegetable, berry and tree fruit crops as well as various special topics. A Farmer to Farmer meeting after each morning and afternoon session will bring speakers and farmers together for informal, in-depth discussion on certain issues.

For more information on session, accomodations, and registration: https://newenglandvfc.org/

2022-2023 Update on Honey Bee Health in the Commonwealth

Join MDAR's Crop and Pest Services (CPS) Division, Apiary and Forest Pest Education and Outreach Team, to get an update on honey bee health in the Commonwealth. Each event will include 1-2 presentations consisting of 90 minutes of content and 30 minutes of Q&A for attendees. Presentations will cover information and data focused on regulations, honey bee health, beekeeping practices and invasive pests. Events will be held virtually via Zoom on Tuesdays from 7pm-9pm and are free and open to the public.

- December 6, 2022 - State of the State: Annual Review of the Apiary Program Activities and Inspection Data
- December 13, 2022 - Dive Into Disease: Summary of the Molecular Analysis of Bee Samples
- March 7, 2023 - MA Beekeeping Laws and Regulations – Including the NEW Regulations, and Spring Into Beekeeping
- March 14, 2023 - Massachusetts Bee Aware Annual Honey Bee Health Survey, and USDA-APHIS Annual Honey Bee Health Survey
- March 21, 2023 - Spotted Lanternfly, and Northern Giant Hornet (formerly know as Asian Giant Hornet)

Pre-Register for the Zoom Webinar and a link will be automatically sent for the presentations.

Growing Your Farm Business Planning Course

When: January 17th – March 14th, 2023 - Tuesday evenings 5:30 – 8:30pm

Where: MDAR office in Southborough, MA

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 in person in Southborough on Tuesday evenings starting January 17th and ending March 14th, (no class February 21st). 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.

If interested, please complete the brief Growing Your Farm 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. For more information, see ABTP program webpage or contact Diego Irizarry-Gerould at 857-248-1671.

Exploring the Small Farm Dream Course

When: January 12 – February 9, 2023 - Thursday evenings 6:00pm – 9:00pm

Where: MDAR office in Southborough, MA

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 course utilizes the Exploring the Small Farm Dream 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 planning to start their farm business in Massachusetts. The course fee is $100 for up to two participants per enterprise, as space allows.

If interested, please complete the brief application found here: Exploring the Small Farm Dream 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. For more information, see ABTP program webpage or contact Jess Camp at 617-823-0871.

Applications for these winter courses will be accepted until December 2, or until each course is full. *Applications are accepted on a rolling basis, with course session locations selected based on interest from those on the waitlist. If you are interested, but unable to attend the current session, please consider submitting an application in order to be placed on the waitlist for an upcoming session.

UMass Extension's Invasive Insect Webinar Series 2023

When: Wednesdays from 9:00am-11:45pm: January 25, February 8 and February 22

Where: Online

Registration: Free! Please register in advance for each workshop. To register and find more information about individual sessions and pesticide credits, click HERE.

Join UMass Extension's Landscape, Nursery, and Urban Forestry Program and UMass Extension's Fruit Program presents for this series of FREE webinars focusing on the impact, monitoring, and management of invasive insects in Massachusetts and the nation! Topics to include spotted lanternfly updates, management, and entomopathogens; forest pest risk re. climate change; the beech leaf disease nematode; and invasive forest insects. Please note: while participants from anywhere are invited to attend, much of the material presented will be specific to Massachusetts and New

England.

Ag Day at the State House Set for April 12, 2023!

Agriculture Day at the State House will take place on Wednesday, April 12, 2023 from 10AM to 2PM. MDAR is excited to have the opportunity for farmers and growers to return to Beacon Hill to meet with lawmakers to promote and discuss all the issues impacting the agricultural industry in Massachusetts. Thanks to those who have already replied expressing interest in serving on the planning committee. If you would like to be involved in the planning of Ag Day, please email Phu Mai at Phu.Mai@mass.gov with your contact information and agricultural affiliation. MDAR hopes to convene a meeting of the committee sometime this month before Thanksgiving. As one of the marquee days of the year at the State House, MDAR is looking forward to working with stakeholder groups to make Ag Day 2023 one to remember!

THANK YOU TO OUR 2022 SPONSORS!

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Vegetable Notes. Genevieve Higgins, Lisa McKeag, Susan Scheufele, Hannah Whitehead, Maggie Ng co-editors. All photos in this publication are credited to the UMass Extension Vegetable Program unless otherwise noted.