



UMass  
Extension

# Vegetable Notes

For Vegetable Farmers in Massachusetts since 1975



Volume 32, Number 8

May 7, 2020

## **IN THIS ISSUE:**

- Crop Conditions
- Pest Alerts
- Drains for Produce Farms
- Calculating Fertilizer Applications
- News
- Events
- Sponsors



*Potatoes going into the ground at the UMass Student Farm this week. Photo: J. Dragon*

about one week for much of the rest of the state. Track progress of this pest using the NEWA Cabbage Maggot forecast here: <http://newa.cornell.edu/index.php?page=cabbage-magot>. Scout uncovered brassicas for tiny white eggs at the base of the plants, or use yellow sticky cards to monitor for adult flies. See the [New England Veg Mgmt Guide-Brassica insect section](#) for more details and conventional and OMRI-approved control recommendations.

**Flea beetles** are beginning to emerge now, and, if not already, will soon be munching on tender young brassicas wherever they are planted. Looking for some new ideas to try this year? Check out [this webinar](#) on flea beetle biology and

## **CROP CONDITIONS**

Sunny weather, finally, this week came just in time for some early season weed-killing and helped push crops along a bit. The prolonged gray and low temperatures this spring are slowing crop growth, and causing damping off and edema, issues that often occur when seeds and seedlings sit in cold, wet soils under gray skies. We also heard reports of scorching on tender foliage that was not prepared for the sudden sunlight last weekend. Low temps over the last few weeks may cause problems down the line for onions (bolting) and broccoli/cauliflower (buttoning), but only time will tell. Currently, cold nights have folks scrambling to get some early-planted crops covered. Corn plantings are going in under plastic and now in bare ground, tomatoes are filling in high tunnels, and potato planting has begun. Seedling sales are booming, but figuring out how to get plants (and other farm products) to ravenous customers is still the biggest challenge of the day. Farmers' markets are starting up, CSAs are planning for opening day, and farms are continuing to find innovative ways to market their produce and other farm products, but it is a huge challenge. This week MDAR announced guidance for opening pick-your-own operations in MA, and while it will be challenging to figure out how to invite customers on to the farm to pick, PYO growers are relieved that the state will allow these activities. See News below for the full guidance announcement.

## **PEST ALERTS**

Share your pest alerts with us! We have limited ability to do on-farm scouting at the moment, if you see something, even run-of-the-mill annual pests, let us know! Help us get the word out to your farmer neighbors by sending us pictures by email to [umassveg@umass.edu](mailto:umassveg@umass.edu). If we use your scouting info for publication in Veg Notes we will keep your farm name and location anonymous.

### **Brassicas**

**Cabbage root maggot** has reached peak flight (452 GDD base 40F) in some warmer parts of MA and is forecasted to get there within

management from the [Brassica Pest Collaborative](#).

[Leafminers](#) are being seen on brassica seedlings in the greenhouse. These leafminers are generalist species, different from the beet/spinach and allium leafminers, and do not usually become pests causing economic damage. Plants usually grow out of the damage once planted out in the field and they are controlled by natural enemies or move to wild hosts.

[Imported cabbageworm](#) butterflies are flying now, and possibly laying eggs. Scout for single, pale-yellow eggs standing on end on undersides of brassica leaves.

## Chenopods

[Beet leafminer](#) was reported a few weeks ago in Rhode Island, where it was found several weeks ahead of schedule in Swiss chard. Reports continue to come in from the south, so keep an eye out for leafminers affecting spinach, beets and Swiss chard. Scout for bright, white eggs laid in a row on the underside of leaves. Targeting eggs and hatching larvae is most effective, especially if using group 5 insecticides including the OMRI-approved product Entrust. Adding an adjuvant or petroleum oil to the tank mix can improve efficacy. For other control options see the [beet](#) and [spinach](#) insect sections of the New England Veg Management Guide. Control options vary by crop.



Cabbage root maggot eggs at the base of a brassica transplant. Photo: UMass Vegetable Program



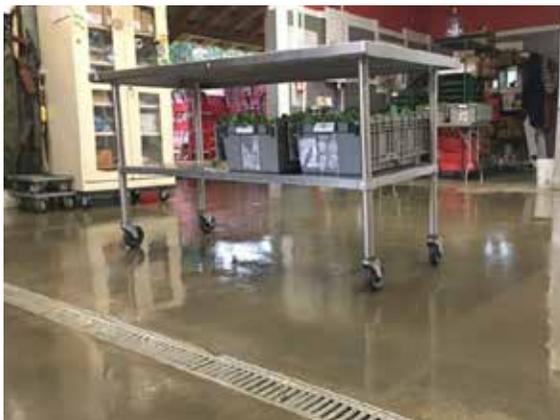
Beet leafminer eggs. Photo: K. Campbell-Nelson

## **D**RAINS FOR PRODUCE FARMS

--Written by Chris Callahan and Andrew Chamberlin, University of Vermont Extension Ag Engineering. Originally published on the UVM Ag Engineering Blog. [Click here to view the original article.](#)

### Introduction

Drains provide an intentional path for wash water and other effluent to leave the produce wash and pack area. This is an important element of [hygienic design](#) – designing spaces to be cleanable and avoiding cross contamination.



*A well-pitched floor and well-maintained trench drain provide for a cleanable wash/pack area on this farm. The area is hosed down daily or between major periods of different activity. More information about floors can be found in our guide, "[Floor Design for Vegetable Wash, Pack, and Storage Areas](#)".*

Water leaving [sinks](#), spray tables, wash lines, barrel or drum washers, dunk tanks, or dump tanks should be intentionally routed away from the area where produce is being handled to avoid potential cross-contamination. This is what drains are meant to do, but there are some details in their design, installation, and use that should be considered to make sure they work as intended.

The first detail to be considered is which type or types of drain to use.

### TYPES OF DRAINS

#### Direct Drains

Direct drains are common when sinks and tanks are used. These drains are often fabricated with hard plumbed piping but can also be made of flexible hose. Typically, direct drains are connected directly to an outlet of a sink, tank or catch pan under a wash line and provide drainage directly to an outlet such as a septic tank, catch basin or vegetative swale. A hand valve is often installed close to the outlet drain of the vessel to

open or close the drain to either allow or prevent flow. Direct drains are well suited to lower flow rates and cleaner water with less debris. Plan on including clean out ports in your drain line.

**Air Break and Back-Flow Prevention:** An air break is often included in direct drains for two reasons. First, an air break can mitigate the impact of back-flow resulting from an obstruction downstream. In the case of an obstruction or clogged drain resulting in a backup, the overflow will occur at the air break preventing contact of the effluent with the tank or other vessel above or upstream of the air break. Secondly, maintenance, cleaning, and inspection is eased when an air break is included. More information on backflow prevention, air breaks, and check valves is provided in the guide sheet, "[Backflow Prevention for Produce Farms](#)."



*This sink uses a direct drain with “broken drain” or “air break” to prevent back flow from a clogged drain from coming up into the produce sink. More information is available in the guide sheet “[Backflow Prevention for Produce Farms](#)”.*

### Spot or Floor Drains

Spot or Floor Drains are individual drains set in a poured concrete [floor](#). What is seen once the floor is poured is just a circular opening which may be covered with a coarse grate or cap. The drain piping is embedded in the floor or run below the subfloor in a wood-framed construction. A general rule of thumb for determining the number of spot or floor drains is to provide one drain for every 600 square feet of floor area. But, also consider the specific planned use of the space and where equipment, tanks, and sinks may be located. If they are all pushed toward the perimeter of the building, it may make sense to have more drains there to provide for dedicated draining and equipment layout flexibility.

Spot drains are generally used when the outlet water flow is limited to a single area and of moderate volume. These drains can typically accommodate some sediment and small pieces of debris. But, it is still important to plan on cleanout ports in the drain.



*This floor drain is approximately 12” in diameter and serves as a sump or floor sink. It has a larger volume below the grate to serve as catchment for high instantaneous flows of water when the space is hosed down.*

### Trench Drains

A trench drain is a high volume floor drain option that is flush with the floor surface at the top of the drain. They are also sometimes called linear, channel, or gutter drains. Seen from the side, they generally have a “U” shaped cross-section which deepens toward the outlet allowing the top to stay level with the floor while also providing a slope in the drain to carry wastewater away.

**There are two approaches to building a trench drain:**

- **Preformed Plastic** – A preformed plastic drain can be installed prior to the pouring of concrete. These are about the same size as a rain gutter (3-6” wide) and are topped with a durable plastic top grating. These work well for garage applications, but may clog easily in vegetable wash/pack areas and can be difficult to clean since they are narrow.
- **Formed Concrete** – A trench is formed as part of the initial pour of a concrete floor. Forming and pouring a custom trench allows the width to be selected based on how you plan to clean it out. If you plan to use a shovel for removing collected sediment, make sure



**Rule of thumb:** 1 spot drain for every 600 square feet of floor area.



**Rule of thumb:** Slope floors and trench drain bottoms with ¼” per foot slope (2%) to promote drainage of water and settling of sediment.

the trench is wide enough to do this (i.e. typically 12" wide). Forms are used to deepen one section of the floor and provide the necessary pitch in the trench to promote drainage. These are similar to the gutters used in tie-stall dairy barns. A steel grate is placed on top of the trench providing a flush surface for walking, product movement, and vehicle movement. A construction drawing for this type of drain is provided on the last page of this document.

**Trench Drain Outlets:** Plan for at least a 4" diameter vertical outlet with a female fitting set flush with the top of the poured concrete floor of the trench at the outlet. A simple 12"-24" length of 4" pipe can be inserted in the female fitting to result in a stand pipe when in use. This will prevent flow of sediment laden water directly out the drain. The more clear water at the top of the standpipe can flow out. The level of the outflow will depend on the height of the pipe insert. Sometimes a coarse grate or inlet screen is installed to prevent large pieces of debris from flowing out the drain. The standpipe can also be drilled to provide a coarse filtration.

There are several trench drain systems available on the market, including:

- [Zurn Linear Trench Drains](#)
- [NDS Drainage](#)
- [JR Smith Trench Drain System](#)

There are also distributors who can help you understand product availability and selection and probably some design work. [FW Webb](#) is a common plumbing supply distributor in New England and they distribute these systems as well.

A construction drawing you can use to build your own trench drain is provided on the next page and can be [downloaded as a PDF](#).

The next thing to consider is where the drained water will go.

## DISCHARGE:

Discharge of vegetable wash water is regulated differently in each state. Be sure to check with your local and state regulatory authorities to ensure your plan is appropriate. Consider the area around your wash and pack shed and think about where it would be appropriate to discharge wash water. Direct discharge away from food crop production areas, avoid areas with regular crew or vehicle traffic, and do not discharge directly into any bodies of water

Finally, consider your maintenance, cleaning and inspection plan.

## MAINTENANCE, CLEANING, & INSPECTION

Floor drainage, with proper pitch can be mostly maintenance free, however some cleaning, and inspection is required especially with a heavy soil load.

Note the rate at which your drains empty. If you start to notice a slow drain or abnormal gurgling it may indicate a partially clogged drain. Addresses clogged drains early can prevent an untimely backflow. As noted above, consider including cleanout ports which will make the inevitable clogged drains easier to deal with.



*Top: A removable coarse grate on this trench drain helps keep larger debris out while allowing water to pass. Middle: This trench drain was designed with a wide opening to make shoveling sediment easier. The green standpipe raises the top level of the water during use, allowing sediment to settle out. The removable covering grate is shown at right. Below: Outlet details of a trench drain, showing the standpipe and cleanout drain.*

The steel grates on trench drains can be removed for cleaning the trench with a square shovel to remove the sediment and can then be hosed or and brushed out for cleaning. With minimal ventilation and some time, these drains can also be fully dried once cleaned, which is an added produce safety benefit.

When cleaning the drain, look for any wear that should be addressed. Cracks in the concrete should be repaired to prevent harborage.

**Acknowledgments:** Funding for this publication was made possible, in part, by the Food and Drug Administration through grant PAR-16-137 through the Vermont Agency of Agriculture Food and Markets via the Integrated Extension Educational Programming in Support of the VAAFM Produce Program Grant (#02200-FSMA-19-01). The views expressed in the publication do not necessarily reflect the official policies of the U.S. Department of Health and Human Services nor does any mention of trade names, commercial practices, or organizations imply endorsement by the United States Government or the State of Vermont.



*Regular cleaning of floors and drains is an important part of the produce farms' standard operating procedures. Be sure to include a sufficient period of time and ventilation to allow for complete drying.*

## **CALCULATING FERTILIZER APPLICATIONS**

It can feel overwhelming to determining the right amounts of fertilizer and other amendments to add for each of the many crops and fields on your farm. Every year we help growers new and seasoned to make these calculations and, if you follow these steps, we think you will agree that they do get easier! As we recommended in our [recent article on soil fertility](#), make the calculations first, determine what you should add in an “ideal” setting, and then figure out what you can realistically add, based on what is available and economical, to get close enough. Keep records on what you apply so that you can make educated changes to your applications if you see nutrient deficiencies in your crops. Here are the steps to follow, with details below:

1. Work from a soil test.
2. Find nutrient recommendations for your crop.
3. Calculate nitrogen credits.
  - Contributions from previous applications of organic amendments like compost and manure
  - Cover crop nitrogen contributions
  - Soil organic matter contributions
  - Contributions from sod plowdown
4. Choose your fertilizer.
5. Calculate fertilizer needed to meet N needs.
6. Calculate how much P and K that fertilizer will add.
7. Calculate how much additional fertilizer you need to reach your other nutrient needs.

**1. Work from a soil test.** A typical soil test will report macro- and micronutrient levels and soil pH. Some labs will automatically report soil organic matter (SOM) levels, and at other labs (including the UMass Soil Lab) you need to specifically request for SOM to be tested for. On UMass Soil Lab test results, in addition to reporting the soil nutrient level and optimum range of each nutrient in parts per million, macronutrient (phosphorous, potassium, calcium, and magnesium) levels are reported as *very low, low, optimum, or above optimum*. Because nitrogen is

so mobile and ephemeral in soils, nitrogen is not routinely tested for in soil tests, and instead, nitrogen applications are made solely based on crop need. To test plant available nitrate during the growing season, you can take a [pre-sidedress nitrate test](#).

## Results

Analysis	Value Found	Optimum Range	Analysis	Value Found	Optimum Range
Soil pH (1:1, H <sub>2</sub> O)	5.7		Cation Exch. Capacity, meq/100g	10.6	
Modified Morgan extractable, ppm			Exch. Acidity, meq/100g	4.0	
<i>Macronutrients</i>			<b>Base Saturation, %</b>		
Phosphorus (P)	8.5	4-14	Calcium Base Saturation	47	50-80
Potassium (K)	80	100-160	Magnesium Base Saturation	13	10-30
Calcium (Ca)	1002	1000-1500	Potassium Base Saturation	2	2.0-7.0
Magnesium (Mg)	163	50-120	Scoop Density, g/cc	1.03	
Sulfur (S)	14.8	>10	<b>Optional tests</b>		
<i>Micronutrients *</i>			Soil Organic Matter (LOI), %	4.4	
Boron (B)	0.0	0.1-0.5			
Manganese (Mn)	2.5	1.1-6.3			
Zinc (Zn)	2.0	1.0-7.6			
Copper (Cu)	1.0	0.3-0.6			
Iron (Fe)	3.0	2.7-9.4			
Aluminum (Al)	59	<75			
Lead (Pb)	0.9	<22			

\* Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.

## Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):	[Bar]		[Bar]	
Potassium (K):	[Bar]			
Calcium (Ca):	[Bar]			
Magnesium (Mg):	[Bar]		[Bar]	[Bar]

- Find nutrient recommendations for your crop.** If you indicated a crop on your soil test submission, you will receive nutrient application recommendations based on the crop need and the soil test results. For commercial vegetable growers, those recommendations will be in lbs/acre; for home gardeners, they will be lbs/1000 sq. ft. If you don't indicate a crop, you can easily look it up in the crop sections of the [New England Vegetable Management Guide](#). In this example, we'll make a fertilizer plan for broccoli, so the nutrient recommendations will be from the [Cabbage, Broccoli, Cauliflower, and other Brassica Crops section](#).

PLANT NUTRIENT RECOMMENDATION ACCORDING TO SOIL TEST RESULTS FOR CABBAGE, BROCCOLI, CAULIFLOWER, AND OTHER BRASSICA CROPS										
CABBAGE, BROCCOLI, CAULIFLOWER AND OTHER BRASSICA CROPS	NITROGEN (N)* LBS PER ACRE	PHOSPHORUS (P) LBS P <sub>2</sub> O <sub>5</sub> PER ACRE				POTASSIUM (K) LBS K <sub>2</sub> O PER ACRE				
		VERY LOW	LOW	OPTIMUM	ABOVE OPTIMUM	VERY LOW	LOW	OPTIMUM	ABOVE OPTIMUM	
Broadcast and Incorporate	100	150	100	50	0	175	125	50	0	
Sidedress 4 weeks after transplant	60*	0	0	0	0	0	0	0	0	
<b>TOTAL RECOMMENDED</b>	<b>160</b>	<b>150</b>	<b>100</b>	<b>50</b>	<b>0</b>	<b>175</b>	<b>125</b>	<b>50</b>	<b>0</b>	

\*CAULIFLOWER APPLY 30 LBS/A

For most crops these tables are split between up-front application (broadcast and incorporate) and sidedressing a certain number of weeks after seeding or transplanting. All of the P and K that a crop needs can be put down up front, before planting, as P and K will stay in the soil and remain available for when the crop needs them. Depending on the N source, N applications can be split between pre-plant and sidedressing. Inorganic forms of N (e.g. urea) will leach quickly from soil, so any N you put down pre-plant that your crop doesn't take up relatively quickly will leach out, along with the money you spent on it! Organic forms of N are released slowly by microbial activity throughout the season, so if you are using an organic form of N, you can apply all N up front, along with P and K.

Broccoli N recommendations are 100 lbs/A pre-plant and 60 lbs/A 4 weeks after transplant (circled in yellow). We'll do our calculations using Kreher's 5-4-3, which is an organic amendment that will release N slowly, so we will apply the full 160 lbs/A up front.

P and K recommendations are based on your soil test recommendations. In our example soil test, our P levels are optimum, so we should not add any P (circled in red). K levels are low, so we should add 50 lbs/A K (circled in blue).

3. **Calculate nitrogen credits.** Manure, compost, some cover crops, soil organic matter, and sod all contain N that can be credited towards your total N needs for the season. The recommendation entered at the top of Table 1 is the preplant nutrient recommendation from step 2, and the following paragraphs will explain how the credits are calculated:

**Manure and compost:** Like soil, manures and composts can be analyzed by a soil testing lab to determine the nutrient content, pH, C:N ratio, and other important characteristics. Compost and manure analysis is available through the [Penn State](#) and [UMaine](#) soil testing labs. If testing your organic amendment is not possible, approximations can be found in Table 2 at the end of this article.

Table 1. Nutrient credit calculations.			
Recommendation	N 160 lbs/A	P 50 lbs/A	K 125 lbs/A
<b>Credits</b>			
Manure	-	-	-
Compost	-	-	-
Cover crop	10	-	-
Soil organic matter	45	-	-
Sod	-	-	-
Total credits	55		
Nutrients needed	105	55	125
<i>Table developed by Becky Maden, UVM Extension</i>			

**Cover crops:** When a cover crop is tilled in, N is released and much of it will be available for your summer and fall crops. The maximum amount of N is released 4-6 weeks after incorporation. In the spring, the soil doesn't warm up fast enough for the microbes to release the N before the main crop needs it, so don't include N credits for early spring crops. Sod also contributes some N when it is plowed under to start production in a new field. Below is a table with some estimations of N contributions from certain cover crops. These numbers can vary widely, based on the cover crop stand and time of incorporation. If you're interested in learning more, the SARE publication [Managing Cover Crops Profitably](#) is a great resource.

**Soil organic matter:** Soil organic matter (SOM) contains nitrogen that becomes available for plant uptake slowly throughout the season as it is released through microbial activity. The general rule of thumb in MA is: **credit yourself 10-20 lbs/A of plant-available N per 1% SOM, capped at 4% or 40 lbs/A.** The amount of N released from SOM increases with soil temperature, so numbers may vary between New England states.

**Example credits:**

- Buckwheat cover crop: 10 lbs N/A
- Soil organic matter: Our example field has 4.4% SOM, but the SOM credit is maxed out at 4%. Also, knowing that this field is relatively slow to warm up in the spring, we won't credit ourselves at the full 20 lb/A rate.

$$4\% \text{ SOM} \times \frac{15 \text{ lbs/A nitrogen}}{1\% \text{ SOM}} = 45 \text{ lbs/A nitrogen}$$

Type of manure	Dry Matter	Total N	NH <sub>4</sub> -N	Organic N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
		----- lbs/1,000 gallons -----				
Dairy, liquid	<5%	12-16	4.9	7.3	4.8	15.1
Dairy, slurry	5%-10%	22.3	7.6	14.7	8.9	22.0
		----- lbs/ton -----				
Dairy, semi-solid	10%-20%	8.5	1.8	6.7	4.1	6.1
Dairy, solid	>20%	5-12	1.4	10.9	8.1	10.0
Beef (paved lot)	29%	14	5	9	9	13
Swine (hoop barn)	40%	26	6	20	15	18
Sheep	25%	23	n/a	n/a	8	20
Poultry, layer	41%	16-37	18	19	55	32
Poultry, broiler	69%	75	15	60	27	33
Horse	20%	12	n/a	n/a	5	9

Source: [New England Vegetable Management Guide](#)

Cover Crop	Lbs N per acre
Rye*	25
Oat, Leonard*	10
Hairy vetch, spring incorp.	40-70
Hairy vetch, mid-summer incorp.	90-200
Red clover, spring incorp.	40-70
Red clover, mid-summer incorp.	70-150
Alsike clover	90
Sweetclover	90-170
Sudangrass	25
Field Peas	90-150
Buckwheat	10
Berseem clover	75-220
Sod	20-40
*young rye/oats only. As rye matures, C:N ratio increases and the N release rate becomes neutral. Mature rye/oats can tie up N.	
<i>Compiled by Becky Maden, UVM Extension</i>	

4. **Choose your fertilizer.** This choice can be made based on many different factors, including:

- What fertilizer you already have on hand
- Price
- Application equipment (some materials are easier to spread with certain types of spreaders)
- Availability of materials from local distributors
- What materials meet your nutrient needs most closely

We'll use Krehers 5-4-3 for this example.

5. **Calculate how much fertilizer you need to apply to meet your pre-plant N needs.**

Need 105 lbs/A N (from table 1b above), fertilizer is 5% N:  $\frac{105 \text{ lbs/A nitrogen}}{0.05} = 2,100 \text{ lbs/A 5-4-3}$

6. **Calculate how much P and K that fertilizer will add.**

$$2,100 \text{ lbs/A of 5-4-3} \times 0.04 = 84 \text{ lbs P/A}$$

$$\times 0.03 = 63 \text{ lbs K/A}$$

Total P needed (from table 1b) = 50 lbs/A. Our application of 5-4-3 will apply 84 lbs/A of P, so we don't need to apply additional P.

Total K needed (from table 1b) = 125 lbs/A.

$$125 \text{ lbs/A} - 63 \text{ lbs/A} = 62 \text{ lbs/A K}$$

Our application of 5-4-3 will apply 63 lbs/A of K, so we need to put down an additional 62 lbs/A to reach our total K need.

7. **Calculate how much additional fertilizer you need to reach your other nutrient needs.**

We'll use potash (0-0-50) to meet our remaining K needs.

$$\frac{62 \text{ lbs/A K}}{0.5} = 124 \text{ lbs/A potash}$$

Now we have application rates for both of our fertilizers:

- 2,100 lbs/A Krehers 5-4-3
- 125 lbs/A potash

And you're ready to brew a big pot of coffee and do the same math for your remaining fields and crops!

--Written by G. Higgins, UMass Vegetable Program, with many thanks to Becky Maden, UVM Extension for her resources and input

## NEWS

### MDAR GUIDANCE FOR PICK-YOUR-OWN OPERATIONS

The MA Department of Agricultural Resources has released their guidance for pick-your-own (PYO) operations on how to open PYO operations in compliance with CDC guidelines for protecting consumer and worker safety. The complete guidance can be accessed here: <https://www.mass.gov/doc/mdar-bulletin-16-farm-pick-your-own-pyoagricultural-tourism-activities/download>

The guidance, briefly, includes the following recommendations:

- 6-foot social distance must be maintained while picking
- Personal safety recommendations from the CDC must be followed
- Farms are recommended to develop a PYO activity plan including locations of parking and picking areas, number of pickers allowed at a given time, and locations of hand wash stations
- Staff and customers must wear masks while working and picking
- Ag Tourism not related to direct harvest of crops is prohibited
- Prohibit sampling of produce and encourage pickers to minimize handling of produce
- Carts must be sanitized
- New single-use harvest containers must be used—re-usable bags and containers are prohibited
- New harvest containers must be stored under a plastic covering to prevent contamination
- There is NO need to disinfect produce, as there is no indication that COVID-19 is transmitted via food
- Increase frequency of routine sanitation and disinfection of surfaces including registration tables, sales areas, and other contact surfaces
- Handwashing stations must be made available for staff and customers
- Disposable gloves must be worn by staff at all times during PYO operations
- Communicate with customers as well as community partners such as local boards of health
- Plan for cancellations, be prepared in case you need to make changes to your activity plan

## 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](mailto:umassveg@umass.edu)

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

### UMass Extension services update:

As you are probably aware, operations at the University of Massachusetts Amherst have been significantly reduced in response to the COVID-19 pandemic. Currently, MA and University policy have the effect of temporarily suspending most of the on-campus services that we provide until further notice, including:

- Soil & Plant Nutrient Testing
- Plant Disease Diagnostics
- Hot Water Seed Treatment
- Nematode Analysis
- Weed, Insect, Turfgrass, and Invasive Plant Identification
- Public access to all farm properties

*Until further notice, please do not send or deliver samples to campus, as we cannot process them.*

In addition, all in-person UMass Extension events scheduled at least through May 15 have been canceled or postponed.

## MDAR COVID-19 IMPACT SURVEY

The Massachusetts Department of Agricultural Resources is conducting a survey to gain insights from the farming community on the impact of COVID-19 on Massachusetts agriculture. We understand that this is a busy time of year, and your participation is greatly appreciated. Your response will help the Commonwealth understand the effects of COVID-19 on the agricultural economy, and may result in future programs and funding to help serve your local community. Please rest assured that results will be aggregated, so individual responses will not be identifiable to protect your data. Please only respond once per farm operation. Thank you for your time! [www.surveymonkey.com/r/MDARCOVID19Survey](http://www.surveymonkey.com/r/MDARCOVID19Survey)

Estimated survey time: 5-10 minutes for 15 questions. Please respond by June 1<sup>st</sup>.

Questions, contact [Myron.Inglis@mass.gov](mailto:Myron.Inglis@mass.gov).

## EVENTS

### PHONE FORUM ON COVID-19 PICK-YOUR-OWN GUIDELINES

Co-Hosted by – MDAR, Massachusetts Farm Bureau and UMASS Extension

The Commonwealth recently released guidelines for operating Pick-Your-Own farms during COVID-19. They were developed by the Massachusetts Department of Agricultural Resources in conjunction with the Massachusetts Farm Bureau Federation and several members of the agricultural community. The guidelines can be found at <https://www.mass.gov/doc/mdar-bulletin-16-farm-pick-your-own-pyoagricultural-tourism-activities/download>.

The purpose of the call will be for MDAR staff to walk PYO operators through the document and provide further clarification on the guidance and best practices. There will also be time for questions and answers.

**When:** Monday, May 11, 1pm

#### How to join:

One tap mobile

+13017158592,,84022252608# US (New York)

+13126266799,,84022252608# US (Chicago)

Meeting ID: 840 2225 2608

### MINI-TWILIGHT MEETINGS FOR COMMERCIAL VEGETABLE GROWERS

**Join us** each Wednesday at 3pm for a virtual mini-Twilight Meeting! Each week we will have a topic lined up for demonstration and discussion, with a presentation of new information on crop, pest, and farm management topics followed by plenty of time for Q&A about the topic at hand, and farmer-to-farmer discussion of the issues of the week. Farmers can join by phone or by computer—those who join by computer will be able to see some shared photos and presentations. This is a new program that we hope will allow us to connect with growers while we are not able to physically visit farms for routine scouting and assistance. It is intended for our commercial farmers and will cover topics relevant to small and large scale farm businesses and [conventional and organic production systems](#).

**How to join:** [Click here to register and receive the sign-in information.](#)

#### Upcoming Topics:

- **May 13: Cleaning, Sanitizing, & Disinfecting on the Farm in the Era of COVID-19**  
[There are differences among cleaning, sanitizing, and disinfecting thta are important](#) to understand in developing new protocols for your farm during the pandemic and in general for routine sanitation. We will cover the basic principles behind these terms and discuss what we know (and don't know) so far about how to apply them on your farm this season.

#### Recordings of Past Calls:

- April 22: [Early-season pest scouting](#)

- April 29: [COVID-19 business relief programs and assistance](#)
- May 6: [Organic pest management](#)

### **GARDENING Q&A WITH MOFGA**

Starting a new garden this year? An experienced gardener with some questions? Either way, join us for a series of Q&A ZOOM calls with Maine Organic Farmers and Gardeners Assoc.'s Organic Crop Specialist, Caleb Goossen. Bring your questions as we kick off the growing season!

**Thursday, May 7 at 7pm:** [Click here to register for this session.](#)

## THANK YOU TO OUR SPONSORS!



**Become a sponsor!**

*Vegetable Notes. Genevieve Higgins, Lisa McKeag, Susan Scheufele, co-editors.*

*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.*