UMASS EXTENSION

Vegetable Notes

For Vegetable Farmers in Massachusetts

Volume 26, Number 10 June 19, 2014

In this issue:

Crop conditions

Summer arrived this week! Plants took note by engaging in a major growth spurt. Potatoes started flowering, tassels appeared in early corn, large fields of direct-seeded butternut popped up, garlic produced scapes, and field tomatoes needed first or second strings. Sweet potato transplants rapidly took hold. Strawberry harvest is in full swing, and asparagus is winding down. Early summer squash and zucchini has fruit - if not quite full grown, that moment will come shortly. Planting of long-season cucurbits continues, along with successions of sweet corn, greens, short-season cucurbits, and brassicas. Fall carrots will be going in over the next several weeks, and major fall brassica transplants have been started with Brussels sprouts already in the ground. Concerns about root maggots have declined, even though second flight has begun, since the soils have warmed up. So far, cumulative precipitation is running higher than the 30-yr average in western MA, though thankfully still lower than this time last year! Rain amounts are lower than average in SE MA and the Cape, though all regions received some rain in the past week according to the NASS New England report. As of Monday June 16, this year's cumulative degree days are running from 40 to 200 GDD (base 50) above the 30 year average at most locations in MA, and there is a similar trend across new England with the exception of some northern and coastal areas. This seems contrary to most farmers' sense that plantings and pests are all late, and may attest to our own rapid adaptation to changing averages with a new sense of what feels 'normal'. Our home-grown insects and diseases are moving through their paces, and we've seen how effective long-distance rotation can be in escaping from beetle pests such as striped cucumber, Colorado potato, and both eggplant and crucifer flea beetles. Not all farms have this option, but when they do it can be a remarkably effective tool. Pests that have moved in from other regions include potato leafhopper and basil downy mildew – watch potato and beans, and basil closely (see basil article, below). Mark your calendar for the first IPM field walk on July 2 (see events, below). Celebrate: once again we have made it to the delicious, longest day of the year. Even the hardest working farmer can take pleasure in the fact that daylight hours outlast the workday.

Scouting for onion thrips requires close inspection of inner foliage, and maybe a hand lens!

Pest alerts

European Corn Borer: The earliest corn has emerging tassels and now is the key time to scout for ECB & apply controls. First silk has been seen in warm areas; set out corn earworm traps when corn has first silk. For the ECB-ZI or 'Iowa' strain, flight peaks at 631 GDD at base 50 F. Most of our trapping sites have reached the peak moth flight according to degree day models. Scout emerging tassels and look for ECB caterpillars in the florets or in the stalk. Action threshold at pre-tassel to green tassel: If 15% or more of plants have one or more ECB caterpillars or show fresh feeding damage, a spray is needed. Scout and repeat if needed in five to seven days. A field in Litchfield, NH had 14% with ECB or damage, so now is certainly the time to scout. Many growers also show residual weed issues in early

planted corn due to rain events that have helped with weed establishment.

Potato Leafhopper: Numbers are at threshold on one farm in Hampshire County, MA but not in locations scouted in eastern MA, Saunderstown, RI or Burlington, VT. Threshold: 1 adult per sweep or 15 nymphs per 50 leaves in potato, or 1.5 adults or nymphs per leaf in eggplant.

Colorado Potato Beetle: Small, medium and even some large larvae have been seen in southern RI and western MA. Some locations are also observing lady beetle larvae and adults which feed on CPB eggs and small larvae. The CPB threshold (per plant if < 12" tall and per stalk if >12" tall) is 0.5 adult, 4 small larvae, or 1.5 large larvae. To determine need to spray with counts of both small and large larvae, assume 2.5 small larvae = 1 large. Small (1st two instars) take 120 GDD (base 52) from hatching to 3rd instar (='large') which = 5-6 days at avg. T of 75F (75-52=23 GDD per day). Potatoes are most susceptible to defoliation during bloom period: 10% will reduce yield.

Onion thrips continue to be seen on onions but not leeks in Saunderstown, RI, eastern and western MA. Populations are still under threshold. Scout fields often and treat if levels reach threshold of 1-3 thrips per leaf.

Brassica Flea Beetles continue to be a problem in most locations regionally with more damage seen on non-waxy greens such as pak choy, tatsoi, or arugula, but heavy damage on waxy Brussels sprouts and kale as well. One grower is reporting good results using a 'push-pull' strategy to protect the main (waxy) brassica seedlings by covering them with the repellent Surround WP and using pak choy as an attractive trap crop, which is sprayed as needed to protect that crop and kill beetles.

Late blight: Weather has been less favorable for late blight development this week, and the disease is still only being reported in FL. NEWA's late blight decision support system is recommending a longer (5-12 days depending on location and fungicide last sprayed) spray interval on susceptible varieties, while varieties with moderate resistance should be safe in most locations. To get spray recommendations tailored to your location in MA, check out the new MA Late Blight DSS website and track spread of disease across the country at usablight.org.

Early blight: In the absence of late blight, growers may use the "P-day" model based on temperatures since emergence (see Potato early blight) which recommends 300 P days for first fungicide application to control early blight. We are currently at 250-300 P days around the state for potatoes that emerged May 15. For tomatoes, use Tomcast to determine sprays for early blight, first fungicide is needed when 'disease severity values' reach 25 since tomatoes were planted. Even assuming a May 15 plant date, this threshold has not been reached in MA yet, with most sites below 20 DSV.

Basil downy mildew: has been detected in transplants being distributed through large chain stores across the US, including nearby in CT. Outbreaks have also been confirmed in greenhouses in Long Island, and New Jersey, and in grower fields in NJ. All basil crops should be inspected regularly. Fungicides can be used but must be applied preventatively. Please report suspected outbreaks and submit samples to Angela Madeiras, a plant pathologist at UMass researching this pathogen. Please provide all of the following information (Submitter name; Address; Date of sample collection; Host plant species (include cultivar if known); Origin of seed or seedlings, if known) and submit with your samples to: Angela Madeiras, Fernald Hall, UMass, 270 Stockbridge Road, Amherst, MA 01003. See article this issue for more info and recommendations.

Location	Total ECB reported*
CT River Valley, MA	
South Deerfield	28
Sunderland	22
Amherst	10
Hadley	10
Feeding Hills	5
Central & Eastern MA	
Spencer	7
Tyngsborough	3
Concord	1
Sharon	1*
Seekonk	3*
Rehoboth	15
NH	
Litchfield	66
Hollis	14
Mason	7

*Represent counts from ECB NY (E2) traps only.

Table 1. Accumulated Growing Degree Days, base 50°F (10°C): 1/1/14 – 6/19/14.

Location	GDD
Pittsfield	477.3
Ashfield	488.1
S. Deerfield	599.2
Belchertown	604.4
Harvard	590.1
Dracut	605.6
Boston	620.3
East Bridgewater	580.8
Sharon	608.5
Seekonk	625.1

PROTECTING HONEYBEES AND NATIVE POLLINATORS

Honeybees and native pollinators visit vegetable crops during flowering and pollen shed. In fruiting crops such as cucurbits, their activity is crucial to the success of the crop. In other crops such as sweet corn or potato, bees are among many beneficial insects who seek out pollen or nectar resources as a food source, but crop yield does not depend upon their activity. Populations of honeybees and native pollinators have declined worldwide in recent years. Current research on the honeybee and native pollinator decline point to a combination of causal factors such as parasites, disease, low genetic diversity, poor nutrition, loss of habitat, management stress and pesticide use. This article addresses the threat of pesticide use on pollinators and how to mitigate these risks. Pesticides applied to protect vegetable crops can affect pollinators through multiple routes of exposure: direct contact with sprays, contact with treated surfaces, pesticide-contaminated dust or pollen particles that are collected or adhere to the body of the insect (and may be taken back to hive), and ingestion of pesticide-contaminated nectar. Decisions made by the farmer make a difference in the exposure of honeybees, native pollinators and other beneficials to toxic levels of pesticides. While pesticides applied to crops are only one among many factors that threaten pollinators, this is one factor that growers can do something about. Taking precautions to minimize pesticide poisoning of pollinators in all crops is an important responsibility of all pesticide applicators.

Tips to Protect Pollinators from Pesticide Exposure[1]

Do not treat plants in bloom. If sprays are needed in crops that bloom over long periods, make applications late in the day or at night when pollinators are not foraging, so that there is sufficient drying time before foraging begins. Control weeds to keep pollinators from foraging near treated crops.

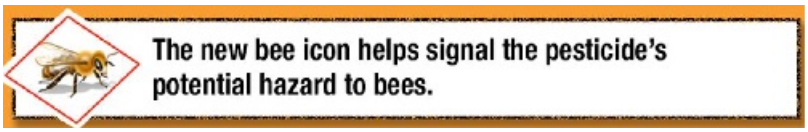
Consider drying time and temperatures. Some products are highly toxic when wet, but much less so after the pesticide is dried. Spinosyns have this characteristic. Apply when there will be adequate drying time (usually 2-3 hours, depending on weather conditions and crop canopy) before pollinator activity. Honey bees can become active and forage at temperatures as low as 55F. If temperatures following treatment are unusually low, residues on the crop may remain toxic to bees up to twenty times as long as following normal temperatures. Conversely, if abnormally high temperatures occur during late evening or early morning, bees may forage actively on the treated crops during these times. Stop spray applications when temperatures rise and bees begin foraging.

Avoid drift on non-target areas near the field where blooming plants may be located. Windspeed and application equipment both influence drift.

Use liquid rather than powdered formulations. Wettable powders, dusts and microencapsulated products have a greater toxic hazard than emulsifiable concentrates (or other liquid formulation with active ingredient in solution). Products that do not have acute toxicity but could cause injury to immature bees if carried back to the hive should not be applied in particulate form; this includes insect growth regulators.

Make use of some soil and seed applications which reduce exposure compared to foliar applications, unless plant uptake of the active ingredient produces residues in pollen or nectar. In the case of neonicotinoids, there is evidence that foraging bees may receive sublethal doses in pollen and nectar when cucurbit crops were treated with a systemic at early growth stages. This effect is reduced by using lower rates and applying as early as possible, but may not be entirely eliminated by these methods. A sublethal dose may make bees more vulnerable to other stressors, or may combine with doses from contact with other treated plant material.

Read the label for bee hazard rating. The U.S. EPA recently introduced a label change for insecticides that contain one or more of the neonicotinoids to protect bees. The bee icon (see below) will be placed in the Environmental Hazards section of the pesticide label.



Use the least toxic pesticide. See Table 26 in the New England Vegetable Management Guide for information on insecticide active ingredients and toxicity. EPA registration includes an acute, single-dose laboratory study designed to determine the quantity of pesticide that will cause 50% mortality (LD50) in a test population of bees. If a pesticide is used outdoors as a foliar application, and is toxic to pollinating insects, a "Bee Hazard" warning can be found in the Environmental Hazards section of the label. The EPA bee toxicity groupings and label statements are as follows:

High (H) Bee acute toxicity rating: LD50 = 2 micrograms/bee or less. The label has the following statement: "This product is highly toxic to bees and other pollinating insects exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees or other pollinating insects are visiting the treatment area." If the residues phrase is not present, this indicates that the pesticide does not show extended residual toxicity.

Moderate (M) Product contains any active ingredient(s) with acute LD50 of greater than 2 micrograms/bee, but less than 11 micrograms/bee. Statement: "This product is moderately toxic to bees and other pollinating insects exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product if bees or other pollinating insects are visiting the treatment area."

Low (L) All others. No bee or pollinating insect caution required.

In The New England Management Guide, the bee toxicity rating (H, M or L) is listed for each active ingredient in the Insect Management section for each crop.

Resources:

How to Reduce Bee Poisoning From Pesticides. 2006. Oregon State University. http://www.cdfa.ca.gov/files/pdf/ReduceBeePesticideEffects.pdf

Pesticide Environmental Stewardship – Pollinator Protection. www.pesticidestewardship.org/PollinatorProtection

Pesticide Task Force of the North American Pollinator Protection Campaign (NAPPC) www.Pollinator.org/nappc

Pollinator Protection - EPA Actions to Protect Pollinators. www.epa.gov/opp00001/ecosystem/pollinator/risk-mgmt.html

The Xerces Society for Invertebrate Conservation. http://www.xerces.org/pollinator-conservation/

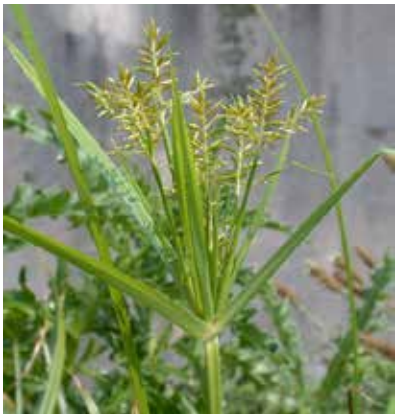
USDA Report on the National Stakeholder Conference on Honey Bee Health, National Honey Bee Health Stakeholder Conference Steering Committee. 2013. http://www.ars.usda.gov/news/docs.htm?docid=15572

[1]Tips to Protect Bees from Pesticide Poisoning adapted from 2014-2015 New England Vegetable Management Guide and 2014 Supplement, Core Training Manual, Pollinator Chapter by Dr. Patricia Vittum and Natalia Clifton, UMass Extension.

Disclaimer -The most reliable information was included that was available at the time this information was compiled. Due to constantly changing laws and regulations, UMass Extension can assume no liability for recommendations. The pesticide user is always responsible for the effects of pesticide residues on their own crops, as well as problems caused by drift from their property to other properties or crops. Always read and follow all instructions on the label.

--Adapted from Ruth Hazzard, New England Vegtable Management Guide and Tina Smith, UMass Extension Floriculture Program

POSTEMERGENCE YELLOW NUTSEDGE CONTROL IN VEGETABLES



Seedhead of yellow nutsedge.

Yellow nutsedge (*Cyperus esculentus*) is a perennial sedge (not grass) that emerges in early May from a small tuber or 'nutlet'. The plants will begin to form new tubers in July and August, so it is important to manage it before this occurs. In general, between-row cultivation will not control emerged nutsedge well, but only move the plants down the row with the cultivator and spread it in the field. However, in fallow fields, regular tillage during the season can manage this weed well for future crops.

There are postemergence herbicide options that are available to manage it. Halosulfuron (eg. Sandea or Profine) is registered on a variety of vegetable crops. It is in the sulfonylurea class of herbicides and is effective at very low rates, so it is important that application equipment be well calibrated. Sandea can be applied pre-emergence or post-emergence in several crops. The crops that Sandea can be used on include asparagus, sweet corn, tomatoes, beans, cucumbers, pumpkins and some melon types. For pumpkins, applications can be made to direct seeded crops after seeding but before 'cracking'. Post-emergence applications should not be made until the crop has two to five leaves.

A non-ionic surfactant, but not a crop oil, should be added for optimal control. Although Sandea will control or suppress yellow nutsedge and a number of broadleaf weeds, common lambsquarters will not be controlled with post-emergence applications. Weeds should be in the 1-3 inch stage when treated. Weeds that are larger than this will not be well controlled. Slight stunting and yellowing of the crop has been observed within a few days of postemergence applications. Usually the crop recovers quickly with little effect on yield. Check the label for replanting restrictions before planting other crops

Basagran (bentazon) offers an alternative selective postemergence control option in sweet corn, beans and peas. Basagran will also control many broadleaf weeds but it will not control grasses. Experience with Basagran suggests that application in high relative humidity (>80%) and high temperature (>80°) will afford optimal control. Often, a repeat application of either herbicide is necessary if yellow nutsedge is dense.

Dual Magnum (metolachlor) has a section 24c registration in Massachusetts for the following crops: asparagus, beets, leafy brassica greens, broccoli, transplanted and direct-seeded cabbage, carrots, cucumber, garlic, melons, dry bulb and green onions, bell pepper, spinach, Swiss chard, pumpkins, caneberry, highbush blueberry. Regular section 3 registrations include beans, sweet corn, potato, pumpkin, and tomato. Dual provides excellent control of annual grasses, hairy galinsoga, nightshade, and yellow nutsedge. To access the Section 24c labels, go to www.farmassist.com. Under products, select indemnified labels, select Massachusetts and Dual Magnum, and fill in the required information.

--reprinted from A. Senesac, Cornell's Long Island Research Lab with additions from A. R. Bonanno, UMass Extension

DOWNY MILDEW IN BASIL

Sporulation on the underside of basil leaves. Photo by Rob Wick.

Downy mildew of basil is being reported from all over the country as well as Canada, though, to date there have been no known outbreaks in Massachusetts. The story may be similar to that of the 2009 late blight epidemic, where infected plants were being widely distributed via national chain stores. Whenever possible, growers and home gardeners should buy transplants produced locally, to reduce the spread of these destructive plant diseases via large-scale propagation centers that distribute plants nationally and internationally.

Downy mildew of basil caused by the oomycete *Peronospora belbahrii* is a relatively new, destructive disease that was introduced into the US in Florida in 2007 and was first reported in Massachusetts in 2008. During 2008 and 2009, the disease appeared throughout the East Coast, both in the field and in greenhouses. Considerable economic losses occurred in Massachusetts during that time, with many states reporting 100% of fields and greenhouses infected, often sustaining 100% loss. The initial rapid transcontinental transport of downy mildew likely occurred via infected seed sold internationally. Within the United States, spread of the disease probably occurred via aerial dispersal of spores, as infected basil leaves produce an abundance of spores that are dispersed long distances on weather systems. Thus, the pathogen can spread widely once introduced to an area. We anticipate basil downy mildew will be a major disease of basil in the US into the foreseeable future.

Symptoms of downy mildew on basil can easily be mistaken for a nutritional deficiency. Infected leaves develop diffuse or vein bound yellowing on the top of the leaf and distinctly vein-bounded patches on the bottom. When spores are produced, a characteristic gray, fuzzy growth on the underside of the leaves is evident. The fuzzy growth looks as if soil had been splashed onto the leaf under-surface, however, close inspection with a hand lens will show the spores. More photographs of the disease are available at: http://vegetablemdonline.ppath.cornell.edu/NewsArticles/BasilDowny.html

Disease Cycle. Initial inoculum comes from infested seed, or can be introduced via infected transplants. The pathogen may overwinter in greenhouses where basil is grown year-round, and there is a constant supply of living host tissue. Characteristic purply-gray sporulation occurs on leaf undersides and spores are dispersed over long distances on air currents. Their dark color protects them from harmful UV rays encountered as they float through the atmosphere. Like other oomycetes such as late blight, basil downy mildew also spreads explosively and cannot be controlled with fungicides once established.

Management: The most important environmental factors favoring disease development are high humidity and extended

leaf wetness. These factors can be reduced by:

- Heating and venting greenhouses, especially when warm days are followed by cool nights, can reduce relative humidity and prevent condensation and prolonged leaf wetness.
- Improving horizontal air flow in greenhouses by the use of fans.
- Watering in the morning, if practical, or sub-irrigating rather than using overhead irrigation.
- In the field, planting in well drained sites with good air circulation and orienting rows with the prevailing winds.
- Controlling weeds and spacing plants adequately to enhance leaf drying.
- Basil crops should be disked under or otherwise destroyed as soon as possible after last harvest or when abandoned because of disease.

Relative susceptibility of basil cultivars: All varieites and cultivars of basil are susceptible to downy mildew and should be considered at-risk, though some varieties are more tolerant than others. Field trials conducted in southern New Jersey in 2009 determined that all sweet basil (*Ocimum basilicum*) cultivars such as 'Genovese,' 'Italian large leaf,' 'Poppy Joe' and 'Nufar' are very susceptible to downy mildew. Less susceptible basils included the lemon and spice types such as *O.* x *citriodorum* and *O. americanum*, cultivars , 'Lemon Std', 'Lemon', 'Lime', 'Spice', 'Blue Spice' and 'Blue Spice Fil'.

Chemical control: Few fungicides are labeled for herb plants and there are differences in registrations for field grown plants versus greenhouse plants. Research trials have shown that the phosphite fungicides (eg. K-Phite, Prophyt, Fungi-phite) are among the most effective chemical controls. Other effective materials include mandipropamid (eg. Revus), cyazofamid (eg. Ranman), and fluopicolide (eg. Presidio). OMRI-approved products labeled for basil downy mildew include MilStop, OxiDate, Actinovate, Regalia, and Double Nickel. It is the grower's responsibility to read and follow label instructions and be sure that a product is registered for use in the greenhouse. The label is the law and any recommendations made here are superseded by the label. Copper formulations have been tested and shown to be effective but are not yet registered for basil. This year, the UMass Extension Vegetable team will be evaluating the efficacy of OMRI-approved copper formulations alone and in rotation with Regalia, a plant defense activator. Look for results in VegNotes later this summer.

At the University of Massachusetts, plant pathologists are also investigating methods to control this disease with biological control agents and are interested in collecting live, infected plants from residential gardens, greenhouses and field grown basil. If you think your basil plants are infected, please call or email Dr. Angie Madeiras, Stockbridge School of Agriculture; tel. (413) 559-8479, madeiras@psis.umass.edu.

--Updated by Susan B. Scheufele; Robert L. Wick and M. Bess Dicklow, UMass and Margaret T. McGrath, Cornell University

GARLIC UPDATE

Bulbs are starting to form and scapes are emerging on garlic. The focus for this month is on making sure that the garlic plant that you have already grown is able to put all of its available energy into a strong, healthy bulb. Controlling weeds, maintaining adequate field moisture, and scaping will all help to maximize yield. Continued field culling will maximize quality, an especially important factor in seed garlic production.

Avoid Over-Fertilizing Garlic: Garlic will not respond with improved yield to applications of nitrogen after the summer solstice. These late applications of nitrogen could delay the normal maturity of garlic and may even aggravate some diseases.

Weed control: Continue to control weeds in the garlic planting for at least the next few weeks. Weeds will compete for moisture and will make it more difficult to harvest garlic. Most growers will want to complete at least one more cultivation pass on bare ground, and may need to hand-weed mulched beds.

Maintain Field Moisture: Garlic needs adequate moisture as it forms the bulb to maximize size. If you can, supply one inch of water per week to the garlic if we are not receiving rain. Plasticulture growers and those with heavy straw mulch

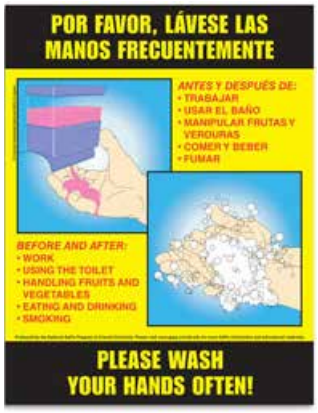
should keep checking moisture levels under the mulch, though they may need to water less than bare ground growers. Keep watering until a couple weeks before harvest, as needed.

Scaping: Removing the scape may provide up to a 30% yield boost, depending on soil conditions and weed competition. If you can sell the scape to recoup the cost of labor used to remove it, even better! If you can't sell them, snap them and leave them in the field to speed up the process.

Field Culling: Continue to walk the garlic field and pull plants which are unusually wilted on warm, dry days; plants that are distorted or curled; and plants that are an off color (yellow or bright green, usually) and discard them. All of these plants will either have a physical defect such as feeding injury or will have a disease such as Fusarium. This is a particularly important step if you plan to save your garlic for seed or to sell it as seed. Even sickly garlic will often still make a small bulb. Once it is cured, a small bulb with disease issues can look remarkably like a healthy small bulb, though the disease inoculum is still present. Field culling is your best quality control option.

-Crystal Stewart, Cornell University, Eastern New York Horticultural Program originally published in Cornell's Veg Edge Weekly Vegetable Update: June 6, 2013

FOOD SAFETY - HYGIENE AND HAND WASHING ON THE FARM



Produce encounters many opportunities to become contaminated as it makes its way from field to market. Such risks are inherent to every farming operation. Regardless of whether or not your farm participates in a 3rd-party-certified food safety program, such as Commonwealth Quality or USDA Harmonized GAP it is essential that good agricultural practices be followed to ensure that any risk of microbial contamination is minimized.

One major avenue for potential produce contamination is contact with people. Farmers and employees handling produce, harvest equipment or packing containers in the field or in the packing shed must practice good hygiene to reduce the chance that human pathogens are transferred onto food. It is the responsibility of the farmer to uphold basic standards of hygiene among workers and to create an environment that supports good practices. Here are some guidelines and resources to help you comply with best practices for worker hygiene on your farm. Many of these can also be found in the UMass GAP & Harmonized GAP Manual online.

Train all workers prior to their handling produce on proper hand washing and sanitation techniques, including the locations of hand sinks, restrooms or portable toilets, and break areas. Policies regarding wearing clean clothes and not wearing jewelry or handling personal items such as cell phones before handling produce should be established and made clear. Workers should also be encouraged to seek immediate treatment if they cut themselves, or if other first aid is required, and told the locations of first aid supplies. Workers who exhibit signs of infectious disease (vomiting, diarrhea) should be instructed not to handle produce, and either given other tasks or allowed to recover off of the farm. You can use this Food Safety Field Training Kit for Fresh Produce Handlers (large, durable hard copies can be purchased through Penn State Extension) in trainings.

Post signage illustrating proper hand washing and sanitary facility use. Signs should also be posted to remind workers to wash hands before returning to work after doing things like using the bathroom, eating, smoking, touching animals, or using chemicals. Posters like the one pictured here, are available for download from the UMass GAP manual, or laminated versions can be purchased from Cornell Extension. More posters and training aids can be found at the Farm Employers Labor Service website.

Provide and maintain clean facilities with potable water. Bathrooms should be kept clean, and stocked with toilet paper, soap, single-use towels, and a trash receptacle. Ensure routine maintenance with a regularly checked log, like those available for download here. Portable toilets should be provided in the field if bathrooms are not easily accessible, and should be accompanied by a hand wash station equipped with potable water. Hand sanitizer alone is not adequate – hands should be washed with soap and water, even in the field. There are many companies in Massachusetts that either sell or rent portable facilities. A list of some of these servicing companies is provided on the UMass GAP website. University of

Minnesota also has an excellent illustrated, step-by-step guide called How to Build a Field Hand Washing Station in 10 Easy Steps for Under $20.

U-pick operations, and other farms that may have members of the public or other un-trained people in their fields and buildings should post clear signage regarding the need for hand washing and hygiene, and provide either a nearby rest-room or field hand washing station. Pets should not be allowed to enter fields or packing facilities.

-Lisa McKeag, UMass Extension, with help from the resources mentioned above.

Upcoming Events

IPM field walks. In this series, learn to identify and scout fruit and vegetable pests and select integrated pest management strategies that work for you. We will walk the fields with Extension Educators and Farmers in Massachusetts, Rhode Island, and Vermont to learn how each area and farm is practicing IPM. Bring a hand lens if you have one. This series is funded in part by a Northeast IPM Center grant. Each field walk includes 2 education credits for certified pesticide applicators.

July 2nd, 2014, 4-6 pm
Simple Gifts Farm, 1089 North Pleasant Street, Amherst, MA 01059

July 9th, 2014, 4-6 pm
Casey Farm, 2325 Boston Neck Rd, Saunderstown, RI, 02874

August 14th, 2014 3:30-6:00 pm
High Meadows Farm, 742 Westminster West Rd., Putney, VT

August 22nd, 2014, 3-5 pm
The Farm School, 488 Moore Hill Road, Athol, MA 01331

Bee Field Day 2014

When: Saturday, June 21, 2014 - 9:00am to 3:30pm

Where: UMass Agronomy Farm, 89-91 River Rd, S. Deerfield, MA 01373

Field Day is an opportunity to learn from experienced beekeepers the practical tasks of hive management. Expert beekeepers volunteer their time to share techniques on pest & disease management, Queen rearing, swarm prevention, and a variety of practical skills. It is an opportunity to learn and ask questions from some of our best state and New England beekeepers. This is a free event, open to all beekeepers and the public. It is sponsored by the Massachusetts Beekeepers Association, The University of Massachusetts and hosted by the Franklin County Bee Association.

Worker Protection Training

When: Wednesday, June 25, 2014, 2:00pm to 4:00pm

Where: UMass Cranberry Station, 1 State Bog Rd, East Wareham, MA 02538

There is a $5 fee for manual. If you have a pesticide license, you do not need this class. Please contact Marty Sylvia by email or at 508-295-2212 x 20 to register or for more info.

UMass Agricultural Field Day

When: Tuesday, July 29, 2014, 10:00am to 4:00pm

Where: UMass Animal and Crop Research Center, 89-91 North River Road, South Deerfield, MA 01373

Come tour the research farm and learn about all of the exciting projects currently underway on a broad range of agricultural topics. Vegetable topics that will be covered include:

- Organic Management of Basil Downy Mildew: Susan Scheufele, Katie Campbell-Nelson, Lisa McKeag, Ruth

Hazzard

- Evaluation of Conventional and OMRI-Approved Fungicides to Control Fall Diseases of Brassicas: Susan Scheufele, Katie Campbell-Nelson, Lisa McKeag, Ruth Hazzard
- Evaluation of Conventional and OMRI-Approved Insecticides to Reduce Cabbage Root Maggot Damage: Susan Scheufele, Katie Campbell-Nelson, Lisa McKeag, Ruth Hazzard
- Organic Fertility in High Tunnel Vegetable Production: Frank Mangan, Zoraia Barros, Aline Marchese and Viviane Barros
- Growing Fava Beans in Massachusetts: Fatemeh Etemadi, Masoud Hashemi, Francis Mangan
- On-Farm GAP Certification: Zoraia Barros, Frank Mangan, Aline Marchese and Viviane Barros
- Integrating Livestock Production into Vegetable Systems : Frank Mangan, Zoraia Barros, Aline Marchese and Viviane Barros
- Jilò (scarlet eggplant) Variety Trial: Aline Marches
- Cover Crop and Nitrogen Management for Sustainable Potato Production: Emad Jahanzad, Allen V. Barker, Masoud Hashemi
- Amending Soil with Biochar and Rock Dust to Improve Sweet Corn Yield: Emily Cole, Kate Gervais, Stephen Herbert, Masoud Hashemi
- Integrating Forage Radish for Sustainable Early Sweet Corn Production: Julie Fine, Masoud Hashemi, Amanda Chuong
- Native Pollinator Installations: Sonia Schloemann

Contact Madeline Madin, cdle@umext.umass.edu, 413-545-5221 for more information on this event.

Vegetable Vendor Needed for Barre Farmers Market

The Saturday farmers market in Barre, MA is seeking a vegetable vendor for the season. For more information contact Sandra Evangelista at 978-355-2062. This market is more than 20 years old and has an excellent customer base but is currently lacking a full-scale, diversified vegetable vendor.

Vegetable Notes. Ruth Hazzard, Katie Campbell-Nelson, Lisa McKeag, Susan Scheufele, co-editors. Vegetable Notes is published weekly from May to September and monthly during the off-season, and includes contributions from the faculty and staff of the UMass Extension Vegetable Program, other universities and USDA agencies, growers, and private IPM consultants. Authors of articles are noted.