UMass Extension
Vegetable Notes
For Vegetable Farmers in Massachusetts since 1975

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CROP CONDITIONS

A typical New England March is upon us, with temperatures wildly fluctuating, gusting winds, and still a potential snowstorm in the forecast. But that won't stop growers from forging ahead, getting ready for spring! Brambles and fruit trees are being pruned, greenhouses are beginning to fill with the earliest onion flats, and tomato grafting has begun. Covers are coming off some low-tunnels and over-wintered greens are being harvested. Crop rotations and fertility plans are being fine-tuned and in general folks are making sure they are ready to hit the ground running once the weather warms for good. Watch out for aphids in high tunnels where you had overwintered crops--now is the time to get started on a biocontrol plan in houses. Last week we hosted our annual IPM stakeholder meeting, at which we elicit input from a diverse group of growers on their greatest challenges and needs as far as educational tools and programs, research, and other assistance. What we heard loud and clear is that growers are struggling to keep up with all the new regulations in the farm landscape, and we hope to do our best this year to help you all learn to understand and implement these rules as painlessly as possible. To that end, we will be hosting a number of food safety and WPS trainings this season. We'll start with two Produce Safety Alliance Grower Trainings--one in N. Grafton, MA on March 23rd and one in Dighton, MA on March 24th. This is a required training for any farms fully covered by FSMA, but recommended for all produce growers who may be affected by the law or buyer requirements, or who just want to learn more about farm food safety. If Dighton is too far South for you, there is another PSA training scheduled for April 11 & 12 in Portland, ME. We also have a series of WPS train-the-trainer workshops coming up. See the events section of this issue for details. Here's hoping for a great 2017 season! Happy planting!

Spinach anthracnose causing water-soaked lesions with black acervuli (pictured up close below with black setae or hairs sticks out) in the centers of the lesions. Photos by S.B. Scheufele

WHAT DO WINTER TEMPERATURES MEAN FOR NEXT SEASON'S PEST POPULATIONS?

By Victor Izzo. Lecturer. University of Vem,ont Agroecology and Rural Livelihoods Group, Department of Plant and Soil Sciences

Many agricultural pests, such as the Colorado potato beetle (CPB, *Leptinotarsu decemlineata*), overwinter underground, but not all pests that burrow will survive the winter. Two factors that influence the number of CPB that survive the winter are the depth of the burrow and winter soil temperatures. If only a small percentage of CPB survive, pest pressure on solanaceous crops (especially potatoes and eggplants) is reduced. If a large percentage of CPB survive, pressure on these crops will be greater, requiring producers to control the population using mechanical or chemical approaches. CPB represents the most important insect defoliator of potatoes throughout the Northern Hemisphere (Alyokhin et al. 2008). Therefore, it is a good species to examine in the context of climate change and changing winter temperatures.

Though CBP originated in subtropical regions (i.e., central Mexico), it has adapted to survive and thrive in various

How well did Colorado potato beetle survive this winter?

environments, including the Northeastern United States. Our research group studied overwintering experiments with two CPB populations. One population was subtropical (from Central Mexico) and the other was established in the more temperate region (Vermont). This research helped us to better understand what factors contribute to the overwintering survivorship of CPB within temperate climates (Izzo et al. 2014a, 2014b), such as the Northeastern United States.

According to our findings, overwintering success is linked both to the CPB's evolved behavior (e.g., when they burrow, burrowing depth) and seasonal environmental factors (e.g., soil temperatures, plant host quality). CPB populations in temperate climates burrow deeper into the soil to better survive colder winter temperatures in these regions. Depending upon the depth of the frost line within the soil (which is related to the air temperature), beetle survivorship may vary significantly over seasons. Some beetles may not reach "safe" overwintering sites during cold years, while milder seasons may allow overwintering beetles to more easily survive.

These findings are especially relevant under current climate change scenarios. Intuitively, warmer soil temperatures and shallower frost lines within Northeast landscapes should increase overwintering survivorship of CBP, and therefore increase pest pressure on solanaceous crops. However, fluctuating soils temperature may actually reduce overwintering success by disrupting CPB life cycles. Beetles emerging early or burrowing late due to prematurely warming soil temperatures may ultimately die when temperatures drop. Nevertheless, it is evident from our study that changing soil temperatures will exhibit a profound effect on the population dynamics of temperate CPB populations.

THE SECRET LIVES OF WEEDS

It helps when trying to figure out how to manage weeds better to understand why they are so darn successful in the first place. Weeds are plants that thrive in disturbed environments, like annual vegetable systems that are repeatedly tilled. But all weeds are not created equal, and each species has its own lifestyle—when and why it germinates, where it thrives, and so on—which you can use to your advantage when it comes to managing them. Here we have broken them down into the following groups: summer annuals (small- or large-seeded broadleaves, and grasses), winter annuals, biennials, and perennials (stationary or wandering). Get to know your most problematic weeds and determine when and how you can get the most out of your weed control efforts. It will also help to have a good field guide around to help identify weeds in the field, we recommend "Weeds of the Northeast" by Uva, Neal and DiTomaso. At the end of the article you will find some other resources to peruse, good luck!

ANNUAL WEEDS germinate from seeds and complete their life-cycles within one year, while perennial weeds survive from year to year through underground storage structures from which they re-grow.

Summer annuals germinate in spring and set seed during the growing season—some may have multiple generations per season. Many of our most common and troublesome vegetable weeds fall into this category, including crabgrasses, foxtails, pigweeds, lambsquarters, hairy galinsoga, velvetleaf and purslane, for a few. Since the summer annuals are such a big and diverse group, it is helpful to further break them down:

Small-seeded broadleaf weeds germinate when seeds are within the top one inch of soil. They grow very quickly and produce a huge amount of seeds (tens to hundreds of thousands), to improve the chances that some individuals will survive in a highly disturbed area. Because the seeds are small, seedlings of these species are very small and fragile, so it is important to take advantage of this vulnerability and control them at this stage.

Examples: Pigweeds **(***Amaranthus spp.), lambsquarters (Chenopodium album), galinsoga (Galinsoga ciliata), smartweeds (Polygonum spp.), purslane (Portulaca oleracea)*

Control Strategies:

- Cultivate the top 1-2 inches of soil 2 to 4 times within the first month following tillage to eliminate most individuals that will emerge during the season
- Organic mulches are also highly effective—reduce weed density by hoeing or shallow cultivation before placing the mulch
- Plant crops densely if the crop will tolerate it, since these weeds are easily shaded-out
- Flaming may be effective on plants < ¼ - ½ inch tall
- Cultivating in the evening can reduce emergence of seeds brought to the surface by tillage
- Remove escapes before they set seeds since they produce so many long-lived seeds

Seeds of lambsquarters on the left and velvetleaf on the right, illustrating the difference between small and large-seeded annuals.

Large-seeded broadleaf weeds emerge from seeds buried between 0.5 and 2 inches deep in the soil. They grow rapidly and are more competitive than small-seeded annuals, since they have more energy stored up, have bigger leaves, and are more competitive with your crops. They produce fewer seeds (hundreds to thousands per plant) but seeds can survive for longer periods of time (decades).

Examples: Velvetleaf **(***Abutilon theophrasti), giant ragweed (Ambrosia trifida), common cocklebur (Xanthium strumarium), morning glories (Ipomea spp.)*

Control Strategies:

- Delay planting until early-June to allow most seeds to germinate and be killed in preparing seedbed (velvetleaf)
- Repeated cultivation in the early season to prevent establishment.
- Mulches are NOT effective because more energy is stored in large seed and emerging plant is bigger and stronger
- Don't allow to go to seed, as the seeds last longer in soil

Summer annual grasses emerge mostly from the top ½-1 inch of soil. They produce a huge amount of seed and seeds are very long-lived. Summer annual grasses are associated with shallow or reduced tillage practices or compacted soils.

Examples: Foxtails **(***Setaria spp.), Crabgrasses (Digitaria spp.), Barnyardgrass (Echinochloa crus-galli), Fall panicum (Panicum dichotomiflorum)*

Control Strategies:

- Use transplants, plant into clean beds—Vigorously growing crops can outcompete relatively shade-intolerant grasses
- Use stale-seedbed for small-seeded crops or those with a wimpy canopy like carrots
- Cultivate before plants exceed ¼ inch
- Pay attention to ends of rows, between rows, or edges of plastic where there is no competition from crops and/or the soil is compacted

Winter annuals, in contrast, germinate in late summer or fall and overwinter as small plants or rosettes, resume growth in spring, and set seed late spring or summer. These weeds are most problematic in winter (think chickweed in overwintered greens!) or in early spring crops and in no-till systems.

Examples: Wild mustard **(***Brassica kaber/Sinapsis arvensis), horseweed (Conyza canadensis), shepherd's purse, field pepperweed (Lepidium campestre), henbit (Lamium amplexicaule), and purple deadnettle (Lamium purpureum).*

Control Strategies:

- Fall tillage for spring planted crops is effective, or till in spring and delay planting
- Rotation with warm season crops like squash and tomato tends to break the life cycle of these cool season weeds
- Organic mulches are very effective since winter annuals occur as small, prostrate plants or rosettes over the winter
- Use up all applied nitrogen by end of season, as these can be effective N scavengers

BIENNIAL WEEDS are propagated from seeds but generally take more than one full year to complete their life cycles. They grow vegetatively during the first growing season, overwinter as a root, then bolt and flower during the second season. They are very similar to winter annuals, but they can start growing earlier in the season of their first year so that they may live longer than one full calendar year. They are also similar to stationary perennials since they survive as a taproot.

Examples: Wild carrot **(***Daucus carota), wild parsnip (Pastinaca sativa), common burdock (Arctium minus), bull thistle (Cirsium vulgare), common teasel (Dipsacus fullonum), white campion (Silene alba)*

Control Strategies:

- Fall tillage for spring planted crops is effective, or till in spring and delay planting
- Organic mulches are very effective since biennials start as small, prostrate plants or rosettes over the winter
- Frequent mowing or cutting is effective, taking care not to allow flower heads to form
- Tillage is usually very effective, but if the crown is cut up then new plants may be produced

PERENNIAL WEEDS survive for multiple years from underground structures, and can be stationary or wandering.

Stationary perennials are slow growing at first but later become very competitive. They reproduce by seeds, which they produce each year, and individuals survive for several years. These plants overwinter as large taproots in the case of broadleaf weeds like chicory, or large clumps of fibrous roots as in grasses like tall fescue. When the aboveground plant parts are killed through mowing, cultivation, or frost, the plant later regrows from these underground reserves.

Examples: Curly and broadleaf docks **(***Rumex crispus and R. obtusifolius), chicory (Cichorium intybus), dandelion (Taraxacum officinale)*

Control Strategies:

- Cultivation and tillage can be effective at exhausting storage roots and will not spread the weed as with wandering, or creeping, perennials
- Mowing down foliage will also exhaust storage organs
- Removing taproots or crowns from the field is highly effective if scale-appropriate

Wandering perennials reproduce by seed but also by underground vegetative structures like rhizomes (root-like stems), stolons (creeping stems like strawberry runners), or tubers. Fragments of stolons or rhizomes can generate new individuals

Examples: Johnsongrass **(***Sorghum halapense) , quack grass (Elytrigia repens), yellow nutsedge (Cyperus esculentus), horsenettle (Solanum carolinense), milkweed (Asclepias syriaca), bindweeds (various), and Canada thistle (Cirsium arvense).*

Control Strategies:

- Organic and synthetic mulches are NOT effective since the plants have so much stored energy and can poke up through thick mulch
- Persistent removal of the shoots (mowing or hoeing) before they attain several leaves will exhaust the storage roots within two years—this effort should be focused in the spring when storage reserves are at their lowest
- Deep tillage (e.g., to 1 foot, or 30 cm) will chop up and thereby weaken the storage roots
- Watch for creeping perennials moving into fields from hedges and fences

Resources

UMass Weed Herbarium Online: https://extension.umass.edu/landscape/weed-herbarium

New England Pest ID Guide, includes weeds as well as insects and diseases: http://nevegetable.org/sites/nevegetable.org/files/Pest_ID_2016.pdf

Ecological Weed Management at Cornell: https://weedecology.css.cornell.edu/manage/

Michigan's Worst Weeds, helpful descriptions of several tough weeds: http://www.msuweeds.com/worst-weeds/

--Written by Susan B. Scheufele

ORGANIC TOMATO VARIETY TRIAL AT UMASS

--Written and Conducted by Levi Lilly, UMass STockbridge School Student

Tomatoes are a very important crop on most New England farms and acreage and sales are increasing. Tomato producers in New England face a handful of common diseases including early blight, late blight, Anthracnose, Septoria leafspot and powdery mildew. Cultural practices like pruning/thinning, trellising, adequate plant spacing, weeding, drip irrigation and light tillage can all help reduce the conduciveness of environmental conditions for pathogens to thrive in. Conventional growers have several effective chemical control options to help reduce the severity of these diseases, including chlorothalonil, azoxystrobin, fenamidone, mancozeb, and more. Organic producers have fewer treatments to work with. Biocontrols like *Bacillus* spp. or *Trichoderma* spp., hydrogen dioxide, potassium bicarbonate, and coppers are most commonly used but are limited in their efficacy.

The first line of defense for any organism fending off pests is genetics. In breeding new crop varieties, individuals are selected for their ability to perform well in the face of stress and disease. Conventional breeding programs often evaluate potential new varieties with large inputs of synthetic fertilizers and pesticides, selecting genotypes that perform well in this environment. When these varieties are used in organic systems, many of them are not suited for the change in management style, and may be less productive and susceptible to diseases and other pests. Breeding and testing in organically managed environments, with organic production in mind, can help mitigate these issues and produce a crop more suitable for organic growers. A handful of seed companies like Johnny's Selected Seeds, Territorial Seeds, and Vitalis Seed breed and test their varieties with this in mind.

Levi Lilly shares results of his 2016 tomato variety trial at the UMass Vegetable Crop Research Twilight Meeting

During the 2016 season, we evaluated 12 varieties of

Variety	
Sakura	6.88
Ginger	4.54
41111	3.73
Toronjina	3.61
Montesino	3.42
Chinouk	3.38
40716	3.36
Ardiles	3.21
50133	2.10
Matthew	2.00
41103	1.93
50261	1.10

Average yield (#/plant) for each variety.

Variety	% P. Mildew	
Toronjina F1	79	a
Ginger	61	b
E15C50133	60	b
Matthew F1	58	b
E15C50126	38	c
Chinouk	24	d
E15C40716	23	d
E15C4111	22	d
Montesino	21	d
Sakura	19	d
Ardiles	9	e
E15C41103	4	e

Average powdery mildew severity (%) for each variety. P<0.0001

cherry and grape tomatoes developed by Vitalis Organic Seed company at the Crop and Animal Research and Education Farm in South Deerfield, MA. Seven of the varieties are currently commercially available and five are still in development. We collected data on differences in phenotypic traits, disease resistance, and yield. The certified organic land was tilled and prepared with black plastic mulch with drip irrigation. Soil was fertilized using Neptune's Organic liquid fertilizer through the drip system. Cultural methods like proper pruning, trellising and manual weed management were used. No pesticides were used. Data was collected weekly throughout the growing period.

2016 was one of the best years in the past decade for tomato production. Low rainfall, humidity and subsequently low disease pressure left the common tomato killer, late blight, out of most New England fields. Around mid-August an infection of powdery mildew caused by *Oidium lycopersicum* started to develop, with significant differences in disease severity observed between varieties. Disease identification was confirmed by Dr. Rob Wick of the UMass Diagnostic Lab. 'Toronjina', 'Ginger', and 'E15C 50133' had the highest percentage of powdery mildew. Infection with powdery mildew did not lead to differences in yield, but may have if we had collected yield data over a longer window.

While we were not able to analyze the data statistically, on average the three top-producers were 'Sakura', 'Ginger', and 'E15C 4111'. 'Sakura' was by far the favorite among all who participated in a taste test of all the varieties. The 1-2", deep red, globe-shaped tomatoes melted in the mouth with smooth texture, low acidity, well balanced skin and full sweet flavor. They were great to snack on, or slice and add to a sandwich. Another favorite was 'Toronjina', which rivals the world famous 'Sungold' tomatoes. These small to medium, snack-sized tomatoes were a refreshing indulgence while working on the farm this summer.

Overall, organic breeding is vital to the future success of organic vegetable production. When breeding programs grow and test in environments that replicate the production environment, selections can be made that aid in natural resistance and help organic growers stay productive with fewer tools at hand.

CROP INSURANCE DEADLINE IS MARCH 15TH

Massachusetts growers are advised that the final date to apply for crop insurance coverage on eligible spring-planted crops for the 2017 crop year is March 15, 2017. Current policyholders who wish to make changes to an existing policiy or cancel an existing policy also have until March 15 to do so.

Crop insurance provides protection against crop production losses due to natural perils such as drought, hail, and excessive moisture. Coverage for corn (silage/grain), fresh market sweet corn, potatoes, and tobacco is available in select counties. Revenue coverage is available through the Whole Farm Revenue Program (WFRP) policy.

Growers are encouraged to visit their crop insurance agent soon to learn specific details for the 2017 crop year, including insurance for corn, fresh market sweet corn, potatoes, and tobacco, which may be eligible for coverage under a written agreement. Crop insurance coverage decisions must be made on or before the sales closing date.

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. Producers can use the RMA Cost Estimator to get a premium amount estimate of their insurance needs online. Learn more about crop insurance and the modern farm safety net at www.rma.usda.gov or by contacting UMass Extension Agricultural Risk Management Consultants, Paul Russell (pmrussell@umass.edu) or Tom Smiarowski (tsmiarowski@umass.edu).

Growers of non-insured crops can obtain coverage on their crops under the Noninsured Crop Disaster Assistance Program (NAP) administered by the USDA - Farm Service Agency (FSA). The NAP deadline is also March 15 for all Spring planted crops. Growers are encouraged to contact their local USDA-FSA Office by the March 15 deadline.

WEBINARS

Reduced Tillage in Vegetables Webinar Series

Reduced Tillage on Permanent Beds. Thursday March 9, 3-5pm.

Permanent bed systems can help small farms improve soils and reduce tillage for a diversity of crops. Learn how farm-

ers are adopting these systems and hear research results on how tillage, mulching and tarping practices can impact your weed control, labor use, and crop productivity. Ryan Maher and Brian Caldwell - Cornell University, Mark Hutton - University of Maine.

Strip Tillage Tools and Practices. Thursday March 16, 3-5pm.

Adapting strip tillage for organic production requires careful crop planning. Learn the tools and equipment and what research is showing about integrating cover crops, managing residue, attracting beneficial insects, and controlling diseases and weeds. Anu Rangarajan and Meg McGrath - Cornell University, Dan Brainard and Zsofia Szendrei - Michigan State University.

Cultivation for Reduced Tillage Systems. Thursday March 23, 3-5pm.

Cultivation of the in-row zone is challenging, especially in reduced tillage systems. Learn about innovative in-row cultivation techniques for managing weeds in reduced tillage crops. Dan Brainard and Sam Hitchcock - Michigan State University, Eric Gallandt and Bryan Brown - University of Maine.

Webinar registration is free, go to:

https://msu.zoom.us/webinar/register/98e6288a06d0f0b14ac87b605f06faf5

Questions? Contact Vicki Morrone, Organic Farming Specialist, at sorrone@msu.edu.

Pollinator Protection Webinar Series

The majority of U.S. specialty crop growers depend on bees for pollination of their crops. Growers know that without adequate pollination, they would not be profitable. But what are the best pollination strategies for fruit, vegetable, and nut crops? These webinars will all be 45-60 minutes long, with time for questions and discussion with the presenter afterwards. Registered attendees will receive a link to the slides and a recording afterwards. The webinar series will be hosted by eXtension.org, an on-line co-operative extension network, and can be accessed by anyone with an internet connection.

March 21, 2017, 2pm EST: Ensuring pumpkin pollination. *Shelby Fleischer, Pennsylvania State University*

March 28, 2017, 2pm EST: How to manage solitary orchard bees for crop pollination. *Theresa Pitts-Singer, USDA-ARS and Utah State University*

Use of High Glucosinolate Mustard as an Organic Biofumigant in Vegetable Crops Webinar

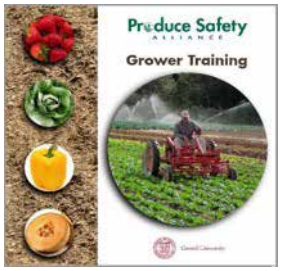
When: Tuesday, April 11, 2017 at 2pm EST

Brassica plants, including mustards, contain glucosinolates that, when broken down, produce compounds that can reduce weed pressure, insect pests, populations of parasitic nematodes, and soil-borne pathogens such as Pythium, Rhizoctonia, Sclerotinia, Verticillium, and Phytophthora. In this webinar, we'll address the use of mustard cover crops that have been bred specifically to have high glucosinolate concentrations and act as a biofumigant in crops like potatoes, peppers, carrots, black beans, and strawberries.

Presenters: Katie Campbell-Nelson, University of Massachusetts and Heather Darby and Abha Gupta, University of Vermont Extension

Events

FSMA Trainings: Produce Safety Alliance Grower Trainings



UMass Extension and the Massachusetts Department of Agricultural Resources (MDAR), along with our co-sponsors, are excited to announce these upcoming food safety training programs

Participants will learn about produce safety best practices, key parts of the FSMA Produce Safety Rule requirements, and how these requirements will be enforced in MA through MDAR's Commonwealth Quality Program (CQP). There will be time for questions and discussion, so participants should come prepared to share their experiences and produce safety questions.

Fruit and vegetable growers and others interested in learning about produce safety and the Food Safety Modernization Act (FSMA) Produce Safety Rule should attend. The PSA Grower Training Course is one way to satisfy the FSMA Produce

Safety Rule requirement outlined in § 112.22(c) that requires 'At least one supervisor or responsible party for your farm must have successfully completed food safety training at least equivalent to that received under standardized curriculum recognized as adequate by the Food and Drug Administration.'

For more information, contact Lisa McKeag at lmckeag@umass.edu or 413-577-3976

Produce Safety Alliance Grower Training--North Grafton, MA

When: Thursday, March 23rd from 8:00 am to 5:30 pm

Where: Brigham Hill Community Farm, 37 Wheeler Rd, N. Grafton, MA 01536

Co-sponsored by UMass Extension, Massachusetts Department of Agricultural Resources (MDAR) and Wegman's.

Cost is $35

Price includes the required PSA Grower Manual ($50 value), a Certificate of Course attendance from AFDO ($35 value), Certificate of attendance from UMass/MDAR and lunch and refreshments.

Cost for lunch and materials is offset by support from Wegman's and a grant from the USDA National Institute of Food and Agriculture

Registration info coming soon!

Contact Lisa McKeag at lmckeag@umass.edu or 413-577-3976 for more information

Produce Safety Alliance Grower Training--Dighton, MA

When: Friday, March 24th from 8:00 am to 5:30 pm

Where: Keith Hall, Bristol County Agricultural High School, 84 Center St., Dighton, MA 02715

Co-sponsored by UMass Extension, Massachusetts Department of Agricultural Resources (MDAR) and Southeastern Massachusetts Agricultural Partnership (SEMAP)

Cost is $35

Price includes the required PSA Grower Manual ($50 value), a Certificate of Course attendance from AFDO ($35 value), Certificate of attendance from UMass/MDAR and lunch and refreshments.

Cost for lunch and materials is offset by support from SEMAP and a grant from the USDA National Institute of Food and Agriculture

To register: http://semaponline.org/FSMA/

Produce Safety Alliance Grower Training--Portland, ME

When: Tuesday, April 11 from 12:30 pm to 5:30 pm & Wednesday, April 12 from 8:00 am to 12:00 pm

Where: Courtyard Portland Downtown / Waterfront, Casco Bay Room, 321 Commercial Street, Portland, Maine 04101

The course is sponsored by UMaine Extension, University of New Hampshire Extension, University of Vermont Extension, Northeast Center to Advance Food Safety

Special thanks to The New England Farmers Union for the course manuals and certificates.

In addition to learning about produce safety best practices, key parts of the FSMA Produce Safety Rule requirements are outlined within each module. There will be time for questions and discussion, so participants should come prepared to share their experiences and produce safety questions.

An additional in-depth exploration of topics and skill-building will be held from 1:00 PM to 4:00 PM on April 12, 2017 for those who wish to attend.

Cost is $40

Includes training manual, Produce Safety Alliance (PSA)/Association of Food and Drug Officials (AFDO) course completion certificate, and snacks.

Accommodations

Directions and room reservations ($155/night group rate)

For more information contact Theresa Tilton at theresa.tilton@maine.edu or 207.942.7396 or Jason Bolton, Ph.D. at jason.bolton@maine.edu or 207.581.1366

EPA Worker Protection Standard Update and Train the Trainer Workshops

When: Wednesday April 19

Where: Holiday Inn, 700 Myles Standish Blvd. Taunton, MA

When: Wednesday April 26

Where: Hadley Farms Meeting House, 41 Russell St, Route 9, Hadley, MA

When: Thursday April 27

Where: Radisson Hotel, 10 Independence Ave. Chelmsford, MA

Hosted by the UMass Extension Pesticide Education Program

The Environmental Protection Agency (EPA) has revised the 1992 Agricultural Worker Protection Standard (WPS) regulation. WPS contains requirements for training, decontamination, notification, and emergency assistance and specific information about personal protective equipment and Re-entry intervals (REIs).

All farm and horticulture workers must be trained under the EPA Worker Protection Standard (WPS) if your farm/greenhouse uses any pesticides, including, those approved for organic production and other general use pesticides.
The agricultural worker employer is responsible for complying with all components of WPS including the training of employees. This training can only be provided by an individual who has a pesticide certification license or has attended an approved EPA WPS Train-the-Trainer workshop.

With the support of the UMass Extension Risk Management Crop Insurance Education Program, the UMass Extension Pesticide Education Program is offering three workshops in April in Taunton, Hadley and Chelmsford.

There will be two sessions at each program: The first, EPA Worker Protection Standard (WPS) Update (10:00am start) is for farmers/growers and their employees. Two contact hours for private categories only. The second session, EPA WPS Train-the-Trainer workshop (1:00-4:00pm) is for individuals who want to conduct annual EPA WPS training for their employees and pesticide handlers. This three hour workshop is intended for individuals who currently are unable to provide this training because they do not have a private pesticide certification. If you are interested in becoming an EPA WPS approved Trainer *then you must register for both of these sessions*. These workshops are also appropriate for organic farmers and their employees. There will be 2 contact hours offered as well for private certification categories only.

Sponsors

Vegetable Notes. Katie Campbell-Nelson, Lisa McKeag, Susan Scheufele, co-editors.