



UMASS  
**EXTENSION**



# Vegetable Notes

For Vegetable Farmers in Massachusetts

Volume 23, Number 7

June 7, 2012

## IN THIS ISSUE

Crop conditions

High-Tunnel season extension program, Monday June 11

Pest alerts

Pre-sdieedress nitrate test: now is the time for sampling

Potatoes: hilling, tuber initiation and managing common scab

Cucurbit fungicides: strategies for 2012

Armyworm alert for small grains, sweet corn, cover crops and turf

Watch for potato leafhopper in potato, eggplant, beans

Using tomato and potato disease forecasts for early blight and Septoria leaf spot

Late blight: keep scouting, use protectants

Sweet corn report

## CROP CONDITIONS

Heavy rains spread throughout New England this week, especially over the weekend. Field work was delayed by wet fields. Harvest of early zucchini and summer squash is gaining, garlic scapes and fresh garlic are ready as well as scallions, early beets, carrots, radishes and salad turnips, earliest broccoli is heading. Those who put their first corn in the ground during the warm spell at the beginning of April are looking at full silk and an exceptionally early harvest – before the end of June. Corn seed slightly later is much slower. Cooler temperatures this week have slowed growth, but conditions have been good for transplanting. One crop that is gaining more acreage across New England is sweet potato, and the past 7-14 days saw sweet potato slips filling up half-acre to acre plots on many farms. Pest activity is strong and early, often outpacing the usual stages of crop growth for arrival.

## HIGH-TUNNEL SEASON EXTENSION TRAINING NEXT MONDAY

Flatts Mentor Farm, Seven Bridge Road, Lancaster, MA 01523

Mon, June 11, 2012, 3pm – 7pm

We hope to see you for this program on early and late-season high tunnel production.

3:00 PM – 4:00 PM High Tunnel Construction with Ledgewood Farm

4:00 PM – 5:00 PM Growing in High Tunnels: FMF farmers share their experiences

5:00 PM – 6:00 PM Thinking Ahead to Fall and Winter: Crop Planning and Health for extended-season crops presented by guest speakers Ruth Hazzard, Danya Teitelbaum, and Amanda Brown

6:00 PM – 7:00 PM Farm Tour

Refreshments will be provided! For more information, please contact: Peter Jakubowicz, Farm Manager, Phone: 978-479-0661. Visit us at [www.flattsmentorfarm.org](http://www.flattsmentorfarm.org)

## PEST ALERTS

**Cucurbit Downy Mildew in NJ:** Cucumber in Gloucester County, NJ, was confirmed to have downy mildew last week. It the first report of the season in the mid-Atlantic region. Downy mildew in cantaloupe has only been reported as far north as North Carolina. Presently there is no risk for MA. The only potential sources for this area are wind-dispersed spores and infected transplants produced in an area with downy mildew (extremely unlikely). Scout routinely, and moni-

tor occurrences, sign up for alerts, and obtain forecasts at <<http://cdm.ipmpipe.org/>>.

**Bean Beetle** – Mexican bean beetle adults have been feeding in early beans in several fields in the CT Valley, and eggs were found at one location.

**Scout for Thrips in Onion** - this a pest that is easy to miss but can hurt crop vigor in this fast-growth stage. Don't let it slip by.

**European corn borer moth captures are dropping this week** – the peak flight is already past! See corn report for more details. Watch for common armyworm (see article).

**Aphids** - watch for aphids on lettuce, peppers, eggplants and tomatoes. Note that natural enemies normally bring these down, so don't spray at the first sight of aphids – estimate density, observe natural enemies, then come back in 4-7 days to see if numbers have dropped.

## **PRE-SIDEDRESS NITRATE TEST: NOW IS THE TIME FOR SAMPLING**

Many crops have reached or will soon reach the stage when it's time to decide whether and how much nitrogen to apply as a side dress or top dress. The pre-sidedress nitrate test (PSNT) can help you to determine the current level of nitrogen in the soil. The amount of nitrate-N (reported as parts per million N03-N) in the soil is a good indicator of whether more N will be needed to complete crop growth. In the New England Vegetable Management Guide, you will find recommendations for broadcast and sidedressed N for each crop. The PSNT helps you adjust this to actual field conditions.

The PSNT is a tool growers can use to optimize N application. Research conducted for several years at UMass and other states, along with several years of on-farm experience, showed that an appropriate threshold for peppers, pumpkins and winter squash is about 30 ppm nitrate-N. Above this level, sidedressing or topdressing supplemental N would be of no value and will likely decrease yield of butternut squash and peppers. There is increasing agreement that a threshold of 30 ppm is appropriate for most vegetables except for sweet corn, for which the threshold is 25 ppm. Using the PSNT can save money and time, improve crop yield, and reduce the likelihood of N leaching and water contamination. Barring unusual weather conditions, PSNT levels in a field tend to be fairly consistent from year to year. Once these values are known for a field, a grower probably does not need to test every year. As a tool, the PSNT should be used along with a grower's experience and knowledge of fields. Interpretation of PSNT results should be made with regard to weather conditions such as leaching rains or soil temperatures.

To collect a sample for nitrate testing, take 15 to 20 subsamples or cores from the field. Sample slices or cores should be taken to a depth of twelve inches if possible. Avoid sampling fertilizer bands or other areas which have high concentrations of N fertilizer. Generally the best place to sample is between the rows. If plastic mulch is used, samples should be taken from under the plastic. With a soil probe you can just sample through the plastic, leaving small holes that cause no problem. Be sure to avoid any trickle irrigation tape under the plastic. Place all subsamples in a clean plastic bucket. Once all subsamples have been collected, thoroughly mix the sample in the bucket and scoop out about one cupful to submit to the lab.

Microbial activity can rapidly change the concentration of nitrate in warm, moist soil, so it is important to either rapidly air dry samples or to keep them cool. Drying can be accomplished by spreading them in a thin layer on a sheet of non-absorbent paper. Samples can be stored moist if they are kept in a cooler or refrigerator, but they should be delivered to the lab within 24 to 48 hours. The lab will do the PSNT within one working day of receipt and inform you of the results. PSNT sample submission forms can be downloaded from the UMass Soil Testing Lab website, [www.umass.edu/soiltest](http://www.umass.edu/soiltest). The charge for this test is \$8.00 (include a check made out to the University of Massachusetts).

### **Contact information:**

Phone: (413) 545-2311; Fax: (413) 545-1931 Email: [soiltest@psis.umass.edu](mailto:soiltest@psis.umass.edu). Website: <http://www.umass.edu/soiltest>

Mailing Address: Soil and Plant Nutrient Testing Lab, West Experiment Station, 682 North Pleasant Street, University of Massachusetts, Amherst, MA 01003

*-John Howell, John Spargo, Ruth Hazzard, & Frank Mangan, University of Massachusetts*

## POTATOES: HILLING, TUBER INITIATION AND MANAGING COMMON SCAB

Potato fields are at a wide range of growth stages at this time of year, from tuber initiation into flowering and tuber bulking. Tuber initiation occurs after the leaf growth is sufficient (usually 8-12 leaves) to produce a surplus of carbohydrates, which is then translocated (in the form of sucrose) to the stolons. Stolons are lateral shoots that develop from buds on the underground stem, between the seed-piece and the soil surface. Tubers develop near the tips of the stolons, about 3-6 inches from the stem. Tuber initiation is favored by moderate soil moisture, cool temperatures and moderate levels of mineral nutrients.

The major objective of hilling is to cover the tubers with soil to prevent greening – so the hills need to be high enough to prevent light penetration and to cover tubers as they expand to full size. Large, wide-shouldered hills result in less greening of tubers and avoid injury to lateral roots; roots are concentrated in the top 18 inches of soil. Hill shape also can influence water and nutrient efficiency; a flat hill with a slight ridge on each side holds water and avoids nutrient runoff. The top of the hill should ultimately be 6-8 inches above the seedpiece. Depending on the equipment setup, planting depth, soil type, and the grower's approach hilling, it may take one to three passes to build hills of the desired shape.



*Hilling potatoes at T. Smiarowski Farm, Hatfield*

**Common Scab.** Potato scab can be a serious problem leading to heavy losses. Some of the suggestions below should be considered before field preparation and planting and should be helpful in future years. Irrigation management to ensure adequate moisture during tuber formation, as noted below, can be helpful.

Common scab is caused by the actinomycete *Streptomyces scabies*. Actinomycetes are bacteria although at one time they were thought to be fungi. The confusion arose because these bacteria are filamentous like fungi. These are soil-borne organisms that can survive in fields for many years, even in the absence of a plant host. They are inactive at soil pH levels below 5.3, which is the reason for growing potatoes on acid soils. (The potato plant is tolerant of acid soils, but thrives on pH levels in the sixes) Varieties such as Superior, Norland and Norchip are resistant to common scab and are a good choice when rotating with other vegetables on higher pH soils.

Most soil microbes are inhibited by dry soils, but this is not true of actinomycetes. Under dry conditions, actinomycetes have little competition from other microbes and can be quite troublesome. The incidence of potato scab can be reduced by maintaining good soil moisture, especially when tubers are forming. Growers have noticed that scab is worse in corners of the field where irrigation does not reach. The use of undecomposed manure tends to increase the incidence of scab. Beets, radishes and carrots are hosts of the disease and should not be rotated with potatoes.

Scab can also be introduced to a field by infected seed. Any seed showing signs of scab should be rejected and not planted. The use of a seed treatment containing mancozeb is useful in controlling scab, but seed lots showing signs of scab should be rejected and not planted.

*-- R. Hazzard and J. Howell, UMass Extension*

## **CUCURBIT FUNGICIDES: STRATEGIES FOR 2012**

The list of diseases affecting cucurbit crops is long, and management of these diseases is complicated by the presence of different types of pathogens which require different classes of materials for effective control and the danger of fungicide resistance developing in pathogen populations. While there is some overlap in the effectiveness of certain materials against the suite of diseases affecting cucurbit crops, there are many cases where the most effective treatment for one disease will be mostly or completely ineffective against others. For this reason proper identification of the pathogen is critical for effective control. In addition, many of these pathogens are already developing resistance to many classes of fungicides, and materials that were very effective years ago are now almost completely useless. Proper resistance management is critical to ensuring the longest possible life for current fungicides. This article will help you prepare for the challenge of managing these diseases effectively.

It is important that systemic or single mode of action materials NOT be applied in an attempt to rescue a badly infested field. These materials should only be used when the pathogen is present at a low level. Applying these materials to a field that's badly infested with the target pathogen exponentially increases the likelihood of resistance developing in the pathogen population. Similarly, it is best to use the most effective systemic material first to keep the inoculum levels as low as possible for as long as possible. All of the materials mentioned in this article except chlorothalonil, mancozeb, sulfur, copper, and the organic materials contain systemic or single mode of action chemicals.

For powdery mildew, we recommend using a combination of quinoxifen (Quintec, FRAC group 13) and triflumizole (Procure, FRAC group 3). Mix with chlorothalonil (Bravo, FRAC group M5) and rotate between the two groups every 1-2 applications. Use the highest labeled rates. Begin spraying as soon as powdery mildew first appears in your field or in other vine crops nearby. If powdery mildew arrives later you may want to begin preventative applications of chlorothalonil shortly after fruit set in non-rotated fields or where *Plectosporium* is an issue. Quintec is also labeled for powdery mildew on strawberry, pepper, and lettuce and so may be useful in other crops. Procure has rotational restrictions. -Do not plant leafy vegetables or fruiting vegetables within 30 days after application. Do not plant bulb vegetables or root vegetables within 60 days after application. Neither of these materials should be applied more than twice per crop. If Powdery mildew continues to be a problem in late summer consider switching to sulfur (Microthiol D). Note that some varieties are sensitive to sulfur, especially when applied at high temperatures. Other viable rotations for powdery mildew include Rally plus chlorothalonil alternated with Pristine plus chlorothalonil, Quintec alternated with Procure, and Quintec alternated with Pristine. Including Pristine in the rotation will also give increased efficacy against *Plectosporium*. This pathogen has demonstrated resistance to strobilurins (FRAC group 11 - Quadris, Flint, Cabrio, etc). Strobilurins are no longer recommended for powdery mildew but are still effective against *Plectosporium*, anthracnose (*Colletotrichum*), scab (*Cladosporium*) And black rot (*Didymella*).

The fungus causing powdery mildew fortunately is sensitive to many types of chemicals that are approved for organic production. These include oil (mineral and botanical types, eg JMS Stylet-oil, GC-3 Organic fungicide, Organocide), sulfur (Microthiol Disperss), and copper (Champ WG). These materials have been found to work well in some studies. Please note that copper products can cause phytotoxicity in some cucurbit crops. As with all fungicides, read the label carefully and adhere closely to the instructions, and check with your certifier for information about which formulations are currently approved for organic production.

When downy mildew is found in the area, or when the danger of downy mildew infection is high, add downy mildew specific materials to the spray rotation. Presidio (fluopicolide, FRAC group 43) and Previcur Flex (propamocarb HCl, FRAC group 28) are both effective materials. Presidio continues to be the best fungicide against this disease, but it is highly susceptible to resistance development. The label requires tank mixing with a fungicide with a different mode of action and it is never recommended to apply sequential applications. If you are including this material in a rotation that already includes chlorothalonil you are meeting this requirement. Note that carrots, potatoes, sugar beets, and leafy Brassicas have an 18 month plant back restriction after the last Presidio application. Both Presidio and Previcure Flex are also effective against late blight on tomatoes and downy mildew on a host of other vegetable crops. We put out weekly risk forecasts for downy mildew in Vegetable Notes, and are working on a text-message alert system for periods when the risk of these types of diseases occurring is high. Other effective rotations for downy mildew include Presidio plus mancozeb alternated with Ranman plus mancozeb, Presidio plus Tanos (famoxadone plus cymoxanil) plus chlorothalonil, and Presidio plus chlorothalonil alternated with Ranman plus chlorothalonil.

Organic control options for Downy mildew in cucurbits are limited. Copper products are probably the most effective material is available to organic growers, but may cause phytotoxicity problems in some cucurbit crops. There are also numerous biological and biorational materials labeled for organic production, though their efficacy may be more variable. Check with your certifier for information about which formulations are currently approved for organic production.

- Andrew Cavanagh, & Bess Dicklow, UMass Extension

## **ARMYWORM ALERT FOR SMALL GRAINS, SWEET CORN, COVER CROPS AND TURF**

Common armyworm, *Pseudaletia unipuncta*, is being reported at high levels in several sweet corn fields in central and western New York as well as western Connecticut, with at least one field suffering total loss. There are no reports in MA at this time, but growers should be on the lookout for outbreaks. For those of you who remember the outbreak in Massachusetts about 10 years ago, this may strike some fear in your hearts. Armyworms feed on corn and several grains (especially wheat and rye) and they also can attack managed turf. When they do so, they move across the area like an army, moving from areas they have destroyed to areas with plenty of food.

Be watching for armyworm caterpillars in the next couple weeks. Sometimes the moths arrive on weather fronts, and sometimes they are blown passively from one place to another. The females lay eggs at night, often in clusters of about 120 to 140 eggs per cluster. Each female can produce up to 2,000 eggs, so it does not take very many females to produce a damaging population of caterpillars. In sweet corn, armyworm feeding looks very much like fall armyworm – ragged, chewed leaves, most often in the whorl stage. Fields near wheat or rye are most at risk

It is important to detect armyworm areas early, while larvae are still small, since large larvae do most of the feeding and quickly destroy whole stands of corn, grasses and small grains. Because armyworm feeds at night look for chewed leaves, cut stems, lodged plants, pellet-like frass on the ground, and larvae hidden under plant canopy and surface residue. You will need to be aware that armyworms can move from field to field every quickly. If there are sufficient numbers and damage is present, an insecticide could be justified. Larger armyworm larvae, greater than 1 inch long, are much more difficult to control. These large larvae are more tolerant of insecticides, reducing the effectiveness and economic viability of this option. Note that true armyworms are a different insect species than fall armyworm.

True armyworm larvae appear smooth cylindrical pale green too brownish when they are still small. Mature larvae are smooth and marked with two orange, white-bordered strips on each side. True armyworm ranges in size from 1/8 inch to 1.5 inches long.

It is very difficult to control armyworms once they reach their full size (about an inch), so monitor likely spots and watch for small caterpillars. If you observe caterpillar activity when they are still small (less than a half inch), you may get some relief with the usual caterpillar products, including spinosad, indoxacarb, chlorantraniliprole, or a pyrethroid.

In Ontario, a threshold of 10% damaged plants is being recommended in seedling stage sweet corn, and 50% damaged plants in mid-whorl stage. Better get out there and scout!

### **Identification Resources:**

Armyworm as a pest of Field Corn: <http://ento.psu.edu/extension/factsheets/armyworm>

Armyworm on Wheat: <http://ohioline.osu.edu/ent-fact/pdf/0036.pdf>

Common (True) Armyworm: <http://www.omafra.gov.on.ca/IPM/english/sweet-corn/insects/common-armyworm.html>

- Compiled by R. Hazzard from Pat Vittum, UMass Turf Entomologist 6/7/2012 Turf Program Update and K. Waldron and K. Wise, NYS Field Crops IPM Program, on NYS Sweet Corn Pheromone Trap Network.

## **WATCH FOR POTATO LEAFHOPPER IN POTATO, EGGPLANT, BEANS**

Potato leafhoppers were first observed in the last week of May in potato in the Connecticut Valley and in beans in central/southeastern MA – an early arrival, not surprising for this season. It is likely their arrival in these crops is widespread and scouting is warranted.

Adults are about 1/4 inch long, light yellow-green, and fly up from foliage when it is disturbed or shaken. These are the first arrivals. PLH overwinters in the southern US and moves north annually. Nymphs will be found later on the underside of leaves, light green, wedge-shaped and very fast-moving. Damage can be severe on early-season varieties of potato and red potatoes, as well as in green beans. Beans are more susceptible when they are young than at later stages. Eggplant is also susceptible. Field crops such as alfalfa, clover, soybean, sunflower and tobacco are also hosts.

Adults and nymphs feed by inserting a needle-like beak into the plant and sucking out sap. They also inject a toxin into the plant, which causes yellowing, browning, and curling of leaves. In potato, leaf margins turn brown and brittle first, followed by death of entire leaves, a condition known as ‘hopperburn.’ In eggplant, leaf margins and tips turn yellow and curl up. Feeding can reduce yield before damage is visible.

It is important to protect plants when leafhoppers first arrive, before nymphs build up. It is difficult to count adults since they fly quickly when foliage is shaken or disturbed. Sweep nets can be used to detect adults – treat if more than 1 adult is found per sweep. If you see several when you shake the foliage, you are probably in that range. Once nymphs develop, they can be monitored by visually inspecting lower leaf surfaces on lower leaves. Treat if more than 15 nymphs are found per 50 leaves. University of Connecticut has established a threshold of 1.5 leafhopper per leaf in eggplant. In potato and eggplant, some materials registered for Colorado potato beetle adults will also control leafhopper, including neonic foliar sprays such as Provado. These and several other carbamate, synthetic pyrethroid and organophosphate products are also registered for leafhopper in potato, eggplant and snap beans. Refer to the New England Vegetable Management Guide for registered products.

On organic farms, pyrethrin (PyGanic EC5.0) has been shown to be the most effective product for reducing leafhopper numbers and damage. Good coverage is important. The residual period is short. Spraying late in the day or in the evening may provide better control than spraying early in the morning. Don’t wait for numbers to build up. Row cover can be used to delay PLH infestation in snap beans until flowering, when plants are less susceptible to damage.

Although bees do not forage extensively in beans or potatoes, if the crops or weeds within the crop field are flowering, bees may be active in the field, and selection of products with lower toxicity to bees is advised. See Table 20 in the Vegetable Guide for bee toxicity ratings. While the classes of insecticides listed above tend to have high toxicity to bees, there are variations within classes; for example, neonics are considered very toxic in general, but Assail (acetameprid) is much less so.

For conservation of both native pollinators and honeybees, clean cultivation and drift prevention are both important. However, encouraging some flowering areas in the margins is good for supporting pollinators before and after crops bloom. These can also be refugia for other beneficials (as well as pests like Tarnished plant bug).

## **USING TOMATO AND POTATO DISEASE FORECASTS FOR EARLY BLIGHT AND SEPTORIA LEAF SPOT**

TOMCAST and Late Blight Blitecast are systems of weather-based disease forecasting which can be used to time fungicide applications in tomato and potato. Three fungal diseases - early blight (caused by *Alternaria solani*), Septoria leaf spot (*Septoria lycopersici*), and fruit anthracnose (*Colletotrichum coccodes*) can be controlled using the TOMCAST system. The first appearance of late blight (*Phytophthora infestans*), and periods of late blight favorable weather can be predicted using relative humidity and temperature data collected from electronic weather monitors. These forecasting systems are available at <http://newa.cornell.edu>.

In the TOMCAST system, leaf wetness and temperature data are converted into a unit called disease severity values (DSVs) as shown in Table 1. These values are calculated automatically for selected weather stations on the NEWA network and displayed by date on the tomato forecast page.

To use TOMCAST, start accumulating DSVs when the tomatoes are transplanted. The first fungicide application should occur when 25 DSVs have accumulated since transplanting or July 11, whichever comes first. For very late transplanted fields, use your best judgment to determine the best time for the first fungicide application if DSVs are accumulating very slowly. Rapidly enlarging fruit or any early blight symptoms would be reasons to initiate the first fungicide application.

Subsequent applications should occur when 18-22 DSVs have accumulated since the previous application if Bravo or Quadris are used, or 15 DSVs if mancozeb or copper fungicides are used. If spray intervals extend more than 14 days using TOMCAST, and the weather forecast calls for rain, apply a fungicide and allow it time to dry before the onset of rain.

Note: If you commonly have problems with bacterial spot, speck, or canker in your tomatoes, TOM-CAST recommended spray intervals will not be sufficient for control of bacterial diseases if you're tank-mixing copper with your fungicide applications.

-Adapted by Zara Dowling, UMass Vegetable Program, from the NEWA webpage

## **LATE BLIGHT: KEEP SCOUTING, USE PROTECTANTS**

In Massachusetts, seasonal late blight severity values exceed the threshold for starting preventative, protectant sprays in potato and tomato. In addition, the weekly SV count, based on conditions over the past 7 days, all range between 5 and 10 new SV with rainfall over 1.2 inches at most locations (see GDD and Disease Forecast table). This means that a fungicide interval of five days would be recommended by the Blitecast system. See table below, and late blight update in May 31 Vegetable Notes.

Average Temp. Range Degrees F (during the leaf wetness period)	DSV's				
	0	1	2	3	4
56-63	0-6	7-15	16-20	21+	
64-68	0-3	4-8	9-15	16-22	23+
69-77	0-2	3-5	6-12	13-20	21+
78-85	0-3	4-8	9-15	16-22	23+

No late blight has been detected in New England this season. However, weather conditions have been favorable, and LB was confirmed in NJ (May 23, in potato), NY (May 29, on potato on Long Island) and several locations in PA (potato and tomato). In NY and NJ, the isolate was US-23 A1, which infects both tomatoes and potatoes and has been consistently sensitive to mefenoxam (eg, Riodomil Gold).

DATE: 6/7/2012	GDD	Rainfall	Late blight Severity Values		TomCast
Location	GDD Base 50F	7-Day Rainfall (in)	LB Severity Val- ues - season*	LB Severity Val- ues - 7 day	Tomcast Sever- ity Values - season**
Belchertown	639	2.14	46	7	n/a
S. Deerfield	611	1.69	42	8	18
Stow	653	2.56	48	9	21
Bolton	589	0.98	46	7	19
Dracut	541	1.59	42	8	17
Tyngsboro	545	1.21	42	8	16
East Bridgewater	527	1.40	51	10	15
Boston	581	1.41	31	5	26
Pittsfield	484	0.93	58	7	26

\*Values accumulated since May 1. Every site is over threshold for Late Blight, even if planting did not occur until mid-May.

\*\*Values accumulated since May 1. The usual threshold for Tomcast is 25 (since transplanting).

If you would like to follow degree day accumulations and see how they're used for pest forecasting you can access data from a number of different weather stations across the state at <http://newa.cornell.edu/index.php?page=degree-days>

materials such as chlorothalonil or mancozeb. How often to spray will depend on LB severity values, and local precipitation events. In tomato, pruning and staking will help to keep the canopy dry, which is also important.

If you suspect late blight in your field, contact your nearest Extension office or diagnostic lab (UMass Plant Disease Lab, 413-545-3209). For symptoms and other information see [www.usablight.org](http://www.usablight.org).

## **SWEET CORN REPORT**

Many growers are seeing tassels emerge and the earliest fields (planted early April) are in silk. European corn borer captures declined this week. This probably means that the peak of first generation flight is past, though cooler temperatures also cause lower flight activity. We can expect a rapid rise in borer activity in tassels for the next two weeks. Scout and spray if 15% of tassels have borers. Protect silking corn with weekly sprays at this time. We have set out some corn earworm traps to see if there might be a few overwintered moths and to be ready for any unusually early flights – if you normally use CEW traps we recommend that you do the same. See article on Armyworm which has been reported in nearby states, though not in MA.

LOCATION	Z1	EII	TOTAL ECB	CEW
<b>CT VALLEY</b>				
SHEFFIELD	0	0	0	
SOUTH DEERFIELD	0	2	2	0
HATFIELD	2	4	6	1
<b>CENTRAL &amp; EASTERN MA</b>				
MILLIS	3	6	9	

## **UPCOMING MEETINGS**

### **High-Tunnel Season Extension Training**

**Flatts Mentor Farm, Seven Bridge Road, Lancaster, MA 01523**

**Mon, June 11, 2012, 3pm – 7pm**

See details above. Refreshments will be provided! For more information, please contact: Peter Jakubowicz, Farm Manager. Phone: 978-479-0661, Visit us at [www.flattsmentorfarm.org](http://www.flattsmentorfarm.org)

### **Vegetable Program Twilight Meeting**

**Ward's Berry Farm, 614 South Main Street, Sharon, MA 02067**

**June 26 4pm-7:30pm**

Topics will include Deep Zone Tillage and No-Till strategies & Equipment, using biocontrols for European Corn Borer, fungicide scheduling and using weather stations for disease forecasting, managing Spotted Wing Drosophila, and soil health strategies. Pesticide credits have been requested.

### **SEMAP - TWILIGHT Grower Education Series - Specialty Crop: Garlic**

**Dave Purpura, Plato's Harvest Organic Farm, 46 Soule Street, Middleboro.**

**July 2 6:30pm – 8:00pm**

**COST: \$20/class; \$15/class (NOFA/SEMAP members)**

SEMAP's 7-workshop series for farmers and home gardeners will offer hands-on skill building in several areas of organic specialty crop production and marketing. Learn organic growing practices directly from local farmers! The tactics, methods and marketing channels presented in this workshop series reflect local farmer's efforts to become more sustainable, financially as well as productively. Learn pointers on planting the perfect patch, harvesting, best varieties and methods.

*Vegetable Notes. Ruth Hazzard, Amanda Brown and Andrew Cavanagh, co-editors. Vegetable Notes is published weekly from May to September and at intervals 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.*

*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.*