

## Vegetable Crops IPM Update, Week Ending 7/03/13

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### Sweet Corn

**European corn borer (ECB)** adult catches are extremely low at this time (see ECB map – all averages below 0.5 moths/night). The first flight is over, and feeding percentages are falling as well, as infestations are treated and no new eggs are being deposited. Infestations may linger over the next week. Consider treating if 12% or more plants exhibit the characteristic “shot-hole” type feeding on leaves and/or droppings or ECB larvae in emerging tassels. **Remember to make a full-tassel application to control ECB larvae as they leave the tassel and travel down the stalk to re-enter the plant near the ear shank.** This last application is often critical to controlling ear infestations from ECB. Consider weekly applications through the silk stage unless local corn earworm catches dictate a tighter schedule. This will help prevent ear infestations resulting from eggs laid on or near the developing ear.

The highest nightly ECB catches for the previous week are as follows:

Allentown	1	East Vineland	1	RAREC	1
Centerton	1	Griggstown	1	Sergeantsville	1
Crosswicks	1	Pedricktown	1	Woodstown	1
Downer	1	Princeton	1		

Low level infestations of **fall armyworm (FAW)** continue in coastal counties. At present, infestation percentages have hit 12% in Cape May County, and this situation may worsen over the next several weeks. FAW caterpillars consume corn foliage, and produce large quantities of feces that pile up within the whorl. FAW larvae typically have light and dark brown bands, and the head capsule has a distinctive upside-down “Y” pattern on it. Unlike ECB, FAW will feed on corn plantings in the seedling stage, although whorl stage is usually the first to be affected. Consider treating if the number of plants infested with FAW either alone, or in combination with ECB exceeds 12%.

**Corn earworm moths (CEW)** have increased in southern NJ blacklight traps over the past week, while declining in the central counties. No captures have occurred in the northern counties. Numbers are low overall, but even at these levels, the damage can be economically important. At this time of the year, pheromone traps catch a disproportionately higher number of moths than the blacklights. Therefore, data from both trap networks are present in this update.

**Blacklight:** At this time, the highest **blacklight** catches are still occurring in western Gloucester and Salem counties (see CEW Blacklight Map). In this blacklight-based map, the green area relates to a 3-day silk spray schedule and blue is a 4-5 day schedule.

**Pheromone:** CEW **pheromone** catches have changed little since last week, but numbers still suggest a threat to silking sweet corn. Because there are few pheromone traps deployed relative to blacklights, the CEW Pheromone map gives a much less defined

image. However, given the threat to these early plantings, it is recommended that for the present, growers in southern NJ defer to the more conservative schedule suggested by the pheromone map (see CEW Pheromone Map). Green areas on the **pheromone** map correspond to a 4-day spray schedule, while blue areas correspond to a 5-day schedule.

The highest nightly CEW **blacklight** catches for the previous week are as follows:

Woodstown	2	Eldora	1	Hammonton	1
Centerton	1	Elm	1	Hillsborough	1
Downer	1	Folsom	1	Pedricktown	1
East Vineland	1	Green Creek	1	RAREC	1

The highest nightly CEW **pheromone** catches for the previous week are as follows:

Elm	8	Springdale	2
Woodstown	6	Eldora	1
Beckett	2	Pedricktown	1
East Vineland	2		

Silking Spray Schedules\*:

South –4-5 days

Central – 5-6 days

North – 6-7 days

\* Note: These are general recommendations. Local trap catches may indicate some variation in the frequency of insecticide applications to silking corn.

### **Cole Crops**

With constant, heavy rains, many cole crop plantings are in decline due to saturated soil. These plants simply turn yellow and wilt. Other plantings are beginning to show signs of **alternaria** infections. This fungal infection causes characteristic target shaped lesions, starting on older leaves and progressing to newer ones. Management of this disease generally requires protectant fungicides. These include chlorothalonil in rotation with a FRAC group 11 material or Endura (Grp 7). Labeled materials differ by crop, so check the *2013 Commercial Vegetable Production Recommendations* for specific recommendations.

### **Tomatoes**

**Bacterial leaf spot (BLS)** infections continue to appear in more tomato plantings. In all cases, fields have a history of the disease. Rotations away from tomatoes and peppers have generally been a minimum of 3 years, but this has evidently not been sufficient. Nearly constant heavy rains have created ideal conditions for appearance and spread of these diseases. Keeping appropriate fungicide/bactericide schedules has been difficult for the same reason. Be aware that the practices of pruning and tying tomato plants in the field can spread bacterial pathogens if they are present on any of the plants. It is advisable to use latex gloves while pruning, and discard them at the end of each row. Using new gloves with each new row will help limit spread in the field. Additionally, tying wands may be dipped in a bleach solution at row end as well for the same reason. Bacterial infections (speck, spot and canker) typically appear first as very dark lesions on

leaf edges or interior tissue. Foliage of any age may be affected. Be sure to work in younger plantings before older, potentially infected ones if tying or other activities are necessary in multiple plantings. This will lower the risk of spreading the pathogen to younger plants. Various chemical applications may also be used to help suppress bacterial infections in both tomatoes and peppers (see the *2013 Commercial Vegetable Production Recommendations*), and these should be considered even in the absence of symptoms.

## Peppers

**Beet armyworm (BAW)** may be active in a few southern NJ pepper fields. These caterpillars generally feed on young foliage before entering fruit. Early infestations may be identified feeding near growing points. BAW is resistant to a number of synthetic pyrethroid insecticides. Newer materials, including spinosad-based insecticides, as well as those including chlorantraniliprole and flubendiamide are effective against BAW.

**Pepper weevil:** For the period of June 26 to July 2, only one weevil was collected in traps across south Jersey. This is the lowest number caught since April 15<sup>th</sup>. It does not mean that this is the end of pepper weevil, however. In 2012 there was a 2 month gap in which no adults were found before finding field infestations in mid-August. There are no known field infestations at this time.

Woolwich Township – 1 pepper weevil

## Brown Marmorated Stinkbug (BMSB)

**BMSB** adult catches in blacklights are low throughout most of the state, but a slight increase has occurred on the Cumberland/Salem County border. This activity near Upper Deerfield exceeded the 5/night threshold for the past week. Therefore a map is present in this update. BMSB has shown a preference for peppers in the past. Growers should pay close attention to activity from local traps to determine when to initiate field monitoring of this pest. As a result of the extremely low activity, no map will appear in this update.

The link for the Vegetable IPM Map Archive is:

<http://www.pestmanagement.rutgers.edu/IPM/Vegetable/Pest%20Maps/maparchive.htm>

This site contains all current pest maps as well as those from previous years, back to 1999.

## Pumpkins and Winter Squash

These crops are now emerging in many areas. It is important to monitor frequently for the presence of **striped and spotted cucumber beetles** at this time, particularly if the seed was not purchased pre-treated with an insecticide for cucumber beetle. Check 5 consecutive plants each in 10 random locations. Examine upper and lower surface of seed leaves for the presence of beetles. Consider treating if beetles are found at 5 or more sites. Heavy, but local infestations may be spot treated. Management

of these pests will limit the loss of plants to the bacterial wilt disease that the beetles transmit.

A sentinel plot containing susceptible and resistant cucumber varieties, as well as muskmelons, watermelons, acorn and butternut squash and pumpkins is now established at the Snyder Research and Extension Farm in Hunterdon County. The purpose of this plot is to detect the presence of **downy mildew (DM)** in northern NJ. Any occurrence will be reported in this newsletter and will also generate an alert to all subscribers. For more information on the regional presence of DM as well as comprehensive, weekly forecasts, see the following website: <http://cdm.ipmpipe.org/>

### **Snap Beans**

**Potato leafhopper (PLH)** adults have appeared in snap beans in the northern counties this week, and should be considered present in all areas. So far, only adults have been present. This pest is a particular problem because it often goes unnoticed until foliar distortion and burn occurs. Once this damage appears, yields have already been compromised. It is critical that beans be monitored regularly for the presence of PLH. If a sweep net is available, consider treating if more than 100 nymphs and adults are present in 20 sweeps of pre-bloom stage plants. This threshold increases to 250 during bloom and to 500 per 20 sweeps during pod development. If no sweep net is available, check plants in 10 random field locations and consider treating if adults and nymphs are found throughout. Adults are pale green, and will fly out from foliage when disturbed and immediately fly back into the plant canopy. Nymphs are wingless and bright green and may be found on the underside of leaves.