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Veg IPM Update: Week Ending 6/18/14

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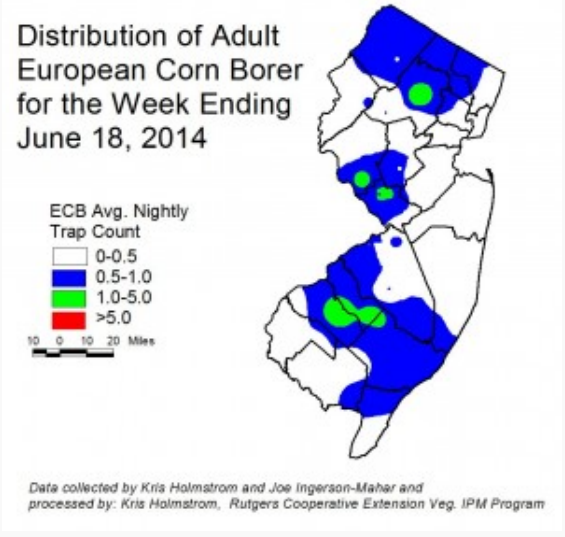
> *Vegetable IPM Report 6-18-14 – Click to View | Download | Print*
>
> ***Maps for the Week***
> *-European Corn Borer Population Map*
> *-Corn Earworm Moth Blacklight Trap Map*
> *-Corn Earworm Moth Pheromone Trap Map*
> *-Pepper Weevil Trap Catch Map*
>
> ***Topics for the Week***
>
> - *Sweet Corn*
> - *Cole Crops*
> - *Peppers*
>   - *Pepper Weevil Report*
> - *Tomatoes*
> - *BMSB*
> - *Pumpkins and Winter Squash*
> - *Snap Beans*



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Sweet Corn

European Corn Borer (ECB) adult catches have begun to decline throughout the state, even as warmer evening temperatures dominated much of that period. This is an indication that the first flight is starting to wind down. At present, higher activity is found along the Gloucester-Camden County border and the Mercer-Hunterdon County border (see ECB map). Larval infestations in sweet corn are increasing dramatically on whorl and pre-tassel stage corn throughout the state. Infestation rates above 30% have been found in central counties this week.

Consider treating if 12% or more plants exhibit the characteristic “shot-hole” type feeding on leaves. As plants mature to pre-tassel, live larvae and droppings can be observed in the 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. Often, early sweet corn plantings suffer from “split set”, in which germination does not occur in a uniform fashion. The result is a planting where all plants do not reach full tassel at the same time. This situation may require an extra tassel spray if there are several days difference in the time full tassel is reached on a significant number of the plants.

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

Downer	2	Clinton	1	Folsom	1
Sergeantsville	2	Denville	1	Pennington	1
Chester	1	Eldora	1	Sparta	1
Cinnaminson	1	Elm	1	Springdale	1

Blacklight Trap Corn Earworm Moth (CEW): Several CEW were captured in blacklights in Elm, Folsom and Eldora this past week.

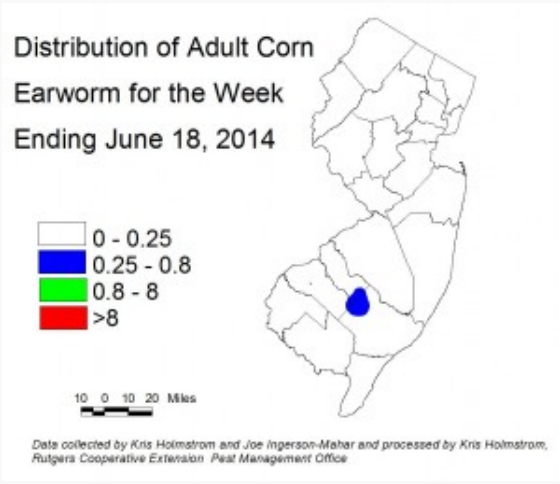
Pheromone Trap Corn Earworm Moth (CEW): Gradually increasing catches have been recorded in pheromone traps in the southern counties (see CEW pheromone trap map). Green areas on the map roughly correspond to a 4-day silk spray schedule, although the relatively few number of pheromone traps results in a broad green band which does not reflect local differences. Highest activity is from the Camden-Atlantic border and south. Despite the low moth numbers, sweet corn plantings now in silk in southern NJ are at risk for ear infestation if CEW is not properly controlled. As silks begin to appear, pay close attention to CEW catches in local blacklight traps, and treat silking plantings accordingly.

The highest nightly CEW pheromone trap catches are as follows:

Springdale	4	Pedricktown	3	Green Creek	1
Elm	3	East Vineland	1	Indian Mills	1

Silking Spray Schedules*:
South – 5 days
Central – 6-7 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.



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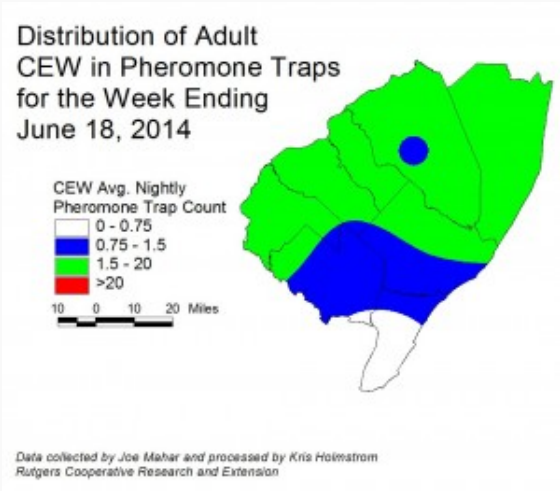
Cole Crops

Heavy egg laying by **Imported Cabbage Butterflies (ICW)** and **Diamondback Moth (DBM)** continues. Infestations of these pests have been found throughout the state. Scout plantings weekly. Check 5 consecutive plants each in 10 random locations throughout the planting, paying particular attention to the innermost leaves where ICW often feed. Consider treating if caterpillars are found on 10% or more plants that are in the 0-9 true leaf stage. From 9-leaf to the early head stage (in broccoli, cauliflower and cabbage) infestations up to 20% may be tolerated. Once heads begin to form, a 5% threshold should be observed to protect the marketable portion of the plant. For leafy greens such as collards and kale, 10% plants infested is the threshold throughout. It is important to distinguish between DBM and ICW because in many cases, DBM are resistant to synthetic pyrethroid insecticides. If DBM is the dominant pest, or makes up more than a few percent of the overall infestation, consider using one of the newer chemistries. These include spinetoram (Radiant), chlorantraniprole (Coragen), and flubendiamide (Synapse/Belt). The latter two materials have the added benefit of not harming bees or predatory/parasitic insects.



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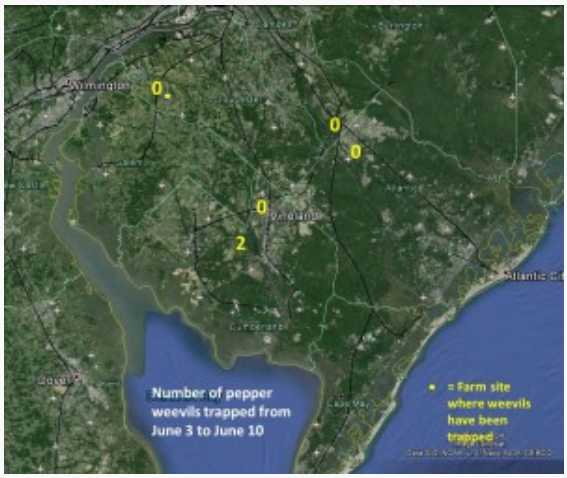
Peppers

ECB eggs have been laid on pepper plants. Be sure to scout fields regularly for the presence of ECB egg masses. If two or more egg masses are found in a 50 plant (two leaves/plant) sample, consider treating even if no fruit are present. In the absence of fruit, ECB larvae will bore into the central stem, topping the plant. This will result in the loss of crown fruit on infested plants. Generally, where blacklight trap catches average one or more ECB per night (blue and green areas on the ECB map) and fruit are greater than ½" in diameter, insecticides are warranted. See the 2014 Commercial Vegetable Production Recommendations for materials useful in controlling ECB.

Pepper Weevil Report

Numbers of trapped weevils continue to decline with only one of the monitoring sites catching any weevils (see pepper weevil map.) This follows the pattern from last year and there may not be any more weevils caught for a few weeks until the local peppers are brought to these facilities. No known new field infestations.



Pepper Weevil Catch Trap Map 6-18-2014
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Tomatoes

As hotter weather arrives, be sure to check for the presence of two-spotted spider mites (TSSM) activity in the tomato fields. Whitish pin-spots (called mite stipple) on the upper surfaces of leave are an indication that mites are actively feeding underneath. This feeding often appears near field edges where other hosts (eggplant, watermelon) are adjacent. Grassy areas that have been recently mowed often result in TSSM infestations in bordering tomato fields. TSSM are best managed before they become heavy. Check 5 consecutive plants each in 10 locations, making sure to take some samples from field edges. Spot treat TSSM infestations when possible. See the 2014 Commercial Vegetable Production Recommendations for materials that are labeled for TSSM control in tomatoes.

Aphid populations have begun to appear both in the field and in high tunnel tomatoes. These pests often form colonies beneath the surface of leaves and near growing points on the plant. While the plants consist primarily of vegetative growth without fruit, aphids are largely an insignificant pest. If no broad spectrum insecticides are used on the plants, the aphids generally are decimated by predators and parasites before becoming an economic problem. Should aphid populations increase to a degree that their droppings are accumulating on the surface of developing fruit, an insecticide that specifically targets these pests may be necessary. See the 2014 Commercial Vegetable Production Recommendations for materials that are labeled for aphid control in tomatoes. Avoid broad spectrum insecticide classes such as synthetic pyrethroids as much as possible.

Brown Marmorated Stinkbug (BMSB)

BMSB catches, while still quite low, are increasing in some traps. Adult activity continues to be well behind in 2014. As adult captures increase to 5/night in parts of the state, maps will be produced to show where activity is highest. Information on scouting, crop injury and control will also be included.

At present, the highest nightly BMSB catches are as follows:

Green Creek	3	Belvidere	1	Phillipsburg	1
Woodstown	1				

Pumpkins and Winter Squash

These crops are now emerging in many areas. It is important to monitor frequently for the presence of **striped 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 and another will be established at RAREC in mid-July. The purpose of these plots 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.

Tomato Field: Two Spotted Spider Mite Infestation

Leaf Underside: Two-Spotted Spider Mites

Striped Cucumber Beetle

All current and archived Vegetable IPM Maps including European corn borer, corn earworm and brown marmorated stink bug population maps are available for viewing @
http://tinyurl.com/njaes-ipm-maps