

Vegetable IPM Update 9-26-2012

-Kris Holmstrom

- Sweet Corn
- Peppers
- Tomatoes - Late Blight Active in New Jersey
- Pumpkin & Winter Squash - Downy Mildew Present
- Cole Crops

Sweet Corn

European corn borer (ECB) adult catches have dropped to nearly nothing over the past week. It is unlikely that ECB will rebound to damaging levels at this point. There may be a few larvae remaining in late season sweet corn plants. 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.

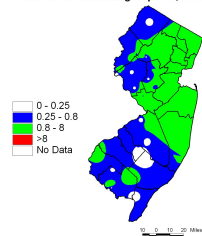
The highest nightly ECB catches for the previous week are as follows:

Beemerville - 1; New Egypt - 1; Hackettstown - 1;

Princeton - 1; Little York - 1

Corn earworm moth (CEW) catches are still declining throughout the state. Some traps continue to capture higher numbers, and there is no particular pattern (see CEW Map). This suggests that there is still a low-to-moderate population present, but that trap catches have been depressed by cool night temperatures. Some increase may be expected if night temperatures rise.

Average Nightly Distribution of Adult CEW
for the Week Ending Sept. 19, 2012



Green area on the map represent a 3 day spray schedule on silking corn. These moths remain a threat to the sweet corn plantings now in the silk stage. Pay close attention to CEW catches in local blacklight traps, and treat silking plantings accordingly. Begin silk spray schedules as close to first silk as possible. The highest nightly CEW catches for the previous week are as follows:

Cedarville	2	New Egypt	2	Griggstown	1
Centerton	2	Pedricktown	2	Hillsborough	1
East Vineland	2	Allamuchy	1	Pennington	1
Hackettstown	2	Green Creek	1	Woodstown	1

Silking Spray Schedules*

South: 3 days

Central: 3-4 days

North: 4-5 days

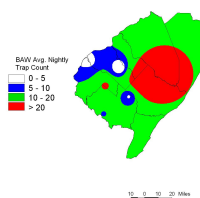
* Note: These are general recommendations. Local trap catches may indicate some variation in the frequency of insecticide applications to silking corn.

Fall armyworm (FAW) infestations continue throughout the state, although with declining regularity. This pest favors whorl stage corn, but will infest all stages. While scouting for ECB, note the presence of larger holes than are typically caused by ECB. These may be accompanied by large amounts of droppings in the whorl. FAW larvae are green with a pale stripe on each side when very small. As they grow, they take on a tan and brown color with a prominent upside-down "Y" on the head capsule. This pest may be difficult to control with commonly used pyrethroid insecticides. Newer materials generally provide better control. See the [2012 Commercial Vegetable Production Recommendations](#) for newer materials useful in controlling FAW. Consider treating if 12% or more plants are infested with FAW either alone, or in combination with ECB.

Peppers

Beet armyworm (BAW) moth catches have declined in some southern NJ pheromone traps, but remain steady at moderately high numbers in others over the past week (see BAW map), with highest catches occurring outward from the Atlantic-Burlington County border area. This pest is typically a threat to peppers, and growers should be scouting fields at this time. BAW larvae feed on leaves near the growing points on plants, resulting in noticeable foliar injury in the upper canopy prior to fruit damage occurring. BAW larvae are typically green in color, with a prominent black spot behind the head on either side of the body. In recent years, BAW infestations have occurred on peppers as far north as Warren County. Like FAW, BAW can be difficult to control with older materials. See the [2012 Commercial Vegetable Production Recommendations](#) for newer materials useful in controlling BAW.

Distribution of Adult Beet Armyworm
for the Week Ending Sept. 19, 2012



Data collected by Joe Speranza-Walsh and processed by Kris Holmstrom
 Rutgers Cooperative Research & Education

Brown Marmorated Stinkbug (BMSB) Blacklight catches of adult **BMSB** have dropped to nearly nothing throughout the state. As such, no map appears in this edition. Despite low light trap catches, BMSB adults and injury continue to occur on commercial peppers, particularly in parts of Warren County. New adults appear to infiltrate fields within one week of an insecticide application. Frying peppers (Cubanelle types), as well as banana and jalapeno peppers appear to be favored this year, as in the past. On cool mornings when the sun is out, BMSB adults are easy to spot as they attempt to warm themselves near the tops of the plants. Stinkbug feeding has the appearance of a large, diffuse blotch on pepper and tomato fruit. The blotch, called “cloudy spot”, has scalloped edges, and is pale on green fruit, but turns bright yellow as fruit ripen. It would be wise to maintain a strict field scouting program at this time. If injury to fruit is appearing with greater frequency, consider treating for stinkbugs. For materials useful against stinkbugs, see the [2012 Commercial Vegetable Production Recommendations](#). The highest nightly BMSB catches for the previous week are as follows:

Hillsborough - 1; Pennington - 1

Tomatoes – LATE BLIGHT ACTIVE IN NEW JERSEY!

Late blight (LB) infections continue to appear with increasing frequency. It is apparent that LB infections are hitting old plantings that growers have stopped treating with fungicides. This situation makes the disease more difficult to manage both on the farm, and within the local region. If a planting no longer warrants fungicide applications due to declining productivity, the plants should either be removed or destroyed with herbicide so that they do not serve as a host for LB. Growers in all areas of the state should respond immediately by adding fungicides specific to LB to their regular protectant program. Complete coverage with fungicides is essential. This particular strain of LB, which Cornell Univ. has identified as U5-23, seems to be responding very well to appropriate fungicide programs. See Dr. Andy Wyenandt's recent pathology columns and Pest Alerts for details. Consult the [2012 Commercial Vegetable Production Recommendations](#) for effective materials.

Occasional **CEW** infestations are appearing in some tomato plantings at this time, and **BAW** infestations are common. In both cases, green fruit near the top of the plant are generally the ones with injury. These fruit have circular holes near the shoulder and in some cases the larvae are still present. These infestations do not typically result in significant loss in New Jersey, but the number of damaged fruit should be monitored for increase. Should they occur, large increases in moths (mainly CEW) could result in economic injury.

Pumpkins and Winter Squash – DOWNY MILDEW PRESENT!

Downy mildew (DM) is widespread on pumpkins throughout the state. This disease can defoliate fields rapidly under wet conditions. Symptoms include pale areas, sharply bordered by leaf veins on the upper leaf surface. Below these areas (lower leaf surface), dark spores are produced. Without control, particularly with recent wet conditions, the lesions will coalesce, resulting in total defoliation of the plants in a period of several days. For more information on the regional presence of DM as well as comprehensive, weekly forecasts, see the following website: <http://cdm.ipmPIPE.org> DM requires the addition of specific fungicide products to the regular protectant program. Good foliar coverage is essential for control. See the [2012 Commercial Vegetable Production Recommendations](#) for newer materials useful in managing DM. As plantings mature, with harvest to begin within 2 weeks, it may be sufficient to use protectant fungicides alone.

Cole Crops

Cabbage looper (CL) infestations are common, as well as those from **diamondback moth (DBM)** and **imported cabbage worm (ICW)**. **BAW** continues as a common pest in a number of northern NJ fields. This typically southern pest will feed on cole crops as well as peppers and tomatoes. Feeding on cole crops is distinguished from other larvae in that extensive ‘window pane’ damage occurs while larvae are small. As they grow, they will consume all of the leaf tissue. It is important to identify this pest if it is present, because synthetic pyrethroid insecticides may not provide acceptable control. The use of synthetic pyrethroid insecticides may be the reason that we find BAW when other pests are no longer present. 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.

With longer dew periods and more frequent rains, all cole crops are subject to infections from **alternaria** and **downy mildew**. The former causes target-like lesions on older leaves, and the latter causes yellow spots on the upper leaf surface with pale spores produced underneath. These infections are particularly damaging on leafy greens, as they impact the marketable portion of the plant. See the [2012 Commercial Vegetable Production Recommendations](#) for newer materials useful in managing alternaria and crucifer downy mildew.