

Hudson Valley Research Laboratory
Department of Entomology

Peter Jentsch; Senior Extension Associate
Henry Grimsland; Research Support
3357 Route 9W; P.O. Box 727
Highland, NY 12528

Phone: 845-691-7151
Mobile: 845-417-7465
pjj5@cornell.edu

● Agricultural Research and Extension on Tree Fruits and Vegetables ●

Sweet Corn Pest Report

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Hudson Valley: The sweet corn lepidopteran complex of insects captured in New Paltz and Warwick traps this week show European corn borer (ECB) adult captures dramatically decrease, low Corn Ear Worm (CEW) and increasing Fall Army Worm (FAW) adult trap captures. Generally, fewer insects were captured throughout the season in Warwick sweet corn fields. CEW captures in the Hudson Valley (New Paltz) are averaging 0.3 per day, requiring growers to be on a 6-day schedule; Fall armyworm (FAW) adult captures have seen a dramatic increase in the Hudson Valley with traps at 3.9 per day. The newly invasive Western Bean Cutworm (WBC) adult numbers continue declining.



Western bean cutworm, *Striacosta albicosta*, (WBC) a newly invasive sweet corn pest from the Western US, has been captured in both Warwick and New Paltz through much of the season with traps now showing no captures for the past two weeks. To date, no treatment is required for this insect this season. Highest captures occurred in New Paltz, totaling 6 per season. Cumulative trap catches of 100 moths would signal intensified scouting in fields nearing silk, HOWEVER, we have not seen trap captures of that volume in our trap sites. Threshold set in Ohio for fresh market sweet corn is 1%.

Western NY: [Marion Zuefle reports](#) that the second flight of European corn borer continues to decline over the past three weeks, with only 8 of 16 WNY trap sites reporting ECB populations requiring a prograded spray interval (see chart below). Fall armyworm (FAW) numbers have increased dramatically with one site, Pavilion, catching a total of 220 moths. Three sites reported Western bean cutworm (WBC), but overall numbers continue to decline.

Eastern Long Island: Report from 8/25 E. LI. has very high FAW populations of 2.4-4.6 adults per day using green bucket traps. Highest CEW are at 5.3 per day with Riverhead on a 4-day schedule.

Corn Earworm adults (*Helicoverpa zea*).



Across the region: CEW increasing in PA. Highest captures of CEW are in west central PA with daily trap captures at 39.4 at Holidaysburg, Blair County and nearer to Hudson Valley, 12.3 per day in Lehigh County, Germansville, PA. Scouting should be ongoing in fields that are in the whorl and silk stage for the presence of all three major insect pests. A five - six day spray interval is recommended when the weekly trap catch of CEW's is less than seven adults per trap.(see chart below).

Field scouting: Check plants in a V or X pattern across the field in groups of 10. Avoid checking only field edges, and start at random, not only where you can see damage. A plant is infested if at least one caterpillar is found. With the high numbers of FAW's, field scouting should include looking for the presence of FAW egg masses. Egg masses consist of 50 – 150 eggs and can be distinguished from the ECB by the fine hairs covering the egg mass (See photo below).



Western Bean Cutworm Adult

Whorl and tassel stage: Typical examples of ECB feeding damage in the whorl stage are straight line pinholes as well as “window pane” damage. CEW and FAW larvae will leave ragged feeding holes in the leaves with large dark frass pellets (see photo below). ECB feeding on the tassel is usually accompanied by white or light brown frass the size of fine sand.

Silk Stage: When scouting fields that are in the silk stage, look for signs of larvae feeding and frass on the silk, around the ear, and in between the ear and the stalk. Pull the ear just slightly away from the stalk to look for signs of feeding or entry (see photo below). Egg masses can be found in the ear zone area on the underside of the leaves, the flag leaves on the ear, and on the husk. ECB egg masses are white when first laid and then turn cream colored after a few days. The ECB egg mass will develop “black heads” just before the larvae hatch (see photo below). FAW egg masses will be covered with gray scales and have the appearance of a small (about 1/4”) piece of lint (see photo below). CEW adults lay their eggs individually on the silk and are very difficult spot. Using the CEW pheromone trap chart below will help in determining the spray schedule.

If 15% or more of plants are infested with sweet corn pest damage, a control is needed.

Average Corn Earworm Pheromone Catch

<u>Per Day</u>	<u>Per Five Days</u>	<u>Per Week</u>	<u>Days Between Sprays</u>
<0.2	<1.0	<1.4	No Spray (for CEW)
0.2-0.5	1.0-2.5	1.4-3.5	6 days
0.5-1.0	2.5-5.0	3.5-7.0	5 days
1-13	5-65	7-91	4 days
over 13	over 65	over 91	3 days



ECB feeding on emerging tassel



Fall armyworm egg mass



CEW and FAW feeding damage



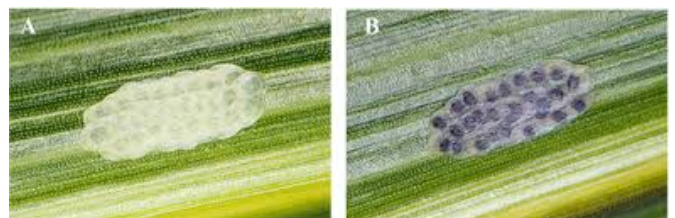
Fall armyworm larva, note the prominent inverted "Y" on the head capsule.



WBC egg mass (early stage)

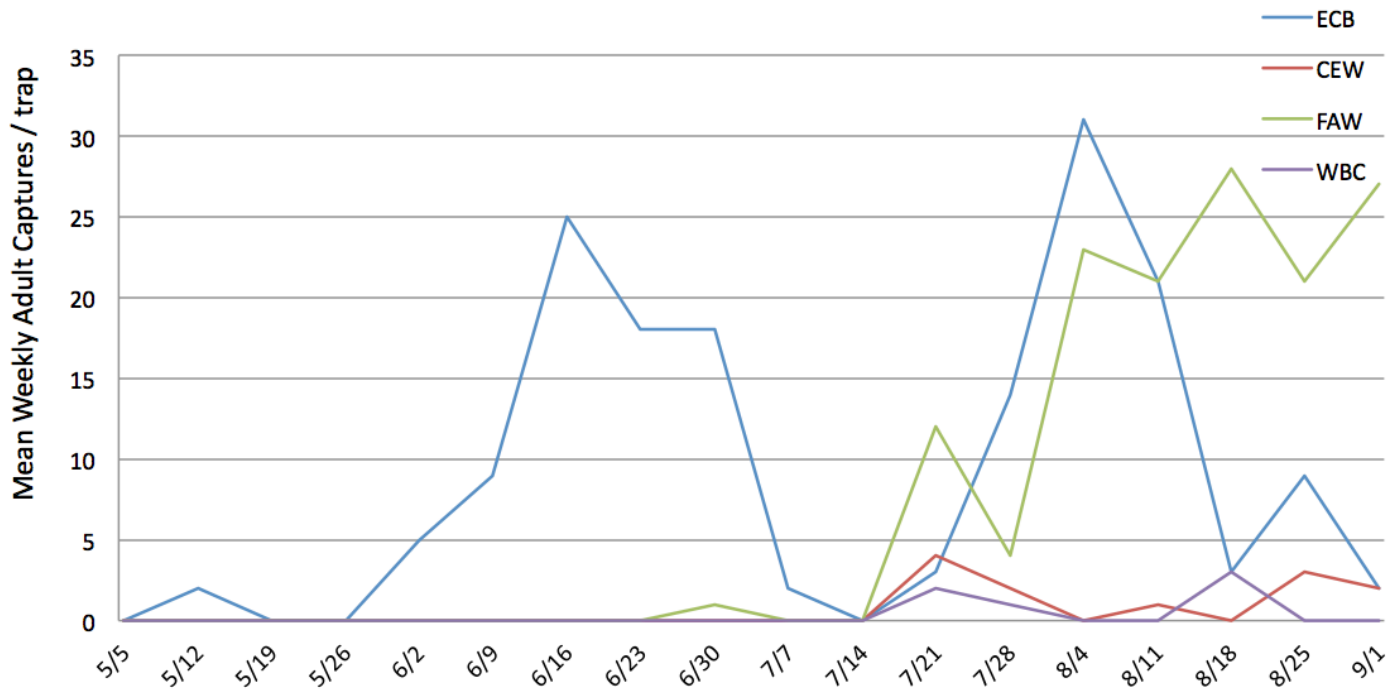


WBC eggs (late stage)

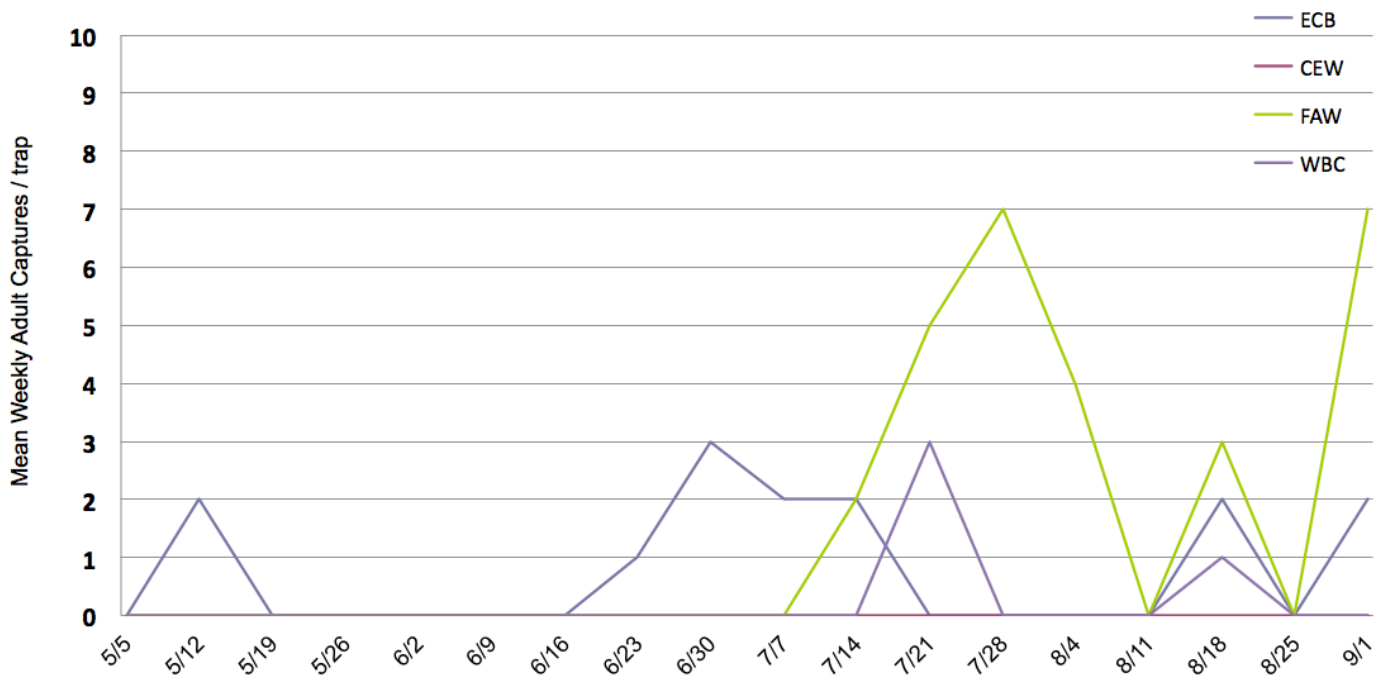


ECB egg masses (early and late stage)

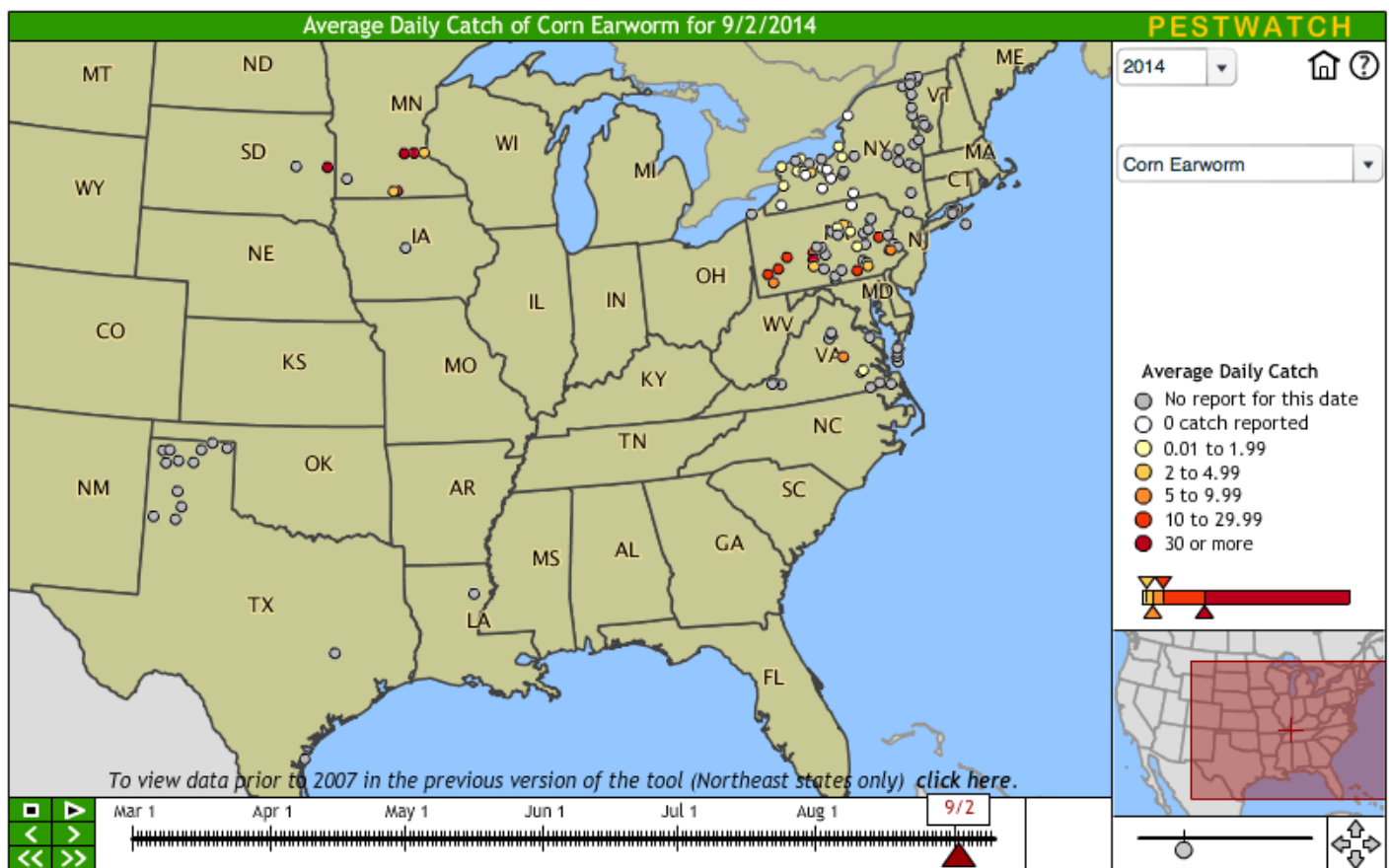
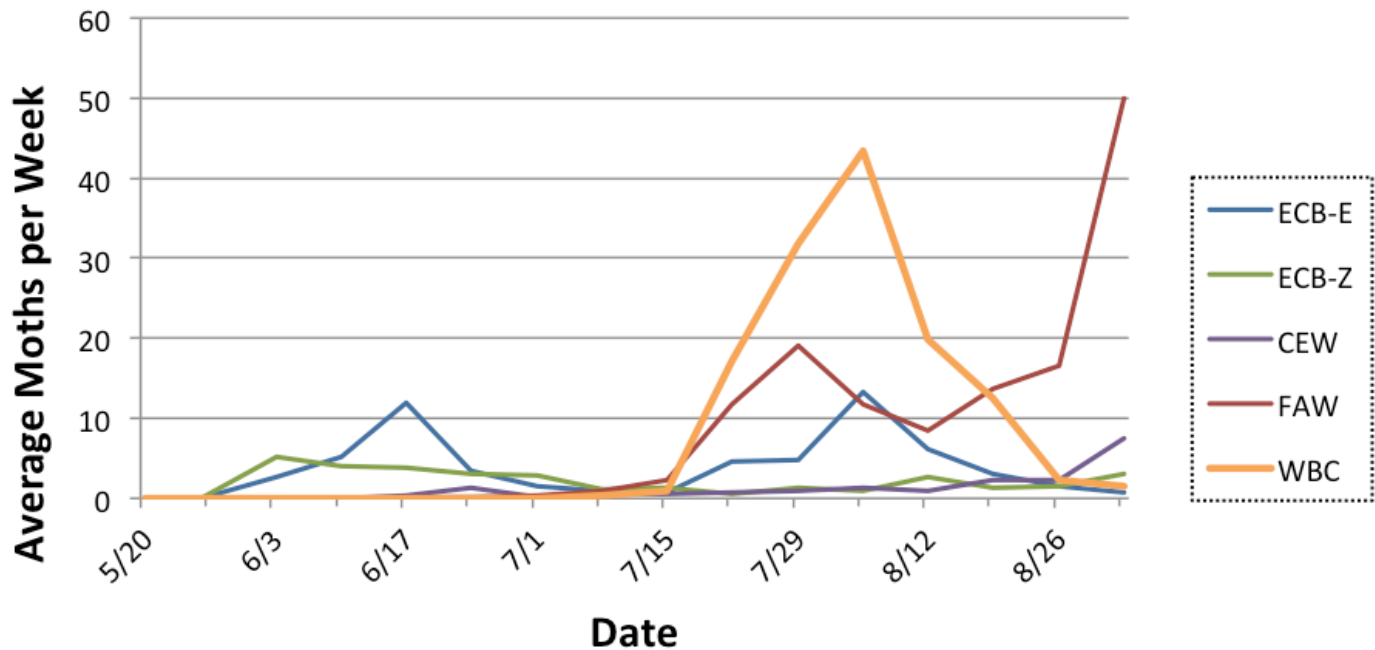
**Sweet Corn: European corn borer (ECB), Fall Armyworm (FAW), and
Corn Earworm (CEW) and Western Bean Cutworm (WBC) Adult Flight Data
New Paltz, NY - 2014**



**Sweet Corn: European corn borer (ECB), Fall Armyworm (FAW), and
Corn Earworm (CEW) and Western Bean Cutworm (WBC) Adult Flight Data
Warwick, NY - 2014**



**Sweet Corn: European corn borer (ECB), Fall Armyworm (FAW), and
Corn Earworm (CEW) and Western Bean Cutworm (WBC) Adult Flight Data
Western NY - 2014**



<http://www.pestwatch.psu.edu/sweetcorn/tool/tool.html>