

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 I

## Sweet Corn Pest Report

Tuesday, July 15



European Corn Borer Adults (*Ostrinia nubilalis*)

The trap catch data from New Paltz and Warwick this week indicates a continued decline in the number of adult first brood European corn borers (ECB). In New Paltz, Corn Earworm (CEW) and Fall Armyworm (FAW) adults were not observed in our traps. Historically we see CEW and FAW arrive in the Mid-Hudson Valley by late June.

Heavy rainfall over the past two weeks, with 6.7" of rainfall during the first half of July, likely had some impact on flight patterns and distribution of the lepidopteran complex in sweet corn.

There were no European corn borer (ECB), Corn earworm (CEW), Fall armyworm (FAW) or Western Bean Cutworm (WBC) adults caught in any of our traps in New Paltz this past week. In Warwick, two ECB and two FAW adults were found in traps. In the Hudson Valley, the E-strain of ECB has been increasing over the past three weeks. The second generation of ECB-E strain will begin to emerge this week (@ 1400 modified base 50 degree days). **We are at approximately 1402 DD<sub>BE</sub> in Highland, NY, with the onset of 2<sup>nd</sup> ECB generation moths predicted to occur after the 15<sup>th</sup> of July with egg hatch beginning 1550 DD<sub>BE</sub> or 23 July.**



Fall Armyworm Moth (*Spodoptera frugiperda*)  
Image: Entomology Dept. Kansas State Univ.

In NY there are two distinct strains of ECB, designated E and Z strains. The z-strain being bi-voltine (having 2 generations per year), while the E-strain having bi-voltine and uni-voltine hybrid strains. ECB adults are active at night, remaining still during the day while anchored to the plant, often residing in areas of dense vegetation at the crop border in conditions of high humidity (dew). The average adult lifespan is 10-15 days. Females lay an average of 500-600 eggs/female in groups of 5 to 50 per egg mass.

Though CEW adults have yet to be observed in our traps in New Paltz or Warwick, yet, this does not necessarily mean that they are not here. FAW adults have been observed in both locations.

Scouting should be ongoing in fields that are in the whorl and silk stage for the presence of all three major insect pests. Once the CEW adults are observed, a five day spray interval is recommended when the weekly trap catch is not greater than seven CEW's (see chart below).



**Fall Armyworm Larva** (*Spodoptera frugiperda*)  
Image: Entomology Dept. Kansas State Univ.

**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. Sometimes feeding damage is old and no larvae are found; this usually means that the larvae have left the plants to pupate in the soil.

**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.

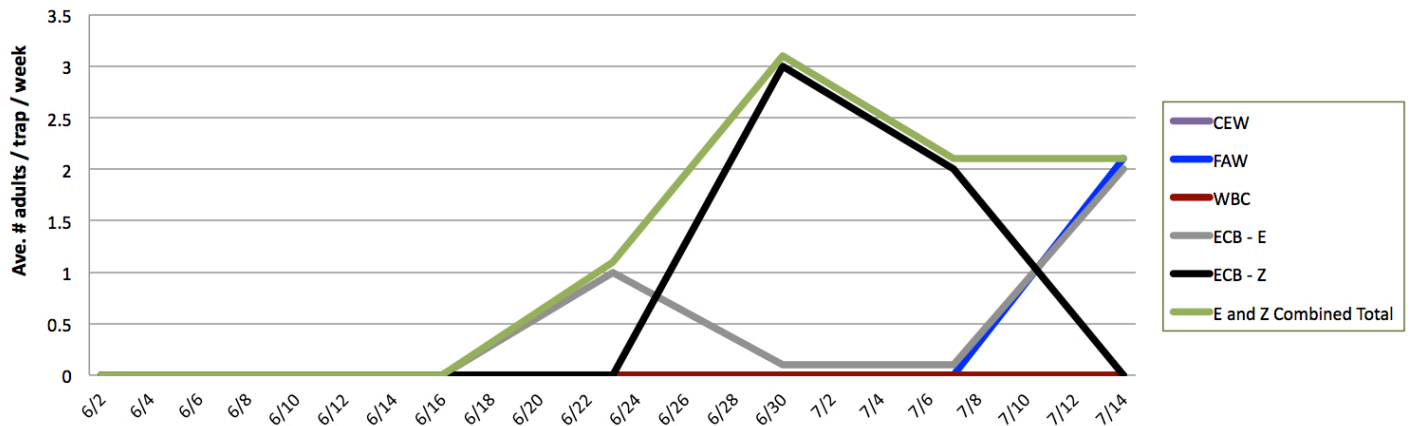
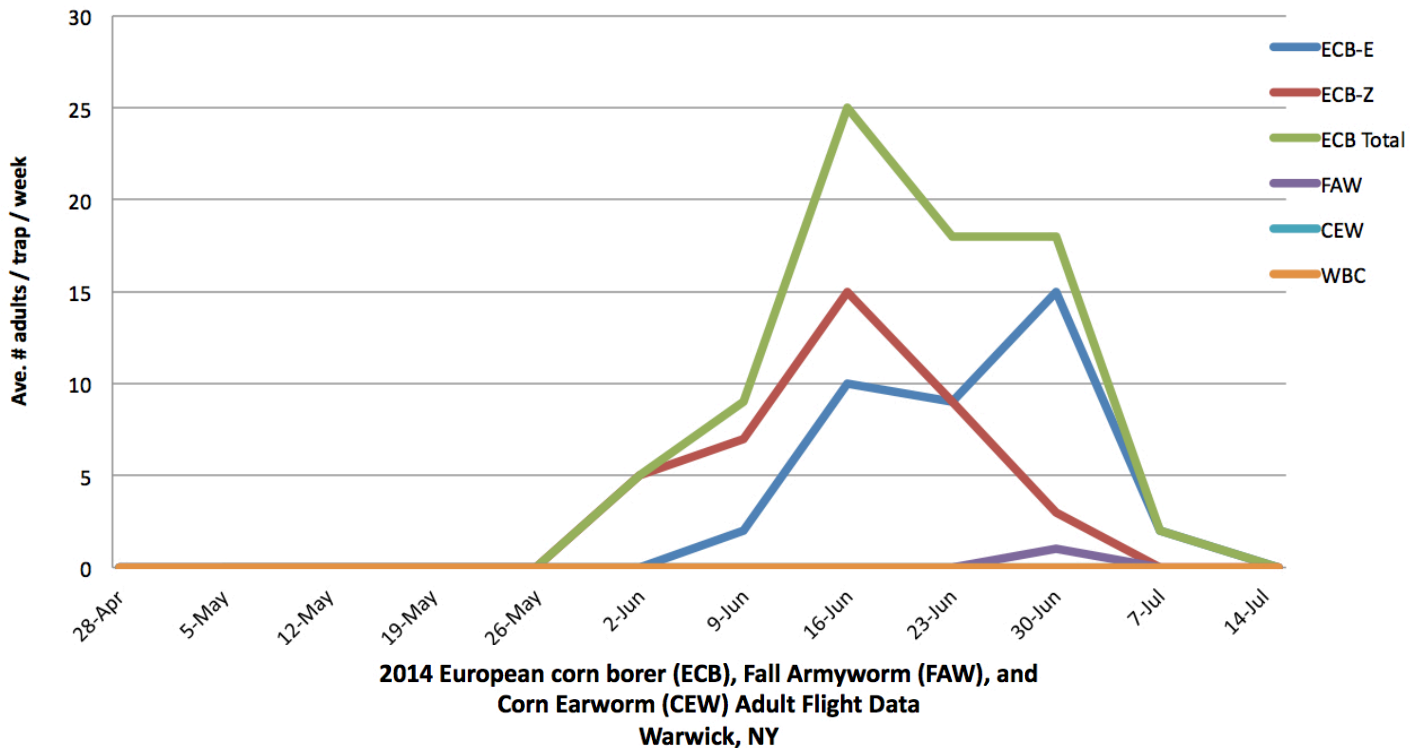
**Silk Stage:** When scouting silk stage, look for signs of larvae feeding and frass on the silk, around the ear, and in between the ear and the stalk. Pull the ear just slightly away from the stalk to look for signs of feeding or entry. Egg masses can be found in the ear zone area on the underside of 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. FAW egg masses will be covered with gray scales and have the appearance of a small (about ¼”) piece of lint. 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

## 2014 European corn borer (ECB), Fall Armyworm (FAW), and Corn Earworm (CEW) Adult Flight Data Walkkill View Farms, New Paltz, NY



### [WNY sweet corn trap network report 7.15.14](#) Posted by Marion Zuefle

Nineteen sites reporting this week with only two sites reporting European corn borer (ECB)-E and five with ECB-Z. Five sites caught one corn earworm (CEW) each, this is below the level for a recommended spray. Fall armyworm (FAW) catches were up this week with eight sites reporting trap catches and with one site as high as 13. Western bean cutworm (WBC) was caught at five sites this week.

Fall army worm numbers are up this week. When scouting sweet corn look for FAW egg masses on the leaves. Egg masses consist of 50-150 eggs and can be distinguished from ECB by the fine hairs covering the egg mass. Feeding damage is also very different from ECB. FAW will cause ragged feeding damage on leaves with large amounts of frass below the feeding site. The larva has a distinct inverted 'Y' on the front of the head.

<u>Location</u>	<u>ECB-E</u>	<u>ECB-Z</u>	<u>CEW</u>	<u>FAW</u>	<u>WBC</u>	<u>DD to date</u>
Avoca (Steuben Co.)	0	0	0	0	0	1164
Avon (Livingston Co.)	0	0	1	1	0	1324
Baldwinsville (Onondaga Co.)	0	1	0	1	0	1336
Batavia (Genesee Co.)	NA	NA	NA	NA	NA	1042
Bellona (Yates Co.)	0	5	0	3	0	1379
Eden (Erie Co.)	0	0	0	4	0	1252
Farmington (Ontario Co.)	0	0	0	0	0	1264
Hamlin (Monroe Co.)	NA	NA	NA	NA	NA	1238
Kennedy (Chautauqua Co.)	0	0	0	2	4	1067
King Ferry (Cayuga Co.)	NA	NA	NA	NA	NA	1298
Kirkville (Madison Co.)	0	0	0	1	0	1394
LeRoy (Genesee Co.)	NA	NA	NA	NA	NA	1146
Lockport (Niagra Co.)	0	4	1	1	NA	1170
Oswego (Oswego Co.)	0	0	0	0	1	1218
Owego (Tioga Co.)	0	0	0	0	0	1176
Pavilion (Genesee Co.)	0	0	1	13	2	1147
Penn Yan (Yates Co.)	0	0	0	0	0	1339
Plessis (Jefferson Co.)	0	0	0	0	2	1149
Preble (Cortland Co.)	0	0	0	0	0	1294
Seneca Castle (Ontario Co.)	0	0	0	0	0	1271
Sherwood (Cayuga Co.)	NA	NA	NA	NA	NA	1298
Spencerport (Monroe Co.)	1	4	1	0	0	1324
Waterport (Orleans Co.)	0	0	1	0	0	1238
Williamson (Wayne Co.)	1	1	0	0	1	1176
ECB – European Corn Borer CEW – Corn Earworm FAW – Fall Armyworm WBC – Western Bean Cutworm NA – not available DD – Degree Day (modified base 50F) accumulation						
<i>trap catches for the week of 7.8.14 – 7.15.14</i>						





ECB "window pane" damage



ECB feeding on emerging tassel



ECB pinhole damage



CEW and FAW feeding damage



Whorl stage corn riddled by fall armyworm.  
Image: Purdue Cooperative Extension Service