C O R N E L L
U N I V E R S I T Y

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l **Agricultural Research and Extension on Tree Fruits and Vegetables** l

Sweet Corn Pest Report

Tuesday, July 9

The trap catch data from New Paltz this week indicates that the first generation flight of adult European corn borers has ended. Corn earworm adults are active but the populations remain low. A five-day spray interval is recommended when the weekly trap catch is not greater than seven CEW's, (see chart below). Fall armyworm adults have not yet been observed in our traps but they are most likely here and actively laying eggs. Field scouting should be ongoing in all fields that are in the whorl and silk stage for the presence of all three major insect pests.

Again this week's ECB numbers show a sharp decline, with total trap ECB numbers at 9 compared to 35 last week and 82 the week before. The E-strain remains the higher of the two ECB strains with 8 adults of the 9 ECB captured in New Paltz last week. The second generation of ECB-E strain will begin to emerge at about 1400 modified base 50 degree days. We are presently at about 683 DD.

PESTWATCH indicates that the Hudson Valley including Ulster and Orange County, and eastern PA had observations of declining ECB trap captures last week with all regional sites tapering off. This site also posted increasing flight numbers of CEW to our south for the past three weeks with very high CEW in west central PA. Fall armyworm has also been reported in eastern LI and central PA in moderate numbers. Western bean cutworm was reported in Avoca in Stuben County on 19 June. There were no observations of WBC anywhere else in the region to date.

Fields should be scouted for the presence of Corn earworms (CEW), Fall armyworms (FAW) and European corn borers (ECB) larval feeding as larva from the Lepidoptera complex continue to emerge. When scouting remember to focus on the emerging tassel. Separate the leaves and look down into the tassel for any signs of feeding, frass or larvae. The threshold for ECB and FAW is 15% infested plants at tassel emergence.

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

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 ¼") 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.

The insect damage threshold for fresh market sweet corn in the silk stage is 5%.

Average Corn Earworm Pheromone Catch

Per Day	Per Five Days	Per Week	Days Between Sprays
<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

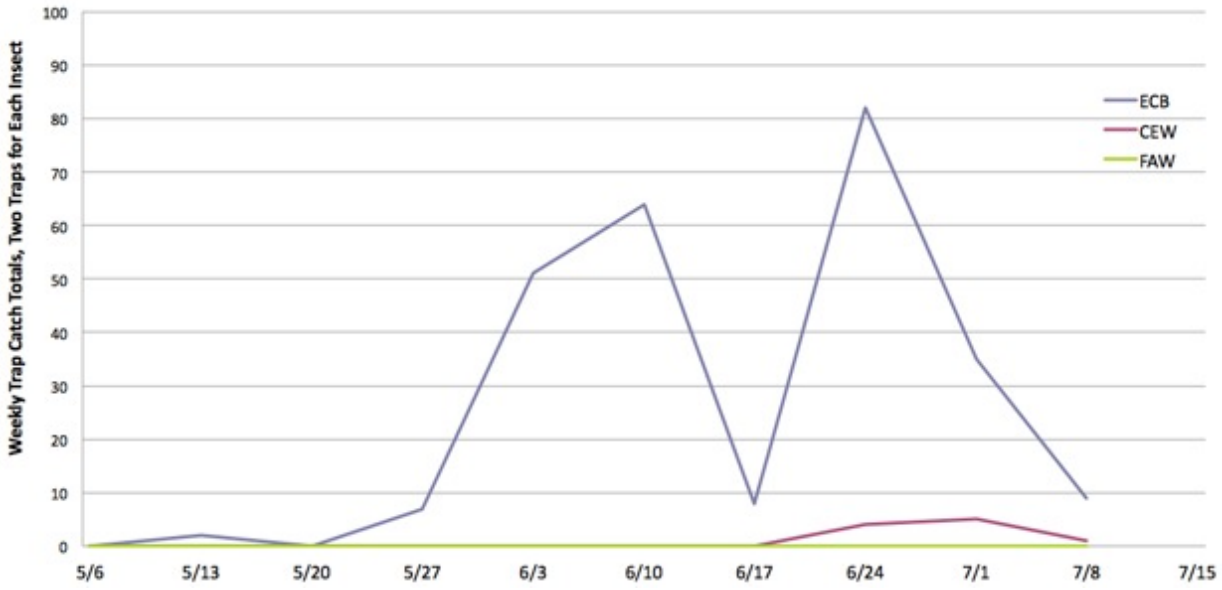
ECB "window pane" damage

ECB pinhole damage

ECB feeding on emerging tassel

CEW and FAW feeding damage

2013 European corn borer (ECB), Fall Armyworm (FAW), and Corn Earworm (CEW) Adult Flight Data
Wallkill View Farms, New Paltz, NY



Japanese beetle has been observed in low to moderate levels. The adult stage is the damaging life stage on corn. Adults are metallic green or greenish brown beetles about 1/3 to 5/8 inches in length, with reddish wing covers. In areas where it is abundant, it can cause severe damage to corn by feeding on the husks, foliage, kernels, and silk. Late June to mid-July is the peak emergence of the beetle. It will emerge as an adult to mate and burrow back into the soil to lay eggs, continuing the cycle for 4 to 6 weeks, having a 30 to 45 day life span.

Japanese beetle on corn silk
Image by Erin Hodgson

Japanese beetles release a strong aggregation pheromone, and are commonly seen feeding and mating in clusters. Adults are also highly mobile and move frequently in the summer. In corn, Japanese beetles can feed on leaves, but the most significant damage comes from clipping silks during pollination. Consider a foliar insecticide during tasseling and silking if there are three or more Japanese beetles per ear and pollination is not complete. Most pyrethroids used against the lepidopteran complex are very effective against the beetle, providing 2-3 weeks of efficacy, as is Sevin (carbaryl).