Identification of Late Season Corn Insects

Late season insect infestations can be impacted by corn maturity., Particularly, corn that is planted late or maturing later than surrounding fields. Later planted fields are very attractive to females of the second-generation corn borers, corn earworms, and fall armyworms as green silks are preferred oviposition sites. Additionally, corn rootworm adults also prefer green silks or pollinating corn and these fields can become ovipositional sites that may result in significant injury the following season.

TABLE 1. LATE SEASON CORN PESTS, VT TO R6

	Corn Growth Stage						
	VT	R1	R2	R3	R4	R5	R6
Below Ground Insect Pests							
Corn Rootworm Larvae							
Above Ground Insect Pests							
Corn Earworn							
Corn Leaf Aphid							
Corn Rootworm Adults							
European Corn Borer							
Fall Armyworm							
Grasshoppers							
Japanese Beetle							
Southwestern Corn Borer							
Southern Corn Borer							
Stink Bugs							
Western Bean Cutworm							
Above Ground Non-Insect Pests							
Banks Grass Mite							
Two Spotted Mite							

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Late Season Corn Insect Pests, VT to R6

Corn earworm

Unlike the Western bean cutworm, corn earworms are cannibalistic so rarely is there more than one per ear. This species has a wide color variation from black to green (Figure 1). Usually more of a significant pest of sweet corn then field corn.

Figure 1. Corn earworm. Picture courtesy of R.L. Croissant, Bugwood.org.

Corn leaf aphid

The aphid is blue-green, pear shaped, and wingless (Figure 2). It has short antennae and purple spot at the base of the cornicles. Usually first found in the whorls spreading to the tassel later in the season.

Figure 2. Corn leaf aphid. Picture courtesy of Eric Burkness, Bugwood.org.

Corn Rootworm Complex

The major corn rootworm species are the Northern corn rootworm (Figure 3) and the Western corn rootworm (Figure 4). In some geographies, (SW US) the Mexican corn rootworm can also be found. While the larval stage is the most damaging, adults can clip silks and interfere with pollination; however, silk clipping is rarely of economic concern.

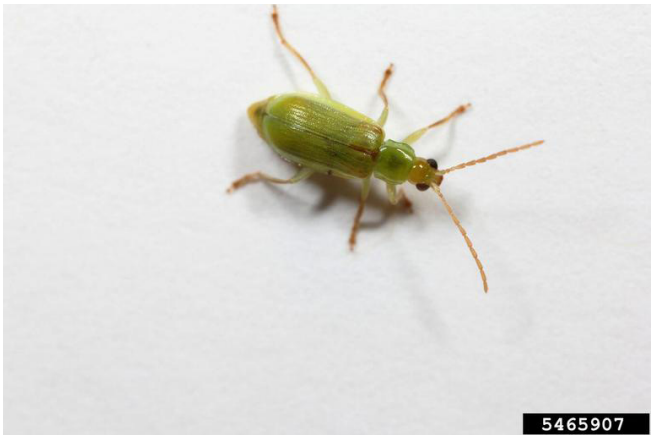

Figure 3. Northern corn rootworm. Picture courtesy of Daren Mueller, Iowa State University, Bugwood.org.

Figure 4. Western corn rootworm. Picture courtesy of Frank Peairs, Colorado State University, Bugwood.org.

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European corn borer

Depending on geography, late season corn can be infested with European corn borer larvae from the single generation type (Northern locations) or larvae from second generation of the two generation type (majority of Midwest) (Figure 5). Larvae can be found in the stalk, ear, and ear shank. Scout for insect frass (excrement) in leaf sheaths, holes in the stalk, shank, or ear. Feeding can reduce nutrient and water transfer, increase risk of stalk diseases, and stalk lodging.

Figure 5. European corn borer. Picture courtesy of Frank Peairs, Colorado State University, Bugwood.org.

Fall armyworm

The identifying characteristic for the fall armyworm larva is the white inverted Y-shape suture between the eyes (Figure 6). Moths are usually attracted to late developing corn or late planted corn as they do not overwinter in the Corn Growing Region and fly into the Midwest from the southern states.

Figure 6. Fall Armyworm. Picture courtesy of Frank Peairs, Colorado State University, Bugwood.org.

Grasshoppers

Early season injury is usually confined to field margins, but as the majority become adults, movement into the field increases. Grasshoppers feed on leaves, silks, and ear tips, and when populations are very high, the entire plant can become stripped.

Figure 7. Two-striped grasshopper. Picture courtesy of Whitney Cranshaw, Colorado State University, Bugwood.org.

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Japanese beetle

The Japanese beetle can clip silks and injure developing kernels at the tip of the ear. Like adult corn rootworms, the silk clipping is rarely of economic concern.

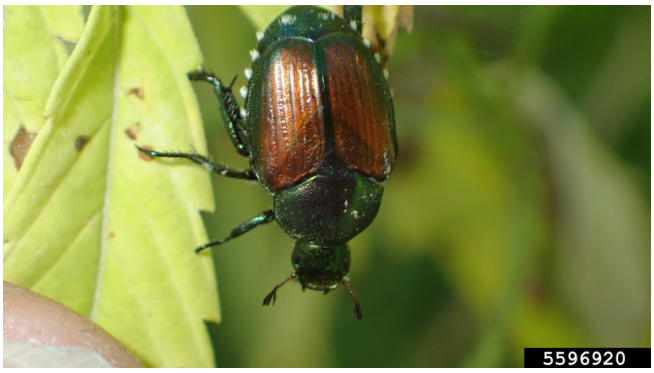

Figure 8. Japanese beetle. Picture courtesy of Whitney Cranshaw, Colorado State University, Bugwood.org.

Southwestern corn borer

The larvae are dull with black spots in regular pattern along the body. Interestingly, the spots are not present on overwintering larvae. There are two to three generations per year with the first generation feeding on the growing point, resulting in “dead heart”. The second generation feeds in the stalk and girdles the stalk above the soil line. This injury can result in lodging.

Figure 9. Southwestern corn borer. Picture courtesy of Frank Peairs, Colorado State University, Bugwood.org.

Southern cornstalk borer

The southern cornstalk borer larva is creamy yellow during the winter and white with black spots in the summer and very similar to the southwestern corn borer. It attacks primarily maize but also feeds on grain sorghum and sugarcane. There are usually two generations each year although three generations can occur. Injury is similar to the southwestern corn borer. Tunneling may be extensive in the lower portion of the stalk, primarily just above the soil line. disrupting nutrient and water uptake.

Figure 10. Southern cornstalk borer. Picture courtesy of Clemson University – USDA Cooperative Extension Slide Series, Bugwood.org.

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Stink bugs

Injury to corn is most severe when stink bugs feed on the immature ear prior to tasseling, but the damage becomes evident after pollination. The feeding injury causes the ear to be deformed. Feeding after pollination on developing kernels, while concerning is not as injurious as feeding on the developing ear.

Figure 11. Green stinkbug.
Picture courtesy of Frank Peairs,
Colorado State University, Bugwood.org.

Western bean cutworm

The western bean cutworm attacks the ear and can be identified by the brown bars behind the head (Figure 10/Figure 12). Typically, unlike corn earworm, more than one larva can be found in the ear.

Figure 12. Western bean cutworm.
Picture courtesy of Mike Weiss.

Banks grass mite

The banks grass mite is most common in the western corn belt where low precipitation levels allow the population to expand rapidly. Banks grass mites are very small, about 1/32 inch in length. Their bodies are oval and vary from green to brown in color. They have eight legs and a row of dark spots, brown to reddish brown, on either side of the abdomen extending from near the head to the end of the abdomen (Figure 13). The number and position of the spots are one feature in distinguishing Banks grass mites and two-spotted spider mites.

Figure 13. Banks grass mite.
Picture courtesy of Frank Peairs,
Colorado State University, Bugwood.org.

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Two spotted spider mite

The two spotted spider mite is more of an economic concern during hot dry weather, when populations can expand extremely quickly. Its host range includes a wide variety of plants, including corn.

Figure 14. Two spotted spider mite. Picture courtesy of Frank Peairs, Colorado State University, Bugwood.org.