

AGRONOMIC Spotlight



Sap Beetles in Corn

Sap beetles are considered minor pests of seed corn. Adults prefer to feed on corn kernels, ear tips, and stalks that have previously been injured by corn earworm, corn borer, or fall armyworm larvae. Sap beetle larvae may also feed on undamaged portions of the corn plant. Occasionally, sap beetle damage has been confused with corn borer larval feeding. Understanding the life cycle and the ability to identify sap beetles will help prevent this confusion.

Life Cycle

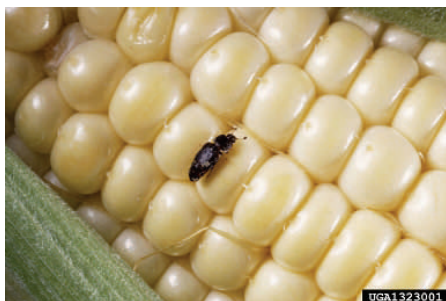
Three to four generations of sap beetles can develop per season in the central Corn Belt. Sap beetles overwinter in the soil or crop debris as adult beetles or pupae³. In the spring, beetles feed on tree sap or decomposing plant tissue. Then, they lay eggs on the decomposing plant tissue or, in some cases, corn silks and ears. After hatching, larvae feed on plant tissue within close proximity. The larval stage lasts about 30 days and is followed by pupation. Pupation takes place for approximately 14 days and then adults emerge.

Identification

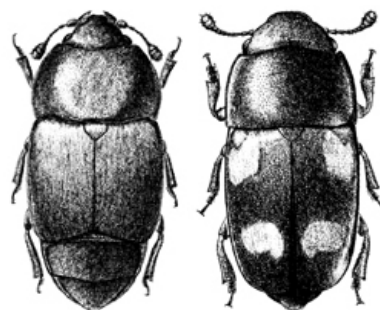
There are three types of sap beetles that can cause damage in corn: corn sap beetle (*Carpophilus dimidiatus*), dusky sap beetle (*Carpophilus lugubris*), and the picnic beetle (*Glischrochilus quadrisignatus*). Adult corn sap beetles can be red-tinged black to brown-yellow in color and approximately an 1/8 inch long³. The dusky sap beetle has a similar appearance to the corn sap beetle except it is larger (about a 1/6 inch long) (Figures 1 and 2). The corn sap beetle and dusky sap beetle can easily be distinguished from other beetles by their characteristic club-shaped antennae and short wing covers. The picnic beetle is even larger (1/3 inch long) and black with four orange or yellow spots on the wing covers (Figure 2).

Concerns

Feeding from sap beetles can be confused with other insects. In the past the University of Illinois determined that feeding damage on corn leaves, thought to be from European corn borer, was actually from sap beetles¹.



◀Figure 1. Dusky sap beetle adult. Source: Keith Weller, USDA Agricultural Research Service, Bugwood.org



◀Figure 2. Dusky sap beetle (left) and picnic beetle adult (right). Source: Ohio State University⁴.

The damage resembled “nicks” and small window-panes”. The leaves did not appear to have previous damage from another pest; however, numerous sap beetles were found in the whorls. This year, agronomists in your area have also witnessed similar damage. Sap beetle damage has not been found to impact yield potential.

Scouting

When scouting for other insects, look for sap beetles. If sap beetles are numerous and other insects are not found, feeding damage may be from sap beetles. In addition, look for sap beetle larvae on corn ears (Figure 3). If needed, your local area agronomist can help assist in identifying what type of feeding damage is present in a particular field.



Figure 3. Sap beetle larvae damaging corn kernels at the ear tip. Source: Eugene E. Nelson, Bugwood.org

Sources: ¹K. Steffey. July 2, 1999. *Mystery Feeding in Corn, Sap Beetles?* University of Illinois Extension. *The Bulletin*; ²S.T. Ratcliffe, et al. 2004. *Sap Beetles Carpophilus spp. Integrated Pest Management IPM. University of Illinois Extension*; ³K.L. Steffey, 1999. *Handbook of corn insects. Entomological Society of America*; ⁴W.F. Lyon and R.N. Williams. 1997. *Sap Beetles. Ohio State University Extension Fact Sheet. Publication no. HYG-2047-97.*

Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

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