



Leaf-feeding Weevil in Sugarbeet

Figure 1. Adult leaf-feeding weevil on damaged sugarbeet leaf. (NDSU photo)

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A leaf-feeding weevil, *Tanymecus confusus*, first was observed feeding on sugarbeet in the southern portion of the Red River Valley (Richland County, N.D., and Wilkin County, Minn.) in 1975. The weevil has since caused problems for growers in southern Minnesota (Big Stone, Chippewa, Lac Qui Parle and Swift counties) in 1992 and 1997, and again in Richland County in 2004.

Tanymecus palliatus and *Bothynoderes punctiventris* are occasional pests of sugarbeet in Europe. Feeding injury by adult *Tanymecus confusus* typically occurs in small areas within sugarbeet fields. Damage is occasionally severe enough to require replanting.

Description and Biology

Adults of the leaf-feeding weevil are about 1/2 inch long, and their head narrows slightly toward its tip into a broad snout. This is a typical feature of the weevil group of insects (a.k.a. snout beetles).

Leaf-feeding weevils are mottled brown to brownish gray (Figure 1), and their bodies are covered with minute, gray, hairlike structures. Because this weevil is a rare sugarbeet pest and it has not been reported on other crops grown in the area, little is known about its biology or its control.

Researchers believe the insect overwinters as an adult in the soil or in plant residues. Adult weevils emerge in the spring and mate, and females then deposit eggs in host plant tissues. Known host plants include pigweed, cocklebur,

wild sunflower and ragweed species.

Larvae (immature weevils) are believed to feed on these plants until they develop into adults. The adults then re-infest these hosts or, on occasion, infest neighboring sugarbeet plants. No larvae have been observed feeding on sugarbeet.

Damage

Damaging infestations of leaf-feeding weevils in sugarbeet fields usually have occurred during the first three weeks in May, although weevils also have been observed feeding on sugarbeet as late as June.

Adult weevils use chewing mouthparts to feed on cotyledons



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and leaves of young sugarbeet plants (Figure 2). Field damage usually appears as circular or oval-shaped patches in affected areas (Figure 3). The weevils generally feed on leaf edges and interveinal areas but usually leave the midrib intact.

Significant feeding damage can result in seedling death. Younger plants are especially vulnerable to attack. Weevils are difficult to find on or near damaged plants because they fall to the ground and “play dead” by remaining motionless after being disturbed. Also, their dark mottled coloring makes them difficult to detect on the ground. Careful inspection will reveal the insects in plant debris or in the soil immediately surrounding damaged plants.



Figure 2. Leaf-feeding weevil damage on young sugarbeet plant. (NDSU photo)

Management

Control of early season broadleaf weeds should be an effective cultural strategy for minimizing the risk of weevil feeding injury to sugarbeet. Field scouting for adult weevils and timely application of insecticides will be necessary to control damaging populations.

Insecticides labeled for use on sugarbeet that have activity as stomach poisons in other beetles, especially weevils, should control the leaf-feeding weevil. In some countries, growers have dug shallow trenches around and within fields to trap weevils.



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Selected References

Armstrong, J.S., A. Cattanaach and L. Buss. 1998. Defoliating weevil identified and damage described from the southern Minnesota Beet Sugar Coop area. *In: 1997 Sugarbeet Res. Ext. Rep.* 28: 256-257.

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Figure 3. Bare patch in sugarbeet field caused by leaf-feeding weevils. (Photo courtesy of Lonnie Buss, retired Southern Minnesota Beet Sugar Cooperative agriculturist)

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