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Southern corn leaf beetles in southern Iowa

Marlin E. Rice

Iowa State University, merice@iastate.edu

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Southern corn leaf beetles in southern Iowa

Abstract

The southern corn leaf beetle is one of those odd insects that has caused some stand loss in southern Iowa during the last couple of years. Problems are now occurring in Illinois and it is possible that farmers in southern Iowa may encounter the insect again. Because it is uncommon in Iowa, at least so far, I have had very little experience with this insect. The following information on biology and management of this insect was provided by Mike Gray and Kevin Steffey, entomologists at University of Illinois. Most of their information came from an article written in 1915 by an USDA entomologist.

Keywords

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INTEGRATED CROP MANAGEMENT

Southern corn leaf beetles in southern Iowa

The southern corn leaf beetle is one of those odd insects that has caused some stand loss in southern Iowa during the last couple of years. Problems are now occurring in Illinois and it is possible that farmers in southern Iowa may encounter the insect again. Because it is uncommon in Iowa, at least so far, I have had very little experience with this insect. The following information on biology and management of this insect was provided by Mike Gray and Kevin Steffey, entomologists at University of Illinois. Most of their information came from an article written in 1915 by an USDA entomologist.



Southern Corn Leaf Beetle.

[Enlarge](#) [1]

How do southern corn leaf beetles injure plants?

The adults feed on stem and leaf tissues of seedling corn plants. Injured corn plants are ragged because of the notched out leaves. If sufficient numbers of southern corn leaf beetle adults are present, seedling corn plants can be killed. Some entomologists have suggested that southern corn leaf beetle injury has often been misdiagnosed as cutworm injury, especially with respect to stem-feeding injury.

Why are southern corn leaf beetles so difficult to find?

Adult southern corn leaf beetles are small, only reaching 3/16 of an inch in length. In addition, they are experts at camouflage, covering their dark brown bodies with small bits of soil. After you find one of these small beetles, a more careful examination should reveal three "teeth" on each side of a plate located just behind the head.

Are some cornfields at greater risk to injury by southern corn leaf beetles?

Adults emerge early in the spring and begin feeding on weed hosts such as cocklebur. Early-planted fields are at greater risk for potential problems. Corn planted into fields that have been devoted to pasture also may be more susceptible to southern corn leaf beetles. No-till

cornfields also may improve the survival of this pest.

Where do southern corn leaf beetles overwinter?

Adults overwinter beneath soil and plant debris and in clumps of some species of weeds. In the spring, the adults emerge and begin to feed on plants such as cocklebur and early-planted corn.

What other information is available concerning the life cycle of southern corn leaf beetles?

Females lay eggs in clusters of 10 to 50 in weed debris or in the soil at the bases of corn plants. In a week to 10 days, the larvae hatch and begin to feed on corn roots. The larval period lasts for approximately 10 weeks and occurs from early May until mid-July in the central portion of the Corn Belt. Adults emerge from the soil beginning in mid-July and after a limited feeding period, begin to secure their overwintering site. The adults are strong fliers and movement from field to field is made with relative ease.

Is there an established economic threshold for southern corn leaf beetles?

No. However, consider the following thresholds for other insect pests as a starting point. We suggest that a rescue treatment should be considered when armyworms have injured 25 percent of the seedling corn plants within a field. Armyworm larvae may consume only leaf margin tissue (similar to southern corn leaf beetles) on seedling plants, or they can remove foliage to the midribs. If southern corn leaf beetle feeding on stem tissue results in cutting of seedling corn plants, you may want to consider the cutworm threshold we've suggested previously and use a rescue treatment when 3 percent or more of the plants are cut.

Are there any products labeled for use as rescue treatments against southern corn leaf beetle injury?

Yes. Capture 2EC is labeled as a postemergence rescue treatment at a rate of 2.1 to 6.4 ounces of product per acre. The label indicates that Capture 2EC should be applied in a minimum of 10 gallons of finished spray per acre with ground equipment. Observations from the field suggest that the use of 15 gallons per acre improves efficacy. Dow AgroSciences also has issued a supplemental label that adds southern corn leaf beetle to its list of corn insects controlled by Lorsban 4E as a postemergence treatment (1 to 2 pt/acre). Capture 2EC and Lorsban 4E are restricted-use insecticides and can be applied only by certified applicators. Please read and follow all product labels for more specific application instructions.

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