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Early-season soybean insects, plus others

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Early-season soybean insects, plus others

Abstract

Several of you have reported small creatures other than the expected bean leaf beetles in seedling soybeans this past week. I'll call them creatures because they represent not just insects but also millipedes and slugs. All of these creatures are feeding on either the soybean cotyledons or the unifoliolate or trifoliolate leaves. Fortunately, from what I have observed and heard, none of these pests is causing significant defoliation or stand reduction. Here is a brief overview of these early-season insects, plus others.

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Insects and Mites

Early-season soybean insects, plus others

by Marlin E. Rice, Department of Entomology

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Bean leaf beetle—pest

Bean leaf beetle adults continue to eat holes in soybean leaves (see last week's newsletter) across the state. They could easily be around for another two, maybe three weeks. Defoliation that you are seeing in your field should not increase during this time period. Essentially, the soybeans will produce new leaves and grow faster than the overwintered bean leaf beetles can eat them.



Bean leaf beetle. (Marlin E. Rice)

Variegated cutworm—pest

This caterpillar is most commonly associated with the second-cutting regrowth in alfalfa, but I found early instars feeding on soybean cotyledons near Ames. As this caterpillar gets larger during the later instars, it might cut a few soybean plants, but it would take a very large population in the field to cause significant stand loss. I do not expect it to become a serious soybean pest. This caterpillar can be recognized by small, white spots down the center of the back.



A young variegated cutworm feeding on a soybean cotyledon. (Marlin E. Rice)

Soybean leafminer—pest

This beautiful red and black beetle feeds on soybean leaves as an adult, but as a larva, it tunnels between the upper and lower layers of the soybean leaf. This mining activity creates a brown "pocket" where the larva resides. Mostly the injury is insignificant, but I did observe a field in Harrison County several years ago where dozens of adult beetles apparently stunted the soybean plants, but the field also was under drought stress and not growing well.



Soybean leafminer. (Marlin E. Rice)

Millipede—pest

Millipedes are not insects—they have more than six legs. They feed on soybeans mostly in the seed furrow as the plants are trying to emerge. Seed furrows that are dry and not completely closed allow the millipedes to travel easily from one plant to the next and feed. Occasionally, they chew through the hypocotyl, which kills the plant. Injury is most commonly reported in no-till or minimum-till fields. I have no data on insecticide performance against millipedes.



A millipede curled up in a defensive position. (Marlin E. Rice)

Slug—pest

Slugs are similar to snails without shells, and they aren't insects because they have no legs. Most injury from this pest has been in no-till corn in northeastern Iowa in past years. Rarely do they feed on soybean. I have not observed slug damage to soybean, but it may be similar to millipede damage whereby the slug chews through the hypocotyl and kills the seedling soybean. There are no insecticides that are effective against slugs.



A slug on a corn stalk. (Marlin E. Rice)

Marlin E. Rice is a professor of entomology with extension and research responsibilities in field and forage crops. Rich Pope is an extension program specialist in entomology with responsibilities in integrated pest management.