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Abstract
The grape colaspis, an uncommon beetle (and one that also is hard to pronounce), has caused significant problems in corn in northeastern Iowa. Jim Fawcett, Iowa State University Extension field specialist-crops, and I examined fields in Benton County in late June with stand loss problems. This past week, Jim Webster (Pioneer Hi-Bred) reported significant stand damage in Blackhawk, Grundy, and Tama counties. He stated that this problem has significantly increased during the past 3 years.

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Grape colaspis in Iowa corn

The grape colaspis, an uncommon beetle (and one that also is hard to pronounce), has caused significant problems in corn in northeastern Iowa. Jim Fawcett, Iowa State University Extension field specialist-crops, and I examined fields in Benton County in late June with stand loss problems. This past week, Jim Webster (Pioneer Hi-Bred) reported significant stand damage in Blackhawk, Grundy, and Tama counties. He stated that this problem has significantly increased during the past 3 years.

![Adult grape colaspis.](http://www.ipm.iastate.edu/ipm/icm/node/1984/print)

Jay Johnson (Prairie Crop Pro Tech) noted adult beetles feeding in corn whorls in fields with poor stands caused by larval injury in Grundy and Marshall counties.

The grape colaspis has caused stand loss in Illinois since the mid- to late 1990s. Kevin Steffey (University of Illinois) wrote a newsletter article several years ago that addresses questions and answers about diagnosing grape colaspis problems in corn and some discussion about the life cycle and management of this pest.

The plants look as if they have been injured by herbicide carryover. How do I know the injury is caused by grape colaspis?

Grape colaspis larvae feed on root hairs and may eat narrow strips from the roots. Denuded roots don't obtain moisture and nutrients efficiently. Injury symptoms above ground include stunting, wilting, purpling of the leaves and stem (indicating a phosphorus deficiency), and browning of the tips and edges of the leaves. Severe infestations may cause plant death and reduced plant populations. The real diagnostic sticker is the presence of the larvae. Although they sometimes are difficult to find because they are so small, careful sifting of the soil reveals the culprits.

**When I examined the injured plants, I found what seemed to be small white grubs. How do I tell the difference between small white grubs and grape colaspis larvae?**

The grape colaspis larva is 1/8 to 1/6 inch in length, slightly curved (comma-shaped), and
has a plump, white body with a tan head and prothoracic shield (or plate just behind the head). Its three pairs of legs are short. Bunches of hairs arise from bumps on the underside of the abdomen. Early instars of white grubs are more C- or U-shaped, and they lack the characteristic bumps on the underside of the abdomen. Also, the legs of white grub larvae are relatively long.

The stand is in rough shape. How much longer will the larvae feed?

Injury to corn caused by grape colaspis larvae is more severe when weather conditions retard the growth of the seedlings. Usually, grape colaspis larvae finish feeding by mid-June, but warmer soil temperatures could accelerate their development. In contrast, cooler temperatures could slow them down.

What is the life cycle of these critters?

The grape colaspis completes only one generation per year in Illinois. It passes the winter as a small larva in the soil 8 to 10 inches in depth. Larvae become active early in the spring, feed on the roots of host plants, and complete their development from mid-June to early July in the Corn Belt. Pupation occurs in an earthen cell 2 to 3 inches below the soil surface. Adults emerge during July in the Corn Belt. The tan adult is oval and about 1/6 inch in length, with rows of tiny punctures on its wing covers, making them seem ridged. Females lay eggs in the soil near host plants, including patches of smartweed and bull nettle. Larvae hatch in 7 to 14 days. Newly hatched larvae feed on roots during the latter part of summer and early fall.

Why am I seeing this problem in corn planted after soybean?

I thought grape colaspis caused problems in corn planted after red clover. Early studies and observations about grape colaspis indicated that grape colaspis problems were much more prevalent in corn planted after red clover than in any other crop rotation sequence. However, these studies were conducted decades ago when soybean did not take up much of our acreage, and we don't grow that much red clover anymore. The grape colaspis had to adapt to our more modern agricultural system, so we now observe grape colaspis problems more often in corn after soybean, and occasionally in soybean planted after corn. Unfortunately, the grape colaspis, like a lot of "occasional" pests in corn, has not been studied for a long time, so our knowledge base is dated.

So what can we do in Iowa?

At this midpoint in the summer, no replanting options are practical. A bigger dilemma is what can be done to prevent a similar problem of occurring next spring? As Kevin mentioned, our knowledge of this insect, including management strategies, is very limited. More research needs to be done but at the present time there are no good solutions.

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