

RESEARCH BRIEF—

New study, old pest

What's new in grape colaspis. The grape colaspis is a historic corn and soybean pest that has caused damage to seed corn in recent years.

Larvae feed on the root hairs of seedling crops. Damage is most common in seed corn; however, there have been damage reports in field corn and soybeans. The larvae are small, cream-colored grubs ($\frac{1}{8}$ to $\frac{3}{16}$ inch) with light tan heads. The adults are small, brown beetles about $\frac{3}{16}$ -inch long (a little shorter than a corn rootworm). The most recent research from Iowa State prior to this study was in 1941 and 1942 in a corn and red clover rotation.

ISU research. In response to the recent damage, graduate student Ben Kaeb, under the guidance of Jon Tollefson, Department of Entomology professor and chair, has initiated research to learn more about control and sampling methods of the grape colaspis.

The objectives of his studies are to:

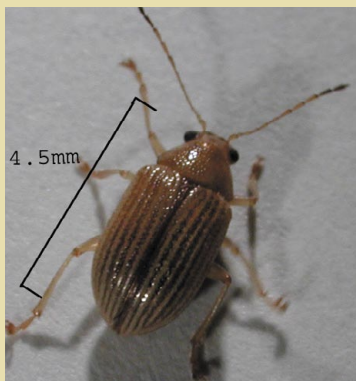
(1) determine the efficacy of available seed treatments and soil insecticide against grape colaspis larvae, (2) evaluate the feasibility of insecticide application in soybeans to prevent injury in seed corn the following season, and (3) examine sweep net sampling in soybeans prior to seed corn as a possible prediction tool.

What's next. Two groups of field experiments will be conducted in 2005. The first is a trial of seed treatments for effectiveness on controlling colaspis beetles, and the other will examine the feasibility of spraying for adult control to prevent egg laying in soybeans.

Learn more. A website on the grape colaspis is in the process of being constructed. It will eventually contain the results of this research. The web address is www.ent.iastate.edu/grapecolaspis/.



Grape colaspis larva next to a dime (Ben Kaeb)



Adult grape colaspis beetle (Ben Kaeb)

RESEARCH BRIEF—

It's a trap!

What's new in soybean aphids. There has been much speculation regarding soybean aphid infestations this summer with expectations that outbreaks may be severe. These predictions are based on large numbers of aphids collected in a network of suction traps during the fall of 2004, when winged aphids were migrating to their overwintering host, buckthorn. Although suggestive of successful overwintering, and thus potential problems during the 2005 growing season, these data are based solely on traps deployed in Illinois. To what extent this network can explain aphid outbreaks in Iowa has yet to be determined.

ISU research. Recently hired entomologist, Matt O'Neal, has joined this network. Beginning in May, the soybean entomology lab at Iowa State University began deploying four traps across the state. The traps will be built at the Research and Demonstration Farms at Floyd, Lucas, O'Brien and Story counties. The 20-foot-tall traps collect aphids from May until September, when winged aphids are active. By collecting aphids well above the plant canopy, aphids are captured moving between their overwintering host and soybeans.

ISU results. These traps are part of a multi-state project, financed in part with soybean check-off funding, that will improve our ability to anticipate soybean aphid outbreaks. Suction trap data from the past four years suggest that large numbers of winged aphids collected in the fall may be predictive of heavy infestations in the following growing season.

What's next. Coupling of suction trap data with in-field population densities will help validate the predictive power of this network.

Learn more. A summary of the current recommendations for soybean aphid management can be found in the updated fact sheet (SP 247, *Soybean Aphids in Iowa—2005*), which will soon be available through ISU Extension. To follow the data collected from the suction trap network (current and archived data from 2001) visit: www.ipm.uiuc.edu/fieldcrops/insects/soybean_aphids/suction_trap_network/index.html.



A network of suction traps used to collect soybean aphids (D. Voegtlin, Illinois Natural History Survey)

Spring on ISU's research farms

Number of soybean rust sentinel plot locations statewide:	_____ 11
Date of first sentinel soybean plot emergence:	_____ April 18
Number of replicated corn research plots:	_____ 100,000
Number of replicated soybean research plots:	_____ 60,000
Number of locations (counties) with research in corn and soybeans:	_____ 13
Number of ISU faculty and staff leading corn and soybean research projects:	_____ 85
Number of visitors to research farms in 2004:	_____ 13,533
Number of field days, many featuring corn and soybean research, conducted in 2004:	_____ 115
Date of first 2005 field day on corn and soybeans (at Crawfordsville):	_____ June 23



PARTNER PROFILE —

Malcolm Robertson

Partnership Program Manager, Corn and Soybean Initiative



Origin

- born and raised in Zimbabwe, a country with a strong agronomic and horticultural crop base

Training

- B.Sc. Agric. (Horticulture) University of Natal, Pietermaritzburg, South Africa
- M.S. (Agricultural and Applied Economics), Clemson University, South Carolina

Background at ISU

- began in Department of Plant Pathology at ISU November 15, 2004
- responsible for partnership managers, Corn and Soybean Initiative

Notable Achievements

- established and ran a very successful precision (drip and microjet) irrigation company
- established a soil, leaf and water analytical laboratory
- involved in establishment of the Regional Tropical Soda Apple Task Force (RTSATF), with the purpose of developing effective strategies to control and limit the dissemination of Tropical Soda Apple (TSA) in the southeastern United States.

Personal Interests

- family, rugby, marathon running, outdoors

Recent Achievement

- Clemson University; Outstanding Contributions to the Department of Plant Industry Award (2001 and 2003).

Quotable Quote

“Agriculture is one of the oldest and most fundamental activities of man. It is the foundation of the modern era and influences everybody—directly and indirectly.”

From Greg Tylka, Coordinator . . .

The 2005 growing season is off to a chilly start. But hope permeates the countryside, hope for favorable weather during the growing season resulting in excellent corn and soybean yields in the fall.

We face some uncertainties entering this growing season, perhaps more so than in recent years. There are some uncertainties about equipment, soil fertility, and disease, insect, and weed management both for corn and soybean production. Producers discussed glyphosate stewardship at numerous presentations throughout the state this past winter. Some growers have not forgotten the 2003 season and are planning for possible soybean aphid problems again this year. Many producers spent the winter learning about Asian soybean rust and the fungicides that are used to manage the disease.

Corn and Soybean Initiative partners who are trained as soybean rust First Detectors in Iowa may be interested in attending one of

Iowa State's Soybean Rust First Detector Updates in the morning or afternoon of May 24, May 26 or June 1. The six 3-hour sessions will include updates on soybean rust identification, management and fungicide regulatory issues. The meetings will be held at the Field Extension Education Lab (FEEL) near Ames. For more information, call ISU's Agribusiness Education Program, (515) 432-9548, or e-mail the Corn and Soybean Initiative staff at csi@iastate.edu.

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. . . and justice for all

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