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Soybean Gall Midge Confirmed in Iowa and Nebraska

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Abstract
Last year, the widespread outbreak of soybean gall midge took many farmers and entomologists by surprise. There was significant field edge injury and economic loss in at least 65 counties in Iowa, Nebraska, Minnesota, and South Dakota. A small team organized a concerted effort to learn more about the life cycle, biology and management of soybean gall midge in 2019. The first step was to establish emergence cages in various habitat types to better understand where they overwinter. We used the “corn rootworm” style traps to collect adults emerging from the ground. A series of traps in Iowa, Nebraska and South Dakota have been monitored for several weeks this spring (Figure 1).

Disciplines
Agricultural Science | Agriculture
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Last year, the widespread outbreak of soybean gall midge took many farmers and entomologists by surprise. There was significant field edge injury and economic loss in at least 65 counties in Iowa, Nebraska, Minnesota, and South Dakota. A small team organized a concerted effort to learn more about the life cycle, biology and management of soybean gall midge in 2019. The first step was to establish emergence cages in various habitat types to better understand where they overwinter. We used the “corn rootworm” style traps to collect adults emerging from the ground. A series of traps in Iowa, Nebraska and South Dakota have been monitored for several weeks this spring (Figure 1).

Figure 1. Soybean gall midge emergence trap locations for 2019. Map by Justin McMechan, University of Nebraska-Lincoln.
Mitchell Helton is a new ISU entomology graduate student and has been checking traps frequently. On Friday, 14 June, he had the first positive detection from emergence cages (Figure 2). The first adult collected was at the ISU Northwest Research Farm near Sutherland, IA. The trap was located in a midge-infested soybean field in 2018. Just a few hours later, Nebraska also had their first positive detection near Eagle in the east-central part of the state (Figure 2). They collected a few more adults from Cass County over the weekend.

Figure 2. First soybean gall midge adult collected in 2019 from northwest Iowa. Photo by Mitchell Helton, ISU.
We plan to continue adult emergence trapping this spring to help us understand peak activity for mating and laying eggs in soybean. At this point, just a few individuals in traps does not warrant a foliar insecticide. But our plans are to make treatments when adult captures increase. We will be sure to keep you updated on subsequent detections and application recommendations in the future.

Growers spraying too early may not have enough residual insecticide activity when adults emerge in the area and may not be able to spray the field again in that period depending on label restrictions limiting efficacy and increasing the likelihood for plant injury from gall midge.

Category:  Crop Production  Insects and Mites

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Crop:
Soybean

Tags: midge Soybean scouting pest IPM

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Dr. Erin Hodgson started working in the Department of Entomology at Iowa State University in 2009. She is an associate professor with extension and research responsibilities in corn and soybeans. She has a general background in integrated pest management (IPM) for field crops. Dr. Hodgson's curre...