6-9-2015

Corn Rootworm Egg Hatch is in Progress

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Abstract
Corn rootworm egg hatch in Iowa typically occurs from late May to the middle of June, with an average peak hatching date of June 6. In 2015, the average hatching date will be slightly behind normal and approximately the same time as in 2014. Development is driven by soil temperature and measured by growing degree days. Research suggests about 50 percent of egg hatch occurs between 684-767 accumulated degree days (base 52°F, soil). A few areas of Iowa have reached peak corn rootworm egg hatch (Fig. 1), particularly around Muscatine. Many other regions will be reaching 50 percent egg hatch within 7-10 days.

Keywords
Entomology

Disciplines
Agricultural Science | Agriculture | Agronomy and Crop Sciences | Entomology

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Corn Rootworm Egg Hatch is in Progress

By Erin Hodgson, Department of Entomology

Corn rootworm egg hatch in Iowa typically occurs from late May to the middle of June, with an average peak hatching date of June 6. In 2015, the average hatching date will be slightly behind normal and approximately the same time as in 2014. Development is driven by soil temperature and measured by growing degree days. Research suggests about 50 percent of egg hatch occurs between 684-767 accumulated degree days (base 52°F, soil). A few areas of Iowa have reached peak corn rootworm egg hatch (Fig. 1), particularly around Muscatine. Many other regions will be reaching 50 percent egg hatch within 7-10 days.

Figure 1. Accumulated soil degree days in Iowa as of June 4, 2015. Expect 50 percent corn rootworm hatch between 684-767 degree days. Map data courtesy of Iowa Environmental Mesonet, Iowa State University Department of Agronomy.

To generate degree day accumulation on corn rootworm egg hatch for your area, use this website. To create an accurate map, make sure to set the start date to January 1 of the current year and the end date to today, and set the plot parameter to “soil growing degree days (base = 52).” Be aware the website is having some technical difficulties with the soil temperature probes this year.

A severe corn rootworm larval infestation can destroy nodes 4-6; each node has approximately 10 nodal roots. Root pruning can interfere with water and nutrient uptake and make the plant unstable (Photo 1). A recent meta-analysis showed a 15 percent yield loss for every node pruned.
Photo 1. Severe root pruning by corn rootworm larvae can dramatically impact yield. Photo by Erin Hodgson, Iowa State University.

Regardless of agronomic practices to suppress corn rootworm (e.g., crop rotation or Bt corn), every field should be scouted for corn rootworm injury. Continuous cornfields and areas with Bt performance issues are the highest priority for inspection. Looking at corn roots 7-10 days after peak egg hatch is encouraged because the feeding injury will be fresh. Assess corn rootworm feeding and adjust management strategies if the average injury is above 0.5 on a 0-3 rating scale. Aaron Gassmann, Iowa State University corn entomologist, has a webpage for additional corn rootworm management information including an interactive node-injury scale demonstration and efficacy evaluations.

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This article was published originally on 6/9/2015. The information contained within the article may or may not be up to date depending on when you are accessing the information.

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