

5-29-2018

Corn Rootworm Egg Hatch Peaked Around Iowa

Erin Hodgson

Iowa State University, ewh@iastate.edu

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Hodgson, Erin, "Corn Rootworm Egg Hatch Peaked Around Iowa" (2018). *Integrated Crop Management News*. 2494.
<https://lib.dr.iastate.edu/cropnews/2494>

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Corn Rootworm Egg Hatch Peaked Around Iowa

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 central Iowa. In 2018, the average hatching date will be ahead of the average, despite having cool April temperatures. 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). Most areas in Iowa have reached peak corn rootworm egg hatch (Fig. 1). Larvae will start feeding on corn roots if available.

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Corn Rootworm Egg Hatch Peaked Around Iowa

May 29, 2018

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 central Iowa. In 2018, the average hatching date will be ahead of the average, despite having cool April temperatures. 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). Most areas in Iowa have reached peak corn rootworm egg hatch (Fig. 1). Larvae will start feeding on corn roots if available.

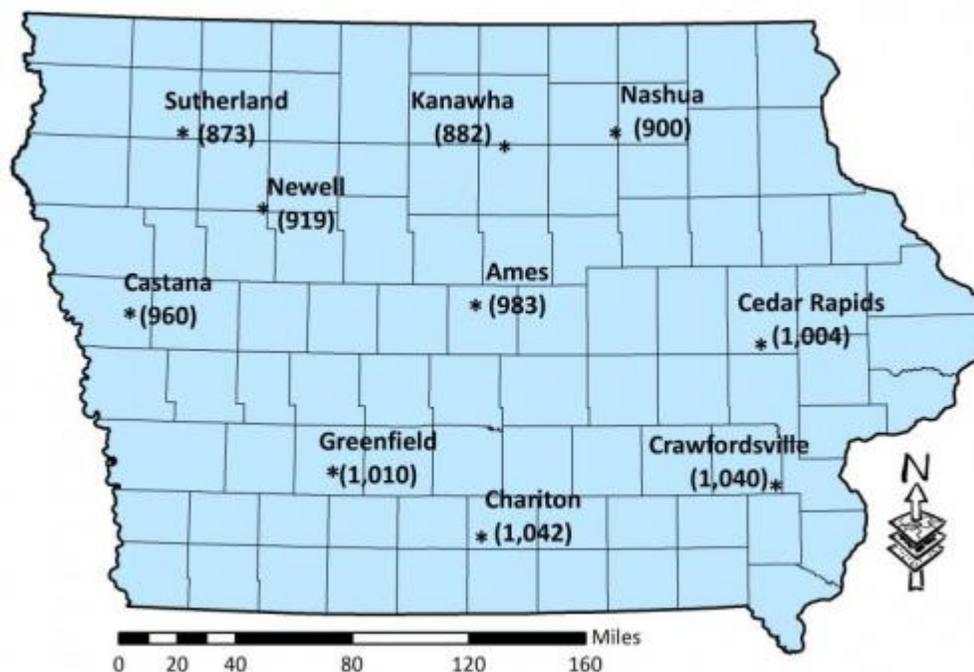


Figure 1. Accumulated soil degree days in Iowa as of May 29, 2018. Expect 50 percent corn rootworm egg hatch between 684-767 degree days. Map data

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 the ISU Agronomy [Mesonet 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 that some locations are 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. Regardless of agronomic practices to suppress corn rootworm (e.g., crop rotation, Bt rootworm corn, or soil-applied insecticides), every field should be scouted for corn rootworm root injury. Fields with continuous corn and areas with Bt performance issues are the highest priority for inspection. Looking at corn roots 10-14 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. Also, consider monitoring for adult corn rootworm to supplement root injury assessments. 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.



Photo 1. Severe root pruning by corn rootworm

larvae can dramatically impact yield. Photo by Aaron

Gassmann, Iowa State University.

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Author:



[Erin Hodgson Associate Professor](#)

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...