Corn Rootworm Egg Hatch Peaking Around Iowa

Erin W. Hodgson
Iowa State University, ewh@iastate.edu

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Corn Rootworm Egg Hatch Peaking 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 2017, the average hatching date will be about the same time as the 2014-2016 growing seasons. 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 or will within a few days (Figure 1).

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Figure 1. Accumulated soil degree days in Iowa as of June 11, 2017. 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 the current date, and set the plot parameter to “soil growing degree days (base = 52).” Be aware that some locations have had technical difficulties with the soil temperature probes this year.

A severe corn rootworm larval infestation can destroy root nodes 4 through 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 used 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. Continuous cornfields 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.

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Crop:  
Corn

Tags:  rootworm  degree days  injury  scouting

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...