6-9-2020

Corn Rootworm Egg Hatch Getting a Late Start in Iowa

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Abstract

Corn rootworm egg hatch in Iowa occurs from late May to the middle of June, with an average peak hatching date of June 6 in central Iowa. In 2020, the expected hatching date will be behind the average due to cool spring temperatures. Development is driven by soil temperature and measured by growing degree days. Research suggests about 50% of egg hatch occurs between 684-767 accumulated degree days (base 52°F, soil). Most areas in Iowa will reach peak corn rootworm egg hatch in 5-7 days (Figure 1).

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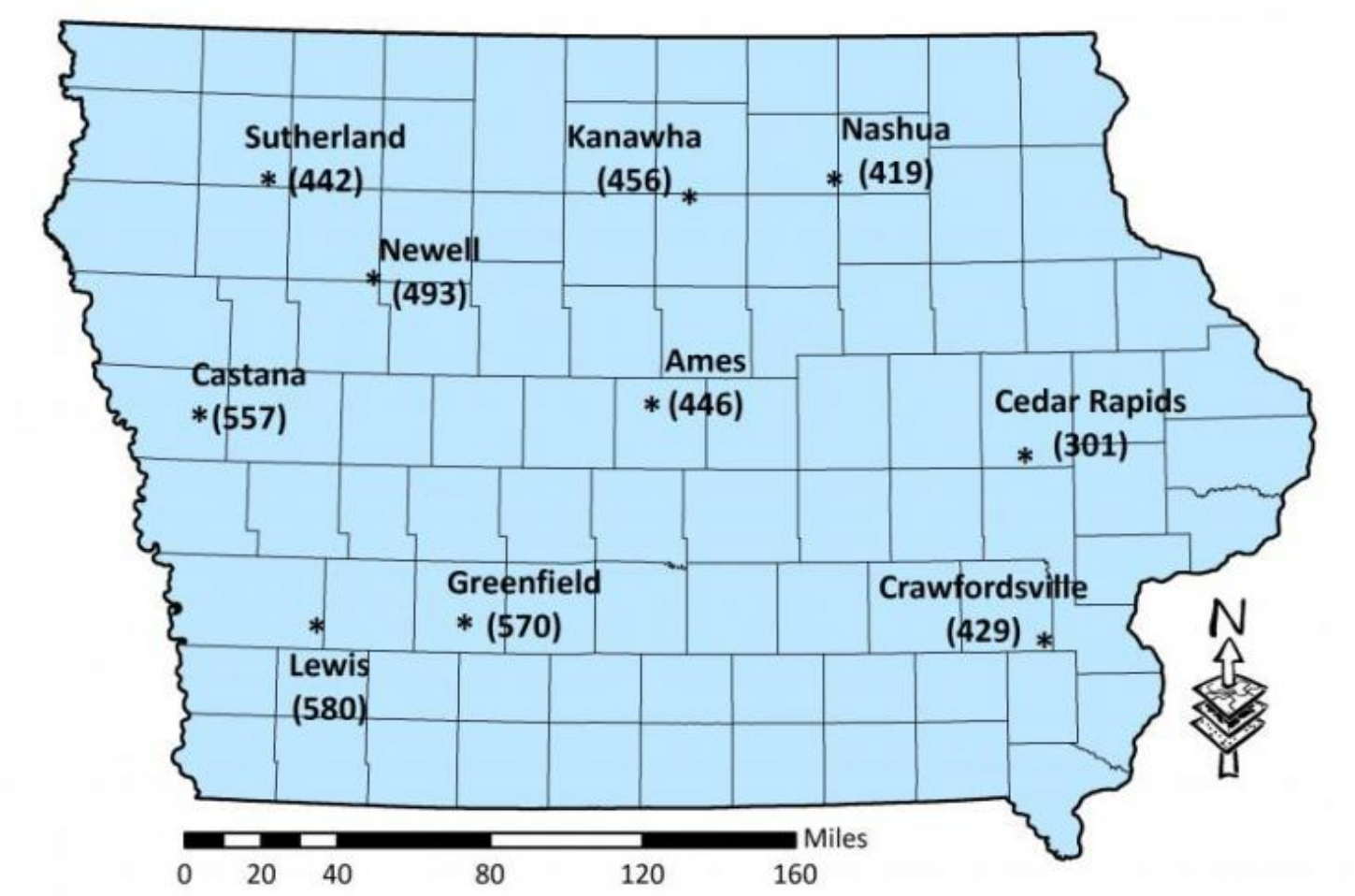

Figure 1. Accumulated soil degree days in Iowa as of June 9, 2020. Expect 50% corn rootworm egg hatch between 684-767 degree days. *Map data courtesy of Iowa Environmental Mesonet, Iowa State University Department of Agronomy*

To predict corn rootworm egg hatch for your area based on degree day accumulation, use the ISU Agronomy Mesonet website. Set the start date to January 1 of the current year, use the current date for the end date, and make sure the plot parameter is set to "soil growing degree days (base = 52)." Be aware that some locations are having 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 interferes with water and nutrient uptake and make the plant unstable (Photo 1). A recent meta-analysis showed a 15% yield loss for every node pruned back to 1/5 inches.

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 hybrids, or soil-applied insecticides), every field should be scouted for corn rootworm root injury. Continuous cornfields and areas with Bt trait 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 the ISU 0 to 3 Node Injury 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.

Category: Insects and Mites

article was originally published on June 9, 2020. The information contained within may not be the most current and accurate depending on when it is accessed.

Crop:

Corn

Tags: corn rootworm Insects egg hatch corn rootworm egg hatch

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