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Corn borers should increase in 1999

Marlin E. Rice

Iowa State University, merice@iastate.edu

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Corn borers should increase in 1999

Abstract

Never have European corn borer populations been this low. Surveys conducted in Minnesota and Wisconsin this past fall indicate that the numbers of live larvae in corn stalks are at historical lows in these two states. The Minnesota population appears to be in a tie with population levels seen in 1974 and 1985. However, Bt corn was not available during those years. When Bt corn acres in Minnesota are considered, the European corn borer population density will drop to a lower level on a statewide per-acre basis than is shown in the graph. The Wisconsin population is at the lowest level ever! Although I haven't shown it on the graph, information from Wisconsin dates back to the first European corn borer survey in 1942. The 1998 Wisconsin population was even lower than that in Minnesota.

Keywords

Entomology

Disciplines

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INTEGRATED CROP MANAGEMENT

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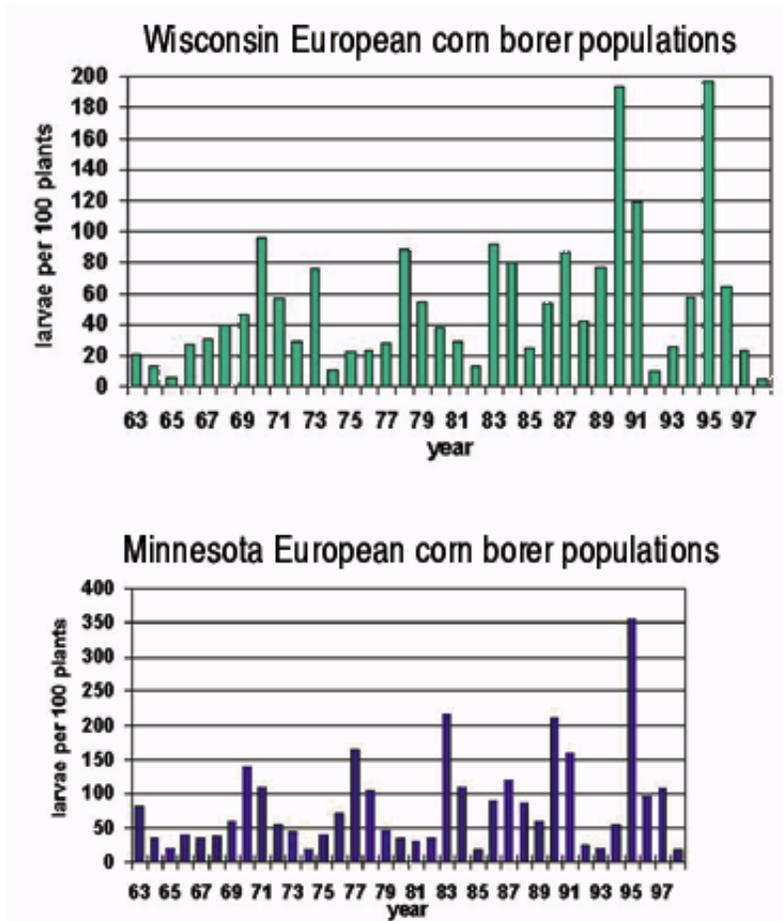
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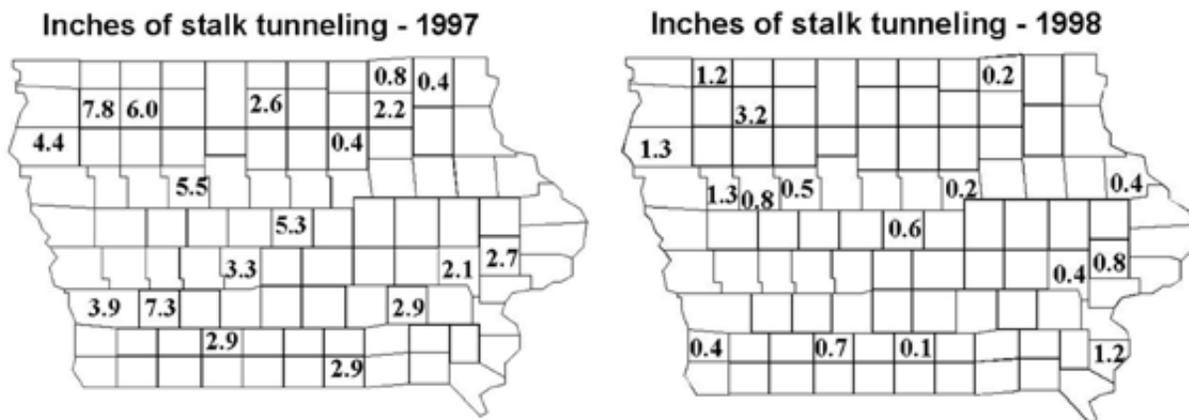
[1] **European corn borer stalk tunneling.**

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Iowa State University terminated the fall European corn borer surveys sometime during the early 1980s. Therefore, we no longer have long-term population comparisons. If we examine the relative amount of stalk tunneling in nonBt corn during 1997 and 1998, we can see, however, that injury was very low compared with the previous year. Several counties in central and western Iowa had large amounts (>5 inches) of stalk tunneling in 1997, whereas in 1998 only Clay County was recorded with even a moderate level of injury.



What are the causes of these decreases in population? Several biological, environmental, and agronomic factors working in concert are responsible. Weather, particularly the cool, rainy June of last summer was a major contributor to poor survival of first-generation larvae. Natural diseases, such as *Beauveria bassiana*, and natural enemies, such as lady beetles and parasitic wasps, also took their toll on larvae. Additionally, populations are being reduced

because of an increased planting of Bt corn acreage.

What can we expect for 1999? I never predict what insect populations are going to do several months into the future, but this year I will make an exception. I think that the European corn borer population has no place to go but up. How high? We'll just have to wait and see, but you should expect more insects and more damage in 1999 than you saw in 1998.

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