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Winter mortality in European corn borers

Marlin E. Rice

Iowa State University, merice@iastate.edu

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Winter mortality in European corn borers

Abstract

Les Lewis and Bob Gunnarson of the USDA Corn Insects Research Laboratory in Ames conducted a survey of the European corn borer population in central Iowa and found that the population has suffered high mortality. The percent mortality from four central Iowa counties was 51 percent (Franklin County), 37 percent (Hardin County), 40 percent (Marshall County), and 50 percent (Story County). These larvae died from the fungus, *Beauveria bassiana*.

Keywords

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INTEGRATED CROP MANAGEMENT

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European corn borer with *Beauveria*.

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At each location on each sample date 10, 1 square meter samples were taken. All crop residue was dissected, larvae collected and examined for two insect pathogens (*Nosema pyrausta* and *Beauveria bassiana*). All insects were checked for both pathogens and some had a dual infection. In such cases the *B. bassiana* would dominate and all larvae infected with *B. bassiana* will die.

Although some corn borers did survive the winter, many of them are not healthy and are infected with a protozoan-like organism, *Nosema pyrausta*. This organism will not kill the insects, but will cause the female moths to lay fewer eggs than uninfected insects. This is good news. However, the living population ranged from about 7,000 European corn borers per acre in Hardin County to 35,000 per acre in Marshall County. Les Lewis has noted that during serious problem years in the past, the populations have been as high as 40,000 to 50,000 corn borers per acre. Some counties may approach this density during this spring.

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[1] http://www.ent.iastate.edu/imagegal/lepidoptera/ecb/ecb_beauveria.html

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