

4-30-2007

Bean leaf beetles: Predicted winter mortality

Marlin E. Rice

Iowa State University, merice@iastate.edu

Richard O. Pope

Iowa State University, ropope@iastate.edu

Follow this and additional works at: <http://lib.dr.iastate.edu/cropnews>

 Part of the [Agricultural Science Commons](#), [Agriculture Commons](#), [Entomology Commons](#), and the [Plant Pathology Commons](#)

Recommended Citation

Rice, Marlin E. and Pope, Richard O., "Bean leaf beetles: Predicted winter mortality" (2007). *Integrated Crop Management News*. 1097.
<http://lib.dr.iastate.edu/cropnews/1097>

The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit <https://crops.extension.iastate.edu/>.

Bean leaf beetles: Predicted winter mortality

Abstract

During the last 17 years, the bean leaf beetle has undergone tremendous population changes in Iowa. From 1989 to 1996, the populations (both first generation and second generation) were relatively insignificant and the insect hardly could even be considered a serious pest. But in 1997, the population in central Iowa began to accelerate nearly yearly until it reached a historical high in 2002. Populations that year were nearly 400 times larger than those of the mid-1990s. Since that time, the population has returned to more normal levels and is similar to what we witnessed at the beginning of the beetle explosion in the late 1990s.

Keywords

Entomology, Plant Pathology

Disciplines

Agricultural Science | Agriculture | Entomology | Plant Pathology

INTEGRATED CROP MANAGEMENT

Search

Get the latest research-based information on crops. [Sign up to be notified](#) when new content is available!

ICM > 2007 > IC-498 (8) -- April 30, 2007

Current Newsletter

You are viewing **archives** for the newsletter from 1993-2007. For current news, see [Integrated Crop Management News](#).

Archives 1993-2007



Announcements



Crop Production



Insects and
Mites



Pesticide
Education



Plant Diseases



Soils



Weed
Management

Image Gallery

Printable Version

Printable version of this page

Related Articles

What's eating your soybean leaves?
July 30, 2007

Bean leaf beetle:
Predicted peak first-
generation dates
July 2, 2007

Seed treatments in
soybean: Managing
bean leaf beetles
April 23, 2007

Bean leaf beetles: Predicted winter mortality

by Marlin E. Rice, Department of Entomology, and Rich Pope, Departments of Entomology and Plant Pathology

During the last 17 years, the bean leaf beetle has undergone tremendous population changes in Iowa. From 1989 to 1996, the populations (both first generation and second generation) were relatively insignificant and the insect hardly could even be considered a serious pest. But in 1997, the population in central Iowa began to accelerate nearly yearly until it reached a historical high in 2002. Populations that year were nearly 400 times larger than those of the mid-1990s. Since that time, the population has returned to more normal levels and is similar to what we witnessed at the beginning of the beetle explosion in the late 1990s.

Recent study brings
"good news" about the
soybean aphid

March 26, 2007

Revisiting an integrated
approach to bean leaf
beetle and bean pod
mottle virus
management

March 26, 2007

Bean pod mottle virus:
Back with a vengeance

August 7, 2006

Early-season soybean
insects, plus others

May 30, 2006

Recognizing bean leaf
beetle injury

May 22, 2006

First-cutting alfalfa
insects

May 22, 2006

Bean leaf beetles return-
-with a vengeance

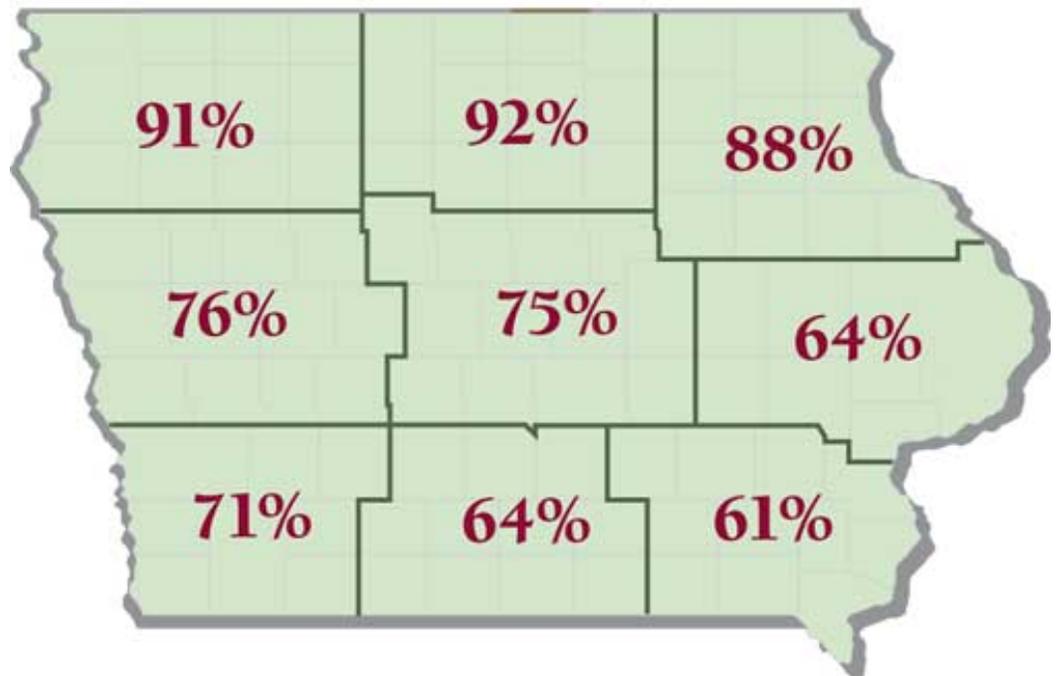
May 15, 2006



Bean leaf beetle (red phase).

So what are the primary reasons for the tremendous population increases several years ago? We believe there are two obvious answers--milder winters and earlier planting of soybeans. As the average winter temperature began to get warmer over several years, so did the insect population. A drop in the winter temperature during 2000-2001 brought a small decline in the bean leaf beetles, but the temperature went up the following winter and the insects rebounded. Earlier planting (and emerging) of soybeans is another primary reason. Early soybeans allow beetles more time to lay their eggs before they die as opposed to later emerging fields where fewer eggs can be laid before the beetles expire.

But since 2002, the bean leaf beetle has hit on "hard times." Late-season spraying for soybean aphids during July and August has greatly reduced the second generation. Each year that we spray aphids, fewer beetles are alive to go into hibernation. A resulting benefit from the soybean aphid applications is that the bean leaf beetle is now relegated to secondary pest status in many areas.



Predicted mortality of overwintering bean leaf beetles in Iowa crop reporting districts as of April 2007.

The beetles will be back again this spring--some were seen in Ames on April 29. Based on this past winter, we predict that the survival of overwintering bean leaf beetles was very similar to what we have seen the past couple of years. In other words, great conditions for the beetles throughout most of the state except for the northern third of the state (see map). Even though bean leaf beetle populations are relatively low, the earliest emerging fields in an area (such as a township) should be closely scouted for this pest and managed if necessary. Beetles are highly attracted to these early emerging fields. Fields that should be of greatest concern from this insect, and the virus it spreads (bean pod mottle virus), are food-grade soybeans and seed beans. Reductions in yield and seed quality can be significant in these fields from these two pests. Information on managing this pest complex will be printed in an upcoming newsletter, can be found in today's and last week's newsletter, or see [Bean leaf beetle and bean pod mottle virus management: An integrated approach](#).

Marlin E. Rice is a professor of entomology with extension and research responsibilities. Rich Pope is an extension program specialist in entomology with responsibilities in integrated pest management and pesticide applicator training.

This article originally appeared on page 129 of the IC-498 (8) -- April 30, 2007 issue.

Updated 05/03/2007 - 1:56pm