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# Management of second-generation bean leaf beetles

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# Management of second-generation bean leaf beetles

## **Abstract**

The overwintering bean leaf beetles are gone and we are looking forward to the appearance of the first-generation adults. The second generation, not the first, will have the greatest impact on yield by feeding on the soybean pods and beans. Monitoring the first generation, however, can aid in the management of the second generation. Larry Pedigo and his students at Iowa State University have developed research-based information to help make a management decision for second-generation bean leaf beetles based upon the population size of the first-generation bean leaf beetles. This article reviews this management concept, which was presented last year.

## **Keywords**

Entomology

## **Disciplines**

Agricultural Science | Agriculture | Entomology

# INTEGRATED CROP MANAGEMENT

## Management of second-generation bean leaf beetles

The overwintering bean leaf beetles are gone and we are looking forward to the appearance of the first-generation adults. The second generation, not the first, will have the greatest impact on yield by feeding on the soybean pods and beans. Monitoring the first generation, however, can aid in the management of the second generation. Larry Pedigo and his students at Iowa State University have developed research-based information to help make a management decision for second-generation bean leaf beetles based upon the population size of the first-generation bean leaf beetles. This article reviews this management concept, which was presented last year.

A degree-day model was developed to estimate the occurrence of first-generation adults in the field. The degree days for the first-generation adults were estimated to be 1212 degree days with a developmental threshold at 46°F. The overwintered female beetles usually begin to lay their eggs after colonizing the bean fields. The degree-day estimation for the first-generation adults is calculated by accumulating the temperature from the week of soybean emergence. Degree days should be calculated for each location or use data from Tables 1 and 2 in the July 16, 2001, ICM newsletter [article](#) [1] to approximate degree day accumulation and predicted peak emergence of first-generation adults.

The first generation can be sampled to predict the size of the second generation. Tables 3 and 4 from the July 16, 2001, ICM newsletter article refer to the size of the bean leaf beetle population that is occurring in the field during mid-July. These are first-generation beetles. If this population exceeds the thresholds, the field should not be sprayed now, but instead sprayed when the second-generation of beetles appear, which will be sometime in mid-August. Scout the fields again in late August to monitor for the first emerging beetles of the second generation. When the first beetles appear, spray the field with an insecticide (45-day preharvest interval or less). Sampling the fields now will help you predict the possibility of economic pod damage at the beginning of pod growth and development a month from now.

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<http://www.ipm.iastate.edu/ipm/icm//ipm/icm/2002/7-8-2002/blbnextgen.html>

**Links:**

[1] <http://www.ipm.iastate.edu/ipm/icm/2001/7-16-2001/scoutblb.html>

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