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## More corn rootworms are good! (or bad?)

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### **Abstract**

Corn rootworm populations are unusually high this year in many areas of Iowa. The snow cover for most of the 2000/2001 winter insulated the ground and contributed to the increase in rootworms in 2001. The past winter was mild, so I expected high populations of rootworms to continue or be even higher than in 2001. I began to prepare for this possibility with my [article](#) in last week's *Integrated Crop Management* newsletter on insecticide failures and what can be done now.

### **Keywords**

Entomology

### **Disciplines**

Agricultural Science | Agriculture | Entomology

### **Comments**

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# INTEGRATED CROP MANAGEMENT

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In late June and early July, I began receiving reports of "insecticide failures." On July 4 and the following weekend there were some scattered thunderstorms. On July 10, there were stronger storms that were more widespread. With the wetter, softer soils and the taller corn for the wind to push against, these early July storms lodged corn that the numerous corn rootworm larvae were feeding on throughout June and early July. Lodged corn has been treated with nearly all the insecticides, including both granular and liquid treatments on continuous and rotated corn in northwestern Iowa, but there are no trends that would indicate a particular product has ceased to work.

Based on research in my laboratory, insecticides applied to the soil at planting or after corn emergence control approximately half of the corn rootworm larvae. Under "average" conditions this level of control is sufficient for the insecticides to prevent lodging and yield reduction in eight to nine of 10 fields that have rootworms. Last year, with the higher rootworm populations, the best treatments in statewide plots gave acceptable control only 60 percent of the time. This year, the populations of rootworms are high enough that, before the rain, the untreated plots at Ames were dying because severe root feeding prevented the corn roots from reaching moisture. During last week's storms, several research locations suffered extensive lodging, in both treated and untreated rows. This outcome is the good aspect of abundant rootworms; it challenges the treatments in our research plots.

A benefit that the rains may provide is adequate moisture for the corn to begin to regenerate roots. If timely rains continue through pollination and ear fill, the impact of the larval feeding and lodging will be minimized. The only control that remains is the management of the beetle population. In heavily infested fields, inspect the silks to make sure that the beetles do not reduce pollination.

Beetle management also might reduce the populations before females lay eggs. Timely treatment of beetles to prevent egg laying can avoid economic infestations next year, but management must begin NOW. The beetles are out and egg laying is beginning. As soon as female beetles are found that contain well-developed eggs, they should be treated to prevent egg deposition. A treatment threshold that can be used is an average of 0.50 to 0.75 beetle per plant. Beetle treatments also may help reduce populations so that next year's soil

treatments are more effective, but treatment could result in unneeded additional cost. Normal winter conditions could bring the beetle population down to a level at which early-season larval treatments alone would be sufficient.

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