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Watch beans for green cloverworms

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Watch beans for green cloverworms

Abstract

The next generation of green cloverworms is about to begin in soybeans. Green cloverworm larvae have been feeding on soybeans in central Iowa during the last 3 weeks of July, and the adults are now making an appearance at lights at night. No significant defoliation has been reported, but fields should be closely scouted during the first 3 weeks of August. Larvae can be identified by a combination of characters. They are pale green with one or two white stripes extending down each side of the body, and three pairs of prolegs in the middle of the body. Larvae also wiggle violently when squeezed; no other caterpillar in soybeans exhibits this behavior.

Keywords

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INTEGRATED CROP MANAGEMENT

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[1] **Green cloverworm.**



[2] **Adult green cloverworm.**

The eggs of this insect hatch in 4 days and the larvae feed for 17-23 days. They develop through six instars (stages) and consume most of their food during stages 4-6. Young larvae will feed anywhere throughout the soybean plant, but older larvae confine their feeding to the upper one-third of the soybean canopy. Diseases frequently suppress green cloverworm populations; however, this may not occur until after a substantial amount of defoliation has occurred.

Larry Pedigo [3], research entomologist at Iowa State University, conducted a variety of studies on this insect during the 1970s and early 1980s. He was able to develop economic thresholds from this research on the green cloverworm. Economic thresholds are shown in Table 1 and are expressed as the number of larvae per foot of row; no thresholds have been developed for narrow-row or drilled soybeans. Sampling should be done with a drop cloth to estimate the number of green cloverworms per foot of row.



Green cloverworms often eat holes in the middle of the leaf and do very little feeding along the edge of the leaf.

[4]



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[5]

If the green cloverworm population is below the economic threshold, but defoliation is approaching 20 percent, then control measures should still be considered (Table 2). Several other insects, most notably bean leaf beetles and grasshoppers, also can contribute to the defoliation, even though the population of just one of these pests by themselves is not at the economic threshold. In fields with multiple insect species feeding on the leaves, the amount of leaf defoliation is the best gauge for making management decisions.

Table 1. Green cloverworm economic thresholds per foot of row.

	Treatment cost per acre (insecticide + application)				
Crop value (\$/bushel)	\$8	\$9	\$10	\$11	\$12
	larvae per foot of row				
\$4.00	21.8	23.9	25.4	27.7	29.1
\$5.00	18.8	20.3	21.8	23.2	24.7

Table 2. Common chemicals labeled for green cloverworm control.

Insecticide	Amount per acre	Harvest interval (days)
Ambush 2EC*	3.2-6.4 ounces	60
Asana XL*	2.4-5.8 ounces	21
Lorsban 4E	0.5-1 pint	28
PennCap-M*	2-3 pints	20
Pounce 3.2EC*	2-4 ounces	60
Sevin XLR Plus	1-2 pints	21
Warrior T*	1.92-3.2 ounces	45

*Restricted use insecticide.

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