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Thoughts on bean leaf beetle insecticides

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Abstract

Now that the bean leaf beetle has focused our attention on pest management in soybean, several questions have arisen regarding insecticide use and performance. Many insecticides are registered for this insect in soybean (Table 1). Some of the insecticides have a short preharvest interval of 28 days or less, but the pyrethroids have much longer intervals; Warrior is labeled at 45 days followed by Ambush and Pounce currently at 60 days. Common concerns have been initial knockdown, residual control, and preharvest limitations.

Keywords

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INTEGRATED CROP MANAGEMENT

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Now that the bean leaf beetle has focused our attention on pest management in soybean, several questions have arisen regarding insecticide use and performance. Many insecticides are registered for this insect in soybean (Table 1). Some of the insecticides have a short preharvest interval of 28 days or less, but the pyrethroids have much longer intervals; Warrior is labeled at 45 days followed by Ambush and Pounce currently at 60 days. Common concerns have been initial knockdown, residual control, and preharvest limitations.

The preharvest interval needs to be considered before an insecticide is used. Depending on soybean maturity and expected harvesting schedules, this will affect your selection of chemicals. I would expect most, if not all, of the insecticides listed in Table 1 to provide good initial control of this insect. However, the bean leaf beetle has received very little attention among entomologists with regard to evaluating residual control of these insecticides. Information on long-term performance is limited to one report from Ohio.

Ron Hammond, The Ohio State University, examined the residual control of two insecticides, Sevin XLR and Warrior. His data show that Warrior gave outstanding control and continued suppression of bean leaf beetles over a 4-week period (Table 2). If Warrior is used, don't forget that the preharvest interval is 45 days in soybean. I have been told of similar residual performance of Warrior in field tests that are being conducted by Rayda Krell, ISU entomology graduate student, this summer. For now, this is all the information I have but I hope to have additional data this winter on this topic.

Table 1. Common chemicals labeled for bean leaf beetle in soybean.

Insecticide	Amount per acre	Harvest interval (days)
Ambush 2EC*	3.2-6.4 ounces	60
Asana XL*	5.8-9.6 ounces	21
Dimethoate 4EC	1 pint	21
Furadan 4F*	0.25-0.5 pint	21
Lorsban 4E	1-2 pints	28
PennCap-M*	2-3 pints	20
Pounce 3.2EC*	2-4 ounces	60

Sevin XLR Plus	1-2 pints	0
Warrior T*	1.92-3.2 ounces	45

* Restricted use insecticide.

Table 2. Bean leaf beetles (per 20 sweeps) treated with Sevin and Warrior in Ohio.

	Rate	Aug. 16	Aug. 23	Aug. 30	Sept. 6	Sept. 13
1994 Treatment						
Sevin	0.75 qt	2.0	2.0	10.7	13.0	27.0
Warrior	2.96 oz	1.0	0.7	0.3	0.0	1.3
Check	--	0.7	1.3	10.0	21.0	27.0
1995 Treatment						
Sevin	0.75 qt	0.5	0.0	3.4	10.5	10.8
Warrior	1.92 oz	0.0	0.0	0.3	1.3	1.8
Warrior	2.96 oz	0.0	0.0	0.5	0.5	1.3
Check	--	0.0	0.8	7.5	17.5	23.2

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