

Pepper weevil control in pepper and eggplant – preliminary report 2017

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Background for the Research in Georgia

The pepper weevil, *Anthonomus eugenii*, appeared again in commercial pepper this fall 2017 season. We have begun comparing insecticides that seem to provide different levels of control of this pest than what was previously thought. Since pepper weevil can be the most devastating pest of pepper (Riley 1992) that occurs in Georgia and susceptible pepper and eggplant are some of our top ranked vegetable commodities in the State, it is imperative to develop effective control strategies for this pest. The problem can be even worse where both pepper and eggplant are grown. Since pepper weevil grubs develop inside of the pepper pods or in the fleshy flowers of eggplant, the grubs are protected from foliar sprays of insecticides. Therefore, the susceptibility of the adults to insecticides is the most critical measure of potential control of this pest. This study identified 3 insecticides with activity.

Procedures of Research

We collected fallen pods an infested pepper field in southern Georgia and held the pods for adult weevil emergence (~2 days). Organically grown pepper pods were sliced and dipped into the high rate of insecticide in the equivalent dilution of 100 gallons spray volume per acre. Five adults were place onto the treated pepper slices and mortality was taken at 24, 48, and 72 hours. The result below show that Vydate and Actara are the strongest insecticides for weevil control, Exirel weakens the weevil (moribund), and unfortunately the pyrethroid, Karate, and experimental provided no control at all.

pepper weevil bioassay 2017



pepper weevil on eggplant



pepper weevil on pepper



Insecticide treatment	24 h dead	24 h moribund	24 h live	72 h dead	72 h moribund	72 h live
Vydate	4.00a	1.17c	0.00c	5.17a	0.00b	0.00b
Actara	3.00b	2.00b	0.00c	5.00a	0.00b	0.00b
Exirel	0.17c	4.44a	0.50b	1.17b	3.33a	0.50b
VST-experimental	0.00c	0.00d	5.00a	0.00c	0.00b	5.00a
Karate/Warrior	0.17c	0.00d	4.83a	0.17c	0.17b	4.67a
Water check	0.00c	0.17d	4.83a	0.33c	0.17b	4.50a

Reference: Riley, D. G. 1992. The pepper weevil and its management, Texas Ag. Ext. Ser. L-5069.