Control of Insects on Eggplant

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Interpretive Summary

Plots treated with Avaunt were among those with a higher weight of marketable fruit. Averagefruit weight was similar for all treatments.

Introduction

Eggplant is a warm season crop that is susceptible to damage from low temperatures. This fact limits the area of Tennessee that successful large scale production can occur to western end of the state. It is a popular garden vegetable crop in several states, and is beginning to see more interest with home gardeners in Tennessee due to the influx of persons from other regions where it is better known. Belonging to the same family as tomatoes and peppers (*Solanaceae*), eggplant is susceptible to many of the same insect pests that feed on these crops. For this reason a study was conducted at The Plateau Experiment Station, Crossville to evaluate the efficacy of some insecticides on these pests.

Materials and Methods

Three foliar insecticide treatments were compared to an untreated control for efficacy in controlling lepidopteran pests on eggplant. Fertilizer was broadcast at 450 lb/A of 15-15-15 before final disking and four foot wide plastic mulch with trickle tape was laid June 12. 'Black Beauty' plants were transplanted into the plot on June 16. Plot size was one row, 15 ft long, with 6 feet between rows. Experimental plot design was a randomized complete block with four replications. Insecticides being tested were applied on Aug. 1, Aug 11, Aug. 19, Sept. 3, and Sept. 12 using a 2.5 gallon CO_2 hand sprayer at 45 gallons per acre at 40 psi. Plots were hand harvested five times between Sept. 5 and Oct. 1. Fruit was evaluated for insect damage and was graded as marketable or cull. Counts and weights were taken on each grade.

Results and Discussion

Plots treated with Avaunt were among those with a higher weight of marketable fruit (Table 1). Average fruit weight was similar for all treatments. The number of cull fruit and the percentage of damaged fruit was similar for all the treatments.

Table 1. Treatment, yield in tons per acre of marketable and cull grade fruit, percentage of damaged eggplant, and average fruit weight for various insecticide treatments at the Plateau Experiment Station, Crossville, 2003.

Treatment Formulation	Rate lb ai/A	Marketable ton/A	Cull ton/A	% Damaged Fruit	Ave. Fruit Wt. (lb)
Danitol 2.4 EC	0.200	4.13 b[z]	0.19 a	4.45 a	0.58 a
Spintor 2 EC	0.065	5.58 ab	0.34 a	4.38 a	0.55 a
Avaunt 30 DF	0.065	6.58 a	0.23 a	2.61 a	0.60 a
UTC	-------	3.46 b	0.39 a	6.26 a	0.46 a

[z] Means within columns followed by the same letter are not significantly different at the 0.05 level of probability, Duncan's multiple range tests.

This research represents one season's data and does not constitute recommendations. After sufficient data is collected over the appropriate number of seasons, final recommendations will be made through research and extension publications.