(C6)

BLUEBERRY: *Vaccinium corymbosum* L.

CITRUS THRIPS CONTROL IN ORGANIC SOUTHERN HIGHBUSH BLUEBERRIES IN CALIFORNIA, 2007

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Citrus thrips: *Scirtothrips citri* (Moulton)

This test evaluated the effects of insecticides for potential use for citrus thrips control in organic blueberries. The trial was located near Richgrove, Tulare Co., CA in a 3.8 acre portion of a mature blueberry field with each plot measuring 4 rows (44 ft) by 58 ft long. Plots were organized into a RCBD with 4 blocks of 15 treatments and an untreated check. Treatments were applied at 100 gpa on 7 Aug 2007 using a commercial tractor-pulled sprayer with nozzles located on wrap-around booms. Nozzles on each boom were directed towards the blueberry canopy and penetration was facilitated by fans. A second treatment of each product was applied a week later on 15 Aug 2007 using the same method. The effects of insecticide treatments were evaluated by taking 10 beat samples from the center two rows of each plot on each evaluation date. This was done by beating the terminal 6 in of new flush growth from an un-branched shoot onto a black, 12-in by 12-in piece of acrylic, and then counting the thrips. Evaluations were done on 6 Aug (pre-counts), 8 Aug (3 DAT1), 14 Aug (7 DAT1), 17 Aug (2 DAT2), 21 Aug (6DAT2), 24 Aug (9 DAT2), and 27 Aug (12 DAT2). Data were analyzed by ANOVA using transformed data (square root (x + 0.5)) with means separated by Fisher's Protected LSD at $P > 0.05$.

Table 1 shows the effects of treatments on the density of citrus thrips. By 3 DAT1, Entrust and Veratran D + Molasses lowered thrips counts below 10 thrips per beat sample and were the only insecticides to result in significant reductions compared to the untreated check. By 7DAT1 and 2 DAT2 Surround and Food Grade d-Limonene also resulted in significant reductions in thrips density. There were no significant differences on the 6DAT2 evaluations. On the final evaluation date, plots treated with Entrust were the only plots with at least a 50% reduction in thrips compared to the untreated check.

Table 1.

	Rate form prod/acre or v/v	Mean no. of citrus thrips per ten beat samples					
		Pre	3DAT1	7DAT1	2DAT2	6DAT2	9DAT2
Entrust	2 oz	29.3a	4.3a	7.9a	6.0a	8.9a	11.8a
Veratran D + Molasses	15 lb + 1 gal	31.6a	7.7a	10.5ab	4.5ab	11.4a	26.4bcde
Surround WP	50 lb	34.3a	19.5b	11.1abc	6.6abc	17.5a	20.4abcd
Food Grade d-Limonene	0.5 %	24.5a	20.6bc	16.5bcd	10.8abcde	16.9a	15.9ab
JMS Stylet Oil	1.5 %	28.8a	22.0bcd	20.7cd	17.4cdef	25.7a	24.7bcde
415 Oil	2 %	32.2a	22.6bcd	24.3d	13.1bcde	18.7a	26.8cde
M-Pede 49L	2 %	31.9a	23.2bcd	18.5bcd	17.9ef	24.8a	31.3e
First choice 9300 Vegetable Oil	4 %	36.4a	23.6bcd	19.7bcd	16.8def	17.0a	17.2abc
QRD 400	1 %	30.2a	23.7bcd	21.3cd	14.2bcdef	20.9a	19.1abcd
Pyganic 1.4EC	7 pt	33.4a	24.6bcd	28.1d	15.0cdef	18.2a	25.5bcde
Ecotrol[1] 10EC	1 %	27.9a	26.2bcd	18.9bcd	14.8cdef	25.7a	18.2abc
Trilogy	2 %	30.3a	26.3bcd	23.5d	24.0f	13.4a	22.7bcde
SeaSide	1 %	30.4a	28.8cd	16.5bcd	11.9bcde	14.7a	24.9bcde
Orosorb	1 %	36.1a	30.3d	26.3d	17.9def	20.7a	29.3de
Biolink	0.5 %	34.0a	31.7d	27.9d	8.1abcd	13.2a	16.4abc
Untreated	---	38.5a	32.7bcd	28.2d	16.8 def	24.5a	31.6e

[1]R-11 used as a surfactant at 0.25% v/v.
Means in a column followed by the same letter are not significantly different.
($P > 0.05$, Fisher's protected LSD) after square root (x + 0.5) transformation of the data. Untransformed means are shown.