Influence of insecticide applications on Beet curly top virus incidence in Fresno County, 2015

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Sun 6366 tomato plants were transplanted on 22 May 2015 into a Panoche clay loam soil at University of California West Side Research and Extension Center, Five Points. Beds were formed at 60 inches center to center and plants were at 14 inch spacing. Plants were irrigated with surface drip (Netafim Streamline™) 0.24 gal/hr emitters at 14 inch spacing) throughout the season. All fertility, weed and disease control tactics were similar to commercial practice. Insecticide treatments are listed in the tables below. Six treatments were compared in a four replication randomized complete block design. Each plot consisted of 200 ft of one bed. Total plants per plot recorded on 17 Jun, BCTV symptomatic plants were recorded 22 Jun and at 14 day intervals. Percent plants with BCTV symptoms were calculated. On 11 Sep, 20 feet of bed of each of the 3 more promising treatments and the untreated control were hand harvested, weighed and yield per acre was calculated. In addition, 30 to 35 lbs of the fruit from each harvested plot were hand sorted into four categories (red, green, sunburn and rot). Fifty red fruit were sent to the Processing Tomato Advisory Board laboratory at Helm and the color, solids and pH were quantified. Analysis of Variance was run, coefficient of variation and least significant difference at P=0.05 are listed at the bottom of the tables.

Disease levels were over 12% by the end of the season in the untreated controls and differences in both disease incidence and yield were significant at P=0.05. No symptoms of phytotoxicity were observed.

Influence of insecticide treatments on incidence of Beet curly top virus in Five Points, 2015.

	BCTV (%)				
	22 Jun	1 Jul	14 Jul	28-Jul	12-Aug
Verimark 13.5 oz/A tray drench (5/21/15)	2.8	3.7	5.7	4.3	4.8
Admire Pro 6.5 Drip (6/22/15)	10.4	11.8	9.7	8.6	6.7
Admire Pro 10.5 oz/A transplant water (5/22/15)	5.3	6.8	8.0	8.4	6.9
Admire Pro 4 oz/A transplant water (5/22/15) Silvanto 2 fl oz directed foliar (5/22/15) Admire Pro 6.5 Drip (6/22/15)	7.8	8.1	10.3	7.5	8.1
Silvanto 2 fl oz directed foliar Admire Pro 6.5 Drip (6/22/15)	11.7	12.8	11.5	9.9	9.6
Untreated Control	9.9	12.1	13.9	11.5	12.3
$LSD_{0.05}$	4.29	3.18	3.87	4.66	3.58
CV (%)	35.95	22.88	26.06	36.95	29.5

Influence of insecticide treatments on yield and quality of processing tomatoes with moderate levels of Beet curly top virus.

	Yield	**% based on hand sort**				**PTAB**		
	(t/a)	Red	Grn	Sun	Rot	Col	Sld	pH
Verimark 13.5 oz/A tray drench (5/21/15)	45.6	80.2	7.8	0.2	11.8	28.0	4.725	4.530
Admire Pro 6.5 Drip (6/22/15)	40.0	77.3	11.1	2.1	9.5	28.3	4.850	4.480
Admire Pro 10.5 oz/A transplant water (5/22/15)	42.1	77.6	12.8	1.4	8.2	27.5	4.675	4.545
Untreated Control	36.2	79.4	9.8	0.8	9.9	28.3	4.925	4.510
$LSD_{0.05}$	7.7	NS	NS	NS	NS	NS	NS	NS
CV (%)	11.7	9.8	35.2	93.1	31.5	6.7	5.250	1.700