

**Evaluation of insecticide treatments on Beet curly top virus incidence in Fresno County processing tomatoes, 2016.**

On 17 May, processing tomato plants were transplanted into a Panoche clay loam at University of California West Side Research and Extension Center in Fresno County, CA. Throughout the season, the field was irrigated with drip tubing (Netafim 15mm, .24 GPH emitter at 14" spacing) buried at a depth of 10 inches. Each plot consisted of one 60-in. bed, 300 ft long. The experimental design was a randomized complete block with four replications. Insecticide programs compared are detailed in the table below. All fungicides applied through the buried drip were applied over 30 to 45 min through electric metering pumps. The water was run for an additional 30 min after treatments were run. Banded applications were applied in 12.5 gallons of water per acre with a CO<sub>2</sub>-pressurized backpack sprayer at 32 psi and the spray was directed over the plants, which covered approximately 20% of the bed. Activator at 0.125% was included with each application. On 31 May, plants in each 300 ft plot were counted. On 10, 17, 23, 30 Jun and 6 Jul, the number of diseased plants per bed were counted. On 18 Sep, 20 ft of bed was hand harvested and weighed. From the harvested fruit, a 25 to 35 lb sub-sample was hand sorted for reds, greens, sunburn and rot. A 50 fruit sample was taken, weighed, and analyzed for color, solids and pH at the Processing Tomato Advisory Board laboratory in Huron. Analysis of variance was performed and Least Significant Difference at P=0.05 is presented.

*Beet curly top virus* (BCTV) incidence was moderate and differences in levels of disease were apparent in terms of disease incidence and yield. Although *Tomato spotted wilt virus* was present and counts were documented, there were no differences among treatments in terms of TSWV incidence. No evidence of phytotoxicity was observed in any of the treatments.

Influence of insecticide treatments on *Beet curly top virus* and *Tomato spotted wilt virus* symptom incidence in Fresno County, CA 2016.

Treatment, application (date applied)	Disease counts							
	BCTV					TSWV		
	10-Jun	17-Jun	23-Jun	30-Jun	6-Jul	23-Jun	30-Jun	6-Jul
Verimark 13.5 fl oz product/A Tray Drench 16 May	0.17	0.97	1.15	3.50	11.25	0.10	0.81	1.17
Admire Pro 4.0 fl oz/a) transplant water 17 May Verimark 10 fl oz/A drip applied 10 Jun Verimark 10 fl oz/A drip applied 28 Jun	0.27	1.37	1.47	4.00	10.75	0.09	0.53	0.89
Silvanto 10.5 fl oz 6 Jun Platinum 3.67 oz drip applied 10 Jun Venom 6.0 oz drip applied on 28 Jun	0.91	3.76	3.58	6.94	17.00	0.09	0.36	0.90
Admire Pro 4.0 oz transplant water 17 May Platinum 3.67 oz drip applied 10 Jun Venom 6.0 oz drip applied on 28 Jun	0.09	1.44	1.53	4.87	12.00	0.00	0.71	0.99
Verimark 13.5 fl oz product/A Tray Drench 16 May Platinum 3.67 oz drip applied 10 Jun Venom 6.0 oz drip applied on 28 Jun	0.62	1.06	1.85	3.87	13.00	0.09	0.70	0.88
Untreated control	1.54	3.37	4.48	9.18	27.25	0.09	0.90	1.29
LSD <sub>0.05</sub>	1.01	1.27	1.70	1.87	2.24	NS	NS	NS

CV %	11.89	42.19	48.05	22.98	27.04	194.2	73.49	55.56
------	-------	-------	-------	-------	-------	-------	-------	-------

DRAFT

Influence of insecticide treatments on processing tomato (cv. Sun6366) yield and quality in Fresno County, CA 2016.

Treatment, application (date applied)	Gross Yield Tons/ acre	Fruit quality (%)				Laboratory analysis		
		red	grn	Sun burn	rot	Color	Solids	pH
Verimark 13.5 fl oz product/A Tray Drench 16 May	54.94	77.22	3.21	0.82	18.76	23.8	5.25	4.558
Admire Pro 4.0 fl oz/a) transplant water 17 May Verimark 10 fl oz/A drip applied 10 Jun Verimark 10 fl oz/A drip applied 28 Jun	54.78	79.30	2.58	0.46	17.66	24.0	5.25	4.525
Silvanto 10.5 fl oz 6 Jun Platinum 3.67 oz drip applied 10 Jun Venom 6.0 oz drip applied on 28 Jun	54.92	80.70	4.28	2.23	12.79	23.3	5.10	4.525
Admire Pro 4.0 oz transplant water 17 May Platinum 3.67 oz drip applied 10 Jun Venom 6.0 oz drip applied on 28 Jun	45.74	81.26	2.54	1.25	14.96	23.5	5.10	4.505
Verimark 13.5 fl oz product/A Tray Drench 16 May Platinum 3.67 oz drip applied 10 Jun Venom 6.0 oz drip applied on 28 Jun	57.97	81.29	3.20	0.08	15.42	23.0	5.10	4.505
Untreated control	39.50	72.56	4.83	0.32	22.28	23.0	5.33	4.523

LSD <sub>0.05</sub>	12.36	NS	NS	NS	10.693	NS	NS	NS
CV %	15.98	10.60	57.93	126.57	41.79	3.9	5.56	0.880