NOT ALL MATERIALS TESTED HERE ARE CURRENTLY REGISTERED, CAREFULLY READ LABEL BEFORE WRITING A RECOMMENDATION

Tomato (*Solanum lycopersicum*) cv. 'Sun 6368'
Powdery mildew; *Leveillula taurica*

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Evaluation of materials for control of powdery mildew on processing tomato, 2009.

On 20 May, Sun 6368 tomato plants were transplanted into a Panoche clay loam at University of California West Side Research and Extension Center in Fresno County, CA. The field was sprinkler irrigated for 10 days and irrigated with buried drip for the remainder of the season. Each plot consisted of one 66-in bed, 30 ft long. Treated beds were separated by one untreated planted row and by 5 ft between plots within a row. The experimental design was a randomized complete block with four replications. On 22, 31 Jul, and 12, 21 Aug, materials were applied in 50 gallons of water per acre with a CO_2 pressurized backpack sprayer at 40 psi. A spray boom with three Teejet 8002 flat fan nozzles spaced 19-in apart was used for all applications. When the first application was made, powdery mildew was present at a very low level; less than 1/100 leaves. On 29 Jul, 7, 22 Aug and 1 Sep powdery mildew severity was rated on each of ten leaves per plot using a scale of 0 to 10 based on percentage of the leaf affected by powdery mildew. Leaves rated 0 had no visible powdery mildew; leaves rated 10 were covered. On 25 Aug and 2 Sep, the severity of necrosis due to powdery mildew was rated on a scale of 0 to 10, with 0 being unaffected and 10 being totally necrotic. Arcsine transformed data was subjected to analysis of variance. Student-Newman-Keul's Multiple Range Test on transformed data ($P \leq 0.05$) was used for mean separation. Non-transformed means are presented as a percentage of the leaf surface covered with powdery mildew symptoms for foliar ratings and the necrosis rating is presented to reflect leaf death severity.

Powdery mildew severity was extremely high and was first detected on 20 Jul at this trial site. Materials that were generally among the best performing included Luna Sensation, Quadris Top, either alone or rotated with Bravo Weather Stik, GWN-4617 and BAS560. It is likely that the performance of the Quadris Top/ Bravo Weather Stik rotation was due to the Quadris Top since Bravo Weather Stik applied alone was similar to the untreated control.

Treatments[z]	Foliage covered with powdery mildew (%)						Necrosis rating					
	29 Jul		7 Aug		22 Aug		1 Sep		25 Aug		2 Sep	
Luna Sensation 7.6 fl oz + D[xy]……..	1.0	ab[w]	1.0	d	5.3	c	13.3	b	1.5	ef	2.0	c
Quadris Top 8 fl oz + D……	0.0	b	2.0	d	5.8	c	18.5	b	1.3	f	1.8	c
Quadris Top 8 1 oz + D (1,3)/Bravo Weather Stik 2.75 pt (2,4)[u]……	0.3	b	3.8	d	15.0	c	21.8	b	2.3	cde	3.3	c
GWN-4617 3.4 oz + D……..	2.0	ab	2.8	d	11.0	c	22.5	b	1.3	f	2.0	c
BAS560 15 fl oz + Widespread Max 0.03%.	2.3	ab	5.0	cd	17.0	c	45.8	a	2.0	def	3.3	c
Cabrio 16 oz + D (1,3)/Rally 4 oz/A + D (2,4)……..	1.5	ab	11.8	bc	34.3	b	49.8	a	3.3	bcd	5.0	b
Cabrio 16 oz + Franchise 0.25% (1,3)/Rally at 4 oz + Widespread Max 0.03 % (2,4)…..	2.0	ab	12.5	bc	38.0	b	53.8	a	4.0	bc	6.5	ab
Flint 3.0 oz + D……	1.8	ab	15.5	ab	39.8	b	60.5	a	3.7	bcd	5.5	b
Cabrio 16 oz + Franchise 0.13% (1,3)/Rally at 4 oz/A + Widespread Max 0.03% (2, 4)..	0.5	b	13.3	bc	33.8	b	61.8	a	3.5	bcd	5.0	b
Regalia at 0.5% + Cabrio 8 oz + D.....	2.3	ab	16.8	ab	42.3	b	62.5	a	3.5	bcd	5.8	b
Regalia 0.5% + Rally 2.5 oz + D.....	2.0	ab	14.0	bc	37.3	b	63.0	a	3.7	bc	5.8	ab
Microthiol 10.0 lb……	1.5	ab	27.3	ab	50.5	ab	65.0	a	2.7	bcde	6.3	ab
Regalia 1.0% + D……..	1.0	ab	27.8	ab	59.0	ab	67.5	a	4.7	ab	7.8	ab
Bravo Weather Stik 2.75 pt……...	4.3	a	22.8	ab	59.0	ab	70.3	a	4.7	ab	7.3	ab
Untreated Control……..	3.5	ab	33.3	a	70.3	ab	74.3	a	6.0	a	8.8	a

[z] All materials were applied in the equivalent of 50 gallons of water. Rates are expressed in units formulated product per acre.
[y] Materials separated by a "+" were applied as a mixture.
[x] D=Dyne-Amic 0.25%.
[w] Means within a column followed by the same letter did not differ significantly according to Student-Newman-Keul's Multiple Range Test on transformed data P = 0.05.
[u] The number in parenthesis refers to application date: 1= 22 Jul, 2= 31 Jul, 3= 12 Aug, and 4= 21 Aug.

Influence of fungicide programs on yield and fruit quality of processing tomatoes, Fresno Co., 2009

Treatment	Wt. (tons/ acre)	Wt of 50 fruit (lbs)	Fruit (% by weight)				Color	Solids (^{o}Bx)	pH
			Red	Green	Rot	Sunburn			
Quadris Top 8 fl oz + Dyne-Amic 0.25%	41.26	10.14	47.0	12.6	19.0	17.3	27.8	4.83	4.378
Quadris Top 8 fl oz + Dyne-Amic 0.25% (1,3) alt. Bravo Weather Stick 2.75 pt (2,4)	33.69	9.96	35.9	9.0	30.6	21.8	32.0	4.68	4.385
Cabrio 16 oz+DyneAmic 0.25% (1,3) Rally 4 oz+ DyneAmic 0.25% (2,4)	30.82	9.75	34.8	8.5	28.9	25.2	32.0	4.93	4.4.28
Cabrio 16 oz+Franchise 0.13% (1,3) Rally 4 oz Widespread Max 0.03 (2,4)	27.93	9.58	27.7	17.6	27.6	21.7	33.5	4.63	4.368
Cabrio 16 oz+Franchise 0.25% (1,3) Rally 4 oz Widespread Max 0.03 (2,4)	26.95	8.18	32.8	16.2	27.3	18.7	30.3	4.55	4.415
Untreated control	22.09	8.29	44.0	4.0	25.0	25.2	29.8	4.35	4.467
LSD	6.43	1.92	12.4	NS	NS	NS	5.29	0.59	0.064
CV(%)	14.02	13.70	22.27	82.20	24.96	27.59	11.37	8.40	0.97