

Comparison of fungicide programs for control of powdery mildew (*Leveillula taurica*) on tomato
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The study was conducted at the University of California West Side Research and Extension Center. On 20 May, H6368 tomato plants were transplanted into a Panoche clay loam. 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, 75 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. Programs evaluated included the following:

- Season-long weekly: Quadris 6.0 fl oz (Q) and Rally 4.0 oz (R) alternated weekly from 26 Jun to 27 Aug at weekly intervals beginning with Q: 10 applications
- Season-long bi-monthly: Q and R alternated every other week from 2 Jul to 27 Aug; beginning with Q; 5 applications
- Late weekly: Q and R alternated weekly from 30 Jul to 27 Aug; beginning with Q: 5 applications
- Early weekly: Q and R alternated weekly from 2 Jul to 6 Aug; beginning with Q: 6 applications
- Sulfur weekly: Dusting sulfur 50 lbs applied weekly from 7/2 to 8/13: 7 applications
- Untreated

Rally and Quadris were applied in 50 gallons of water per acre with a CO₂ 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. Sulfur was applied using a hand operated applicator. 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. Leaves were evaluated weekly from 29 Jul to 2 Sep. On 21, 27 Aug and 4 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. On 22 Sep, 70 ft per plot was machine harvested and weighted. A 20 lb fruit sample was taken from each plot, sorted for green, rot, sunburn and a 50 fruit sample was taken to PTAB for analysis of color, pH and solids. Data was subjected to analysis of variance. Least significant difference (LSD) P=0.05 is presented. Means are presented as a percentage of the leaf surface covered with powdery mildew symptoms. Necrosis severity is presented as a rating.

Influence of fungicide programs on percentage of leaf surface covered with powdery mildew, Fresno Co. 2009 on H6368 processing tomato..

Treatments ^z	29 Jul	4 Aug	13 Aug		21 Aug		27 Aug		2 Sep	
			basal	terminal	basal	terminal	basal	terminal	basal	terminal
Quadris/Rally, 7 day interval, 6-26 to 8/27	2.8	1.3	11.0	0.0	9.0	4.5	16.0	5.0	31.0	13.8
Quadris/Rally, 7 day, late, 7/30 to 8/27 -	7.3	2.0	35.5	0.0	13.5	3.5	36.0	3.8	38.0	15.0
Sulfur 7 day, 7/2 to 8/13	1.5	0.8	2.5	1.0	6.8	11.0	7.5	11.8	13.8	17.8
Quadris/Rally, 14 day interval, 7/2 to 8/27	8.0	0.8	21.8	0.0	14.8	9.3	44.0	18.3	50.3	28.3
Quadris/Rally, 7 day, early, 7/2 to 8/6	1.5	0.5	10.5	0.0	12.8	12.0	21.5	35.3	26.5	49.3
Untreated	8.0	5.3	51.0	3.0	49.8	25.8	93.5	68.8	96.3	86.8
LSD _{0.05}	2.85	1.67	10.60	1.03	21.61	8.60	14.86	16.75	11.81	19.80
CV (%)	39.07	63.46	31.89	102.47	80.77	51.84	27.07	46.72	18.41	37.46

Influence of fungicide programs on leaf death due to powdery mildew on processing tomatoes; rated from 0 to 10 with 0 being healthy and 10 being completely dead, Fresno Co., 2009

Treatments ^z	21 Aug	27 Aug	4 Sep
Sulfur 7 day, 7/2 to 8/13	0.8	1.0	1.0
Quadris/Rally, 7 day interval, 6-26 to 8/27	1.3	1.3	1.5
Quadris/Rally, 7 day, late, 7/30 to 8/27	2.3	2.5	2.0
Quadris/Rally, 7 day, early, 7/2 to 8/6	0.8	1.3	2.8
Quadris/Rally, 14 day interval, 7/2 to 8/27	1.5	2.0	3.3
Untreated	4.0	5.5	7.5
LSD _{0.05}	1.26	1.01	1.22
CV (%)	47.80	29.63	26.99

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

Treatment	Wt. (tons/ acre)	Fruit (% by weight)				Color	pH	Solids
		Red	Green	Rot	Sunburn			
Sulfur 7 day, 7/2 to 8/13	34.03	47.0	12.6	19.0	17.3	25.25	4.510	5.375
Quadris/Rally, 7 day, early, 7/2 to 8/6	30.96	35.9	9.0	30.6	21.8	29.50	4.470	4.425
Quadris/Rally, 7 day interval, 6-26 to 8/27	29.67	34.8	8.5	28.9	25.2	27.75	4.505	4.675
Quadris/Rally, 7 day, late, 7/30 to 8/27	26.29	27.7	17.6	27.6	21.7	30.25	4.460	4.875
Quadris/Rally, 14 day interval, 7/2 to 8/27	23.61	32.8	16.2	27.3	18.7	27.50	4.510	4.225
Untreated control	22.28	44.0	4.0	25.0	25.2	28.00	4.565	4.000
LSD	6.24	12.4	NS	NS	NS	2.52	0.077	0.343
CV(%)	14.90	22.27	82.20	24.96	27.59	5.93	1.13	4.95