Comparison of fungicides for control of powdery mildew (*Leveillula taurica*) on tomato, 2008

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This study was conducted in two commercial fresh market tomato fields in San Joaquin County. The first trial was located just west of Farmington, CA in a field of the cultivar Bobcat transplanted on July 18th, 2008. Each plot consisted of a single 60-in bed by 30 ft long. The second trial was located southeast of Tracy, CA in a field of the cultivar QualiT-21 transplanted on July 24th. In this trial, each plot consisted of a single 60-in bed by 25 ft long. In both trials, the fields were furrow irrigated and the experimental design was a randomized complete block design with four replications. Both trials had the same treatment list. Fungicide applications were initiated at roughly 6 wk after transplanting. At that time, there were no symptoms of mildew infection visible in the trial fields. Applications were made with a CO_2 backpack sprayer (32 psi) and a handheld boom with hollow cone nozzles, two of which were on drops. Fungicide applications were made on a roughly 11- to 14-day schedule (for total of four applications at each trial). Plots were rated for the percentage of the foliage that was affected by mildew. On October 24th, a 10-ft section of each plot was hand-harvested from the Farmington-area trial only. Fruit were sorted into marketable, sunburned, and other culls. Differences in total fruit biomass, marketable yield and percent sunburn were not significant (P=0.05).

		FARMINGTON-AREA TRIAL						TRACY-AREA TRIAL		
		Powdery mildew severity rating[z]			Yield (tons/A)		Sunburn	Powdery mildew severity rating[z]		
Product	Rate	23-Sep	2-Oct	10-Oct	total	marketable	(% by wt)	26-Sep	2-Oct	29-Oct
Nontreated contol	-	2.75	2.75	2.88	29.34	21.40	12.0	1.63	2.25	2.0
Revus Top (mandipropamid + difenoconazole)	7 oz	2.63	2.50	3.00	36.11	27.39	11.5	1.38	2.00	1.9
Revus Top (mandipropamid + difenoconazole)	6 oz	2.88	2.38	2.50	35.99	32.65	7.0	1.75	2.13	1.5
Thiolux (micronized sulfur)	10 lbs	2.50	2.13	2.75	39.60	29.83	13.2	1.25	1.38	1.6
Rally (myclobutanil)	4 oz	2.38	2.00	2.25	36.95	28.36	12.4	1.63	1.63	1.5
Cabrio (pyraclostrobin)	16 oz	2.13	2.00	2.13	35.57	27.83	9.1	1.13	1.38	1.4
Pristine (pyraclostrobin + boscalid)	18 oz	1.88	1.50	1.75	40.15	32.32	8.5	0.88	1.63	1.1
Quadris (azoxystrobin)	6.2 oz	2.00	1.25	1.50	41.91	33.43	9.6	0.63	1.00	1.3
Quadris Top (azoxystrobin + difenoconazole)	8 oz	2.00	1.25	1.25	39.53	29.40	14.1	0.63	1.00	1.3
BAS560F (metrafenone)	15 oz	1.38	1.25	1.25	35.49	28.37	9.3	0.63	1.13	1.1
USF2016A (fluopyram + trifloxystrobin)	5.6 oz	1.50	1.00	1.25	42.35	33.40	9.8	0.75	1.13	1.0
	Mean	2.18	1.82	2.05	37.54	29.49	10.6	1.11	1.51	1.42
	LSD 5%	0.77	0.78	0.76	NS	NS	NS	0.54	0.37	0.55
	CV %	24.5	29.8	25.8	20.1	23.2	44.8	33.3	17.1	26.6
	P value	0.0046	0.0004	<0.0001	0.49	0.47	0.58	0.0001	<0.0001	0.0135

[z] Powdery mildew severity rating scale:

0 = no disease, 1=1-20%, 2=21-40%, 3=41-60%, 4=61-80%, and 5=81-100% of the leaf surface affected by powdery mildew

Numbers represent the means of four replicate observations.