



# TOMATO INFO

**Field Notes**  
**Field Meeting on Varieties**  
**Tomato Powdery Mildew**

## FIELD NOTES

Our tomato crop is clearly behind our 'normal' harvest schedule. Heat units tracked this year from a Davis weather station indicate we are delayed. For a March 15 planting, the delay is about 15 days. The major set back period was mid May through mid June. The average heat unit accumulation per day during July, August and mid September is usually averages about 25 units. *Our simple daily heat unit day calculation was:  $(Temp_{max} - Temp_{min})/2 - 50^{\circ}F$ .*

Table 1. Heat unit measurements, 2011 vs historical average, Davis weather station

start	end	year 2011	historical average	difference
15-Mar	31-Mar	64	126	61
1-Apr	15-Apr	110	135	25
16-Apr	30-Apr	138	169	31
1-May	15-May	196	213	17
16-May	31-May	144	261	117
1-Jun	15-Jun	216	291	75
16-Jun	30-Jun	313	330	17
1-Jul	15-Jul	344	360	16
16-Jul	24-Jul	190	212	23
<b>TOTAL</b>		<b>1715</b>	<b>2096</b>	<b>381</b>

Bacterial speck can also cause delays in days to harvest by suppressing plant growth and vigor as well as blighting flowers. For many fields, it appears flower set was substantially reduced. While a windshield assessment of many of these tomato fields would indicate plants had fully recovered, it is clear fruit set was greatly reduced while vine growth recovered to produce full sized plants.

On the positive side, with the milder temperatures, fruit set in fields without high disease is very good. We will have weak as well as very high yielding fields as the season progresses.

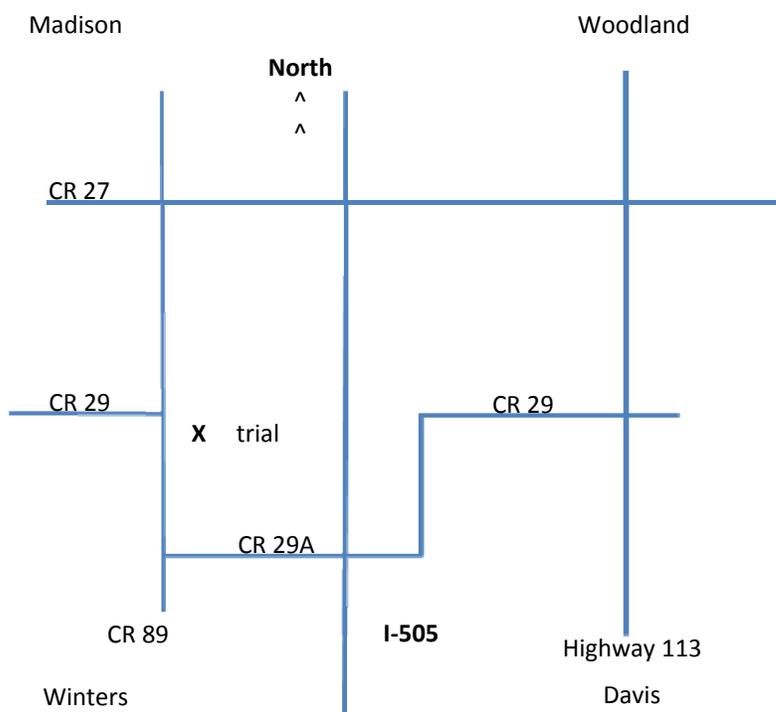
Tomato spotted wilt virus has become widespread in our area, but mostly at a low level (below 1%). The virus is vectored by thrips. Locally, thrips often remain at moderate to high levels from late spring to early fall. While the virus is a concern for all, it appears reasonable that geographic areas that have historical damage levels above 1% might include a spray program when plants are young and thrip activity is high. Perimeters of fields often are the most damaged, indicating an outside source of the virus. Within field spread from early infections and subsequent movement might well lead to high crop losses. Later infections, when plants are more mature, cause much less damage. Assess benefit of spray programs by leaving unsprayed check strips. Alternatively, TSWV resistant varieties might be selected in future

years, particularly in the historically highly impacted fields. However, the past incidence of TSWV isn't always an accurate predictor of future activity.

**FIELD MEETING ANNOUNCEMENT**

Early Maturity Tomato Variety Evaluation Trial  
10:30 am to noon, **Tuesday, 2 August 2011**  
Winters area  
SE corner of County Road 89 X CR 29  
Bacterial speck, Fusarium wilt and Tomato spotted wilt virus  
plant samples will be displayed.  
A light lunch will be available for the first 25 attendees.

Fifteen replicated early-maturity processing tomato varieties were transplanted on double rows per bed on April 6 in a commercial field planted to APT 410. Cooperator is Joe Rominger of D.A. Rominger and Sons. Stand establishment was very good. With several rain events, bacterial speck became fairly severe. Overall, flower set was reduced and vine growth suppressed. Maturity appears to be late for several varieties compared to others. Irrigation was entirely by furrow.



**Directions:** From Highway 113, take the CR 27 exit heading west 11 miles to CR 89. Turn south toward winters on CR 89 for 2 miles. Signs will be posted near the field.

## **TOMATO POWDERY MILDEW CONTROL**

Tomato powdery mildew activity has not been reported or seen to date for this year in our area.

When to begin spraying in a cost-effective approach is a difficult decision. None of the fungicides are eradicates. Beginning sprays when mildew is first detected in the area may be a compromise between very early preventive sprays and delaying until finding a full-blown episode in a specific field. Young plants appear less susceptible than more mature plants. My field observations are that plants approaching full flowering, as early as 70 days before harvest, is a susceptible beginning stage. While infection favors milder temperature conditions, high temperatures cause the rapid desiccation of leaves.

A research effort continues as a California Tomato Research Institute funded project under the lead of UC San Joaquin County Farm Advisor Brenna Aegerter. Two local tests are underway this year to evaluate application timing and materials, especially sulfur, including a sprayable formulation.

Fungicides: Timing of fungicides as a preventive appears important. Under high disease pressure, applications might not be effectively stretched to 14-day intervals. Dusting sulfur is a wise, initial early choice because of additional benefit from russet mite control. As we enter mid August and September, the added value of materials like Quadris, Quadris Top or Cabrio for blackmold fruit rot control is attractive. Rotating chemistry for mildew resistance considerations remains prudent. Quadris, Cabrio and Flint share similar modes of action. Difenoconazole (Inspire) in Quadris Top has the same mode of action as Rally.

Submitted by,

Gene Miyao  
Farm Advisor, Yolo, Solano & Sacramento counties

---

To simplify information, when trade names of products have been used, no endorsement of named products is intended, nor criticism implied of similar products, which are not mentioned.

The University of California, in accordance with applicable Federal and State law and University policy, does not discriminate on the basis of race, color, national origin, religion, sex, disability, age, medical condition (cancer-related), ancestry, marital status, citizenship, sexual orientation, or status as a Vietnam-era veteran or special disabled veteran. The University also prohibits sexual harassment.

Inquiries regarding the University's nondiscrimination policies may be directed to the Affirmative Action Director, University of California, Agriculture and Natural Resources, 300 Lakeside Drive, 6th Floor, Oakland, CA 94612-3560. (510) 987-0096.

---