



TOMATO INFO

Field Notes
Field Meeting on Varieties
Tomato Powdery Mildew

FIELD NOTES

Tomato spotted wilt virus (TSWV) is now widespread and common in our area. There are more fields where damage is severe and well above 5%. On a regional basis, a wholesale spray program to control thrips, the vectoring insect, does not appear warranted, but remains debatable. For some growers, the need to reduce losses to TSWV may include use of resistant varieties or early spray programs once disease is detected. For the vast majority, TSWV may well be present, but without the economic impact level that requires an aggressive treatment program. If one is needed, early intervention will be more productive. There isn't a predictive model nor is there a timely alert network where thrips are monitored and tested for presence of TSWV.

Locally, thrips often remain at moderate to high levels from late spring to early fall. In future years, growers experiencing repeated historical damage levels especially above 5% might include a spray program when plants are young, thrip activity is high and spotted wilt is present. Can perimeter spraying of fields be economically effective?

Edges of the field often have the highest incidence of spotted wilt, indicating the source of the virus likely is migrating from the outside. Within field spread from those 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. Unfortunately, past incidence of TSWV isn't always an accurate predictor of future disease levels.

Tomato spotted wilt control is not a simple program beyond using resistance varieties. And there is a concern of the resistance being overrun.

Other observations: Potato aphid appears to be on the rise. This aphid can survive the high temperatures of summer. While there isn't an issue with vectoring diseases, a high population on leaves can cause plants to wilt and lose vigor. Russet mites are showing up as expected in some fields. As an alert, I've found tomato powdery mildew abundantly sporulating in a field near the Sacramento International Airport. We've seen very low levels for a few years in most fields. Sulfur dust has been a very effective material from research studies led by UC Farm Advisor Brenna Aegerter with support from the California Tomato Research Institute. Under high disease pressure, sulfur dust needs to be repeated perhaps at less than 2-week intervals.

Good news. Bacterial speck incidence has been very low this year.

Not news to locals. An increasing number of buried drip irrigation systems are being installed for tomato production. Lots of interest in 80" centered beds coupled with a

single, buried drip irrigation tape per bed. In a comparison of bed width from UC field tests near Five Points, the first 2 years of the study were positive for wide beds, but not favorable in 2011. That experiment station study by UC Farm Advisors Tom Turini and Scott Stoddard is continuing with support from CTRI.

FIELD MEETING ANNOUNCEMENT

Early Maturity Tomato Variety Evaluation Trial
10:30 am to noon, **Thursday, 26 July 2012**
Northern Winters area
~1.5 miles south of CR 31 x east of County Road 89
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. Vine growth on the early trial is limited. Irrigation was entirely by furrow.

Included are two varieties with spotted wilt resistance.



Directions: Northern Winters area

From Highway 113,
take the CR 31 exit heading west 11 miles to CR 89.
Turn south toward Winters on County Road 89 for 1.5 miles.
Signs will be posted near the field. The field trial is east of CR 89 along a dirt road.

FUSARIUM WILT

Fusarium wilt, race 3 of tomato, is continuing to spread in our region. While the rate of spread is generally slow from field to field and often even within fields, this soil-borne pathogen persists over several years. In clean fields, taking steps to prevent contaminated soil and especially infected plant tissue from being introduced is wise.

I am also seeing a few fields with root knot nematode damage to nematode resistant varieties. In those areas within the field, the incidence of Fusarium wilt is also high. Research indicates that nematode feeding breaks down the Fusarium resistance. This is double trouble in those fields. Growers should spread of soil and debris from those special fields into clean fields.

Submitted by,

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