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TOMATO INF

Field Notes
Field Meeting on Varieties
Thurs Sept 6

FIELD NOTES

Tomato diseases are simply brutal in our area this year.

Alarmingly, vine collapse is present in a number of local tomato fields. High, sustained temperatures have created higher plant stress. I'm especially concerned with the severe root rot seen in several drip-irrigated fields. The common thought is that drip irrigation is a precisely metered, low volume, highly controlled system that virtually insulates against root rot development associated with saturated soil moisture conditions. I suspect that poorly drained soils remain prone to root rot conditions if water logged. While fungicidal treatments in some cases might be helpful, it is advisable to adjust the irrigation schedule to match crop evapotranspiration needs and to irrigate more frequently. Irrigation schedules that mimic furrow irrigation's inherently wide swings in wetting and drying of the soil may predispose the plant to Phytophthora root rot. I believe the message is: match irrigation schedule to crop ET.

Tomato spotted wilt virus (TSWV) is reducing vine health and damaging fruit in a number of fields. The incidence of TSWV infection was likely higher than our early assessments. In general, varieties with spotted wilt resistance in the presence of even moderate spotted wilt virus pressure are comparatively healthier.

Powdery mildew incidence is high in some local tomato fields and is very active. Sulfur dust has been the most effective material for preventive control. Other materials offered control as well. When disease pressure was high and sustained, weekly applications were required; and application interval should not exceed 2 weeks. Treatments might end about 3 weeks before harvest. The collective experience from a team of UC Farm Advisors in the Central Valley under the lead of Brenna Aegerter in San Joaquin County demonstrated that under high disease pressure, yields suffered and sunburn damage from defoliation increased. Under somewhat moderate disease pressure, while yield losses might not be severe, if at all, soluble solids levels were reduced. For harvests scheduled for late September and into October, the need to maintain canopy is reduced as we'd expect temperatures to be lower and of less duration with our shorter days. And while sulfur dust may be one of the best mildew control materials and has dual duty with russet mite control, as we get later into the season, the dual control of materials like Quadris on blackmold fruit rot as well as on mildew should be considered.

Fusarium wilt continues to spread. The need for more Fusarium wilt race 3 resistant varieties is increasingly important for our area.

Another Fusarium pathogen, Fusarium crown and root rot (*Fusarium oxysporum* f.sp. *radicis lycopersici*) has become routinely found. This is especially noticeable during fruit sizing and ripening, causing vine collapse. Infections are near or below ground level with prominent, dark lesions. I often find the disease in tomato fields with higher surface soil moisture, but not always. Unfortunately, the pathogen persists in the soil. Other solanaceous crops, cucurbits and some legumes can serve as hosts.

The California Tomato Research Institute is funding several projects on disease management.

FIELD MEETING ANNOUNCEMENT

Mid Maturity Tomato Variety Evaluation Trial
11:00am to noon, **Thursday**, **6 September 2012**
Western Davis area
County Road 95 X CR 31 (1/2 mile west)
Light lunch will be available for the first 25 attendees.

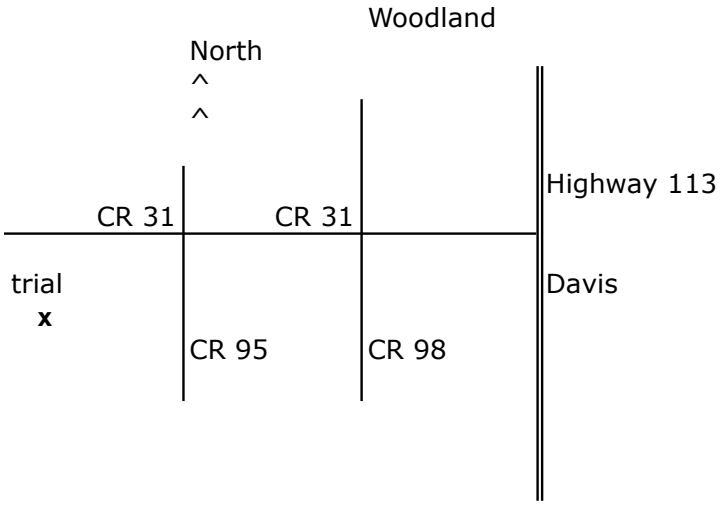
Sixteen replicated and 15 observational, mid-maturity processing tomato varieties were transplanted May 9 in a commercial field planted to Nun 6404. Cooperators are Steve and Sam Meek and John Pon of J.H. Meek and Sons. Stand establishment was very good. Irrigation was with a 1st-year, buried drip system. Growth was vigorous. Verticillium wilt and some Tomato spotted wilt virus are having an impact.

Directions: From Highway 113, take the County Road 31 exit heading west on CR 31 for ~ 5 miles to CR 95.

Continue ½ mile westward. Turn south along dirt road into field.

The trial is toward the middle of the field.

Signs will be posted near entrance to the field on CR 31.



Submitted by,

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