

**VARIETY MEETING
DISEASE SAMPLE DISPLAY
LOCAL FIELD NOTES**

EARLY MATURITY VARIETY TRIAL

Tomato Variety Trial Field Meeting Notice

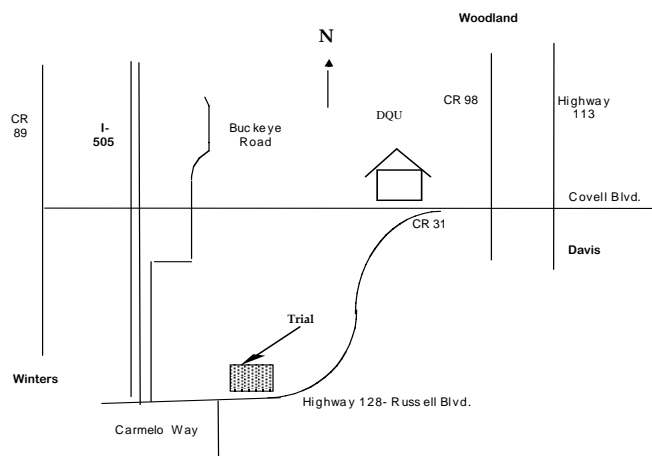
Early Maturity Variety Evaluation Trial
with a disease specimen sample display
10:30am to noon, Thursday, 28 July 2005
Light lunch will be available for the first 25 attendees.

Ten replicated, early maturing processing tomato varieties were direct seeded on twin rows per bed on February 9 in a commercial field of Heinz 9491. Cooperators are Tony Turkovich and Martin Medina of Button and Turkovich Ranches near Winters. Stands are thin in some areas. Plant growth is fair, although bacterial speck was a problem. Harvest is anticipated toward by early August.

Varieties that were planted in the test are: 3 standards APT 410, H 9280, and HyPeel 45, and include HMX 2853, H 5003, BOS 66508, U 250, U 446, PS 740 and HA 3523.

Included in the field day will be a plant disease sample display of Fusarium wilt, Verticillium wilt, and Fusarium foot rot. More minor will be a Southern blight (*Sclerotium rolfsii*) sample, which has limited concern in our area.

I have not seen tomato spotted wilt as a major local virus. Reports from some concentrated hot spots in the Westside of Fresno have raised awareness of this disease spread by thrips.



Directions: From Davis/Woodland, head west on County Road 31/Covell Blvd. Continue west beyond DQU, but make the gradual 'S' turn heading SW. The road becomes Russell Blvd/State Highway 128 heading toward Winters. Our field is about ½ mile beyond the 'S' turn near Carmelo Way. Conversely, the field is approximately 2 miles east of Interstate 505 on Russell Blvd. Signs will be posted.

LOCAL FIELD OBSERVATIONS

What is normal expected weather for our area? Most locals would predict a chance of some rain in May and some very high temperatures in July and August. So while some could argue that we are having normal weather patterns, most growers would hesitate at any description that called our 2005 year-to-date normal for the tomato crop.

Crop loss due to bacterial speck in our area will be costly. Many of the old, severely diseased leaves have withered away. Pathologist Mike Davis and I are monitoring two fields for disease progression of the speck. In both fields, the disease escalated in May with repeated late rains. In one field, speck stunted plants, while in another field (with a different variety) the plants remained vigorous. While we plan on harvesting the trials to measure the impact of disease severity on yield outcome, what have we observed to date? The pattern of disease progression and severity is varied among plants within short distances. We know there is a delay in plant infection and symptom development. The delay causes a decision-making problem for growers since our chemical treatments are only preventive. Without a bactericide tool that eradicates, spraying after the rain event or after the disease has spread is an ineffectively late, knee-jerk reaction. THIS year might be the exception. With multiple late rains coupled with cool temperature conditions, the post spraying after the rain can be useful, since the preventive spray may reduce disease spread from a subsequent rainy event. SO, in your post-season assessments, do not be lulled into thinking post treatment with a preventive material is the correct strategy for the future. NOTE: scabs from speck infections on fruit are not graded as a fruit rot by PTAB inspectors.

Late blight was still found in mid July. It appears the impact from the late blight was minor in most fields. With large vines and increased frequency of irrigations in the extended high-temperature period, a microclimate could favor survival of the fungus with some minor spread within some fields. Be watchful, but I suspect the conditions are microclimate driven and thus limit extensive spread.

Verticillium wilt is prevalent. With the onset of extended days of high temperatures above 100°F, plant stress is likely elevating the impact of this vascular wilt on our infected plants.

Russet mite is a common seasonal pest beginning in late June. Mites are more prevalent in many fields I've visited this year. UC Entomologist Frank Zalom's work indicates that mite damage is generally limited to plant growth stage when green fruit is at least an inch in diameter, but not much beyond when 30% of the fruit is ripe. Exceptions exist, so remain watchful.

LOCAL FIELD RESEARCH

With California Tomato Research Institute funding, Plant Pathologist Mike Davis and I are exploring causes of pre-harvest vine decline in our area. The treatments are concentrating on deep-shanked metham applications and multiple applications of fungicides as a partial remedy. We suspect the cause is associated with a complex of factors, thus not a simple solution project, but one that will be valuable. Our early growth stage fungicidal program should eliminate some suspects.

Submitted by,

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