Tomato Variety Trial Field Meeting Notice

Mid Maturity Variety Evaluation Trial
¼ mile North of NE intersection of CR 31 x 96
10:30am to noon, Thursday, 25 Aug 2005
Light lunch will be available for the first 25 attendees.

Major differences in canopy cover can be seen amongst varieties in our trial this year. Sixteen replicated and 15 observational, mid-maturity processing tomato varieties were transplanted on a single row per bed on May 6 in a commercial field of PS 849. Cooperators are Steve Meek and John Pon of J.H. Meek and Sons. Stand establishment and early plant growth were excellent. Bacterial speck was a moderate problem post layby. Verticillium wilt appears to be a major problem in our trial area. Harvest is planned for early September.

Included in the planting is a couple of Fusarium wilt, race 3 resistant varieties. We also are comparing double plants per plug vs singles with variety AB 2 and Halley.

**Directions:**
Our field is west of Davis. From Davis/Woodland, head west on County Road 31/Covell Blvd. Turn north at CR 96. The field is about ¼ mile north of CR 31. Signs will be posted.

**Local Field Observations**
Most of the recent visits to problem fields have been disease-related. Among the most common problems have been Verticillium wilt, bacterial speck, root rots and also persistent russet mite insect activity.

The increase in root rot activity might be associated with our extended high temperature period. Research by UCD Plant Pathologist John Duniway demonstrated that tomatoes are more susceptible to *Phytophthora* root rot when first subjected to moisture stress prior to an irrigation. The notion of predisposing plants to *Phytophthora* is well known to safflower growers who avoid delaying irrigation when supplemental irrigation is needed. In our case, the high temperatures increase plant stress and accelerate soil moisture depletion by the crop. Checking soil moisture status is essential.

As a reminder, UC Veg Crops Specialist Tim Hartz demonstrated that an evaluation of the brix level of the earliest maturing fruit could provide a relative gauge of how to manipulate late irrigations to improve soluble solids while balancing fruit tonnage yield. Select very pink fruit as early as a gallon-volume batch can be collected. As
some of the fruit can be collected about 5 weeks before harvest, this early indicator
can determine if further irrigations should target boosting fruit yields or if irrigation
should be decreased to elevate fruit sugars. A PTAB inspection station or perhaps
your canner can help determine the Brix sugar level.

Also, keep an eye on russet mites as a follow-up sulfur application may be needed
in some late-harvest fields.

Lastly, those growers who plan on following 2005 tomatoes with a 2006 tomato
planting should review the disease status within the current season. Especially
important this coming year would be to thoroughly incorporate bacterial speck-
infested crop residue into the soil to speed up breakdown of the pathogen in the
tomato debris. In a heavily speck-infested field, reducing the residue remaining on
the soil surface may be a wise IPM management strategy. Delaying planting to
avoid the traditional early rainy season is helpful. Rotating out of tomatoes for a
season might be more effective.

Submitted by,

Gene Miyao
Farm Advisor, Yolo, Solano & Sacramento counties

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