



TOMATO INFO

PEST ACTIVITY IN LOCAL FIELDS PEST MANAGEMENT MEETING MID MATURITY VARIETY TRIALS

PEST MANAGEMENT NOTES IN LOCAL FIELDS

Fusarium wilt, presumably race 3, is prevalent in a number of fields. Recording an estimate of level of infestation and general location within the field will help guide your management decisions in future years. For example, your note might be: "5 diseased plants per 100' of row in northern 1/4 of field #8, 30 Aug 2003."

While it may appear premature, pay attention to field and cannery performance of race 3 resistant varieties during our current season. I suspect the value of these varieties will become increasingly important for our area. Based on the slow spread of race 2 outside of the Sutter Basin, it's difficult to predict the intensity of 'race 3' for our local area. On the other hand, there are examples of sufficient economic loss to 'race 3' that show paying attention to this disease is prudent.

One reason for concern is the pathogen, *Fusarium oxysporum*, survives well from season to season. Thus crop rotation out of tomatoes for several years is not sufficient to rid the problem.

Considerable interest has been generated on the value of cover cropping with mustards during the off-season as a biocontrol method. While reports are promising from the Northwestern US and in some coastal vegetable production areas, many gaps exist in how to accomplish this successfully in our area for canning tomatoes.

As we move into a harvest mode, clean up of equipment from infested fields may be important in reducing the spread of this soil-borne pathogen. Implements such as ditch openers, closers, bucket scrapers and grader-style blades may transport contaminated soil into clean fields. It may be wise to practice that 'ounce of prevention'.

And what else? Our extended stretch of over 100°F was simply brutal. Loss of plant canopy and vigor resulted in more sun burnt fruit. Depending on level and duration of dews and other wet weather conditions, the potential for blackmold infections increases. If harvest schedules become delayed, the susceptibility to blackmold rot increases. A single application of a fungicide as a preventive is helpful. Timing the spray 3 to 6 weeks prior to projected harvest date has been effective in reducing the incidence of mold by 50% in our field tests. Later in the season, spraying only after a substantial rain event has been worthless when fruit is nearly ready to harvest. An early preventive fungicide program appears to be the key.

Root rots are also prevalent. Research by UCD pathologists demonstrated that high soil moisture stress predisposes plants to *Phytophthora* root rot compared to irrigation regimes maintaining a higher soil moisture level. Of course, avoid irrigation practices that saturate soils for extended periods as *Phytophthora* thrives under these conditions.

Fruit rots with irrigation: With the high temperatures, water needs of the plants are increased. As fruit matures, the decision to cut-off irrigation during high temperature periods is a difficult one, especially if the soil moisture profile is depleted. The need to keep plants healthy by furrow or sprinkler irrigating closer to harvest is tricky. Ripe fruit in contact with the wet soil is susceptible to many different rots. Keeping the bed surface dry is challenging even with deep furrows, well vine-trained plants and short irrigation sets.

TOMATO PEST MANAGEMENT FIELD MEETING

**Pest Management Field Meeting
9 to 10 am
Tuesday, August 19, 2003
NW of Woodland, CR 19A x Highway 16 (CR 98)**

We are preparing displays and presentations on Fusarium wilt, Fusarium foot rot, dodder and field bindweed management at a local field meeting. 1 hour of PCA credit is being requested.

The field location is within 2 miles NW of Woodland at NW intersection of County Road 19A x continuation of CR 98 (State Highway 16). Turn onto CR 19A heading west for 1/4 mile to west side of tomato field. Field signs will be posted to help direct attendees. UC Weed Ecologist Tom Lanini will provide a brief update on his field research on dodder management. Discussion of other pests will follow.

TOMATO VARIETY TRIAL FIELD MEETING NOTICE

A duplicate set of 18 replicated and 19 observational mid maturity processing tomato varieties was planted in two commercial tomato fields in the Woodland and the Davis area. One set was direct seeded while the other was transplanted. Both trials will be harvested before the end of August. Two field meetings are scheduled back-to-back on the same morning. A light lunch will be available to the first 40 attendees at our second field trial site north of Davis.

**Mid Maturity Variety Evaluation Trial
Grower: Joe Muller and Sons
10 to 11 am
Tuesday, August 19, 2003
NW of Woodland, CR 19A x Highway 16 (CR 98).**

Our direct seeded trial was planted on March 28 into good moisture with grower-cooperators Frank, Tom and Louie Muller of Joe Muller and Sons. The remainder of the field is planted to Halley on single seed lines per bed. Emergence was good. Plant growth was very good through out the season resulting in large vines. Some varieties have considerable regrowth occurring. Fruit size is large.

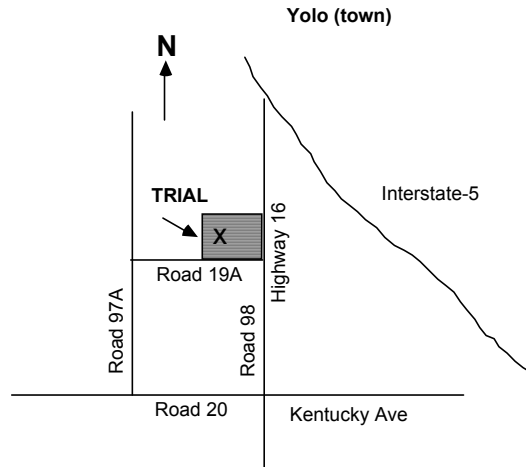
The current crop follows a 2002 tomato planting. Vapam was applied as a preplant herbicide. Volunteer escapes in the variety test are minimal. A major future concern in this field site is a fusarium wilt infestation that has overcome the race 2 resistant varieties. Dodder has also been a problem in this field. Despite these obstacles, yields are exceptionally high in this field test. Fusarium wilt race 3 resistant variety CXD 221 is holding up well to our moderate infestation.

Directions: Field trial is ~0.25 mile west of State Highway 16, on north side of CR 19A near the northwestern outskirts of Woodland.

From CR 98, continue a couple of miles north of Woodland to CR 19A. Head west on CR 19A.

From Interstate 5 (north or south bound), take the Highway 16 exit, head south towards Woodland. County Road 19A is ~1 mile south of I-5.

Signs will be posted near the trial site.



Mid Maturity Variety Evaluation Trial
Grower: Jack Meek and Sons
11:00 AM to noon
Tuesday, August 19, 2003
North Davis area, SE intersection of CR 99 x 29
A light lunch will be available to the first 40 attendees

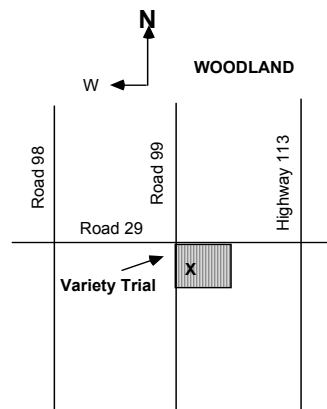
Our second mid maturity variety trial was transplanted on April 23 in a field with cooperators Steve Meek and John Pon of Jack Meek and Sons. Plant establishment was rapid and vine growth continued exceptionally well. Vines cover the beds fully on single plant lines per bed. Yields are impressively high.

Additionally, within the trial, twin plants per plug are compared to single plants using AB 2 and AB 5. Transplants were raised and supplied by Westside Transplants through Timothy, Stewart and Lekos' support.

Directions: Field trial is north of Davis at the SE intersection of CR 99 x 29.

From Highway 113 north of Davis, take the CR 29 exit, heading west to CR 99.

The field is on the south side of a 'high-crowned center-line' irrigation ditch.



Submitted by,

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Farm Advisor, Yolo, Solano & Sacramento counties

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