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Vegetable Crops Facts

UCCE

Merced & Madera Counties Vol. 2, July 2018

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- ✓ **Fresh market grafted trial field day at Farmington**
- ✓ **Processing tomato meeting at WSREC**
- ✓ Season pest update

Special Note:

Merced rainfall:
2012 - 13: 8.3”
2013 - 14: 5.2”
2014 - 15: 7.2”
2015 - 16: 16.7”
2016 - 17: 18.2”
2017 - 18: 6.72”

Scott Stoddard
Farm Advisor

UC Cooperative Extension
Grafted Fresh Market Tomato Field Day

Farmington, CA (San Joaquin County, east of Stockton)

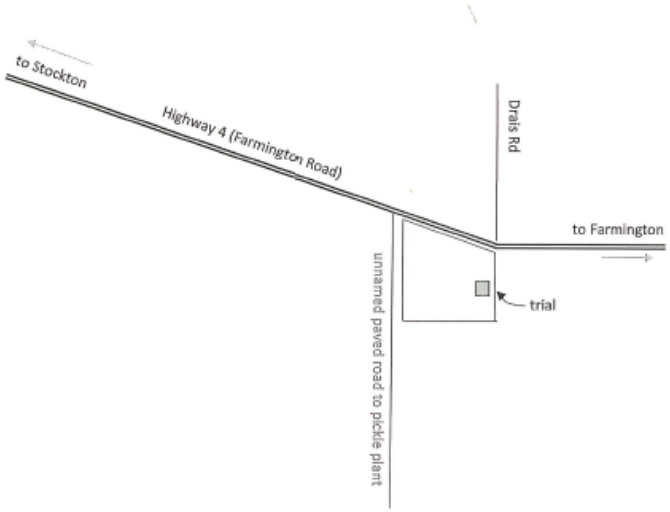
Friday, July 27, 2018
9:00 am to noon, come and go as you wish

This event is free and open to the public.
Boxed lunches: please RSVP to Brenna Aegerter, UCCE San Joaquin County, at bjaegerter@ucanr.edu before July 24

Notes

This field trial is hosted by Tony Chiappe and Mike Carr with Pacific Triple E and will be open for viewing during an informal field day. The trial replicated plots for the following varieties: Quali-T 27, Quali-T 47, QualiT-99, and HM1794 grafted onto Maxifort, DR0138TX, Arnold, Estamino, and Guardior rootstocks. The field is furrow irrigated and will be at full maturity. A second trial located in Le Grand under drip irrigation.

Look for field day signs and shade canopies. Refreshments available.



Turn in to the field on the east edge (if you are coming from the west, this turn will be on your right before you reach Drais Rd.)

July, 2018

UC Cooperative Extension
West Side Crops Pest Management Summer Update Meeting

Wednesday, Aug 15, 2018
9:00 am - 11:30 am

UC West Side Research and Extension Center
17353 W. Oakland Ave., Five Points, CA 93624

PROGRAM

8:00 am. Registration, CE forms

9:00 Tom Turini, Farm Advisor, UCCE Fresno County. *Overview of research on insect pests in melons, garlic, and tomatoes.*

9:20 Lynn Sosnoskie, Farm Advisor, UCCE Merced and Madera Counties. *Field bindweed biology and ecology.*

9:40 Scott Stoddard, Farm Advisor, UCCE Merced and Madera Counties. *Field bindweed management in annual systems.*

10:00 Kurt Hembree, UCCE Weed Management Advisor, Fresno County. *Bindweed management in perennial crops.*

10:20 Break

10:40 Cassandra Swett, CE Specialist in Vegetable and Field Crop Pathology. *Recent research on Fusarium Wilt of tomato.*

11:00 Bob Gilbertson, Professor Plant Pathology, UC Davis. *Resistance breaking strains of TSWV and Beet curly top virus research*

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11:30 Adjourn

Continuing education units (CEUs) requested from CDPR and CCA.

For more information call: Tom Turini (559) 375-3147

Map and Directions to the Center

Via I-5: South to Coalinga exit. Turn left onto SR 144, proceed for about 5 miles. Make a sharp right turn (east) on Oakland Avenue; go about 6 miles.

Via Highway 99: South to Madera. Take 145 south to 5 Points, go south 269 (Lassen Avenue) 6 miles to Oakland Avenue. Via I-5: north to SR 269 (Huron exit). North on 269 about 20 miles to Oakland Avenue.

F3 IMPACTING FRESH MARKET TOMATOES

Fusarium wilt race 3 (F3) has been a problem in certain areas of Merced on processing tomatoes for several years now, but fresh market growers have for the most part been unaffected. This is mainly due to timing: a typical fresh market tomato is harvested about 83 days after transplanting. F3 often does not even show up in the crop until after 60 days, and as a result there is not enough time for it to develop to economically damaging levels.

In 2018, however, I have observed several fresh market fields with early and severe F3 resulting in significant vine collapse and fruit sunburn at harvest. Yellow flagging and vascular discoloration at the stem, sure signs of a Fusarium wilt infection, can be seen as soon as 40 days after transplanting in fields with a history of this disease. Ofter this occurs in fields that were previously planted to processing tomatoes. Unlike processing tomatoes, however, there is no F3 resistance in any of the commercial varieties typically planted in California: Bobcat, Q-21, Q-27, Q-47, Q-99, HM1794, Trinity — all are Fusarium Wilt race 2 resistant, but not F3.

Monsanto Seeds sells a variety in Florida, "Dixie Red", with F3 resistance. It is a semi-determinant variety similar to the others grown in California, but has not been extensively tested here.

Fusarium is a class of soil-borne fungi that can become pathogenic on a whole host of crops, but only by certain species, and they do not typically cross-infect. This means that the Fuasarium species that causes F3 in tomatoes, *Fusarium oxysporum f. sp. lycopersici* Race 3, does not infect cotton or melons. And the Fusarium that causes wilt in cotton, *Fusarium oxysporum f. sp. vasinfectum*, doesn't infect tomatoes.

While crop rotation will help manage this disease, it is no cure. Fusarium can survive as a saprophyte on weeds and non-host crops. Once a field is infected with F3, the pathogen will survive in the soil for a very long time and rapidly reinfect tomato plants.

Fresh market growers should avoid fields with a known history of F3 until resistant cultivars are available. In fields where some F3 may be expected, management methods that promote earliness (furrow irrigation, early transplant dates) should help keep the disease under control. Fusarium is a warm weather disease, and will be worse in the late summer months and in fields with root knot nematodes.

Fresh market tomatoes with advanced F3 infection at harvest displaying typical yellow flagging. Fruit had significant sunburn at this location by harvest.

Virus Update

I have observed only light to moderate TSWV in tomatoes and peppers this year, however, about half of this has been the resistant strain of TSWV. Alfalfa mosaic virus, or AMV, has been more of a problem this year, but also at low levels. Curly top thus far has been very low. Thrips are best controlled with a foliar spray program (not systemic insecticides through the drip). Radiant, Lannate, and dimethoate should be rotated on a 10 - 14 day spray schedule if thrips are present and TSWV infection is greater than 3%.

OTHER PESTS

Very low worm pressure this year so far, perhaps a little more WYSA than we've seen in a number of years. Remember that the materials we use for thrips are also very effective on Lepidoptera pests like beet armyworm, fruitworm, loopers, and western yellowstripe armyworm.

Scott Stoddard
Farm Advisor