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Special Note:

CA Processing Tomato Production (tons):
2014: 14.01 million
2015: 14.36 million
2016: 12.64 million
2017: 10.46 million
2018: 12.28 million

Merced rainfall:
2012 - 13: 8.3"
2013 - 14: 5.2"
2014 - 15: 7.2"
2015 - 16: 16.7"
2016 - 17: 18.2"
2017 - 18: 6.7"

Scott Stoddard
Farm Advisor

UC Cooperative Extension

Northern San Joaquin Valley Processing Tomato Meeting

held in conjunction with

The California Tomato Growers Association (CTGA) Annual Meeting

Thursday, January 31, 2019

8:00 - 11:00 am

Modesto Double Tree Hotel
1150 9th St, Modesto, CA, 95354

PROGRAM

7:30 am. Registration desk open

8:00 **Welcome.** Brenna Aegerter, Farm Advisor, San Joaquin County.

8:05 **Broomrape - a weed of industry concern.** Gene Miyao, retired, Farm Advisor, UCCE Yolo, Solano & Sacramento counties.

8:25 **Grafted plants for processing tomato production.** Brenna Aegerter, Farm Advisor, San Joaquin County.

8:45 **Update on Fusarium and powdery mildew management with fungicides.** Scott Stoddard, Farm Advisor, Merced & Madera counties.

9:05 **Recent research on Tomato spotted wilt virus in the Central San Joaquin Valley.** Tom Turini, Farm Advisor, UCCE Fresno County.

9:25 **Break.** Refreshments in exhibit room provided by the California Tomato Growers Association.

9:45 **Research on the bacterial canker pathogen of tomatoes.** Shree Thapa, Postdoctoral scholar, Plant Pathology, UC Davis.

10:05 **Management of Fusarium diseases in tomato.** Cassandra Swett, CE Plant Pathology Specialist, UC Davis.

10:30 **New vegetable crops farm advisor in northern SJV.** Zheng Wang, Farm Advisor, Stanislaus, San Joaquin and Merced counties.

10:40 **Decision support tools for processing tomato irrigation and fertilization.**

January, 2019

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Daniel Geisseler, CE Nutrient Management Specialist, UC Davis.

11:00 Adjourn, visit exhibits

12:00 **CTGA lunch and program**

The California Tomato Growers Association (CTGA) Annual Meeting:
for information and registration, see www.ctga.org. Note that the UCCE educational meeting is free and open to the public, no registration is required.

Continuing Education Units (CEUs) requested

This Cooperative Extension sponsored meeting is free and open to the public. The meeting room and refreshments are generously provided by the California Tomato Growers Association, Inc.

Pre-registration is required to attend the California Tomato Growers Association Annual Meeting.

Please contact CTGA at (916) 925-0225 or ctga@sbcglobal.net

Other Meetings of Interest:

- Feb 7, 2019 (Thurs), UCCE Classroom, 2:00 pm -4:00 pm. Metam stewardship class. Required for all growers/applicators who will use metam (metam sodium and metam potassium) this year. Contact Merced County Agriculture Commissioner for more information at 209-385-7431.
- Feb 5 - 6, 2019 (Tues-Weds). CA Plant and Soil Conference and CA CCA Annual Meeting. Double Tree Hotel and Fresno Convention Center. Registration required, \$195 includes lunch both days. <http://calasa.ucdavis.edu>.
- Feb 12, 2019 (Tuesday), 8:00 - 4:30 pm. Organic Soil Fertility for Vegetables and Strawberries Short Course, Agriculture Center Conference Room, 1432 Abbott St, Salinas. Lunch provided. \$90.00 Class size is limited, so early enrollment is encouraged. For more details and to register, see <http://cemonterey.ucanr.edu> or call (831) 759-7353.

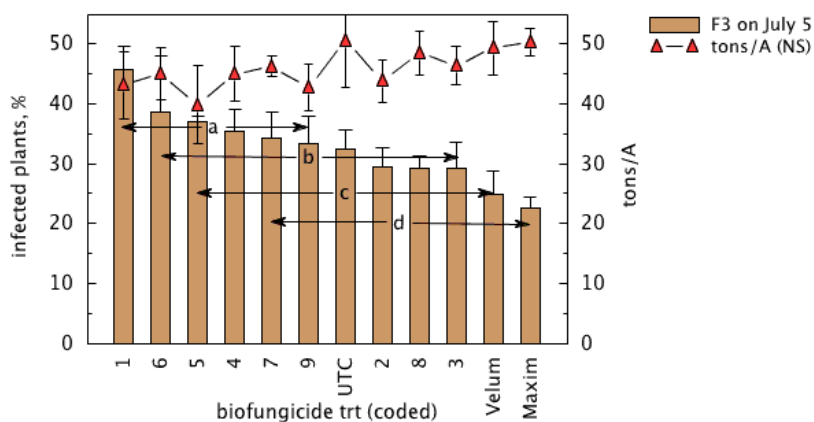


General Notes:

For processing tomatoes, the 2018 production year was fairly good in Merced County. Most precipitation came in the spring, in March and April, but the amount of rain did not cause any significant delays in ground prep or planting. The last frost occurred around March 19, before most transplanting had occurred. The summer was slightly colder than 2017 as well, which also helped production. In 2017, the Merced area had 27 days over 100° F, about twice the average of the previous 10 years. In 2018 there was a total of 15 days over 100° F, with the first 100° F day on July 6. However, the month of July was still very hot, with 25 days at 99 or above. Fresno set a record in 2018 with >30 consecutive days over 100 F.

Merced county officially made the “million ton club” this year, as one of 4 California counties with processing tomato production greater than 1,000,000 tons. Estimated production was 1.083 million tons from 23,500 contracted acres, which is 46.1 tons per acre on average. Soluble solids was 4.91, and color (Hue) was 21.4 using the new system. The other million-ton counties were Fresno (4.3 million), Kings (1.6 million), and Yolo (1.5 million). TSWV and curly tip were mild this season, as were insects and mites.

BioConsortia F3 Trial 2018
F3 infection in H2401



Fungicide drench trial to transplants in Merced in 2018 showed suppression of Fusarium wilt in the first 70 days with Maxim and Velum One fungicides. However, there were no significant differences in yields regardless of treatment.

2018 saw the introduction of new PTAB fruit quality measurements and processes. Color was reported using hue angle. Values typically range from 17 - 25 and are similar to the old PTAB LED color scores, in that lower values indicate redder fruit. Soluble solids were measured with an automated system. The new system may estimate fruit soluble solids slightly lower than the old method, however, further evaluation of 2018 data is needed to confirm.

Fusarium wilt race 3 (F3) continues to be a problem for tomato growers. This soil fungus has been spreading both in scope and severity for more than 10 years in Merced County. There are numerous F3 resistant cultivars now available that provide very good control of this disease. In 2016 trials in the Dos Palos area, N6428, SVS2493, N6429, HM58801, and H1310 all yielded > 60 tons per acre and significantly more than the susceptible control H8504. In 2017, both BP16 and N6428 yielded > 53 tons per acre in a severely infested field. In 2018 in the same field, N6428 was over 60 tons per acre.

I have conducted trials since 2016 evaluating the impact on fungicides and biofungicides applied at planting on the suppression of F3 in both resistant and susceptible varieties in a commercial field severely infested with F3. The fungicides were Vellum (fluopyram, Bayer Crop Science) and Maxim (fludioxonil, Syngenta Crop Protection). Both products were applied as a drench to transplants immediately before planting. In 2018, additional soil drenches were also made after 4 weeks after transplanting. In general, fungicides have shown only short-term suppression of this disease, 60 days or less, and impacts on yield have been mixed. 2017 there was a yield increase in the susceptible varieties with fungicides, but in 2018 there were no significant yield effects.

Resistant breaking strains of TSWV continue to increase in the Merced and Fresno production areas. For reasons that are still unclear, fresh market lines appear to be more susceptible to this new strain of the virus. While the number of infected processing tomato fields was small, several late season fresh market tomato and pepper fields were positively identified with the resistant strain. The resistant strain of the virus is just as likely to infect resistant as non-resistant varieties.

According to Dr. Robert Gilbertson from UC Davis Dept. of Plant Pathology, TSWV symptoms in more than 3% of plants in a resistant variety suggest infection by the resistant breaking strain. Best management for this disease is to control thrips early in the season, in April and May, to minimize the number of infected insects that can transmit the disease later in the season. Tom Turini, vegetable crops farm advisor in Fresno County, has reported foliar application of insecticides are more effective than injecting through the drip. More information about this new development in tomatoes will be discussed at the CTGA meeting January 31.



TSWV on resistant, late season fresh market tomatoes, 2018.

Scott Stoddard, Farm Advisor