

## UC Cooperative Extension – Merced County

# Vegetable Crops Facts

### Jan & Feb 2026 Events at a Glance

#### Jan 28-30, 2026

##### CWSS Annual Conference

2 ½ days of weed management  
and plenty of DPR CE units

For more information:

<https://cwss.org>

Sponsor: CWSS

Location: Santa Barbara

#### Feb 3-4, 2026

##### CA Plant and Soil Conference

2 days on nutrient  
management and CCA units

For more information:

<https://na.eventscloud.com/web-site/58588/cal-asa/>

Sponsor: ASA and UC ANR

Location: Visalia

#### Feb 11, 2026

##### UCCE NSJV Process Tomato Meeting

Time: 8:00 AM - 1:00 PM

Contact: Zheng Wang

[zwwang@ucdavis.edu](mailto:zwwang@ucdavis.edu)

Sponsor: UCCE and CTGA

Location: Lodi

## UCCE Northern San Joaquin Valley Processing Tomato Meeting

University of California Cooperative Extension in San Joaquin, Stanislaus,  
and Merced Counties

*In conjunction with*

### The California Tomato Growers Association Annual Meeting & Exhibit

Wednesday, February 11<sup>th</sup>, 2026, 8:00 – 11:30 am

Hutchins Street Square, 125 S Hutchins St., Lodi, CA 95240

### AGENDA

**8:00 am Registration opens and welcome** – Zheng Wang, UCCE Stanislaus County

**8:30 am Fusarium stem rot and decline (FRD) on tomato.** Brenna Aegerter, Vegetable Crops Farm Advisor, UCCE San Joaquin County.

**8:50 am Biocontrol of FRD with Trichoderma biofungicide.** Zheng Wang, Vegetable Crops Farm Advisor, UCCE Stanislaus County.

**9:10 am Expanding the toolkit: characterizing genetic resistance to FRD as part of an IPM toolkit.** Myles Collinson, PhD student, Dept. of Plant Pathology, UC Davis.

**9:30 am Exploring casual factor for the yield gap between “new” and “old” tomato fields.** Patricia Lazicki, Vegetable Crops Farm Advisor, UCCE Yolo County.

**9:50 am BREAK**

**10:10 am Does rimsulfuron herbicide for broomrape also reduce bindweed?** Scott Stoddard, Vegetable Crops Advisor, UCCE Merced County.

**10:30 am Research update on management of branch broomrape in CA-grown processing tomatoes.** Rohith Vulchi, Postdoctoral Researcher, Dept. of Plant Sciences, UC Davis.

## Feb 2026 Events at a Glance

**Feb 12, 2026**

### 60<sup>th</sup> Annual Sweetpotato Meeting

*Time:* 8:00 AM - 12:00 PM

*Contact:* Scott Stoddard  
[csstoddard@ucanr.edu](mailto:csstoddard@ucanr.edu)

*Sponsor:* UCCE Merced County

*Location:* Merced

**Feb 25, 2026**

### CA Pepper Commission Annual Meeting

*Time:* 10:00 am – 1:00 pm

*Contact:* Nathan Sanyo  
[nathan@tabcomp.com](mailto:nathan@tabcomp.com)

*For more information:*  
<https://calpeppers.com>

*Sponsor:* CA Pepper Commission

*Location:* UC Westside Research and Extension Center

**Mar 3 - 31, 2026**

### Spring 2026 CE for Pest Management Pros

*Time:* 8:00 AM - 12:00 PM on every Tuesday in March

*Contact:* Larry Burrow  
[laburrow@ucdavis.edu](mailto:laburrow@ucdavis.edu)

*Sponsor:* UCCE Merced County

*Location:* Merced

10:50 am Tools and practices to get prepared for the Irrigated Lands Programs and SGMA. Michael Cahn, Irrigation and Water Resource Advisor, UCCE Monterey County.

11:10 am Recent research on Beet Curly Top Virus and management. Tom Turini, Vegetable Crops Farm Advisor, UCCE Fresno County.

11:30 am Adjourn - visit vendors and lunch

**1:30 pm CTGA moderated meeting to discuss the CDFA Broomrape Program.**

## 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, which will be held after the extension meeting. Please contact CTGA at (916) 925-0225 or [info@ctga.org](mailto:info@ctga.org) if you plan to attend.

Meeting facility is handicapped accessible. Attendees may request meeting accommodation by contacting UCCE San Joaquin County at (209) 953-6100.





*Studies done at UC Davis and on commercial processing tomato fields show that chemigated rimsulfuron can provide suppression of the parasitic weed branched broomrape. Anecdotal observations from growers suggest rimsulfuron may also suppress other common weeds in tomato fields, especially field bindweed. The objective of these trials was to test this observation.*

## Evaluating chemigated rimsulfuron herbicide on field bindweed suppression in processing tomatoes

**Scott Stoddard, Dr. Brad Hanson, and Dr. Patricia Lazicki**

UC Cooperative Extension in Merced County, UC Davis, and Yolo County

Studies done at UC Davis and on commercial processing tomato fields have shown that chemigated rimsulfuron applied three times at 1.33 oz per acre per application (total 4 oz/A) can provide suppression of the parasitic weed branched broomrape. Anecdotal observations from commercial growers suggest that such treatments may also suppress other more common weeds in tomato fields, especially field bindweed. This was evaluated in 2025 at four trial locations in processing tomato fields to evaluate the impact of chemigated rimsulfuron (Matrix) herbicide through the subsurface drip irrigation system on suppressing field bindweed (*Convolvulus arvensis*). Three of these locations were in Yolo County (Yolo 1, Russell Ranch, and UCD Veg crops), and one location was in Merced County in a commercial field. At all locations, rimsulfuron treatments were applied approximately 20, 30, and 40 days after planting (DAT) at 1.33 oz/A (as Matrix SG) through the drip system during the middle of an irrigation set, for a total, for a total of 4 oz/A. The incidence of field bindweed varied from 10 to 42% depending on location, but there was no indication chemigated rimsulfuron reduced or suppressed growth. Drone images taken at harvest in Merced and Russell Ranch were very clear and showed greater bindweed pressure in the chemigated treatment areas, however, this is likely due to greater initial incidence, and not a result of rimsulfuron applications. Yields were reduced in the rimsulfuron treated areas in Merced due to high bindweed pressure in these fields, but were similar at Yolo 1. Lack of replication at 3 of 4 of the trial sites prevented a thorough statistical analysis of the results. Therefore, while the data did not support our hypothesis that rimsulfuron could suppress field bindweed, they also did not provide much evidence of the opposite. More work is planned in 2026.

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### METHODS

Trials began in May, 2025, at locations in Yolo and Merced Counties. Three of these locations were in Yolo County (fields 1 and 2 were in commercial fields, while field 3 was located at the UC Davis Veg Crops Research Farm), and one location was in Merced County in a commercial field about halfway between Dos Palos and Firebaugh, CA. Field sites



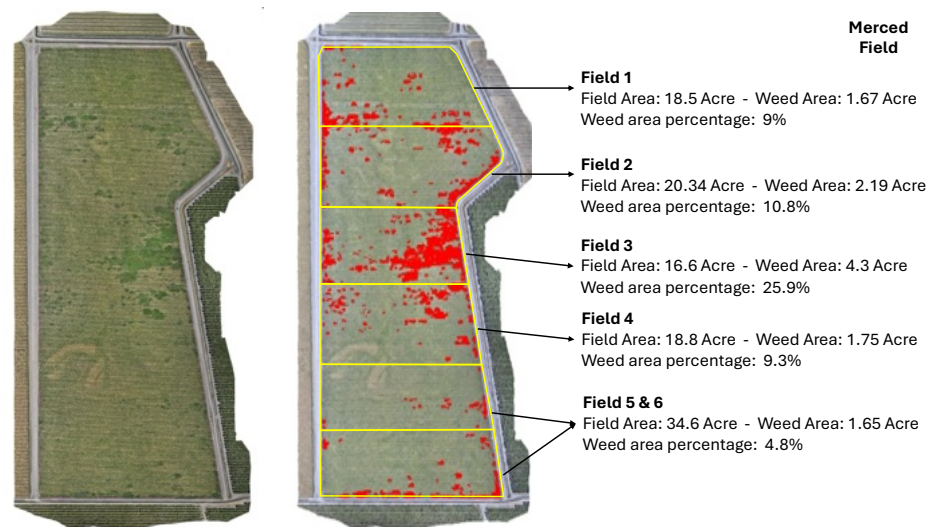
*...the findings suggest there was no field bindweed suppression from the chemigated rimsulfuron treatments. On a positive note, the yield data indicated this method of application did not negatively impact the tomato crop.*

were selected based on previous history of heavy bindweed pressure. Trial sites were large, ranging from 9 to 30 acres.

At all locations, rimsulfuron treatments began about 3 to 4 weeks after transplanting at 1.33 oz Matrix/A through the drip system during the middle of an irrigation set. Treatments application dates targeted 20, 30, and 40 days after transplanting, for a total of 4 oz/A. Bindweed evaluations were made by walking the fields on three dates after treating and by using high resolution drone imagery.

## RESULTS

At all locations, there was no visual reduction in bindweed pressure in the treatment field; in Merced County bindweed and other weeds were worse where rimsulfuron was chemigated, likely because the post application of Matrix was not done as in other irrigation blocks. Based on field transect data, bindweed incidence ranged from 12 to 70%, with an average of about 41% in July. Drone images worked well and clearly showed presence of bindweed ranging from 9 to 25%, with a non uniform distribution. Yields were reduced by 20 tons per acre in field 3 (irrigation block 3) where rimsulfuron was applied through the drip tape, however, this yield reduction was a result of high bindweed pressure in this irrigation block, especially on the eastern edge.



*Figure 1. Drone imagery of the Merced County site, taken Aug 15, 2025. The stitched photo on the left shows field bindweed as darker green. It has been colored red in the image on the right. Yellow lines delineate irrigation blocks – rimsulfuron was chemigated on fields 1 and 3.*



## Controlling in-row weeds with post plant applications of pre-emergent herbicides in tomatoes and melons

**Scott Stoddard,**

UC Cooperative Extension in Merced County

Finger weeders are a simple mechanical tool that are designed to remove small weeds in the plant row. They are fast, simple, and inexpensive, but efficacy is limited to removing weeds when they are at the “white thread” stage, typically 1 – 3 days after germination, and are ineffective on perennial weeds. Fingers weeders, however, offer the potential to incorporate preemergent herbicides back into the plant row, where they are often deficient because treated soil is displaced when the crop is transplanted. Common preemergent herbicides like Dual (metolachlor) and Treflan (trifluralin) need incorporation to work, but unless sprinklers are used, post plant applications of these herbicides are limited to the side of the crop row. Research in 2024 showed good crop safety and improved weed control when the finger weeder was used with pre-emergent herbicides in both melons and processing tomatoes. Weed pressure was reduced about 50% as compared to the finger weeder alone. These studies were repeated in 2025 in a commercial processing tomato field, at UC Merced’s new “Smart Farm” ag research facility, and at the UC West Side Research and Education Center near Five Points (WSREC).

### METHODS

In tomatoes, the herbicides evaluated were trifluralin (Treflan), pendimethalin (Prowl), metoachlor (Dual Magnum), rimsulfuron (Matrix), metribuzin (Sencor), EPTC (Eptam), and napropamide (Devrinol), applied at maximum use rates as a 40% band to the center of the beds. Treatments were applied three weeks after transplanting, then incorporated 1 – 2” with the finger weeder. At the commercial field location, a new Farm Wise robot cultivator was also used without herbicides. In melons, halosulfuron (Sandea), bensulide (Prefar), ethalfluralin (Curbit), metolachlor (Dual Magnum), pendimethalin (Prowl) and trifluralin (Treflan) were used with and without finger weeder incorporation, and applied as a directed band application similar as in the the tomato trials.

Weed ratings were made one and two weeks after treatment. At UC Merced and UC WSREC, the plots were hand weeded one week after treating and weeding times recorded.

*Weed pressure and weed control two weeks after treatment were less than in 2024, and ranged from 64% with the finger weeder alone, to 93% when combined with many of the pre-emergent herbicides. At UC Merced, hand weeding times were half of the untreated control where the finger weeder was used.*

*Crop damage and stand reduction is a legitimate concern with these technologies. My research has shown that new robotic cultivators and finger weeders are safe to use in tomatoes when properly set up and calibrated.*

**RESULTS**

In melons, overall weed control from any treatment combination was marginal in 2025. Under very high weed pressure including volunteer melons and annual morningglory, best overall weed control occurred with the Sandea + finger weeder treatment, which had about 61% weed control one week after treatment, and over 80% at harvest (plots were hand weeded twice). However, there was no significant difference between treatments in hand weeding time or cost.

In tomatoes, weed pressure was much lower and highly variable. At the commercial field location, the combination of the finger weeder plus the pre-emergent herbicides significantly improved weed control over the finger weeder alone or standard cultivation. Herbicides added about 50% more weed control, from 64% to 93% at two weeks after treatment, which was similar to the results from 2024. Best results were with rimsulfuron (4 oz/A), metribuzin, or trifluralin incorporated. In general the herbicide x cultivation interaction was not significant in these trials, which indicates that the benefits of the finger weeder applied equally across all herbicides.

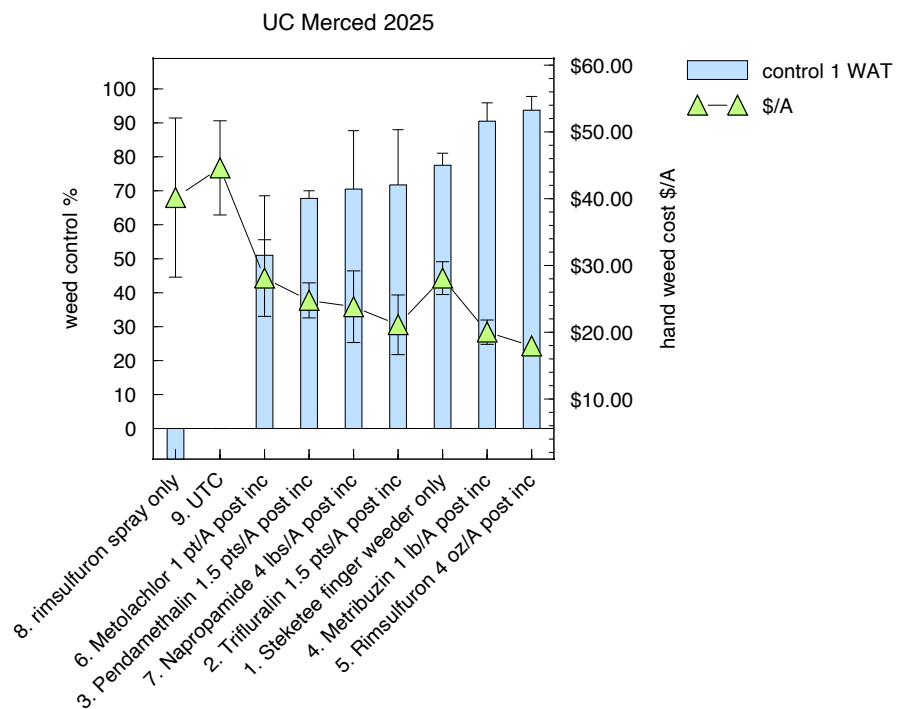


Figure 2. Weed control (blue bars) and hand weeding cost at one week after treatment (WAT) at the UC Merced trial location.



The Farm Wise robotic cultivator worked fine at the commercial field location and did not cause any significant stand reduction. Unfortunately, some of the cameras needed recalibration for this field, and overall weed control was lowest of all the treatments in this trial, at 59% at two weeks after using the machine. Pigweed and puncture vine were the dominant weeds at this location. This was statistically similar as the finger weeder, however, which had 64% weed control.

The finger weeder is a cultivator that enables cultivation and herbicide incorporation to occur in the plant row after transplanting or crop emergence. It is most effective on annual grasses and broadleaf

weeds when they are very small. Robotic cultivators can control weeds over a much greater size range, but are not designed to incorporate herbicides. Both work better in transplanted fields where there is clear size difference between the weeds and crop at the time of cultivation. Over the last two seasons in both melons and tomatoes, the finger weeder by itself reduced annual broadleaf weeds 30 – 50% as compared to doing nothing. When combined with pre-emergent herbicides, weed control improved, often another 50%.

The California Melon Research Board (CMRB) and the California Tomato Research Institute (CTRI) provided funding for these projects.



Processing Tomato Cultivation x Herbicide Trial  
Merced County 2025

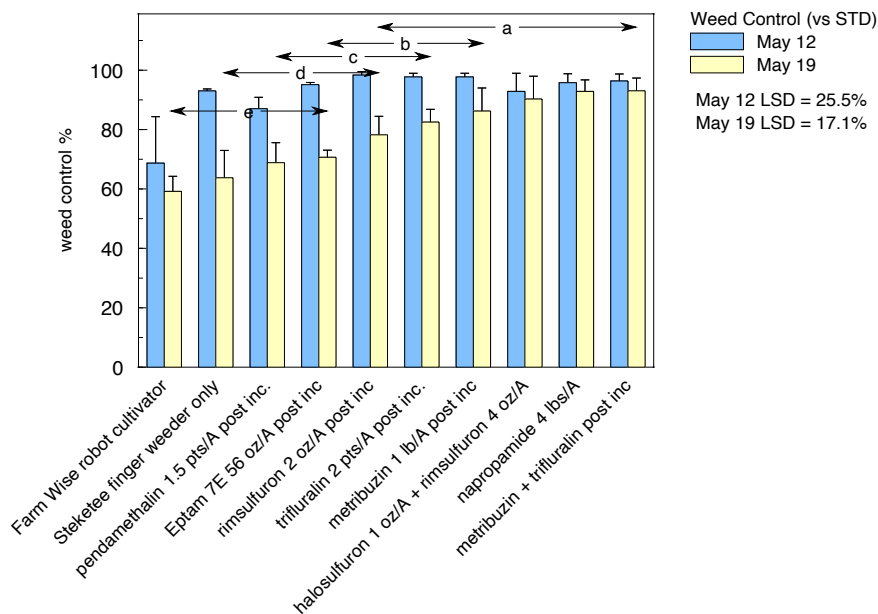


Figure 3. Weed control at 1 and 2 weeks after treatment, processing tomato field in Merced County.