

Does rimsulfuron herbicide for broomrape also reduce field bindweed?

Scott Stoddard
Farm Advisor

UC Cooperative Extension, Merced County

2026 UCCE & CTGA Processing Tomato Meeting
Lodi, CA, Feb 14, 2026

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources



Background

- Branched broomrape reappears in California, ca 2018
- Sept 2012, 80 acres infested in field near Hollister, after > 20 years without tomatoes

“It was a pretty serious infestation,” said Richard Smith, farm advisor with the University of California Cooperative Extension. “We collected big garbage bags of branched broomrape from the 70-acre plot where it was discovered. And when we mapped the site, it overlapped almost precisely with the 1980s outbreak.”

Farm Progress, 10/5/2012



Branched Broomrape

Phelipanche ramosa syn. *Orobanche ramosa*



Photo credit: Brad Hanson

- Native to Eurasia and North Africa-Mediterranean countries
- Obligate root parasite (holoparasite)
- Haustorium– modified root that parasitizes host plant
- “A-Listed” noxious weed in California
- At high density, can greatly reduce yield or even result in crop failure
- Large agricultural host range

Herbicide Efficacy Studies 2020 and beyond

- Brad Hanson, Matt Fatino, Pershang Hosseini
- Planting date important
- Rimsulfuron (Matrix) chemigation through the drip



Rimsulfuron 24c Special Local Need Label



RESULTS DETAILS

5 Results Found For: **matrix**

Matrix SG

General Crop Specific Documents Safety Registration Mfg. Info

RIMSULFURON GROUP 2 HERBICIDE

Label - CD02-628-020

MSDS/SDS - 04/01/2022 CD03-628-020

Supplemental Documents All States All Commodities

Section 24c - CA - For Management of Broomrape in Tomatoes

Supplemental Label - FOR USE IN BLUEBERRIES, RASPBERRIES & B...

FIFRA Section 24(c) Special Local Need (SLN) Label

FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF CALIFORNIA

For management of broomrape in tomatoes

Matrix SG

EPA Reg No. 352-768

SLN # 303093

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Follow all applicable directions, restrictions, Worker Protection Standard requirements and precautions on the EPA registered label for Matrix SG (352-768).

Chemigation

UC WEED SCIENCE

Weed control, management, ecology, and minutia

UC ANR

UCANR: Safeguarding abundant and healthy food for all Californians

Rimsulfuron 24c registration for broomrape management in tomato

Author: Bradley Hanson Published on: October 7, 2022

One of the largest weed issues affecting the California processing tomato industry is the parasitic plant, branched broomrape (*Phelipanche ramosa*; *Orobanche ramosa*)

<https://ucanr.edu/blog/blogcore/postdetail.cfm?postnum=59241>

<https://ucanr.edu/blog/blogcore/postdetail.cfm?postnum=47701>

<https://ucanr.edu/blog/blogcore/postdetail.cfm?postnum=43342>

Last week, CDPR issued a positive decision on a 24c "Special Local Needs" label request to allow application of rimsulfuron (Matrix SG) via chemigation through subsurface drip irrigation systems. This newly-allowed use pattern should be helpful for suppression of broomrape in tomato.

The CDPR decision was posted here: <https://www.cdpr.ca.gov/docs/registration/insp/nd/manu.htm> and is in Report 2022-39 for the Week of September 30, 2022. I've also attached it to the bottom of this blog post.

Rimsulfuron is widely used in tomato in California both as PRE and early POST herbicide for control of many weeds. The 24c label simply adds a new application method that is targeted specifically at the broomrapes which are parasites that attached to the root of tomatoes and other host plants. The new use pattern puts the herbicide right in the rootzone of the tomato plant at the time when broomrape seeds are germinating and the seedlings just attaching to the host.

The protocol for this specific use is three applications of rimsulfuron: one at early bloom and two more at 10-15 d intervals thereafter. Each of the three applications should be 1.33 oz product (25% WDG) which equates to the yearly max allowed on the Section 3 label.

Search [Enter Search Terms]

About Us

Subscribe

Enter e-mail Address

Links

- UC Weed Research and Information Center
- UC Statewide IPM Program
- The Almond Doctor blog
- UC Master Gardener Program
- Green Blog
- Southern IPM Activities

Tags All Tags

- announcement (289)
- weed control (115)
- orchards and vineyards (101)
- herbicide resistance (92)
- invasive weeds (90)

Archives All Archives

- December 2022
- November 2022
- October 2022
- September 2022
- August 2022

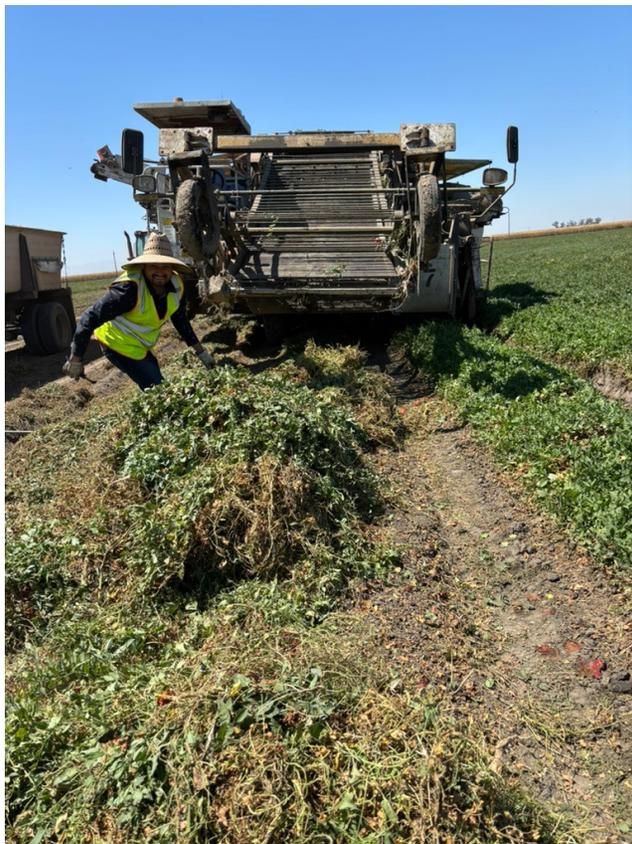
Feeds

Additional benefits?

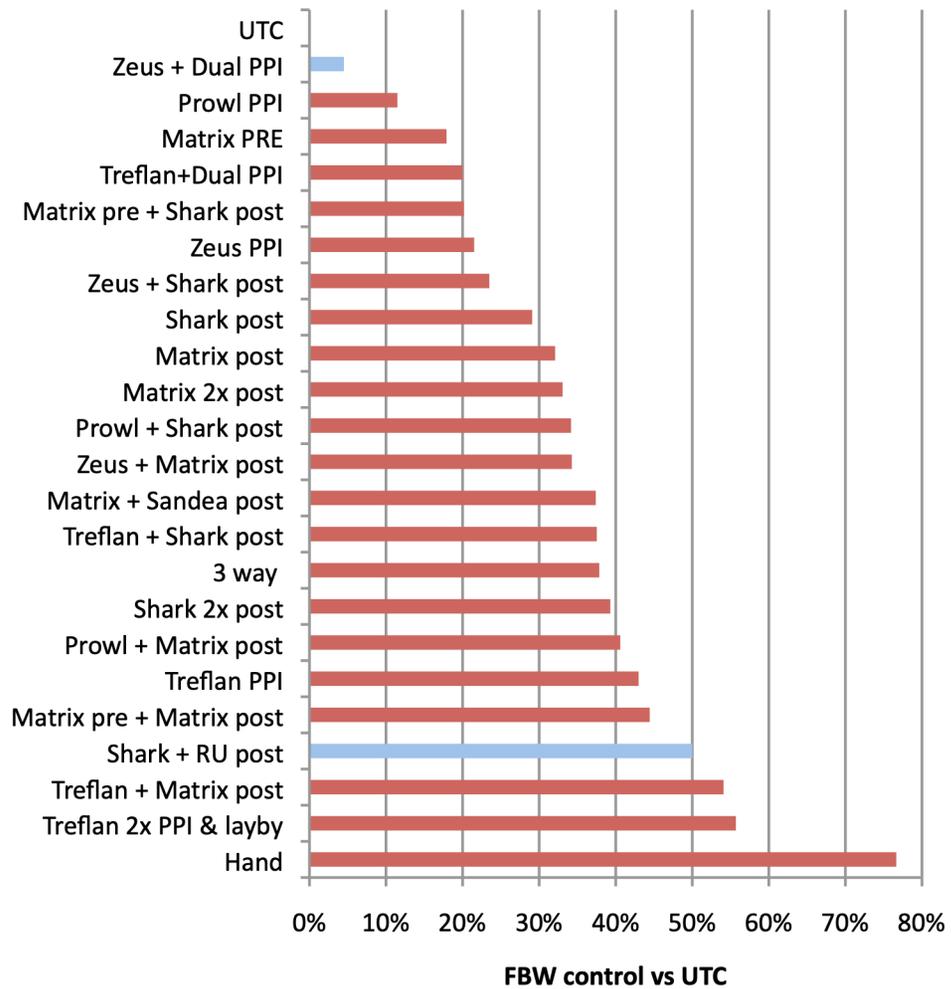
- Reports of reduction in field bindweed in fields using broomrape protocols.
- Small plot trials by Hanson and Fatino did not show this effect.

Glyphosate PRE burn down
trifluralin + metolachlor PPI
fb 2 oz rimsulfuron 1 week POST
fb 2 oz rimsulfuron 2 - 3 weeks POST





Field Bindweed Summary 2011 - 13



Chemigating rimsulfuron for bindweed control?

- Co-conspirators Brad Hanson and Patricia Lazicki
- Rimsulfuron (Matrix) applied 20, 30, and 40 DAP at 1.33 oz/A through the drip.
 - Foliar matrix not applied.
- Dos Palos, UC Davis Veg Crops, UC Russell Ranch, Yolo Co.
- Treatment areas 16, 30, 20, and 9 acres
- Lazicki: 4 reps. Stoddard: 2 reps. Hanson: not replicated



Methods

- Transects: 3 – 4 beds per treatment area, +/- FBW every 25 ft.
- DJI Phantom multi-rotor drone with an image resolution of 2.5 cm/pixel
 - Color differences used to calculate FBW area near harvest.
 - Pilot and photographer: Ahmed Kayad, UCCE Intermountain REC
- Yields at Yolo and Merced

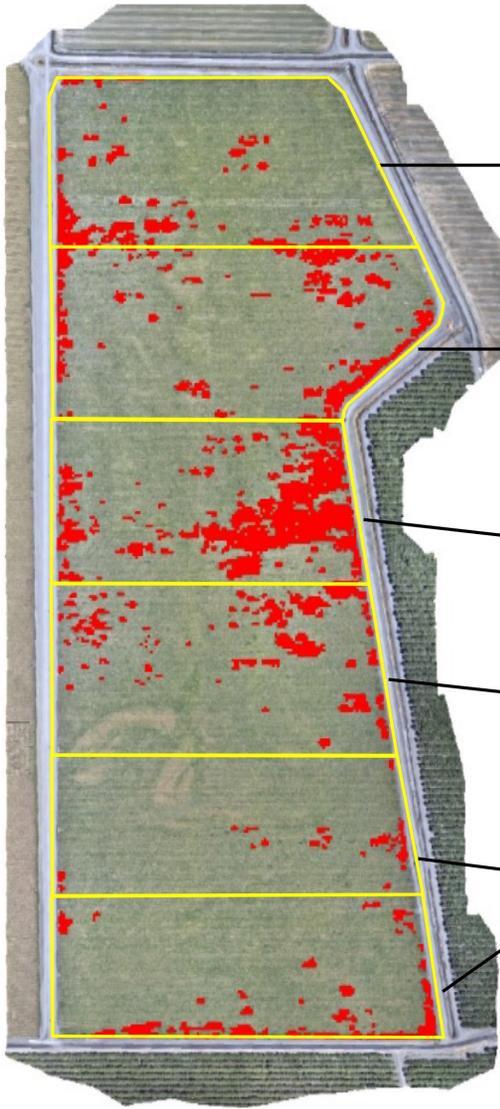
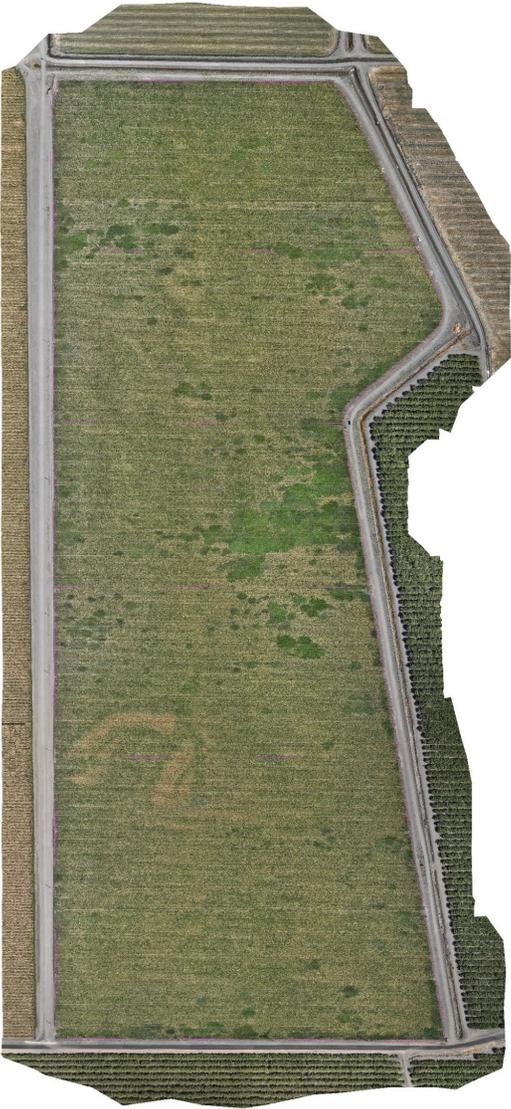




**2007 PT
variety
trial**



**Merced
Field**



Field 1 chemigated Matrix

Field Area: 18.5 Acre - Weed Area: 1.67 Acre
Weed area percentage: 9%

Field 2

Field Area: 20.34 Acre - Weed Area: 2.19 Acre
Weed area percentage: 10.8%

Field 3 chemigated Matrix

Field Area: 16.6 Acre - Weed Area: 4.3 Acre
Weed area percentage: 25.9%

Field 4

Field Area: 18.8 Acre - Weed Area: 1.75 Acre
Weed area percentage: 9.3%

Field 5 & 6

Field Area: 34.6 Acre - Weed Area: 1.65 Acre
Weed area percentage: 4.8%

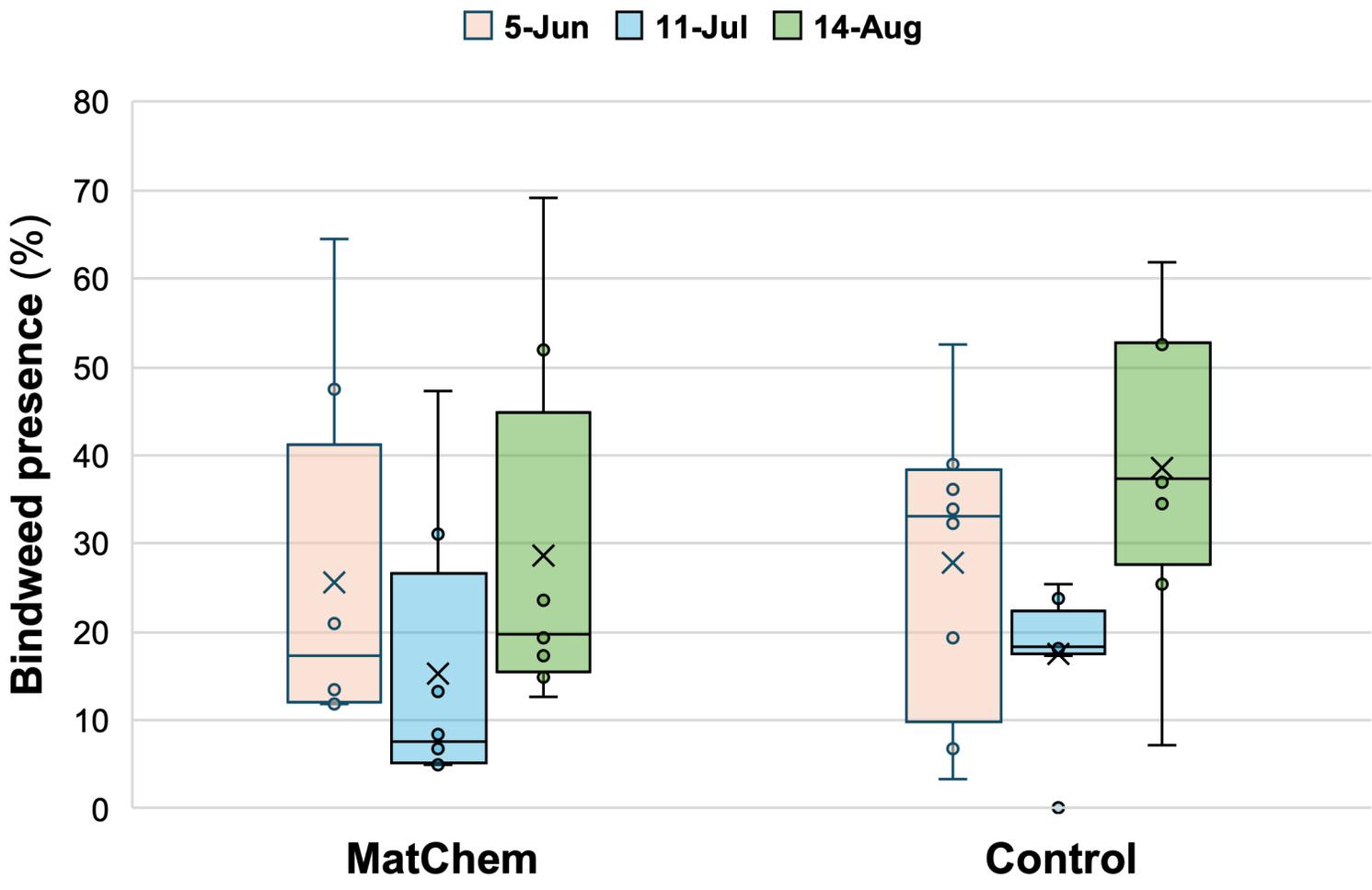
Results - Merced

Table 2. Field bindweed (FBW) incidence, area coverage, and tomato yield by treatment block, Merced County 2025.

Herbicide Treatment	block	FBW % incidence on date		Area % FBW	total yld T/A
		19-Jun	17-Jul		
1 Grower Std	2	29.9	40.9	10.8	63.101
2 Matrix chemigated	1	49.2	42.7	9.0	62.873
1 Grower Std	4	29.8	39.7	9.3	64.450
2 Matrix chemigated	3	25.2	42.1	25.9	44.377

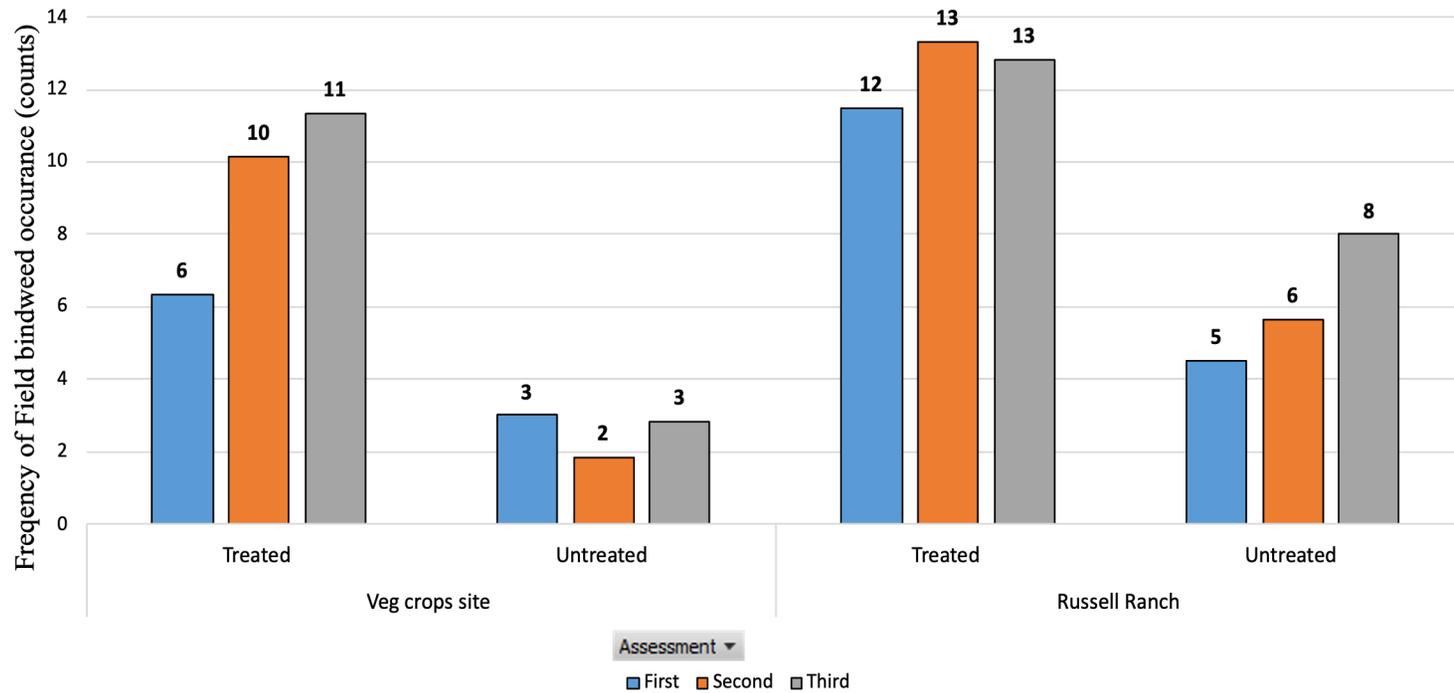
% incidence: presence/absence of FBW measured every 25 ft on 3 to 4 beds per treatment block.

%FBW: field bindweed area as a percentage of total area in irrigation block based on drone image at harvest



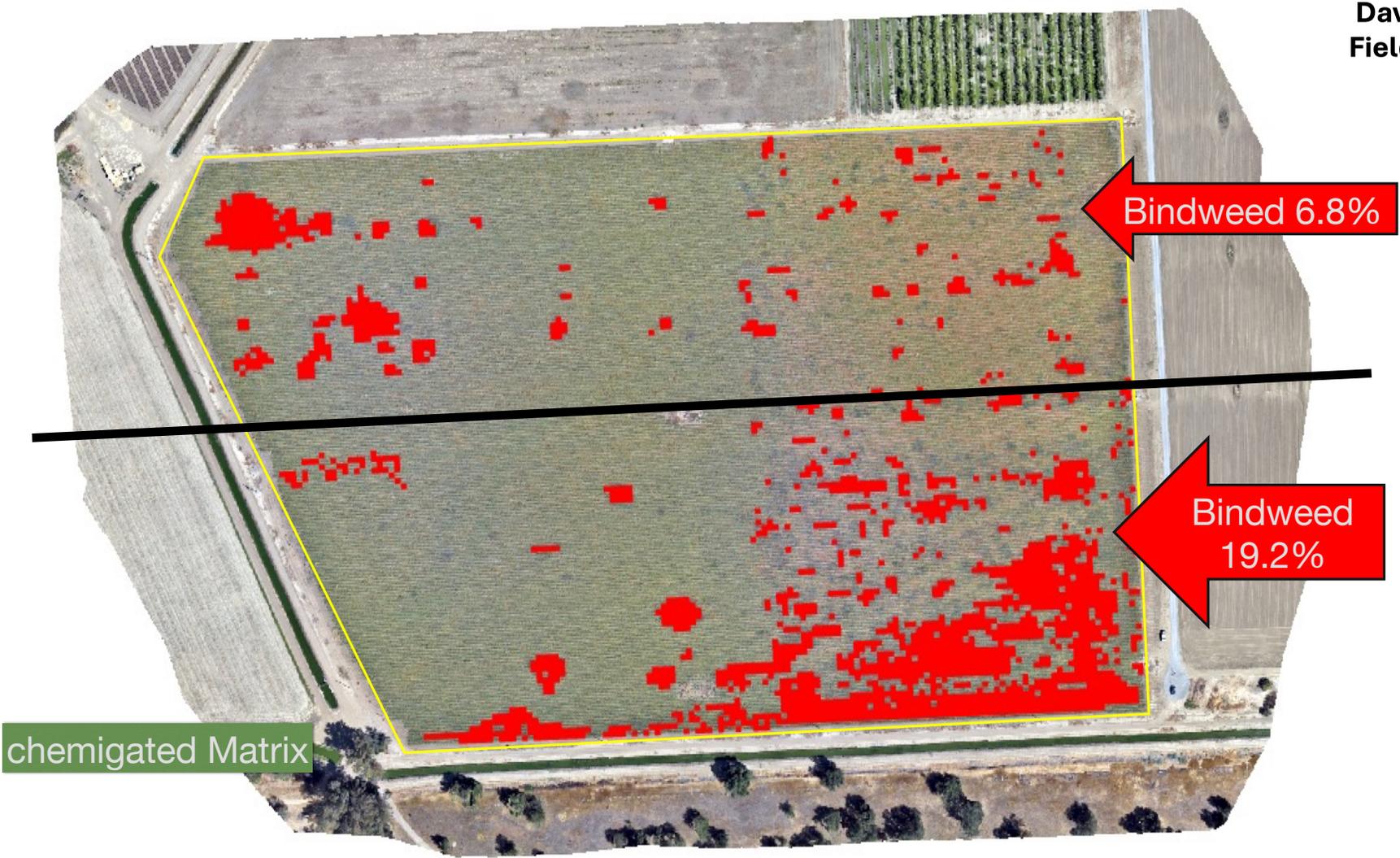
Yolo County commercial field bindweed from transects showed no significant differences

Efficacy of Matrix chemigation applications on field bindweed control in processing tomatoes



UC Davis
research
station
transects data:
field bindweed
higher in
treated areas

**Davis
Field 2**



Bindweed 6.8%

Bindweed
19.2%

chemigated Matrix

Summary

- Lazicki (Yolo Co): no significant differences incidence%, weeding time, or yield.
- Hanson (UC Davis Veg Crops and Russell Ranch): more FBW in treated areas for both fields.
- Stoddard (Merced Co): more FBW in treated areas, reduced yield in 1 treated block.



Acknowledgements

- Dr. Brad Hanson, UC Davis
- Dr. Patricia Lazicki, UCCE Yolo-Solano
- Dan Burns, San Juan Ranching Co, Dos Palos
- Tony Turkovich, Button and Turkovich Ranch
- UC Davis Veg Crops and UC Russell Ranch
- Ahmed Kaya, UC ANR Intermountain REC
- CTRI



UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

Cooperative Extension