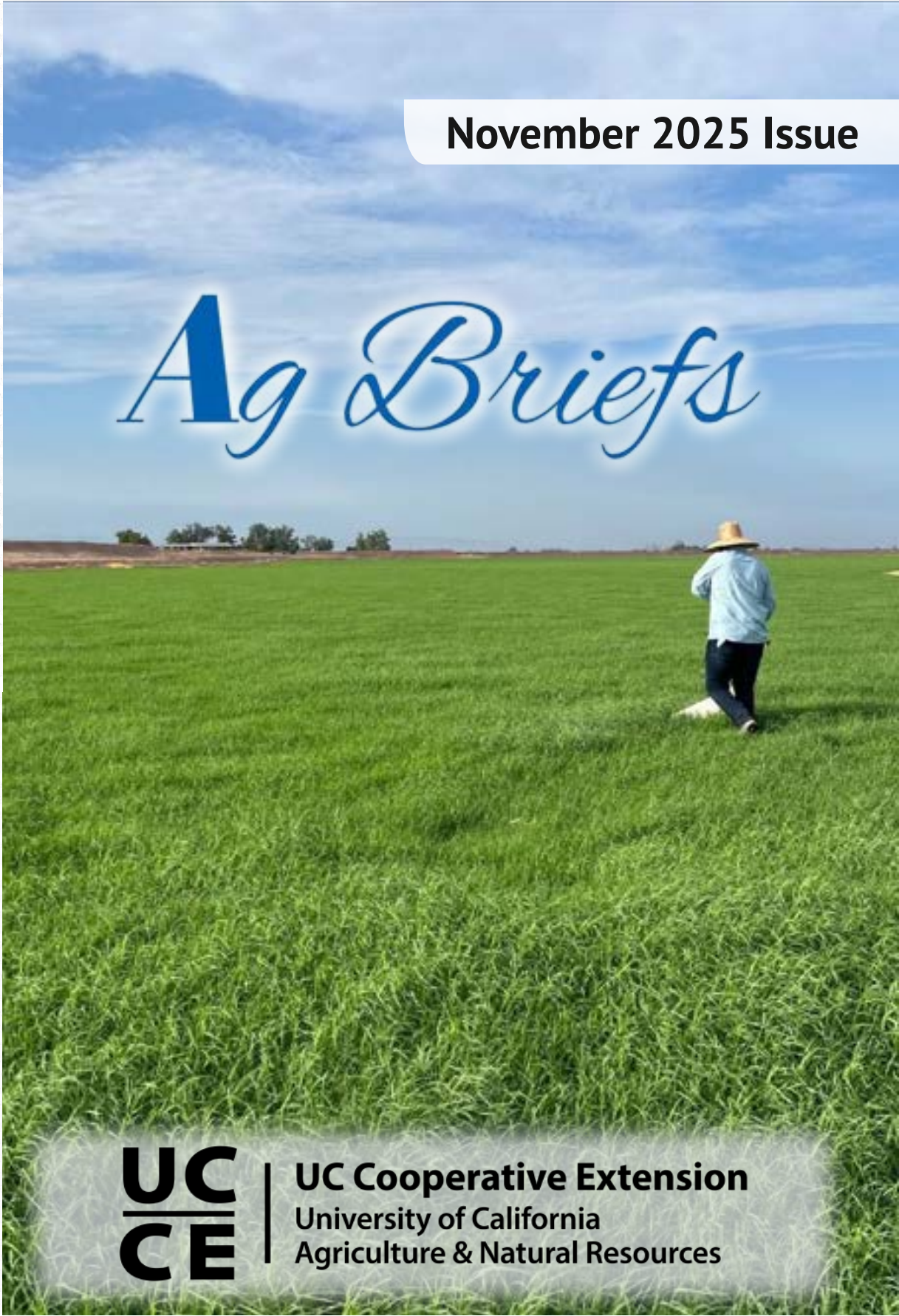
November 2025 Issue

Ag Briefs



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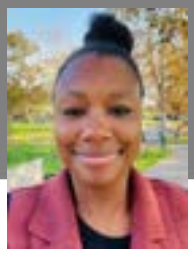
Introduction from The New
AREA COUNTY DIRECTOR



Dear readers,

My name is Chandra Richards, and I'm honored to serve as the new University of California Cooperative Extension (UCCE) Area County Director for Imperial and San Diego Counties!

In this role, I'm excited to strengthen partnerships, support the growth of our team, and expand the visibility of UCCE for our communities, ecosystems and landscapes. I have been actively engaged with UC ANR for over four years, previously serving as an Academic Coordinator to assist Southern California clientele through the $1.7 million Climate Smart Land Management Program grant project. I have promoted conservation practices, climate initiatives, and land access strategies to strengthen economic growth and sustainable development.

I hold a Ph.D. in Soil Biogeochemistry from the University of California Berkeley, and dual Bachelor of Science degrees in Chemistry and Mathematics from Penn State University. My academic and professional journey through environmental sciences and natural resource management has been shaped by a deep commitment to community development, consistent engagement, and policy recommendations.

I believe our greatest strength lies in our ability to listen, learn, and adapt together. What inspires me most is the power of local community resilience—especially in the face of climate events, public health challenges, and natural disasters. Over the past decade, I've remained committed to bridging gaps, guiding others toward their goals, and amplifying innovative strategies through trust, relationship-building, and collaboration.

I'm motivated by the creativity and dedication I see across Cooperative Extension in Southern California especially in fundraising, research, and extension. I'm proud to work alongside an intelligent and dedicated team, whose efforts consistently lead to novel funding proposals and meaningful solutions to local issues.

Outside of work, I enjoy exploring California's trails and beaches with my husband, daughter, and our dog. I also play lacrosse with the San Diego women's post-collegiate club team, am learning to become a more confident downhill skier, and tend to a vegetable and citrus garden, which inspires me to cook and bake creatively.

I look forward to meeting you in the coming months and welcome opportunities to connect, collaborate, and learn together! Please don't hesitate to reach out – I'd love to hear from you. I am always available for honest conversations, moments of connection, and opportunities to grow through challenges together.

Chandra

Introducing an interactive web application for visualizing selected pest population dynamics across Imperial County

Written By: **Arun Babu**[1], and **Benjamin W. Lee**[2]
[1]Entomology Advisor, UCCE Imperial County, [2]Senior Environmental Scientist, California Department of Food and Agriculture

Figure 1. The screenshot from the desktop version of the application, showing the open tab "Flea Beetles", provides users with a visualization of the flea beetle population levels in the yellow sticky traps across the Imperial Valley.

Introduction. As many of you are aware, since August 2024, the Entomology Program at the University of California Cooperative Extension (UCCE) Imperial County has been regularly updating growers, PCAs, and other stakeholders on the population levels of whiteflies, western flower thrips, flea beetles and aphid complexes across the Imperial Valley. These pest population updates are based on adult captures on a yellow sticky trap network established across the Imperial Valley. The details of this project and the biweekly pest counts updates can be accessed from the Imperial Valley areawide pest monitoring webpage (https://ucanr.edu/county/cooperative-extension-imperial-county/imperial-valley-areawide-pest-monitoring), hosted on the UCCE - Imperial County website. Until recently, these updates have been published as PDF reports. While the biweekly updates will continue to be published on the webpage, to enhance the utility of these data for our growers, PCAs, and other stakeholders, a supplemental web application (Fig. 1) has been developed. This article provides details about the web app, its features, and instructions on accessing and using the application.

Imperial Valley Pest Mapping Interactive Tool.

Purpose. The purpose of this app is to display the population dynamics of whiteflies, western flower thrips, flea beetles, leaf miners, and aphid complexes in the Imperial Valley, allowing users to compare the current population trend with data from previous years.

Background. The Imperial Valley Pest Mapping Interactive Tool is a web application built using R programming and hosted on the Shinyapps platform (Shinyapps.io, Posit PBC). The programming code that runs the web application is written by Benjamin W. Lee at the California Department of Food and Agriculture (CDFA). The UCCE Entomology Program maintains the trap network, collects data, and updates the data for the web applications at a weekly interval.

How to access the Web App. There are two versions of the Web App: a desktop version and a mobile version. The desktop version is optimized to view on devices with a larger screen size, including desktops and laptops, while the mobile version is optimized to view on devices with smaller screen sizes (mobile phones and tablets). Weblinks to both versions of the app can be accessed from the UCCE Imperial County Entomology webpage (https://ucanr.edu/county-office/cooperative-extension-imperial-county/imperial-valley-pest-mapping-interactive-tool). Alternatively, the mobile version can be accessed directly at https://imperialvalleypestmap.shinyapps.io/Mobile/, and the desktop version can be accessed

at https://imperialvalleypestmap.shinyapps.io/Desktop/. Moreover, regardless of which version accessed by the user, the landing page provides an option to switch between mobile and desktop versions.

Features of this application. This web app has multiple tabs including, 1) a landing page under the tab title "About This App' which provides general information about the app, its features and the details on the areawide pest monitoring program in the Imperial Valley. The landing page of the app contains a short tutorial on how to use the app with a screenshot of the application overlaid with descriptions of its features (Fig. 2), 2) individual tabs for each insect pest monitored using the yellow sticky traps which provide the details of their population trends across the imperial Valley. When a user selects a tab for a specific pest (Fig. 2, tab 'Aphids', for example), they can view weekly pest counts from each trap overlaid on the map. The radius and color of the circle correspond to the magnitude of the pest count. Hovering the mouse over the trap on the map will display the pest count (per trap per day) for that location, corresponding to the trap collection week selected on the slider. Users can adjust the slider, which is located below the graph on the bottom left, to a specific date to view how the pest population has changed over time. As the user moves the slider to a specific date, the data displayed on the map will update automatically to reflect the insect count for the corresponding date. 3) a tab labeled "Pest and Temperature" where users can compare the pest population trend with the change in air temperature across the seasons, and 4) a table labeled "Compare Annual Counts" allows users to compare the current pest population trend with that of previous years. Currently, we only have limited historical data for this comparison; however, the usefulness of this tab will improve as more data is collected over the coming years.

Figure 2. The screenshot from the desktop version of the application, overlaid with the instructions on how to use various features of this app.

For further information, please get in touch with Arun Babu, Entomology Advisor, UCCE Imperial County, at arbabu@ucanr.edu

Acknowledgement

We thank Gustavo Gamboa Paredes for technical assistance. The Imperial County Agricultural Benefits Grant (2024-2027) provides financial assistance for the establishment and maintenance of the area-wide trapping network, as well as the development of a web application.

Watch for *Rhizoctonia* root canker in desert alfalfa: Identification and management tips

Written By: **Ana M. Pastrana**
Plant Pathology Advisor, UCCE Imperial, Riverside, and San Diego counties

Over the past few weeks, alfalfa fields across our low desert region have exhibited expanding disease rings (Figure 1). Symptoms first appeared in late August, with affected plants showing leaf spots, yellowing, and discoloration in the stems (Figure 2). Severely affected or dead plants often have roots whose outer layers slough off easily, revealing corky or spongy internal tissue with occasional purple to violet-stained areas. Laboratory tests have consistently recovered *Rhizoctonia* from root tissue, confirming the presence of Rhizoctonia root canker, also known as crown and stem rot.

Figure 1. Circular patches of dead or weakened plants are the most characteristic symptoms.

Understanding the pathogen

Rhizoctonia solani is a soilborne fungus that survives for many years by forming hardened structures called sclerotia, which can persist in the soil for 8–10 years even without a host crop. The fungus spreads through irrigation water, rainfall, flooding, contaminated soil, or machinery. When soil conditions are warm and moist, sclerotia germinate and infect alfalfa roots, forming dark lesions along and inside the roots. Infected roots eventually decay, the crown turns brown or black, and affected plants may become stunted or die. Controlling *Rhizoctonia* in alfalfa is challenging. Because alfalfa is an annual crop and the pathogen can survive both in the soil and within the roots over several years.

Figure 2. Discoloration in the stems

Symptoms to watch for

Severe infections cause stunted growth, wilting, and yellow or reddish leaves. Tan, elliptical lesions on the taproot in the areas where lateral roots emerge are distinctive symptoms of Rhizoctonia-related diseases. Circular patches of dead or weakened plants are the most characteristic symptom and can be seen from a distance. Within these rings, weeds often colonize the bare soil. Over time, the patches may expand outward,

and in severe cases, neighboring rings can merge into large irregular areas. The disease is generally more severe in low areas with poor drainage or where soil remains wet for long periods.

Conditions that favor disease development

Conditions that favor disease development include high soil moisture or waterlogged soils, warm temperatures (optimal 22–26 °C / 72–79 °F), soil compaction, poor drainage, low soil fertility or acidity, and wounds caused by machinery or grazing.

Effective management strategies

Cultural practices:

- Enhance drainage by avoiding standing water and over-irrigation. Level fields properly and avoid compaction. Increasing soil organic matter by using composts or well-decomposed manures could encourage beneficial microbes that compete with the pathogen.

- Remove or destroy severely infected plants to limit the spread of the pathogen. If possible, clean equipment when moving between fields to prevent the movement of soilborne inoculum.

- Avoid grazing or driving equipment over wet fields to reduce wounds and compaction.

- Avoid planting alfalfa or other susceptible crops in the same field for 8–10 years after a severe outbreak. Most crops could be hosts of Rhizoctonia, but if rotation is necessary, Rhizoctonia-resistant varieties of cereals such as wheat, barley, oats, or rye may help reduce the fungus population over time.

Chemical control

Chemical control options that are widely used in other annual crops are generally not effective or economical in alfalfa. Any chemical treatment should be used preventively, in combination with good cultural practices, and only with products labeled for alfalfa and soilborne root pathogens in California.

Organic approaches

In organic systems, beneficial microbes may reduce Rhizoctonia survival in the soil and provide some protection to newly germinated seedlings, although results may vary. Preventing these disease symptoms through proper irrigation and field management is the most effective way to reduce the impact of Rhizoctonia root canker in alfalfa. While no fully resistant alfalfa varieties are currently available, some varietal differences may exist, so growers should consult their seed provider.

References

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UC ANR. Rhizoctonia root canker in alfalfa. UC IPM. https://ipm.ucanr.edu/agriculture/alfalfa/rhizoctonia-root-canker/

UC ANR vice president Glenda Humiston visits Imperial County

Written By: **Oli Bachie**[1], and **Jimmy Nguyen**[2]
[1]UCCE Imperial County CD and Agronomy and Weed Management advisor, [2]UCCE Imperial County Food Safety and Organic production advisor

On October 9–10, 2025, University of California Agriculture and Natural Resources (UC ANR) Vice President Dr. Glenda Humiston visited Imperial County to engage withagricultural leaders, UC Cooperative Extension (UCCE) upcoming Area County Director (Chandra Richards), current County Director (Oli Bachie), advisors (Arun Babu, Ana Patrana, Philip Waisen), and local stakeholders. The two-day visit highlighted the strong partnerships between UC ANR, local growers, and regional agricultural industries.

Figure 1. Sean Wilcox of the Imperial Valley Economic Development Corporation (IVEDC) at One World Beef (photo courtesy: Sean Wilcox)

The visit was organized by Sean Wilcox of the Imperial Valley Economic Development Corporation (IVEDC), together with the Desert Research and Extension Center (DREC) and UCCE Imperial County. The tour included stops at several leading agricultural operations, including One World Beef in Brawley, Doc's Organics in Brawley, and Earthrise Nutritional in Calipatria.

On the first day, at One World Beef, Dr. Humiston and the team met with Eric Brandt, CEO and owner, to learn about the company's operations, industry trends, and its contributions to the regional economy. The visit continued with a tour of Doc's Organics, where company owner, Gina Dockstader, discussed their post-harvest fruit processing and organic certification programs. Gina grows a large variety of citrus for local and overseas shipping. Gina also serves as Chairwoman of the IID Board of Directors.

Figure 2. Gina (in the blue shirt) described her post-harvest fruit processing and packing center to Dr. Humiston, UCCE advisors, and stakeholders (photo courtesy: Sean Wilcox)


Figure 3. Dr. Glenda Humiston and UC ANR advisors touring Earthrise Nutritional in Imperial County. (Photo courtesy of UCCE Imperial County)

At Earthrise Nutritional, which specializes in producing high-protein spirulina dried powder and the natural pigment Lina-blue, Dr. Humiston had the chance to discuss sustainable production, innovation, and export markets.

The first day concluded with Dr. Humiston attending the Imperial County Farm Bureau's Annual Meeting and "Farmer of the Year" celebration. There, she met with Farm Bureau President Paula Pangle and other agricultural stakeholders to discuss collaborative efforts between UC ANR and local producers. Both emphasized the importance of maintaining a strong relationship between the Farm Bureau and UCCE to support regional agricultural success.

On the second day, Dr. Humiston participated in a roundtable discussion with the Imperial County Board of Supervisors (BOS), UCCE staff, and local partners. The meeting, opened by BOS chairman, John Hawk, focused on strengthening UC ANR's engagement and visibility throughout the region. Dr. Humiston shared updates on UC ANR programs and funding opportunities while encouraging advisors to continue outreach efforts that communicate the value of UC ANR to local communities.

The visit concluded at the UCCE Imperial County office, where Dr. Humiston met with staff and advisors for a discussion on research priorities, community engagement, and future initiatives. Advisors expressed appreciation for Dr. Humiston's leadership and commitment to advancing agricultural innovation and extension in the Imperial Valley.

Figure 4. Dr. Humiston briefed the gathering on the status of the UCANR and its relationships with stakeholders and partners (photo courtesy: Oli Bachie)

By the end of the visit, participants gained a renewed understanding of UC ANR's statewide mission and its role in supporting agriculture, the environment, and healthy communities. UCCE Imperial County extends its gratitude to Dr. Humiston for her continued support and leadership.

We thank all individuals and institutions who devoted their time meeting with the VP and the ANR team and made the tour and roundtable discussion very viable.

Area-wide monitoring of key insect pests across the Imperial Valley: November 2025 updates

Written By: **Arun Babu**
Entomology Advisor, UCCE Imperial County

This article is intended to provide growers, PCAs, and other stakeholders with information on the adult pest activity of whiteflies, aphid complex, western flower thrips, and flea beetles across the Imperial Valley. The data were collected using a yellow sticky trap network maintained by the UCCE Entomology program. The yellow sticky traps set up in each site consist of a 6 × 12 in (15.2 × 30.5 cm) sticky trap (Olson Products, Medina, OH), shaped into a cylinder, attached to a wooden stake using a binder clip, and positioned about 60 cm above the ground (Fig. 1A and 1B). The traps are distributed throughout the Imperial Valley in major agricultural areas (Fig. 1C). Insects that are attracted to the yellow colors get trapped on the sticky surfaces when they land on the surface during their flight. The traps are replaced weekly. The type and abundance of trapped insect pests are examined in the laboratory using a stereo microscope.

Figure 1 A &B. Yellow sticky traps in various fields, and C) Trap locations across the Imperial Valley

Insect count data from the sticky traps could help forecast the adult insect activity of targeted pests around crop fields. However, since several biological (crop type, crop age, presence of weed hosts, etc.), physical factors (temperature, wind, precipitation, etc.), and farm operations (insecticide sprays, dust from the land preparation, crop harvest, etc.) can influence insect populations development in the field and trap capture efficiency, the insect numbers in sticky traps do not always strongly correlate to the actual infestation levels in the grower's fields. Despite this, the insect pest counts from the sticky traps are a valuable indicator of adult insects' prevalence across a landscape. Collecting data on trapped insects across multiple years may help establish a baseline of pest activity and potential crop infestations throughout the season. Such historical pest data can then be compared with current pest activity in the traps to identify population trends. The sticky traps can also be screened to detect invasive insect pests, such as Asian citrus psyllids, spotted lanternflies, and Mexican fruit flies.

Insect count updates until 04 November 2025

The insect counts from the monitoring trap network are presented below (Figures 2, 3, 4, and 5). Each dot in each of the graphs represents the average insect count from 19 traps placed across the Imperial Valley for that sampling week, with the value expressed as the number of insects per trap per day.

Whiteflies: The whitefly counts (Fig. 2) in the traps consisted mainly of sweetpotato whitefly (*Bemisia tabaci* MEAM1), but also a small fraction (< 5%) of bandedwinged whiteflies, Trialeurodes abutilonia, and other minor whitefly species. Their population peaked in August-September, but with the onset of lower temperatures, the adult counts have been declining over the last couple of weeks.

Aphids. The trap count data for aphids (Fig. 3) do not focus on any single species but represent the aphid complex in the Valley. While adult counts in the traps were near zero throughout the summer, with the cooler temperatures, they are back in the valley, and we are starting to see increased adult activity.

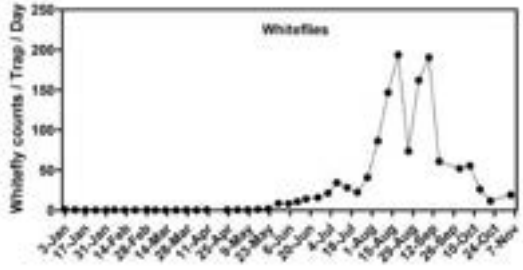

Figure 2. Whitefly counts from the traps

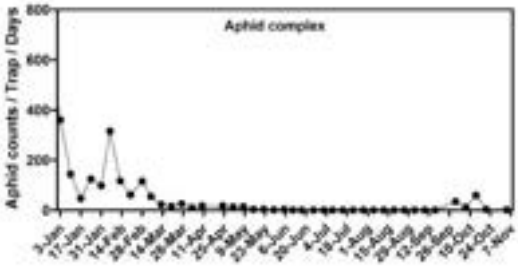

Figure 3. Aphids count from the traps

Flea beetles. The flea beetle counts on the traps (Fig. 4) comprised the pale-striped flea beetle, *Systena blanda*, the desert corn flea beetle, *Chaetocnema ectypa*, and other minor species. Currently, we are observing moderate to low adult activity across the Imperial Valley.

Western flower thrips. Several thrip species were captured in the traps, but only western flower thrips, *Frankliniella occidentalis*, the major thrip species of concern for several crops of the Imperial Valley, were counted. Currently we are observing relatively low adult counts in our traps.

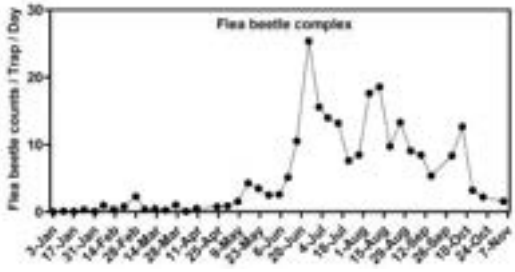

Figure 4. Flea beetle count from the traps

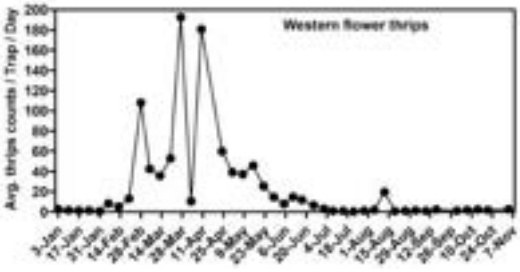

Figure 5. Western flower thrips count from the traps

Additional biweekly updates of trap capture data are available from the UCCE Imperial County Entomology webpage, which can be accessed at https://ucanr.edu/county-office/cooperative-extension-imperial-county/imperial-valley-areawide-pest-monitoring. If you are interested in additional data from this project or have questions or comments, please contact Arun Babu at (442) 265-7700 or arbabu@ucanr.edu.

Acknowledgements

This project is being supported by the Imperial County Agricultural Benefit Program grant (2024-2027). The support is highly appreciated.

Imperial Valley CIMIS Report and UC Water Management Resources

Written By: **Ali Montazar**
Irrigation and Water Management Advisor, UCCE Imperial, Riverside, and San Diego Counties

The reference evapotranspiration (ETo) is derived from a well-watered grass field and may be obtained from the nearest CIMIS (California Irrigation Management Information System) station. CIMIS is a program unit in the Water Use and Efficiency Branch, California Department of Water Resources that manages a network of over 145 automated weather stations in California. The network was designed to assist irrigators in managing their water resources more efficiently. CIMIS ET data are a good guideline for planning irrigations as bottom line, while crop ET may be estimated by multiplying ETo by a crop coefficient (Kc) which is specific for each crop.

There are three CIMIS stations in Imperial County include Calipatria (CIMIS #41), Seeley (CIMIS #68), and Meloland (CIMIS #87). Data from the CIMIS network are available at: https://cimis.water.ca.gov/ Estimates of the average daily ETo for the period of October 1 to December 31 for the Imperial Valley stations are presented in Table 1. These values were calculated using the long-term data of each station.

Table 1. Estimates of average daily potential evapotranspiration (ETo) in inches per day

Station	November		December		January	
	1-15	16-30	1-15	16-31	1-15	16-31
Calipatria	0.13	0.11	0.09	0.09	0.09	0.10
El Centro (Seeley)	0.14	0.12	0.10	0.09	0.10	0.11
Holtville (Meloland)	0.13	0.11	0.09	0.08	0.09	0.10

For more information about ET and crop coefficients, feel free to contact the UC Imperial County Cooperative Extension office (442-265-7700). You can also find the latest research-based advice and California water & drought management information/resources through the link below: http://ciwr.ucanr.edu/.

CALENDAR

Stay up-to-date with seminars, webinars, trainings, events, and more!

NOVEMBER

SOIL COMMUNITY WORKSHOP

November 20, 1:00 PM to 3:00 PM

SDSU Calexico Campus, 720 Heber Ave., Calexico, CA 92231

DECEMBER

FALL DESERT CROPS WORKSHOP

December 3, 8:00 AM to 12:30 PM

AgWest Farm Credit, 485 Business Pkwy, Imperial, CA 92251

https://surveys.ucanr.edu/survey.cfm?surveynumber=47121

ADULT GARDENING PROGRAM

December 6, 9:00 AM to 11:30 PM

Imperial Public Library, 200 W. 9th St., Imperial, CA 92251

36th Annual Fall Desert Crops Workshop

December 3, 2025

AgWest Farm Credit
485 Business Pkwy, Imperial, CA 92251

Registration link: https://surveys.ucanr.edu/survey.cfm?surveynumber=47121

Program (8:00 am – 12:05 pm)

7:30	**Registration**
8:00	**Overview and Introduction** – Oli Bachie, Agronomy Advisor, UCCE Imperial County
8:05	**Opening remarks** – John Hawk, Imperial County Chairman of the Board of Supervisors
8:15	**Self-introduction from new UCCE Area Director** – Chandra Richards
8:20	**Transforming desert irrigation: Leveraging soil sensors and Open ET for water-wise farming** - Ali Montazar, Irrigation and Water Management Advisor, UCCE Imperial County
8:35	**Simplified soil salinity mapping and monitoring** – Elia Scudiero, Associate Research Agronomist, UC Riverside & USDA-ARS Salinity Laboratory
8:50	**Lettuce downy mildew: disease challenges, resistance-breaking strains, and management strategies** – Ana M. Pastrana, Plant Pathology Advisor, UCCE Imperial
9:08	**Exploiting the Strategic Weaknesses of Nutsedge** – Milt McGiffen, Vice Chair for Extension, Vegetable Crops Research, UCR
9:26	**Impacts of organic and conventional nematicides on plant-parasitic and beneficial nematodes on cantaloupe -** Philip Waisen, Vegetable Crops Advisor, UCCE Riverside County
9:44	**Regulation updates for neonicotinoid pesticides and spray days**- Sandra Ramirez, Agricultural Biologist, Imperial County Commissioner's Office

Break (10:02 - 10:17)

10:17	**Closure of the Spreckels Sugar, Impacts and Potential Alternatives –** Oli Bachie, Agronomy Advisor, UCCE Imperial, Riverside, and San Diego Counties
10:32	**IVC Agricultural Education, Ag Technology, and Benefits to the Local Farms** – Efrain Silva, Dean, Economic and Workforce Development Division, Imperial Valley College.
10:47	**Influence of Agricultural burning on Bermudagrass mite damage and seed yield** – Arun Babu, Entomology Advisor, UCCE Imperial County
11:05	**Benefits and drawbacks to integrating livestock into cropping systems** – Brooke Latack, Livestock Advisor, UCCE Imperial, Riverside, and San Bernardino Counties
11:20	**From Policy to Practice: FSMA Produce Safety Rule Enforcement and the Latest LGMA Metrics Revisions** - Jimmy Nguyen, Food Safety and Organic Production Advisor, UCCE Imperial and Riverside County
11:35	**Industry updates** – Victor Lopez, Rockwood Ag. Services Company; Jose Cabrera-Davila; BASF; Brian Guess, Lallemand Plant Care & Sean Fuchs, Valent U.S.A.

Lunch - 12:05 (Courtesy of the Industry Sponsors)

For additional information on the workshop, please contact Arun Babu ababu@ucanr.edu, or call us at (442) 265-7700. Continuing Education Units Requested with CA DPR, Arizona Dept. of Ag and Certified Crop Advisor and is pending approval. If you require any accommodations in order to participate in this event, please submit your request to emails listed above.

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MAILING LIST

AG BRIEFS - WORKSHOPS - UPDATES

If you have questions, comments or feedback about the Ag. Briefs articles or layout, please reach out to Arun Babu at arbabu@ucanr.edu

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