UC CE UNIVERSITY OF CALIFORNIA Agriculture and Natural Resources | UC Cooperative Extension

Imperial County Agricultural Briefs

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Features from your Advisors

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AREAWIDE MONITORING OF KEY INSECT PESTS ACROSS THE IMPERIAL VALLEY: NOVEMBER 2024 UPDATES

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Since the first week of August 2024, the UCCE Entomology program at Imperial County has maintained a yellow sticky trap network across the Imperial Valley. This trap network aimed to facilitate landscape-level monitoring of the population dynamics of adult whiteflies, western flower thrips, flea beetles, and aphids throughout the year. The trap set up in the field consists of a 6 X 12 in (15.2 x 30.5 cm) yellow 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, covering the major agricultural locations (Fig. 1C). Insects that are attracted to the yellow color of the traps and those that land on the surface of the trap during the flight get trapped on its sticky surface. The traps are replaced weekly and are examined in the laboratory under a stereo microscope to count the pest population.

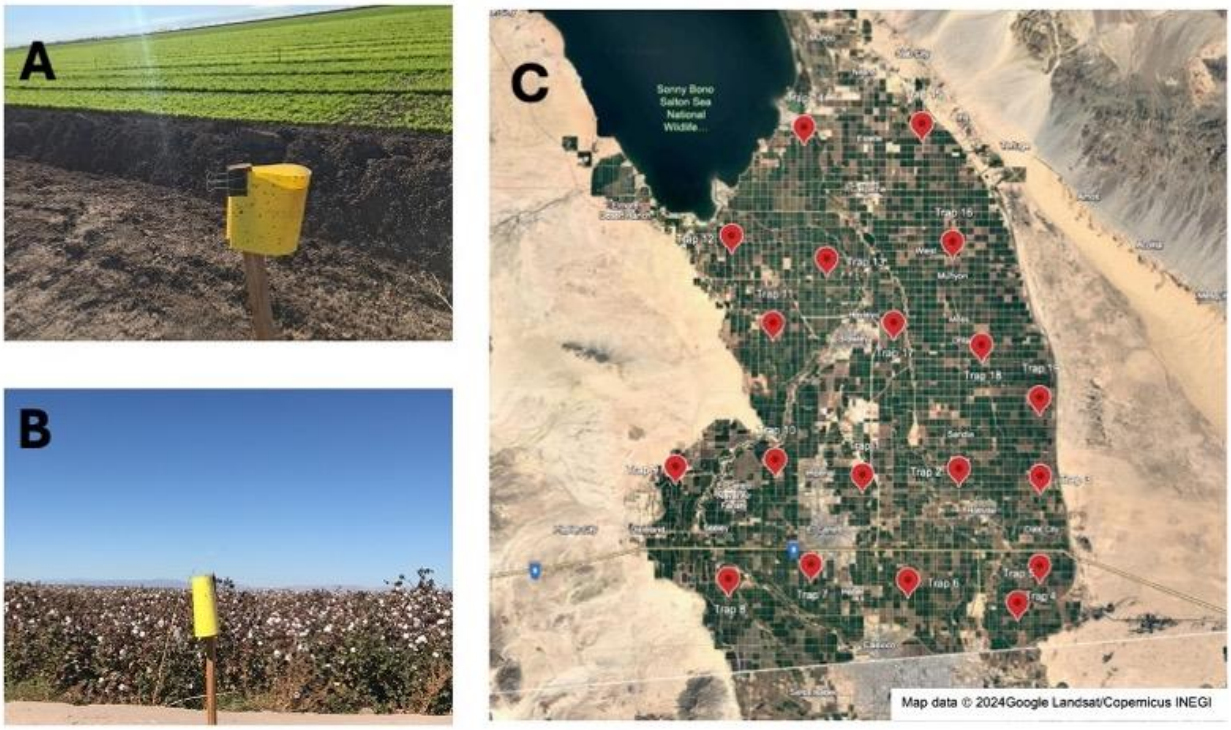


Fig. 1 A & B) Yellow sticky traps in various fields, and C) Trap locations across the Imperial Valley.

Insect count data from these traps identify the adult insect activity of targeted pests around the field. Since several biological and physical factors and farm operations (insecticide sprays, dust from the land preparation, crop harvest, etc.) can influence insect counts in the traps, the insect numbers in sticky traps do not always strongly correlate to the actual infestation levels in the grower's field. Despite this, the trap counts are a

valuable indication of adult insects' movement across the landscape. Moreover, collecting the trap data across multiple years will help establish a baseline of pest activity across the season. This historical pest data can then be compared with current pest activity in the traps to identify population trends. The traps are also being screened for potential invasive insect pests, including Asian citrus psyllids, spotted lanternflies, Mexican fruit flies, etc.

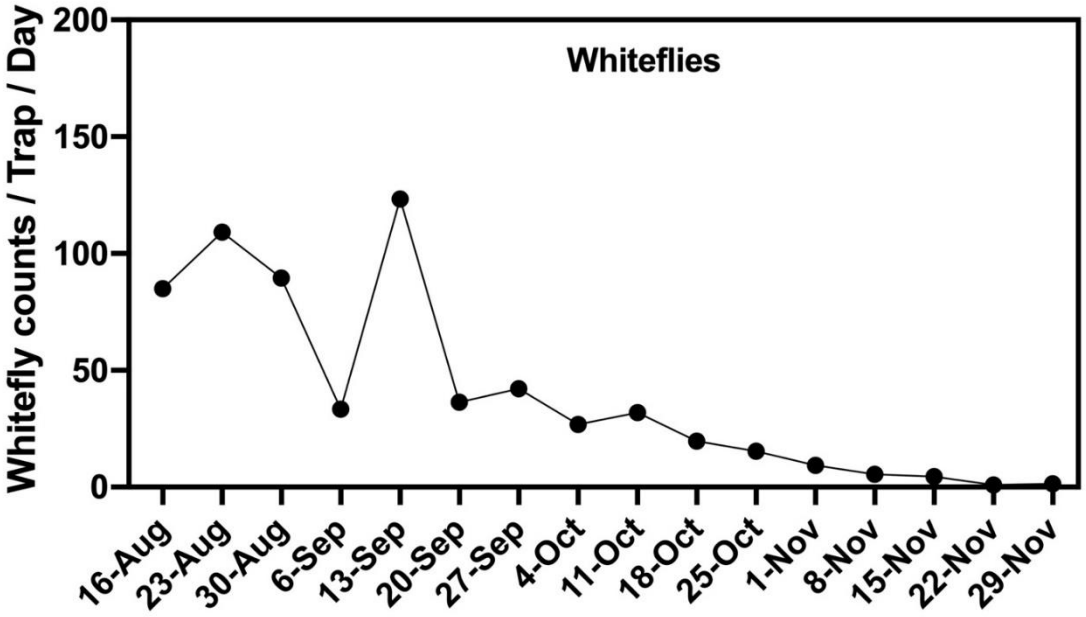
This project is supported by the Imperial County Agricultural Benefit Program grant for 3 years (2024-27).

Insect count updates for November 2024

The updated insect counts from the monitoring trap network are presented below. Each dot in the graph represents the average insect count from 19 traps across the Valley for that sampling week, and the value is expressed as pest counts per trap per day.

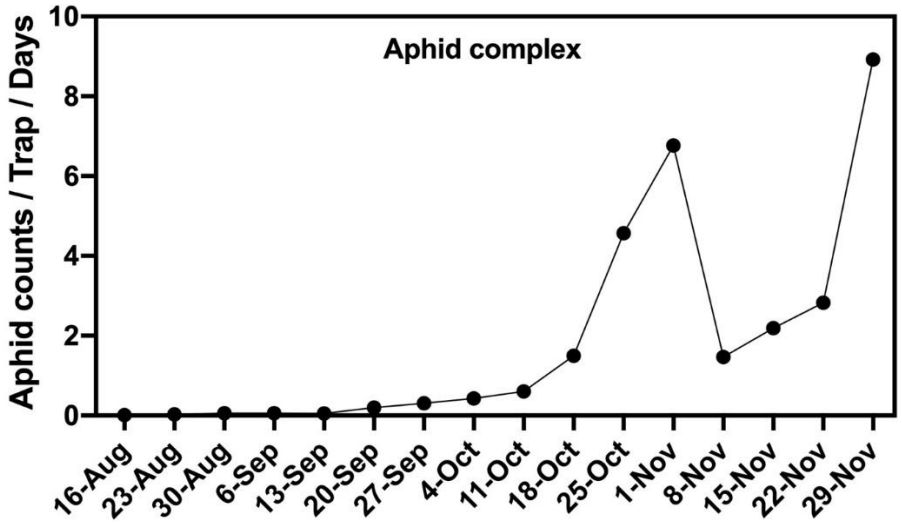
Whiteflies

The whitefly counts in the traps consisted mainly of sweetpotato whitefly (*Bemisia tabaci* MEAM1). Additionally, a small fraction of the total count (< 5%) comprises bandedwinged whiteflies, *Trialeurodes abutilonia*, and other minor species. We observed their numbers decreasing in the traps since mid-September.



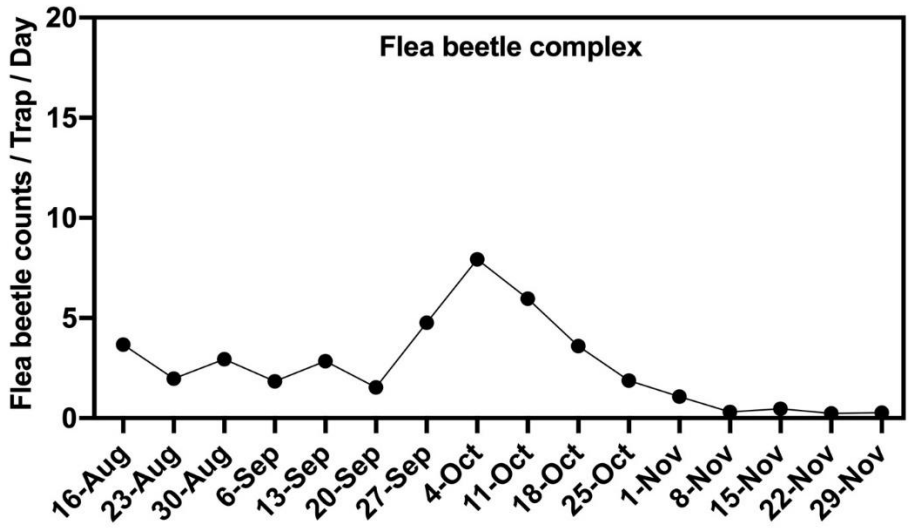
Aphids

The trap count data of aphids below do not focus on any single species but represent the aphid complex in the Valley. The trap capture data suggests that alate (winged) aphids were almost absent in the valley during August and until the first half of September. However, with the cooler weather, their numbers are overall increasing in the Imperial Valley.



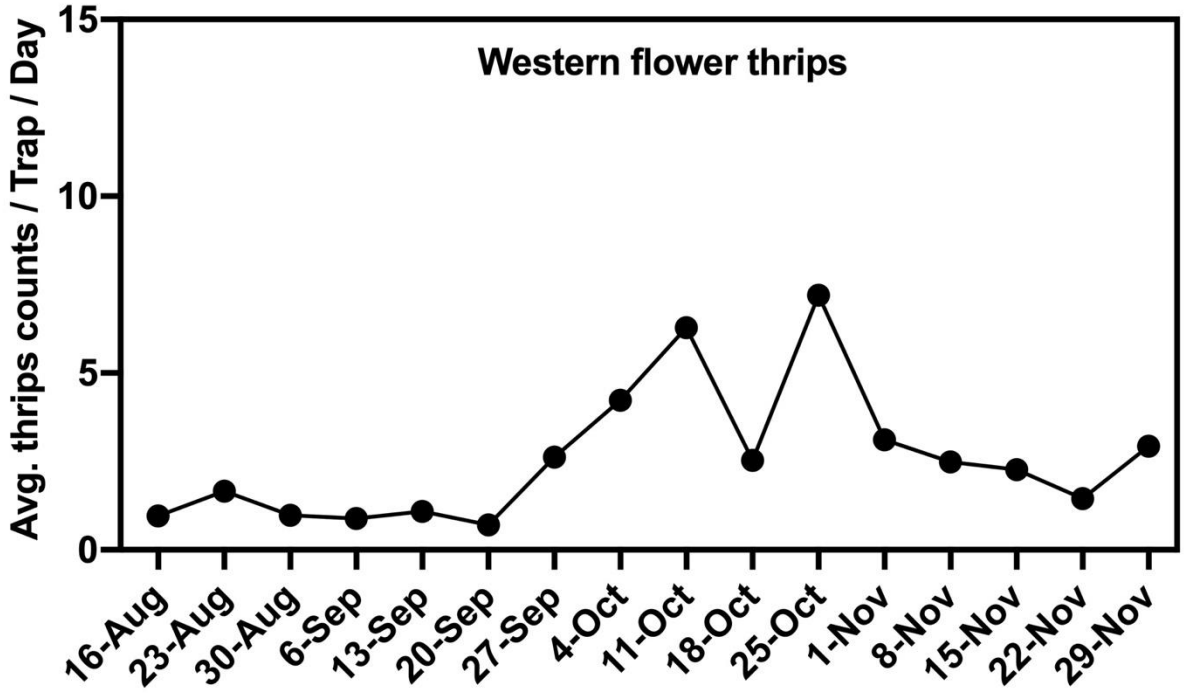
Flea beetles

The flea beetle counts in the traps comprised the pale-striped flea beetle, *Systena blanda*, desert corn flea beetle, *Chaetocnema ectypa,* and a few other minor species.



Western flower thrips

While the traps contained several thrip species, only western flower thrips, *Frankliniella occidentalis*, the major thrip species of concern for several crops in Imperial Valley, were counted to provide more specific data.



If you are interested in additional data from this project or have questions or comments, contact Arun Babu at (442) 265 -7708 or arbabu@ucanr.edu.

2025 Field and Vegetable Crops Guidelines

Cost: $40.00 for each

Available for purchase

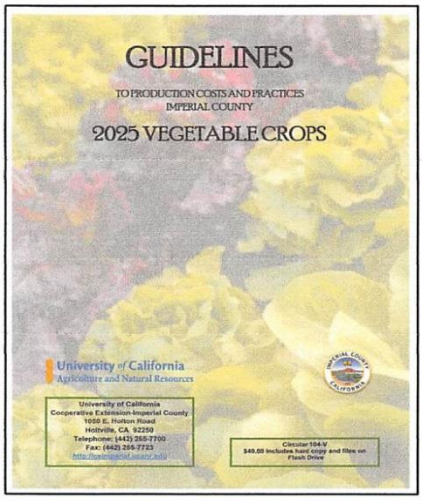
Either by Cash or Check only.

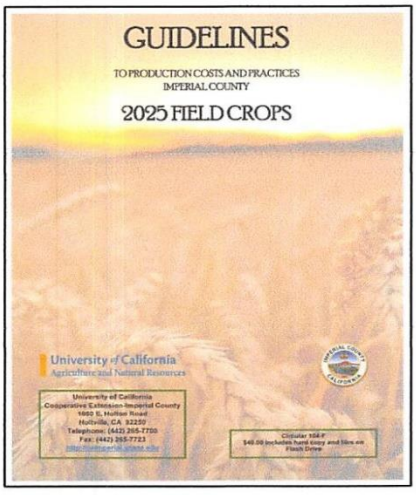
Please bring exact cash.

If paying by Check, make Check out to…

Imperial County Cooperative Extension

Credit Card purchases are not available.





IMPERIAL VALLEY CIMIS REPORT AND UC WATER MANAGEMENT RESOURCES

Ali Montazar, Irrigation and Water Management Advisor, UCCE Imperial, Riverside, and San Diego Counties

The reference evapotranspiration (ET_o) 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 ET_o by a crop coefficient (K_c) 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: http://www.cim is.water.ca.gov. Estimates of the average daily ET_o for the period of November 1 to January 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 (ET_o) in inch per day

Station	December		January		February	
	1-15	16-31	1-15	16-31	1-15	16-28
Calipatria	0.09	0.09	0.09	0.10	0.12	0.13
El Centro (Seeley)	0.10	0.09	0.10	0.11	0.13	0.15
Holtville (Meloland)	0.09	0.08	0.09	0.10	0.12	0.14

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 link below: http://ciwr.ucanr.edu/.