Area-wide Monitoring of Key Insect Pests Across the Imperial Valley: 04 March 2026 Updates

Written By: **Arun Babu**
[1]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, flea beetles, and Bermudagrass stem maggots 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.

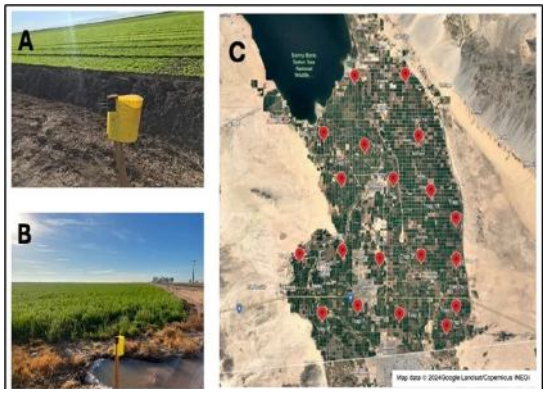

Figure 1 A &B. Yellow sticky traps in various fields, and C) Trap locations across the Imperial Valley

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 03 March 2026

The insect counts from the monitoring trap network are presented below (Figures 2, 3, 4, 5, and 6). 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. Currently, the trap counts (red line) indicate very low adult activity across the Imperial Valley, which is typical for this time of year.

Aphids. The trap-count data for aphids (Fig. 3) do not focus on any single species and represent the aphid complex in the Valley. Currently, we are observing medium alate (winged) aphid population pressure in the traps, equal to the seasonal average.

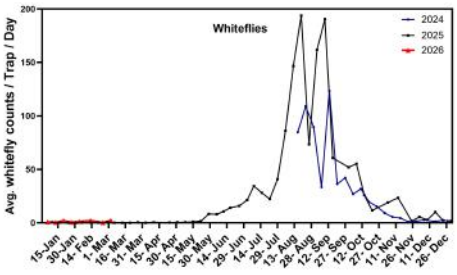

Figure 2. Whitefly counts from the traps

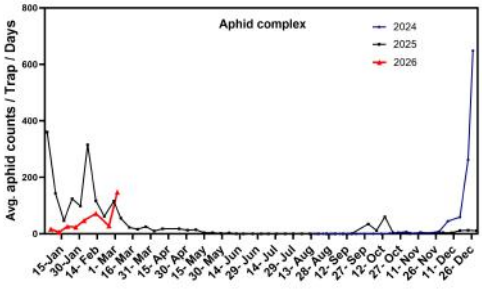

Figure 3. Aphids count from the traps

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 slightly higher population pressure than typical March population levels.

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 in the Imperial Valley, were counted. Currently, we are observing slightly lower than the seasonal average for this time of the year (Fig. 5). However, their population is rapidly increasing across the valley for the last two weeks.

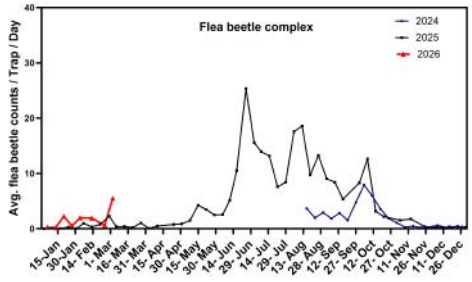

Figure 4. Flea beetle count from the traps

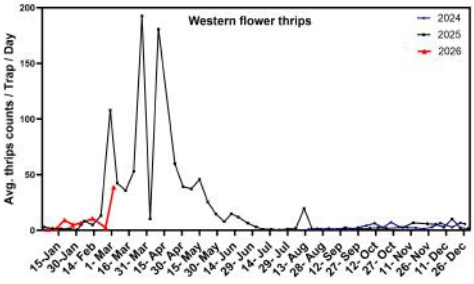

Figure 5. Western flower thrips count from the traps

Bermudagrass stem maggot. Bermudagrass stem maggot (BSM; *Atherigona reversura* Villeneuve) is a relatively new invasive pest species in the Imperial Valley. We had higher-than-normal pest pressure in late summer and fall of 2025. Anticipating that a larger residual pest population from 2025 will serve as the base for the 2026 season, we are expanding the monitoring program to include this pest in future pest population updates. As shown in the figure, from July 2025, we observed elevated BSM adult activity across the Imperial Valley (Fig. 6 on page 3). Adult counts declined over the Dec-Jan due to low temperatures, and given that their only host, Bermudagrass, was mostly dormant. As the weather gradually warms, and Bermudagrass fields are back to actively growing in the Valley, we are observing BSM population increasing across the Valley. While the current adult counts in the traps still remain relatively low (Fig. 6, red line for 2026 counts), recent counts indicate that the population is increasing and is slightly above the typical population pressure for this time of year.

Vist this recent Ag. Briefs article (on page 101) for more about this pest, its biology, identification, damage symptom and management options.

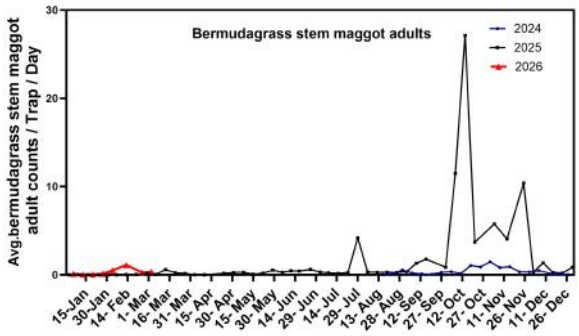

Figure 6. Bermudagrass stem maggot adult count from the traps.

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

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