Area-wide Monitoring of Key Insect Pests Across the Imperial Valley: 01 June 2026 Updates

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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.

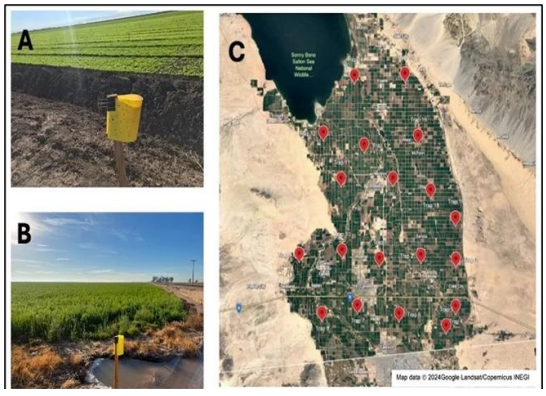

Figure 1 A &B. Yellow sticky traps in various fields, and C) Trap locations across the Imperial Valley

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 29 May 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 (Fig. 2, red line) indicate very high adult whitefly activity, above average for the time of the 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 near-zero alate (winged) aphid population pressure in the traps, which is typical of the seasonal average.

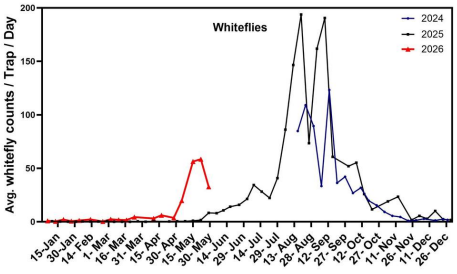

Figure 2. Whitefly counts from the traps

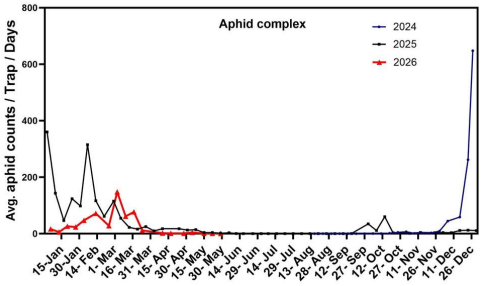

Figure 3. Aphids count from the traps

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 low adult population pressure across Imperial Valley, below the seasonal average.

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 relatively low population pressure in our traps (Fig. 5).

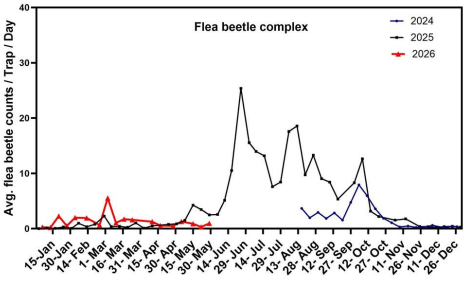

Figure 4. Flea beetle count from the traps

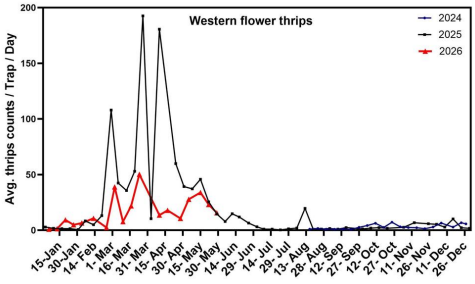

Figure 5. Western flower thrips count from the traps

Bermudagrass stem maggot. Bermudagrass stem maggot (BSM; *Atherigona reversura* Villeneuve) is a relatively new invasive pest species in the Imperial Valley. Current adult counts in the traps are relatively low, comparable to the 2025 average during the time of the season (Fig. 6, red line for 2026 counts).

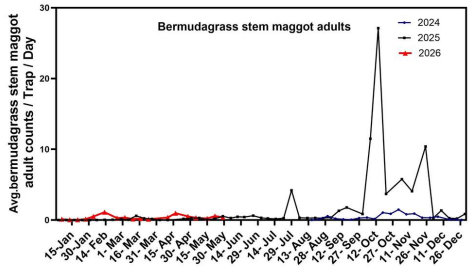

Figure 6. Bermudagrass stem maggot adult count from the traps.

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

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