THE UNIVERSITY OF ARIZONA | COLLEGE OF AGRICULTURE AND LIFE SCIENCES
COOPERATIVE EXTENSION
Yuma Agricultural Center

Pest Abundance on Desert Produce and Melon Crops – Fall 2024

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Every season is unique, and this fall was no different in terms of insect pressure on desert produce crops. A quick look at both recent and historic data on pest abundance recorded from our University of Arizona research plots and areawide trapping suggests that insect pressure was unusual for several pests in the Fall 2024 growing season. For a look at the data see graphs below.

Whitefly/CYSDV: **Whitefly** populations in fall melons were lighter this fall compared to previous years, and areawide, adult movement was below average for much of the fall. Overall, adult counts in traps placed in commercial melon fields continued to be low, slightly higher than last year. CYSDV incidence in cantaloupe fields was considerably lower than last fall, highest in the Dome Valley/Wellton areas (~30%). In contrast, virus incidence in Texas Hill, Roll, and Tacna and was well below 10%. Surprisingly, incidence in fields in the Yuma Valley was estimated at ~5% where historically virus has been heavier. Whitefly nymph populations were significantly lower in experimental broccoli plots at the Yuma Ag Center (YAC) in 2024, and apparently light and variable throughout the desert growing area based on PCA reports.

Beet armyworm (BAW), cabbage looper (CL), and corn earworm (CEW): **BAW** pressure this fall was very heavy, but **CL** was almost non-existent. In our research plots, BAW were active well into early November due to unusually high temperatures during October that were ideal for development and oviposition. Worm pressure became sporadic later in Nov due to below average cool temperatures. Pheromone trap catches for BAW were above average during November, while CL trap counts were well below average throughout the fall. CEW trap catches peaked in early October and failed to be much of an issue at harvest in most locations. However, we did receive reports from PCAs battling CEW in lettuce throughout the area, particularly in Dome Valley and Wellton.

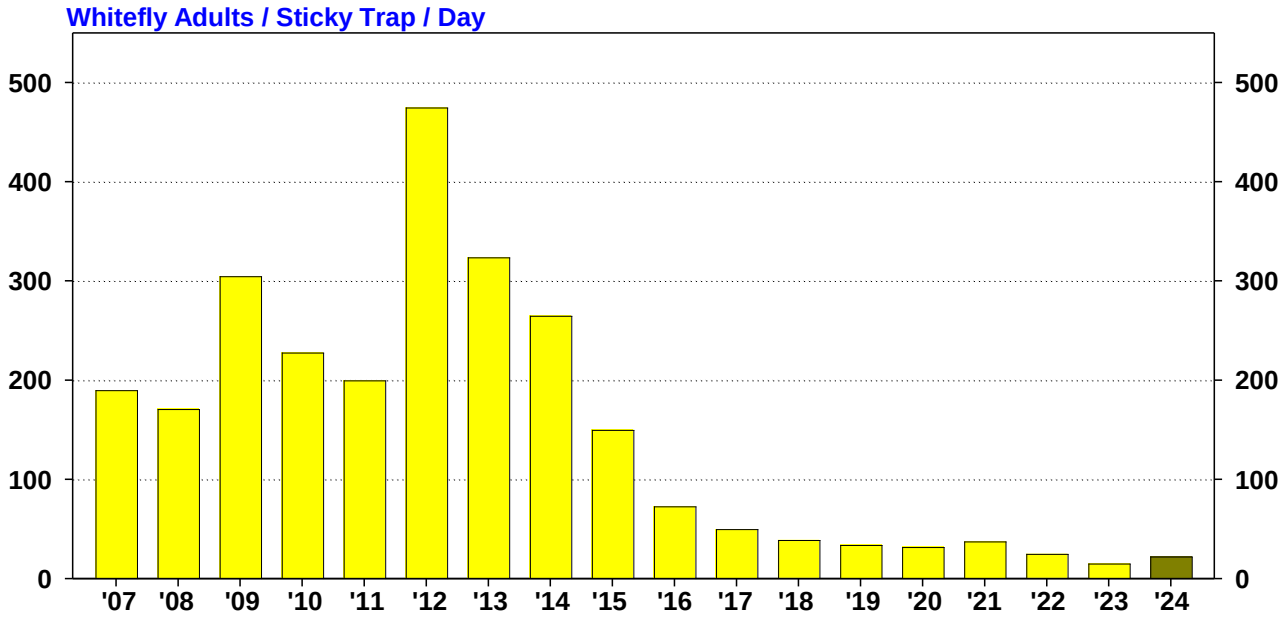
Diamondback moth (DBM): **DBM** was not a problem again for most desert growers, but control issues continue for several PCAs on transplanted cabbage and cauliflower originating from coastal California. In several transplanted fields, Verimark was providing less than 14 days of residual control, and several PCAs have reported poor-marginal residual control with standard foliar insecticides. To date, there have been no reports of yield losses, but control costs for some PCAs have been significantly higher than normal. In our research plots, the larval populations peaked in early November and the most abundant we've seen since 2017. Field efficacy trials in broccoli and cabbage showed that the populations were very susceptible to all industry standard insecticides. Areawide pheromone trapping showed that DBM moth activity peaked well above average in mid-October in traps located near transplanted brassica fields.

Aphids **Flights** of winged adults started out a little later this year with significant trap captures beginning in late October. Overall, winged aphid populations have been the highest we've seen during Nov in the past 10 years. We've had several reports from PCAs throughout the area (Bard, Yuma Valley, Wellton and Dome) of small aphid colonies showing up on lettuce and brassica crops. We're also picking up small colonies at YAC, more than we typically see in the fall. Most of the aphids colonizing produce cops have been green peach aphids, with several instances of the "red morph" appearing. So far, no reports of lettuce aphid on fall lettuce, unlike last season when lettuce aphid was found as early as November.

Western Flower Thrips (WFT) / Bean thrips (BT) / INSV: **WFT** pressure on non-treated lettuce plants at YAC was lighter than the past several seasons. Larvae were most abundant in late October and declined significantly during Nov. Areawide trapping showed that adult activity was below average for most of the fall, with their peak activity in early October. Adult movement has declined significantly since then. Although INSV infected plants in organic transplants were again detected in early November in Tacna, to date virus incidence in surrounding direct-seeded lettuce remains non-detectable in these areas. Bean thrips showed up in Yuma in mid-October following heavy winds out of the W-NW. We speculate that these populations are carried into the Yuma Valley from Imperial Valley where BT are common on alfalfa.

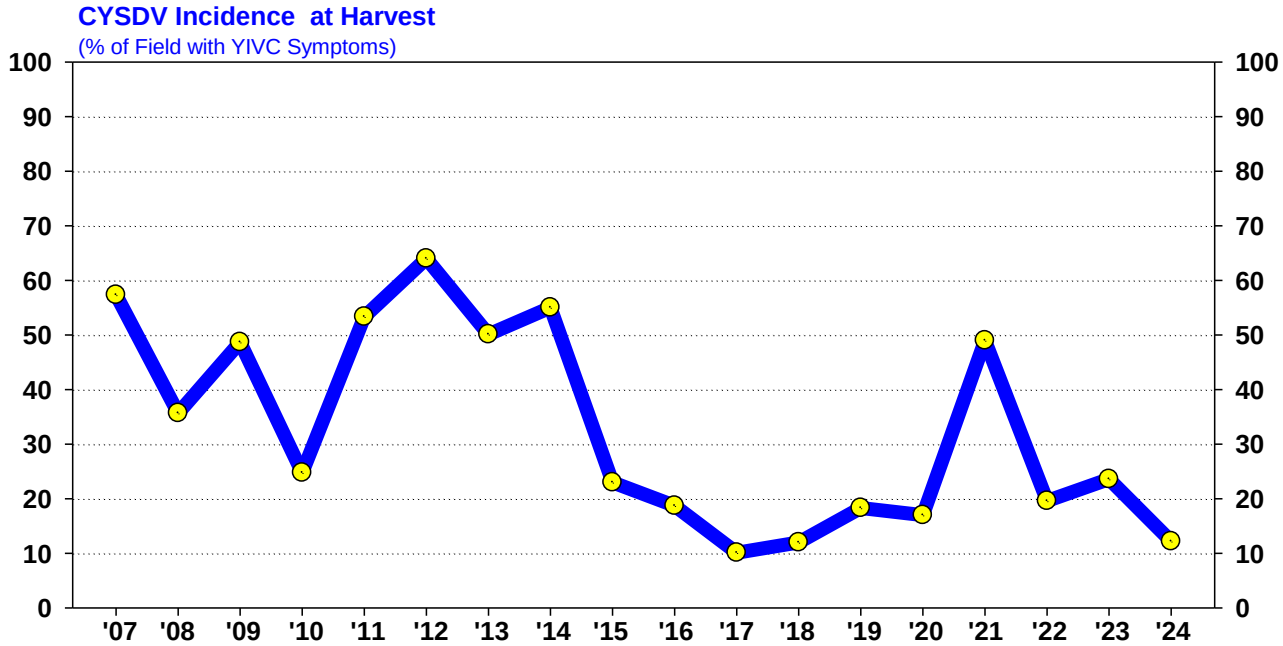
Whitefly Abundance on Yellow Sticky Traps in Commercial Fall Melon Fields

Wellton, Tacna, Roll, and Texas Hill (Aug – Oct) 2007-2024



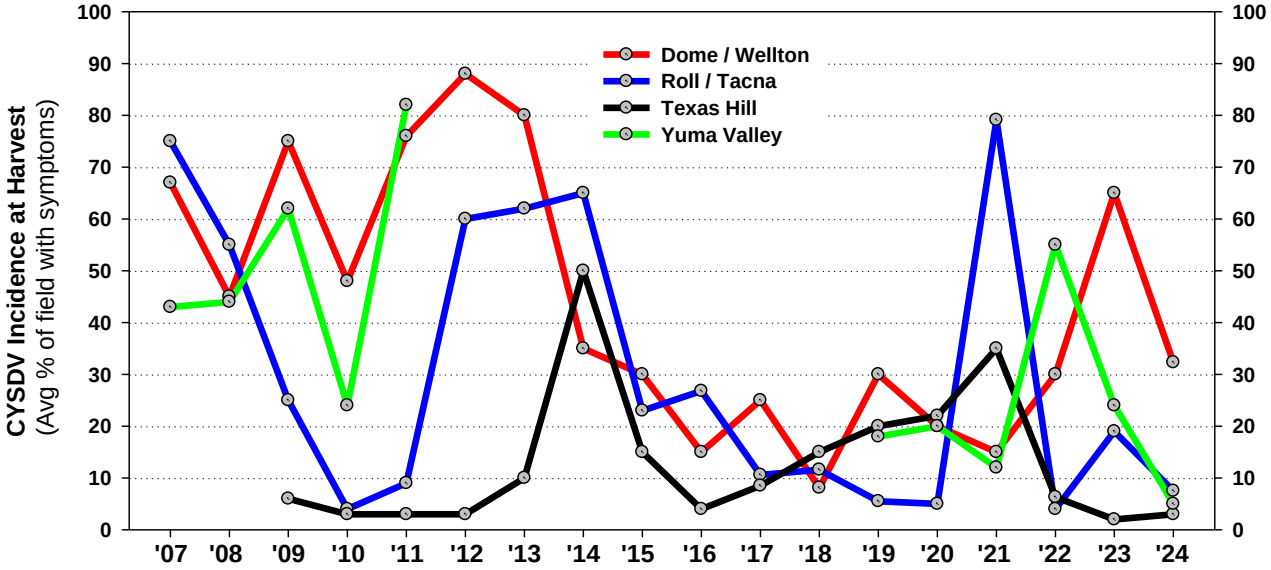
Areawide CYSDV Incidence at Harvest in Commercial Fall Melon Fields

Dome Valley, Wellton, Tacna, Roll, Texas Hill and Yuma Valley, 2007-2024



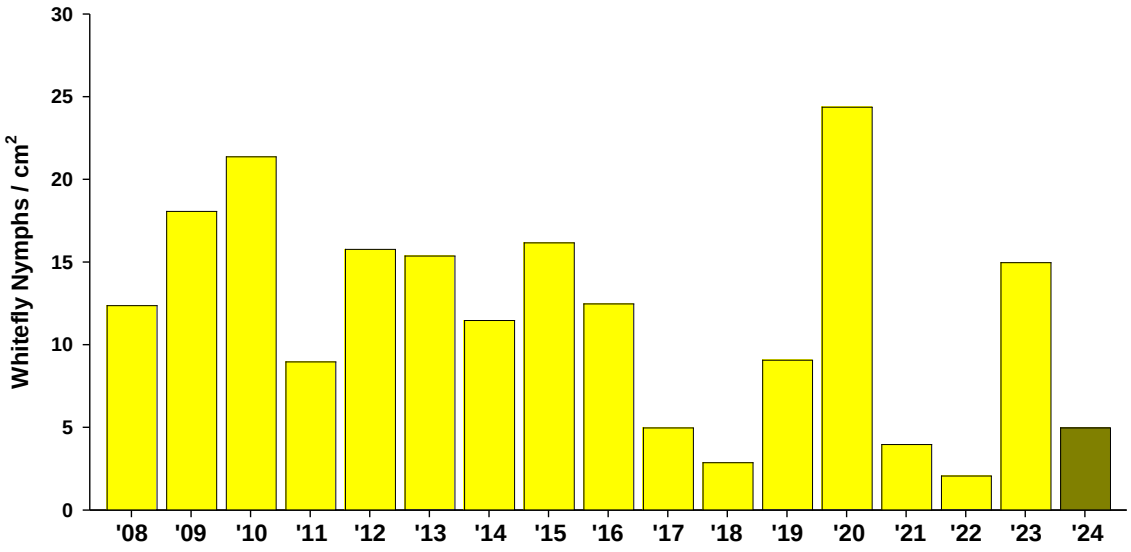
CYSDV Incidence in Commercial Fall Melon Fields at Harvest

Dome Valley / Wellton, Tacna/ Roll, Texas Hill, and Yuma Valley, 2007-2024



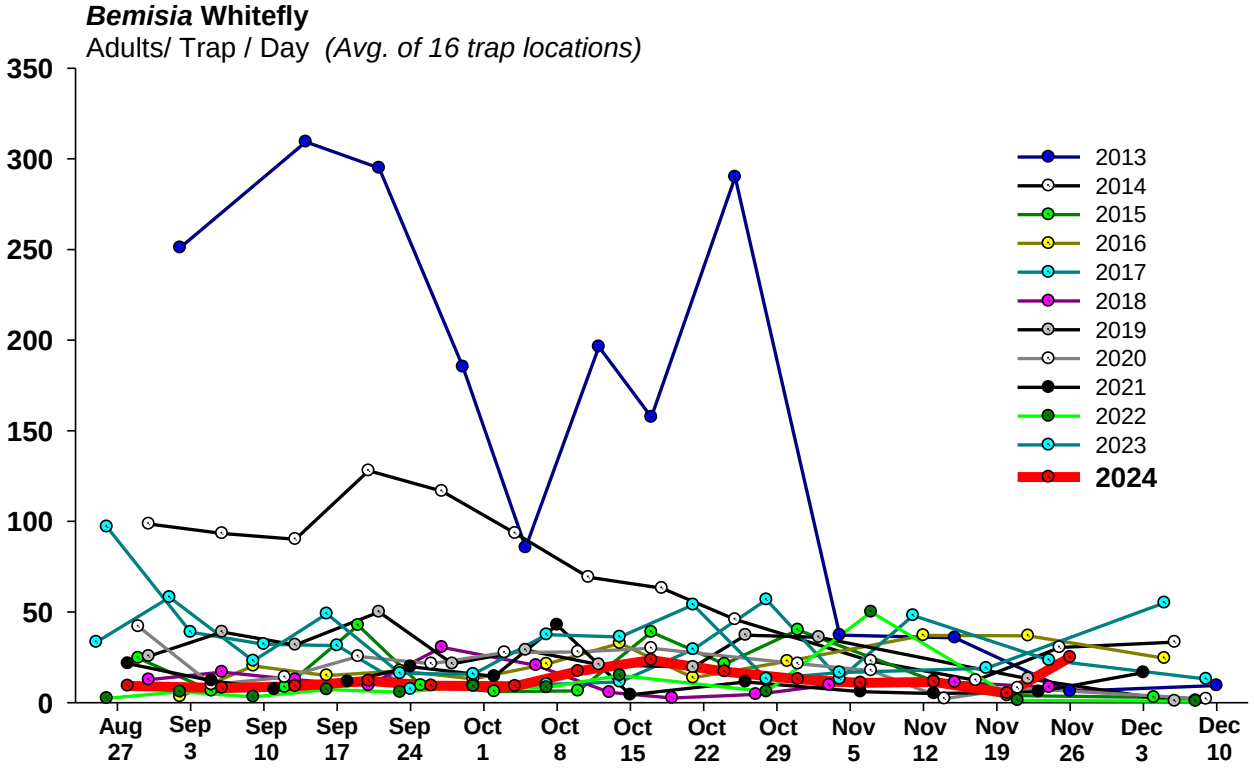
Sweet potato Whitefly Nymph Abundance in Non-Treated *Brassica* Crops

UA Yuma Ag Center, Sept- Nov, 2008-2024



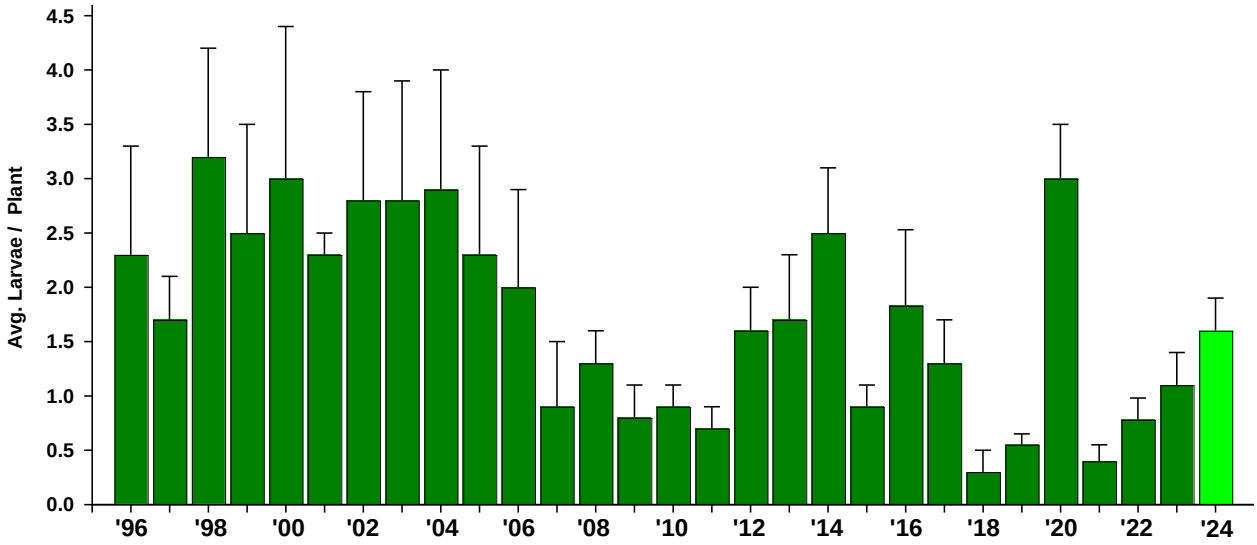
Areawide Whitefly Adult Abundance from Sticky Trap Captures

2013-2024



Beet Armyworm/Cabbage looper Abundance in Non-treated Lettuce

UA Yuma Ag Center, Sept- Nov, 1996-2024

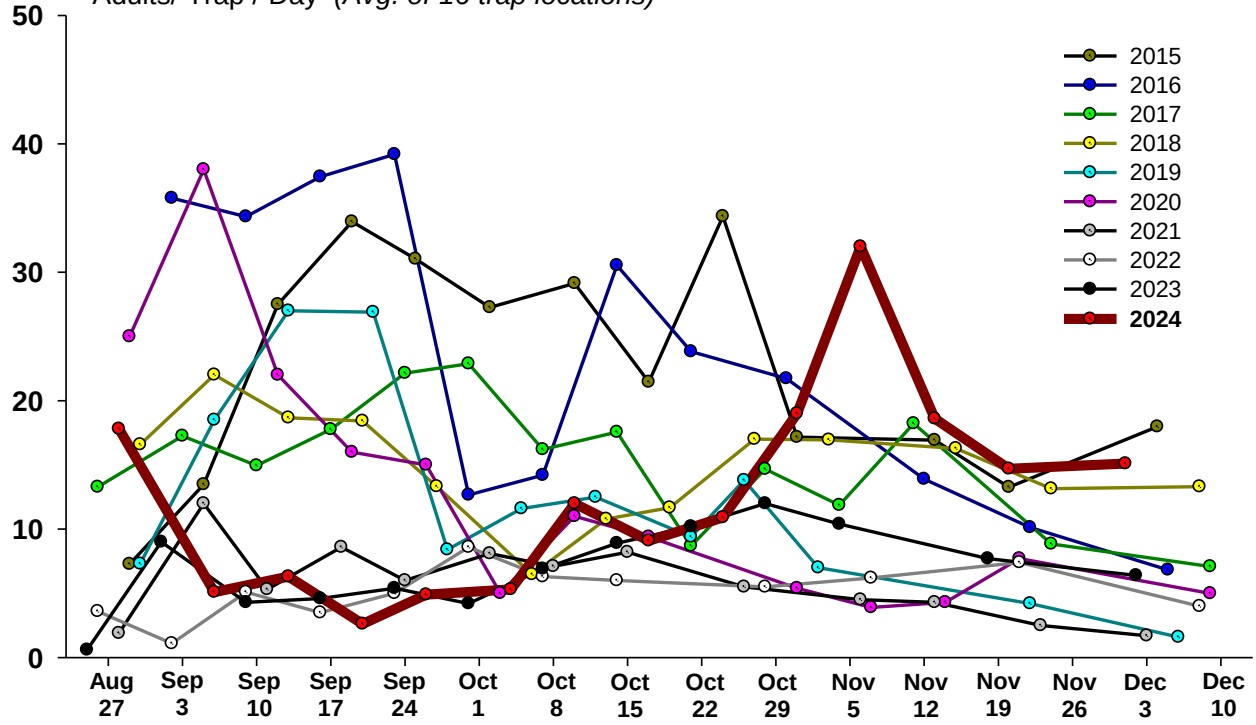


Areawide Moth Abundance from Pheromone Trap Captures

2013-2024

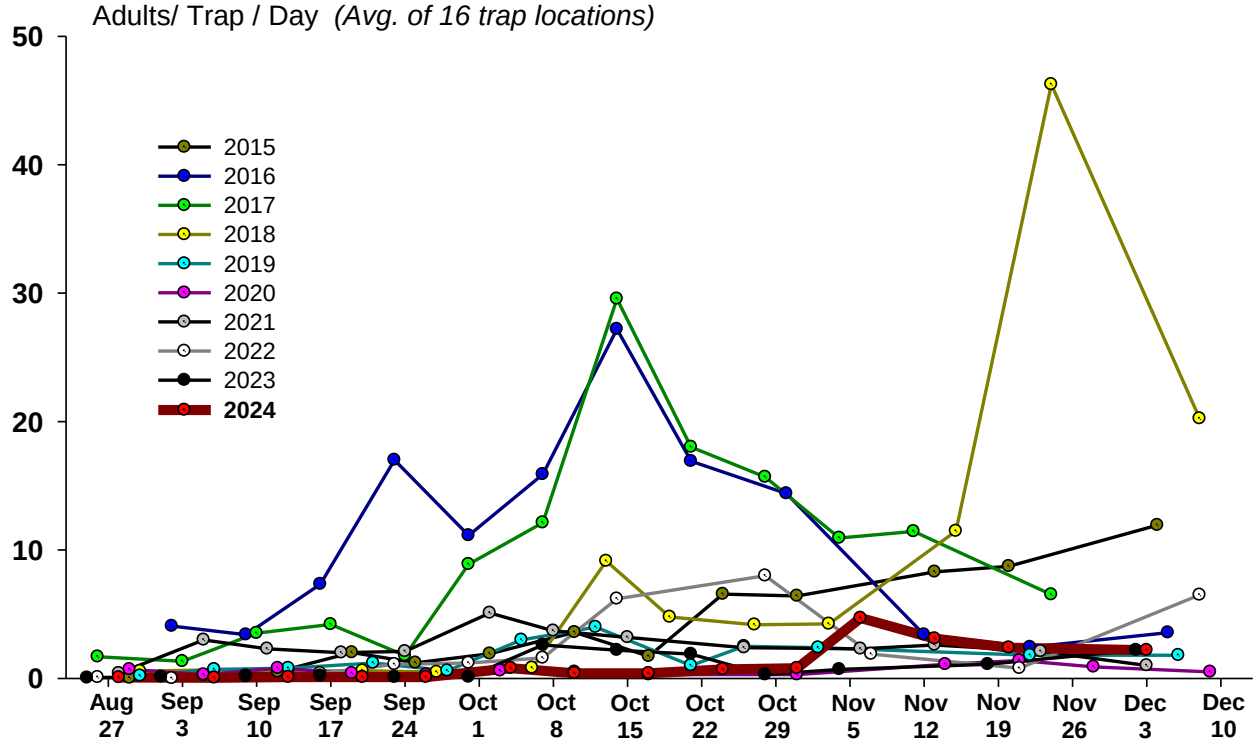
Beet Armyworm

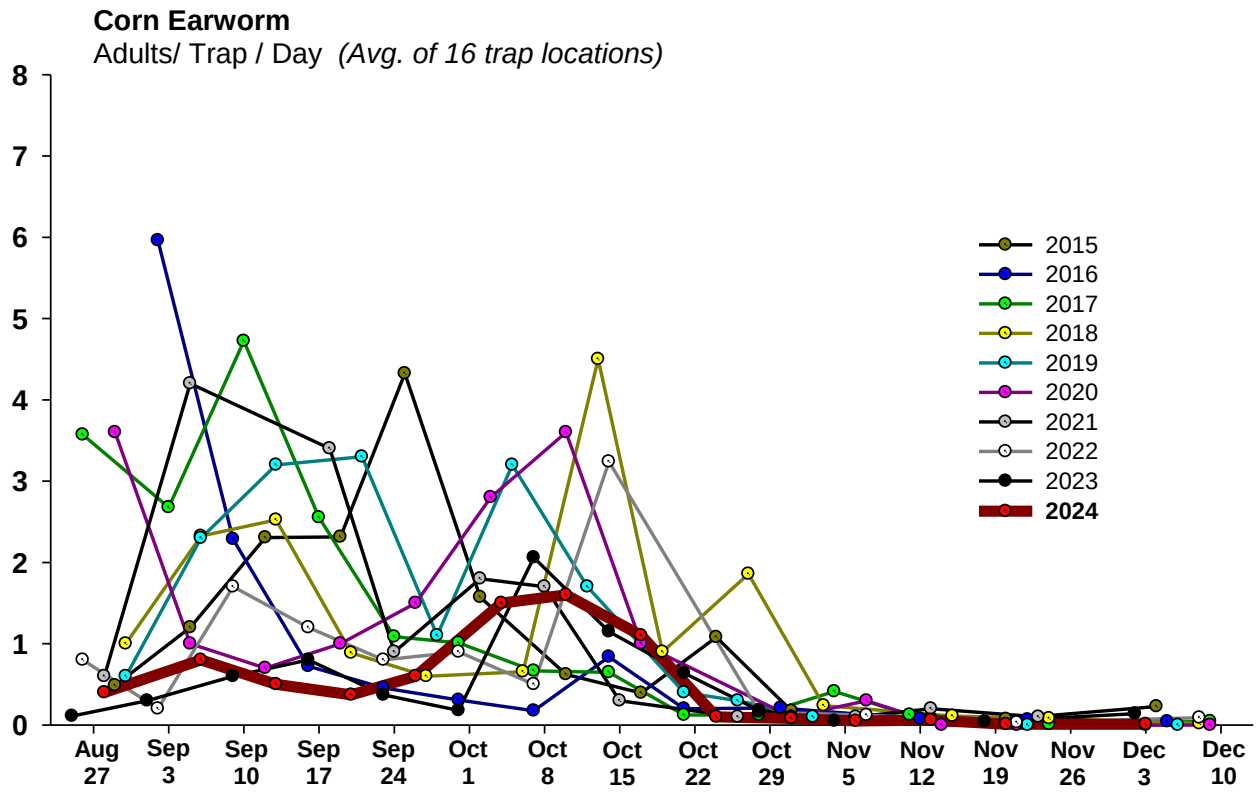
Adults/ Trap / Day *(Avg. of 16 trap locations)*



Cabbage Looper

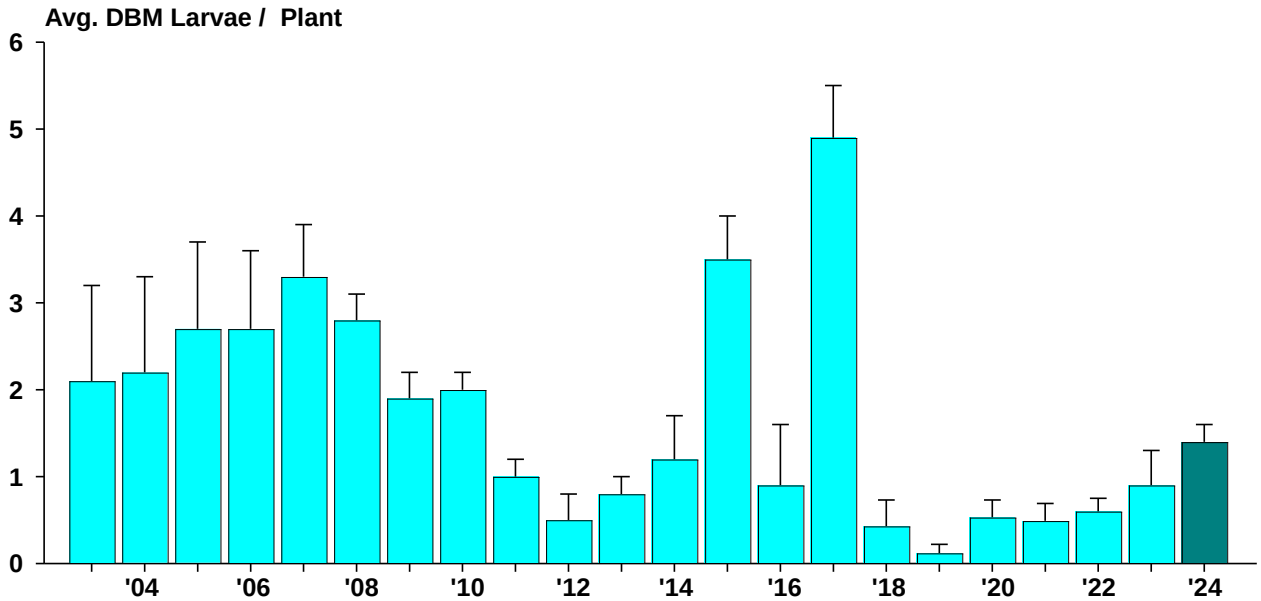
Adults/ Trap / Day *(Avg. of 16 trap locations)*





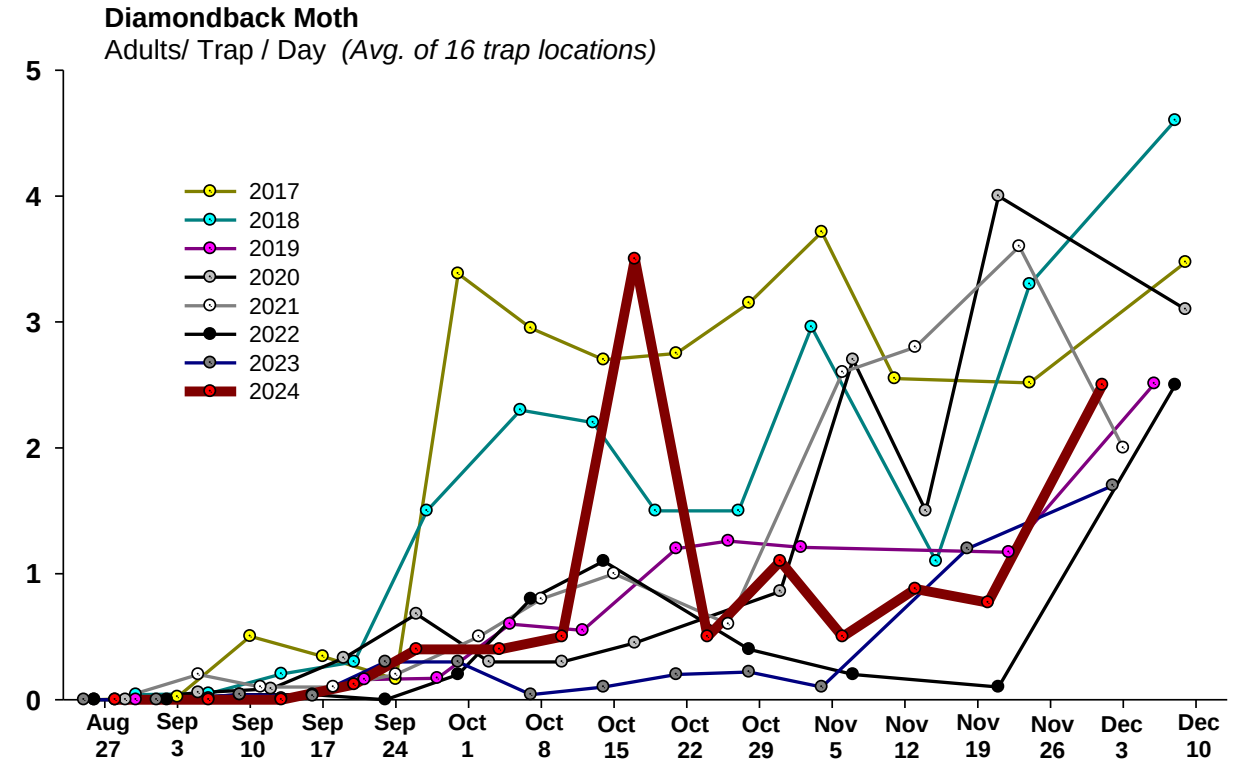
Diamondback Moth Larvae Abundance on Non-Treated Cole Crops

UA Yuma Ag Center, 2001-2024

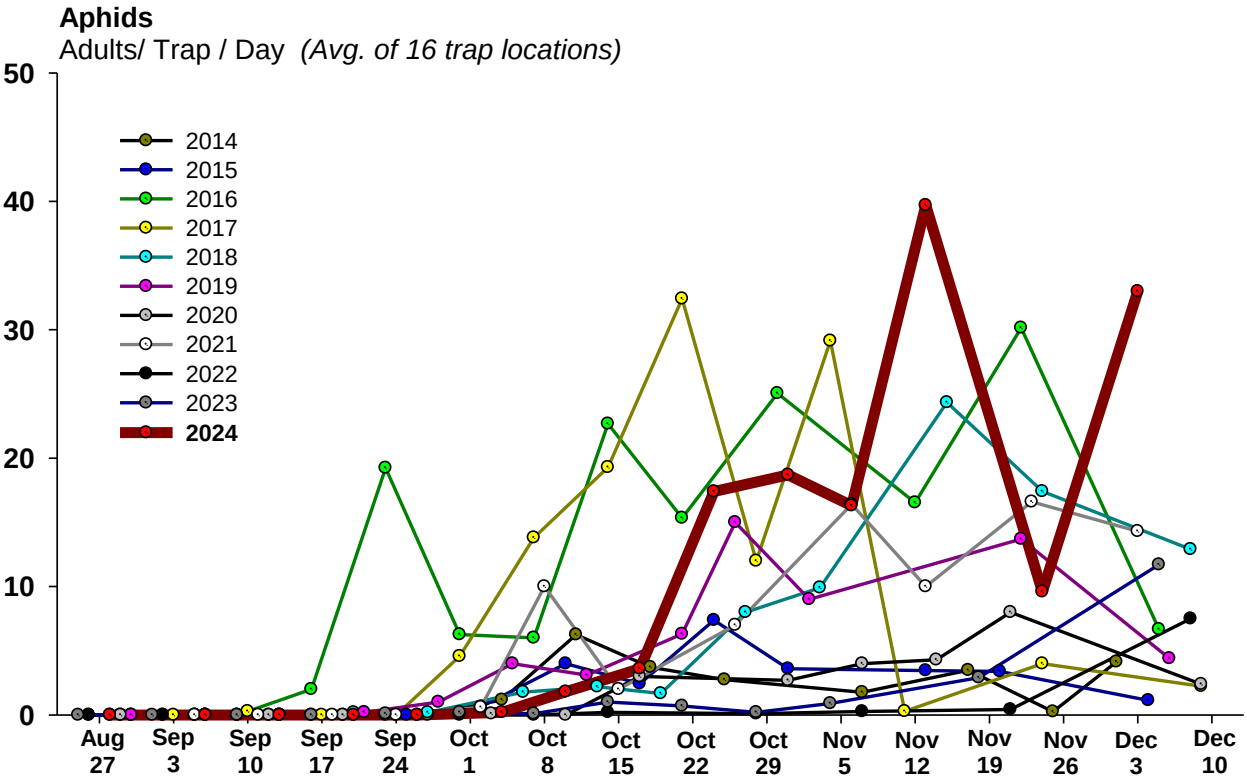


Areawide Diamondback Moth Adult Activity in Pheromone Traps

Sep – Dec, 2017-2024

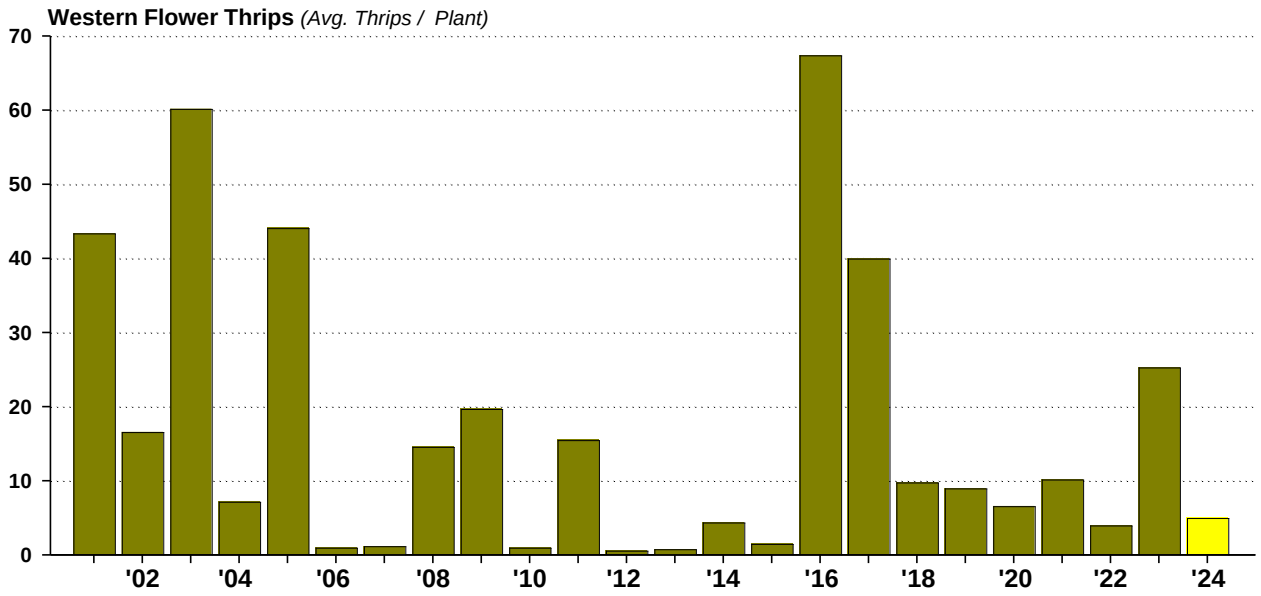


Areawide Fall Aphid Immigration, Yuma County, 2013-2024



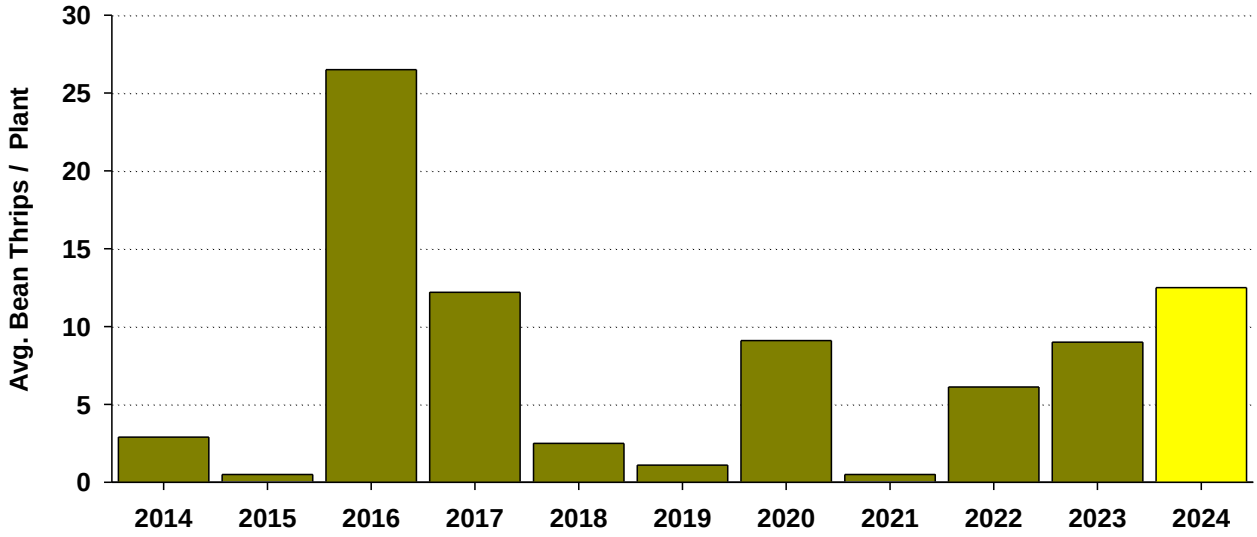
Western Flower Thrips Abundance on Non-treated Fall Lettuce (Oct-Nov)

UA - Yuma Ag Center, 2001-2024



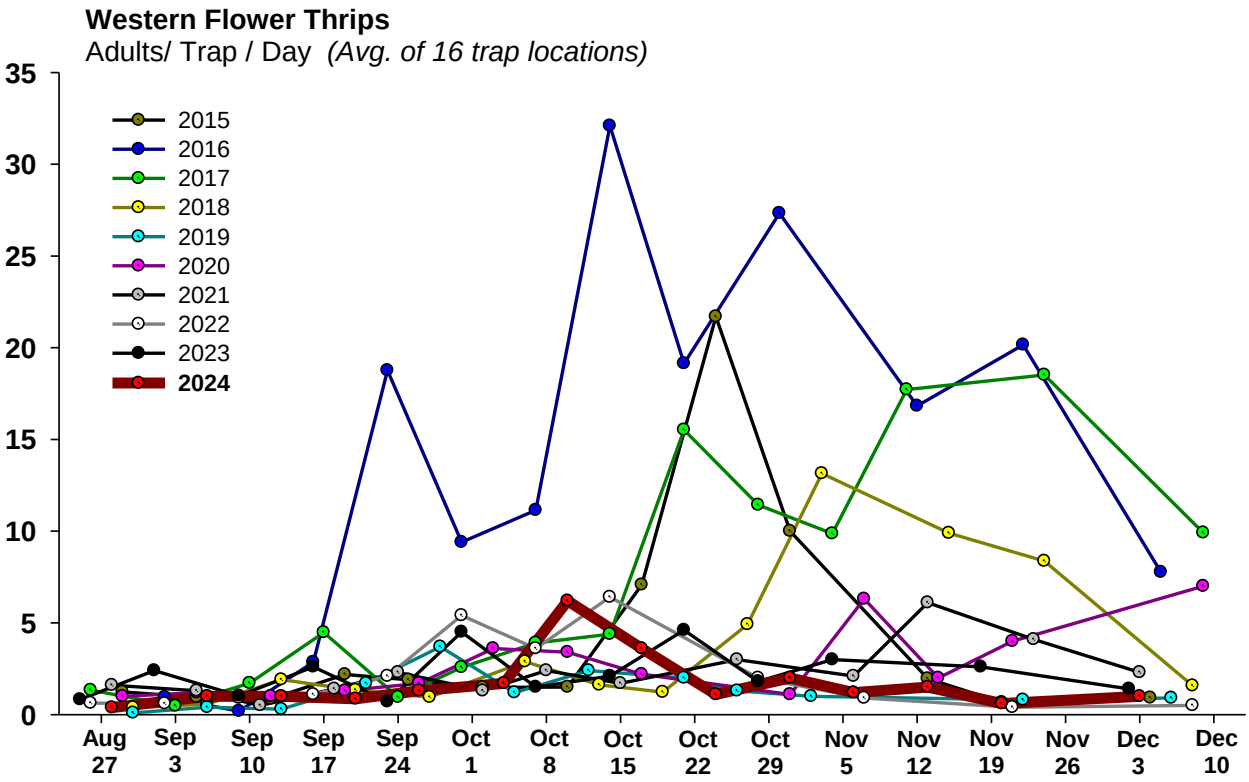
Bean Thrips Abundance on Untreated Fall Lettuce (Oct-Nov)

UA - Yuma Ag Center, 2014-2024

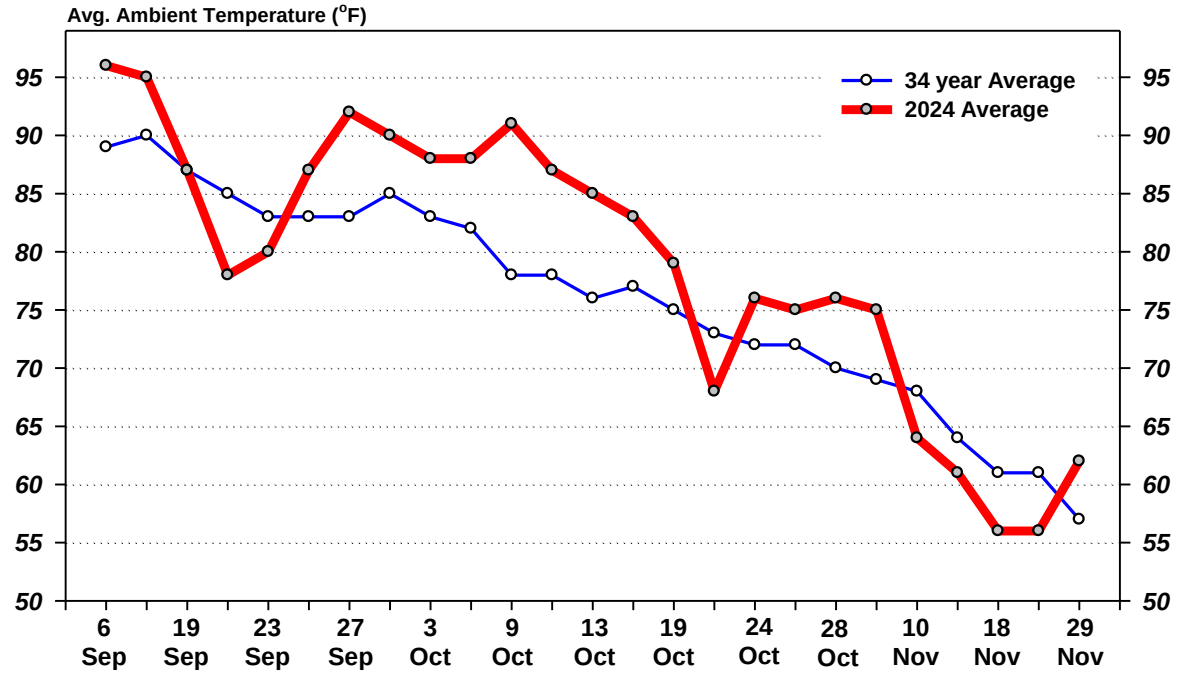


Areawide Thrips Adult Abundance from Sticky Trap Captures

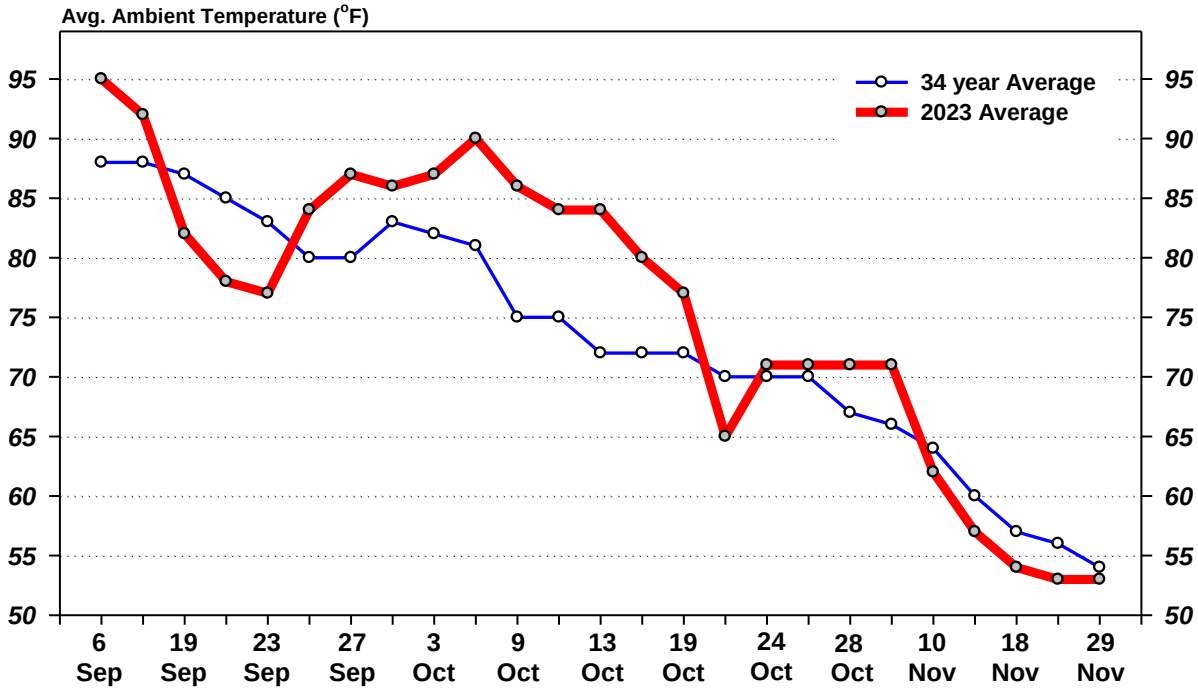
2013-2024



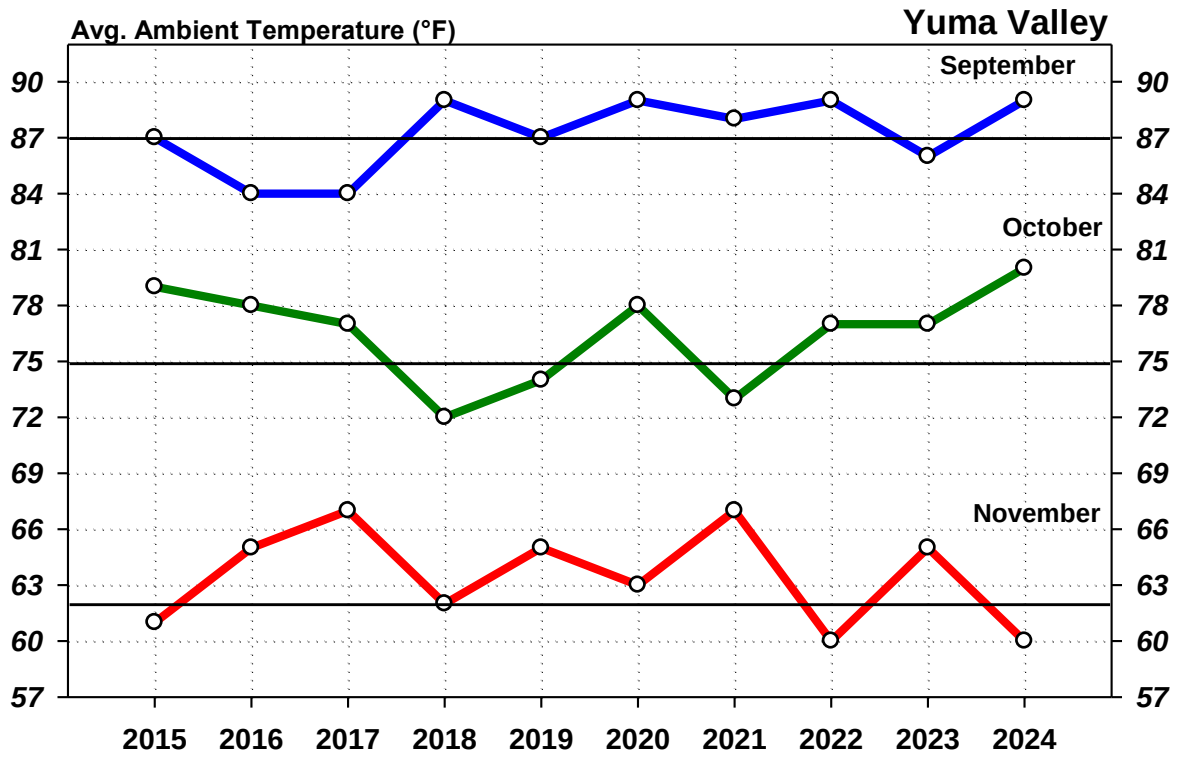
Average Weekly Fall Temperatures - Yuma Valley, 2024



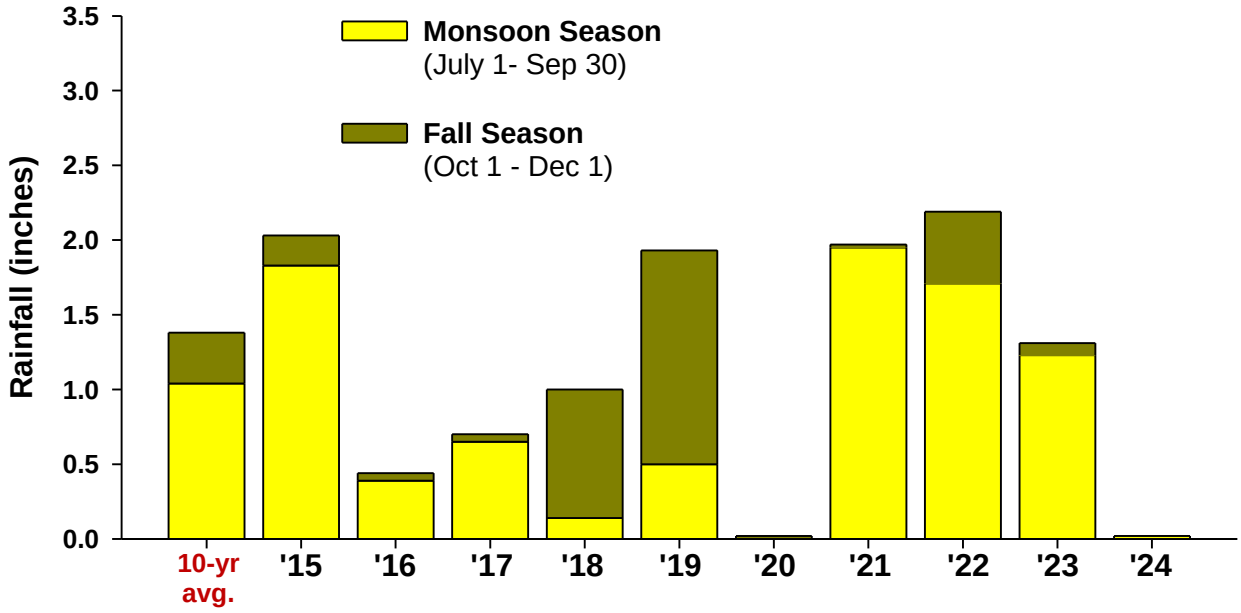
Average Weekly Fall Temperatures - Roll, 2024



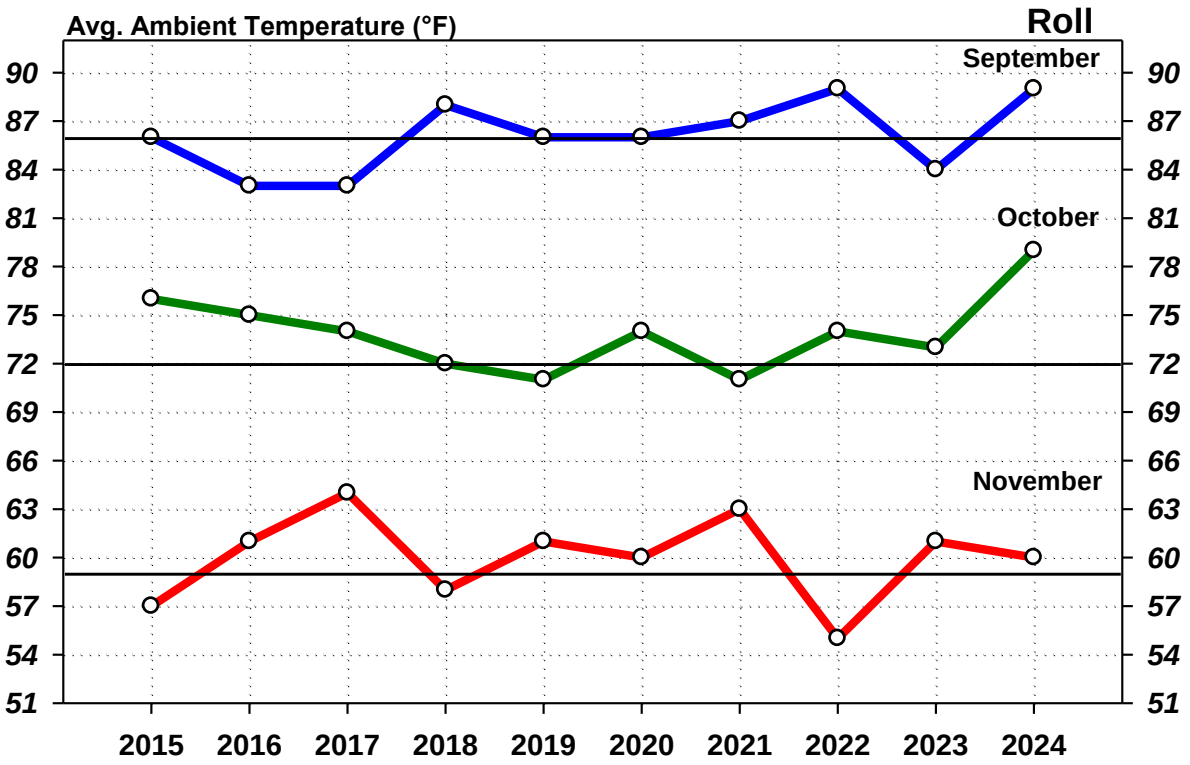
Ten Year Trend in Average Monthly Fall Temperatures- Yuma Valley, 2014-24



Ten Year Trend in Average Rainfall - Yuma Valley, 2014-2024



Ten Year Trend in Average Monthly Fall Temperatures – Roll, 2014-2023



Ten Year Trend in Average Rainfall – Roll, 2014-2023