

## Pest Abundance on Desert Produce and Melon Crops – Fall 2023

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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 and sampling suggests that insect pressure was unusual for several pests. 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 above average. However, adult counts in traps placed in commercial melon fields were the lowest we've seen in 17 years. CYSDV incidence in cantaloupe fields was slightly higher than experienced last fall and was unusually high in the Dome/Wellton areas. In contrast, virus incidence in Texas Hill in 2023 was below 5% and was estimated at ~25% in fields produced in the Yuma Valley where historically virus has been heavier. Whitefly nymph populations were significantly higher in experimental broccoli and cauliflower plots at the Yuma Ag Center (YAC) in 2023, but apparently light throughout the desert growing area based on few reports from PCAs.

**Beet armyworm (BAW), cabbage looper (CL), and corn earworm (CEW):** BAW and CL pressure in the early fall was moderate, although still below levels seen in 2020. BAW and CL larval pressure was consistently present through much of November due to ideal temperature for development and oviposition. Worm pressure has been sporadic since then, likely due to cooler temperatures in the past 2-3 weeks. Pheromone trap catches for both BAW and CL were below average. 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.

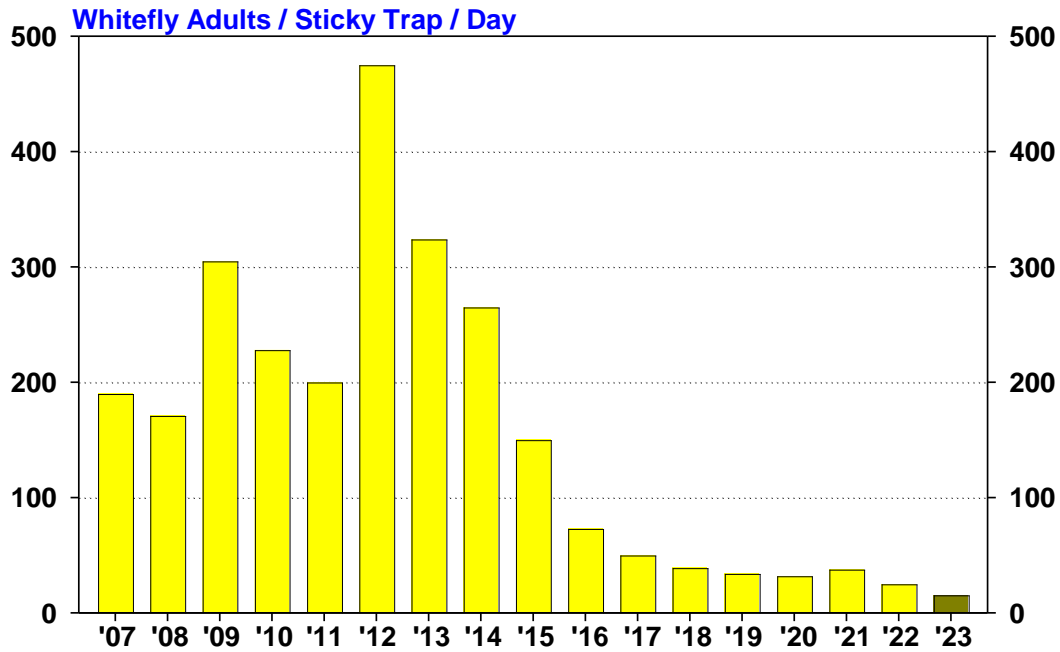
**Diamondback moth (DBM):** DBM was not a problem again for local desert growers in the fall of 2023. PCAs began reporting the presence of larvae in late October but pressure never built up much after that. Areawide pheromone trapping showed that DBM moth activity began later this fall and on average, much lower than we typically find. However, trap counts began to increase rapidly during November. At YAC, the larval populations peaked during 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.

**Aphids** Flights of winged adults started out much later this year with significant trap captures beginning in November. Overall, winged aphid populations have been the lightest we've seen during Oct in many years. However, trap counts have increased significantly since mid-November in the Yuma and Gila Valleys consistent with the recent winds out of the N-NW. We did receive reports of green peach aphid nymphs colonizing lettuce and brassica crops in October, but no reports for the past several weeks. We've had a few reports recently of lettuce aphid showing up in the Wellton area in conventional lettuce fields downwind of organic romaine transplants.

**Western Flower Thrips (WFT) / INSV:** WFT pressure on non-treated lettuce plants at YAC was higher than the past several seasons. Areawide trapping showed that adult activity was average during their peak activity in October, but movement has declined significantly thereafter. Traps placed on edges of lettuce fields showed that WFT activity was higher than last fall. Adult movement peaked in all crops around early-mid October, coinciding with melon and alfalfa harvests. In fall lettuce, adult and larvae densities on plants were higher than in fall 2022, especially during November. Although INSV infected plants in organic transplants were again detected in October in Tacna, Roll, and Yuma Valley, to date virus incidence in surrounding direct-seeded lettuce remains non-detectable in these areas.

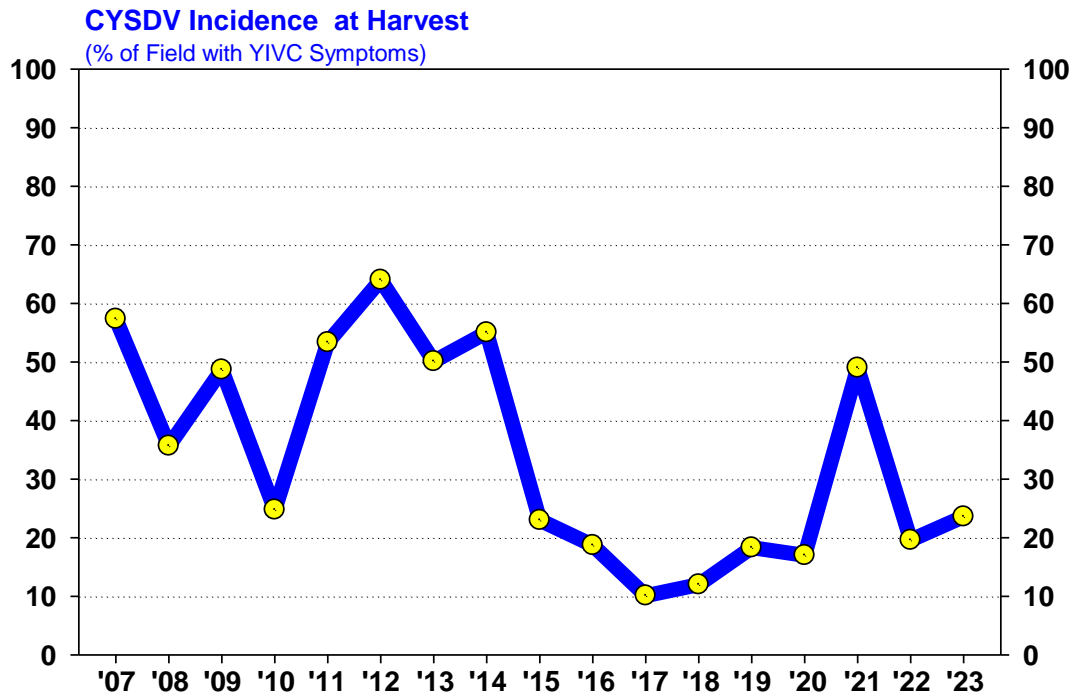
## Whitefly Abundance on Yellow Sticky Traps in Commercial Fall Melon Fields

Wellton, Tacna, Roll, and Texas Hill (Aug – Oct) 2007-2023



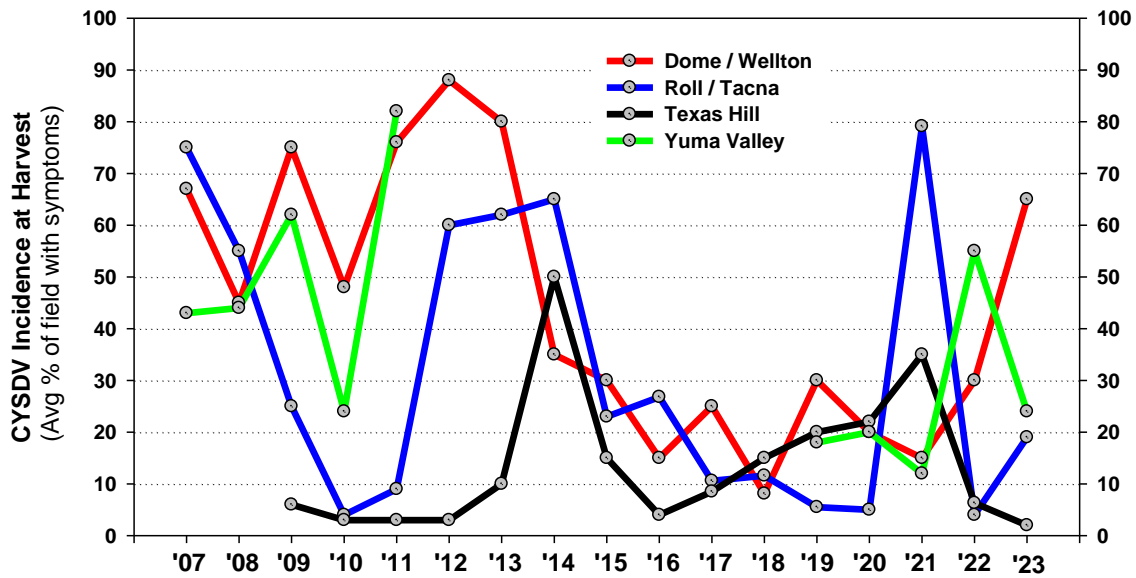
## Areawide CYSDV Incidence in Commercial Fall Melon Fields at Harvest

Dome Valley / Wellton, Tacna/ Roll, Texas Hill and Yuma Valley, 2007-2023



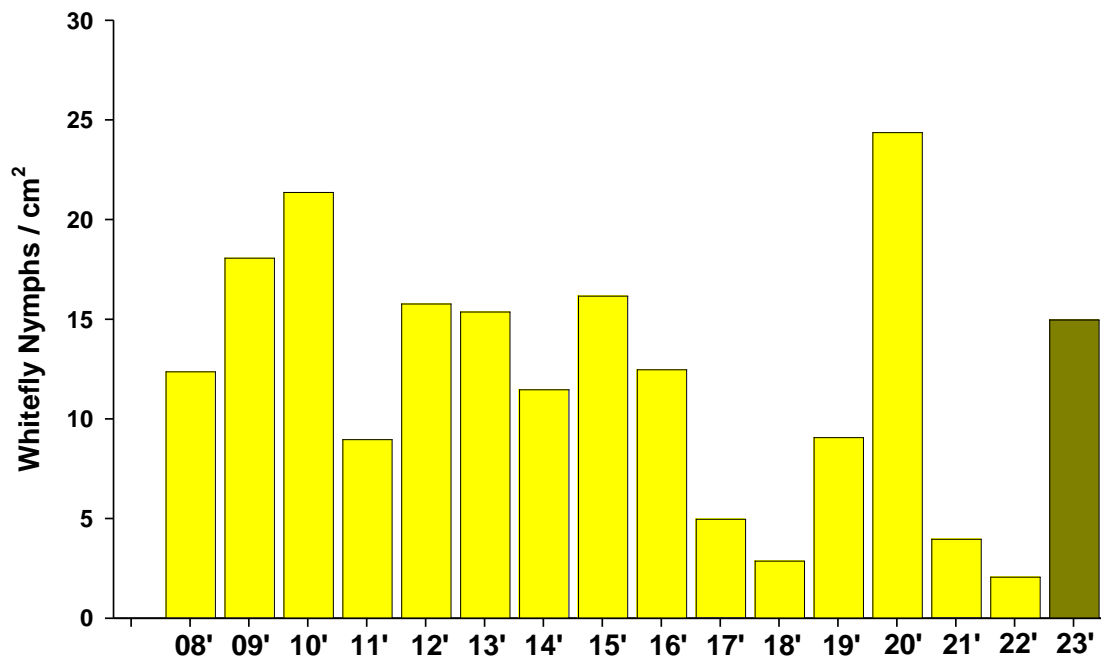
## CYSDV Incidence in Commercial Fall Melon Fields at Harvest

Dome Valley / Wellton, Tacna/ Roll, Texas Hill, and Yuma Valley, 2007-2023

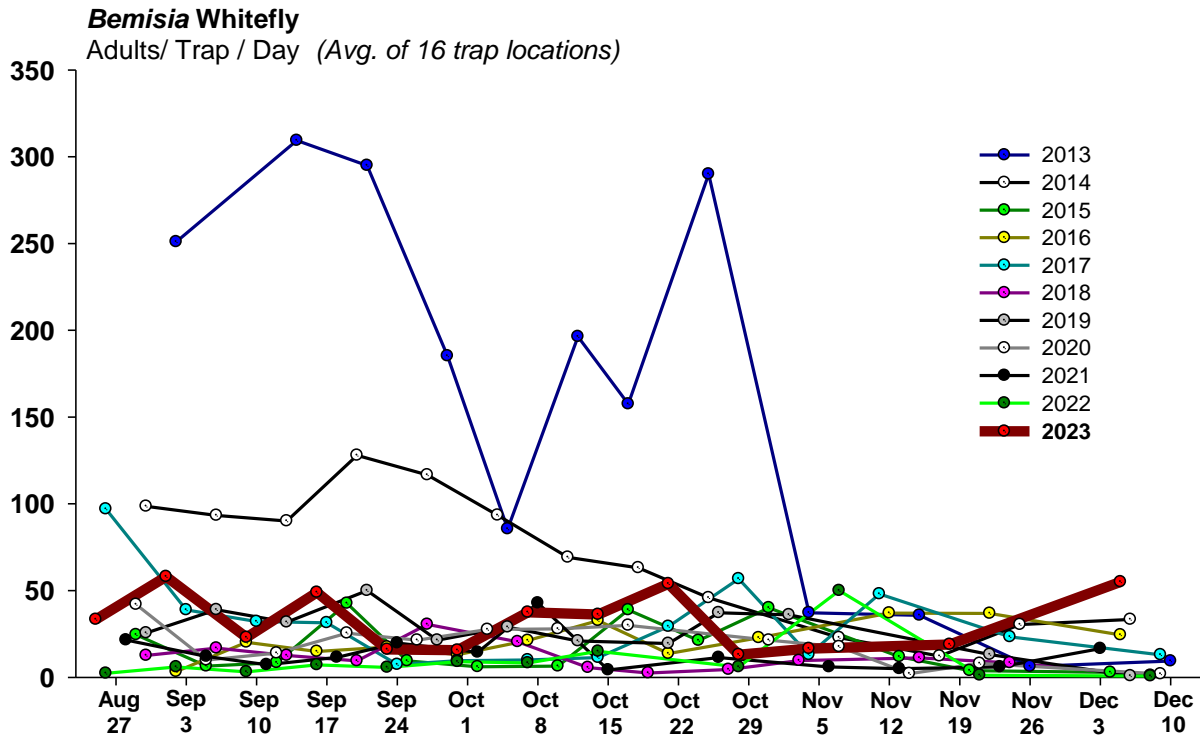


## Sweet potato Whitefly Nymph Abundance in Non-Treated Brassica Crops

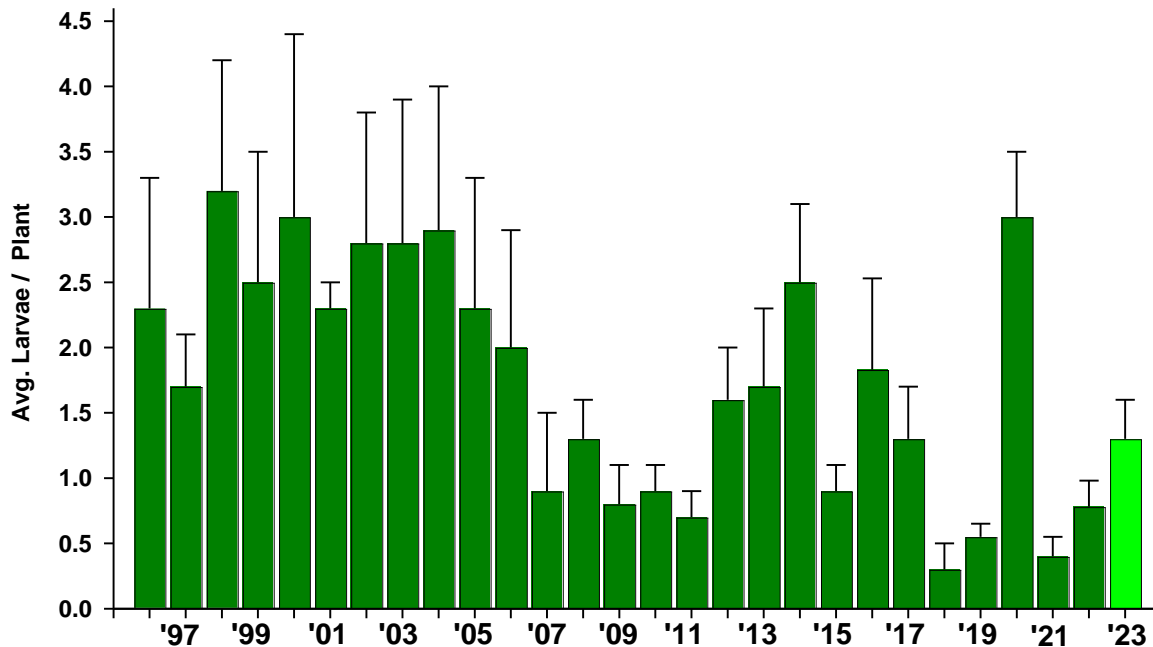
UA Yuma Ag Center, Sept- Nov, 2008-2023



## Areawide Whitefly Adult Abundance from Sticky Trap Captures 2013-2023

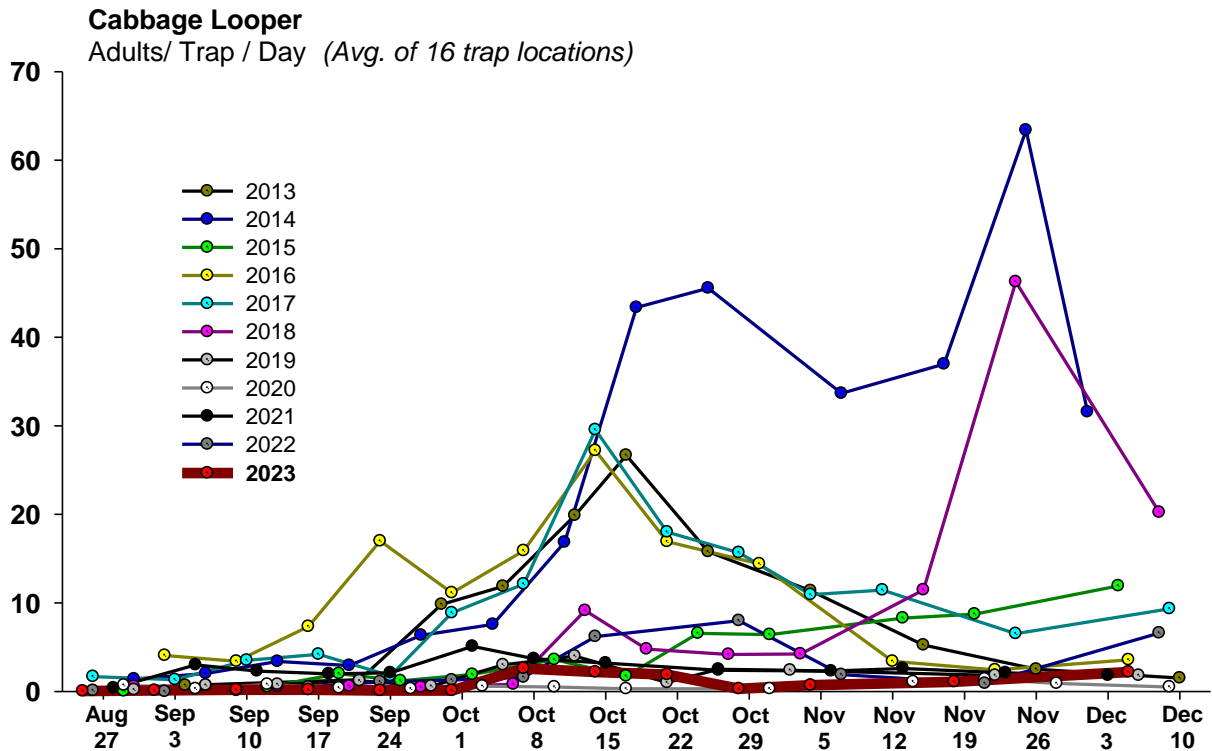
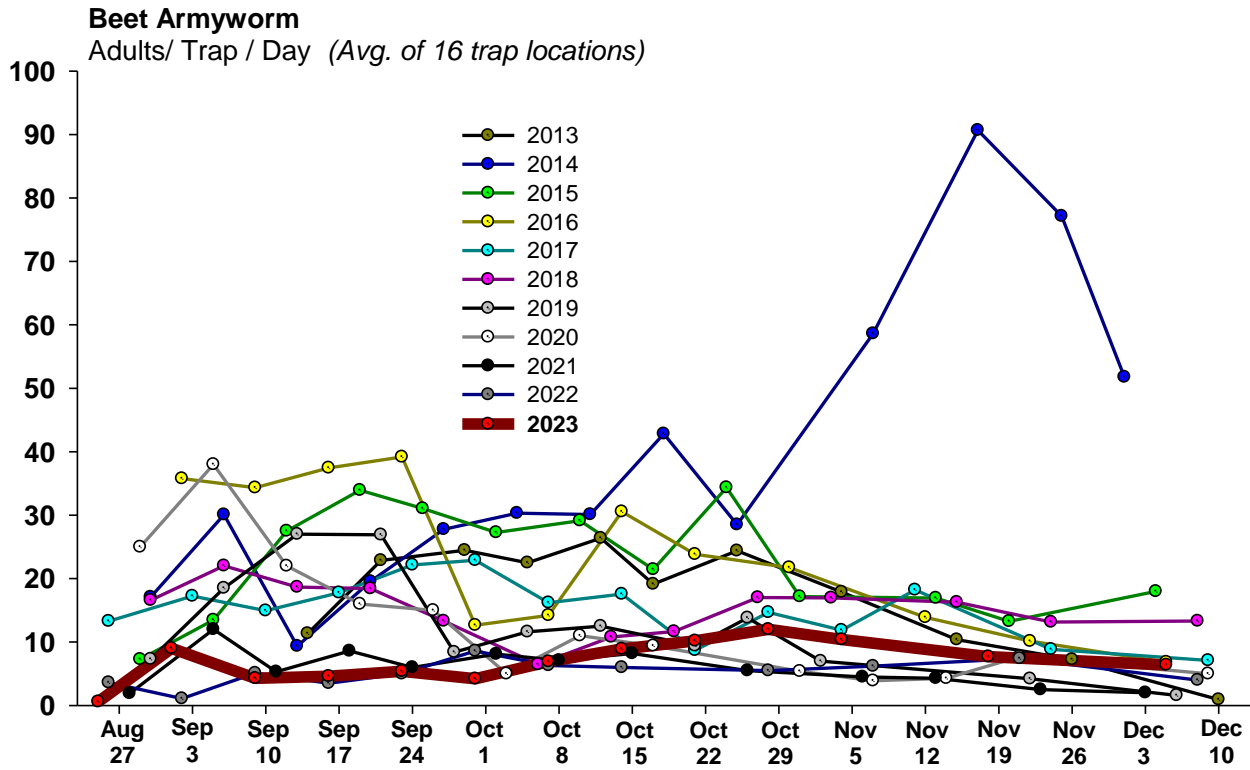


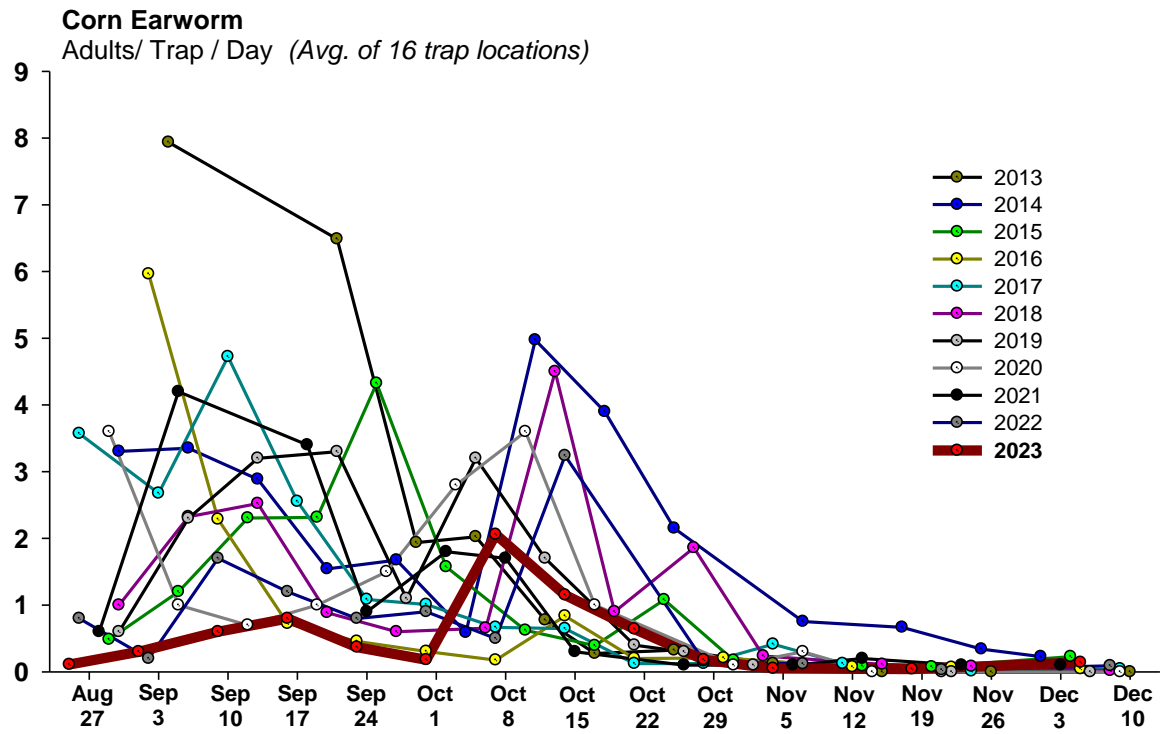
## Beet Armyworm/Cabbage looper Abundance in Non-treated Lettuce UA Yuma Ag Center, Sept- Nov, 1996-2023



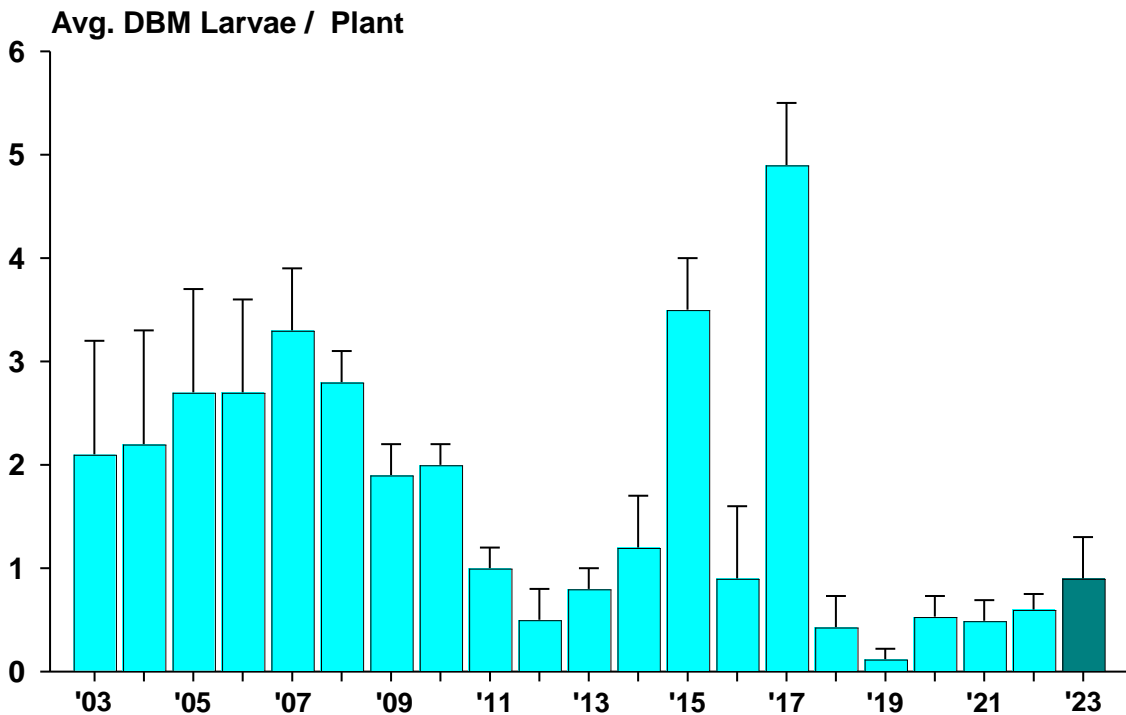
## Areawide Moth Abundance from Pheromone Trap Captures

2013-2023



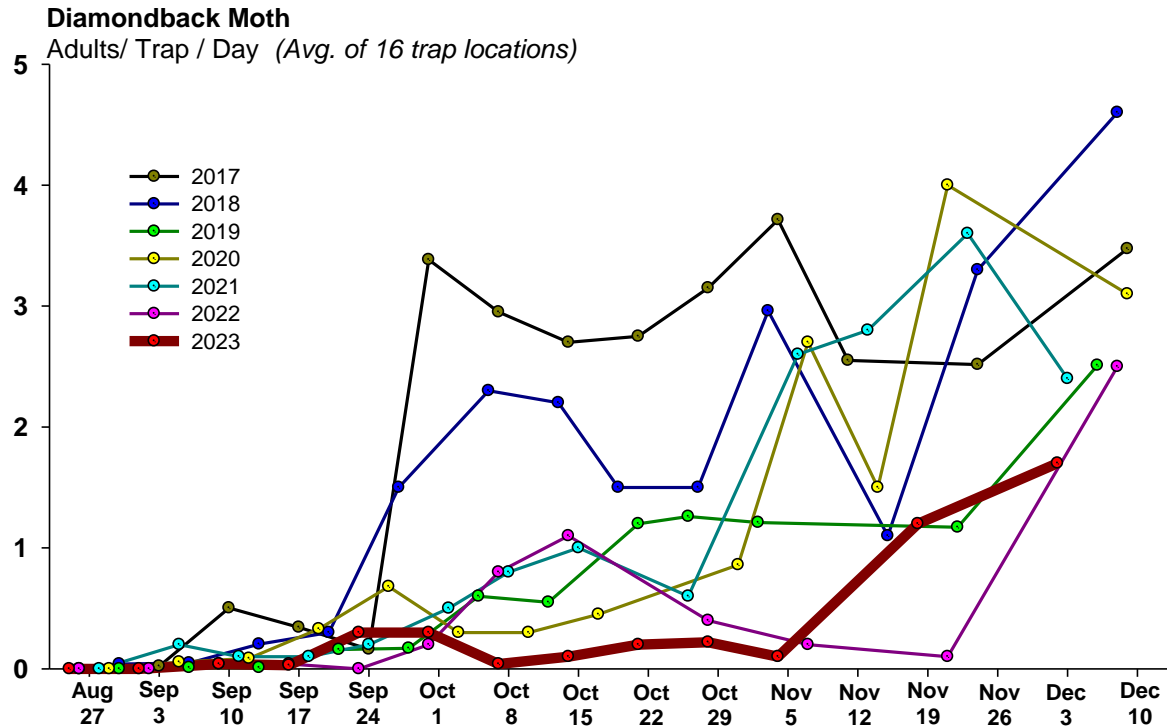


**Diamondback Moth Larvae Abundance on Non-Treated Cole Crops**  
UA Yuma Ag Center, 2001-2023

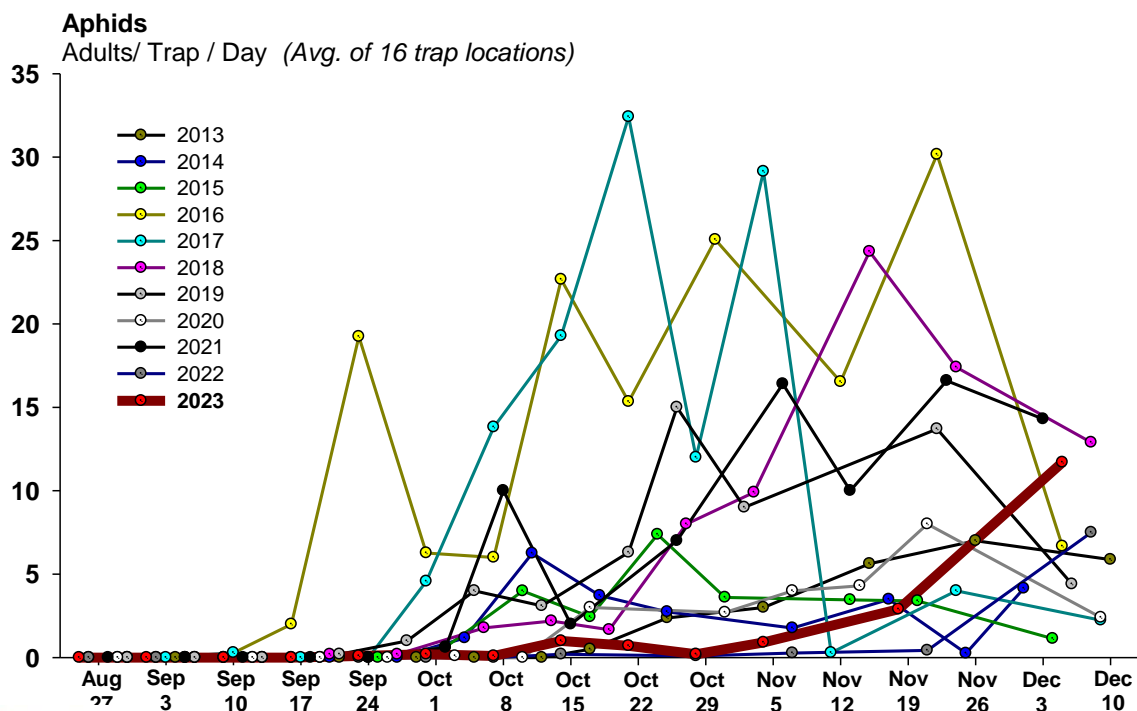


## Areawide Diamondback Moth Adult Activity in Pheromone Traps

Sep – Dec, 2017-2023

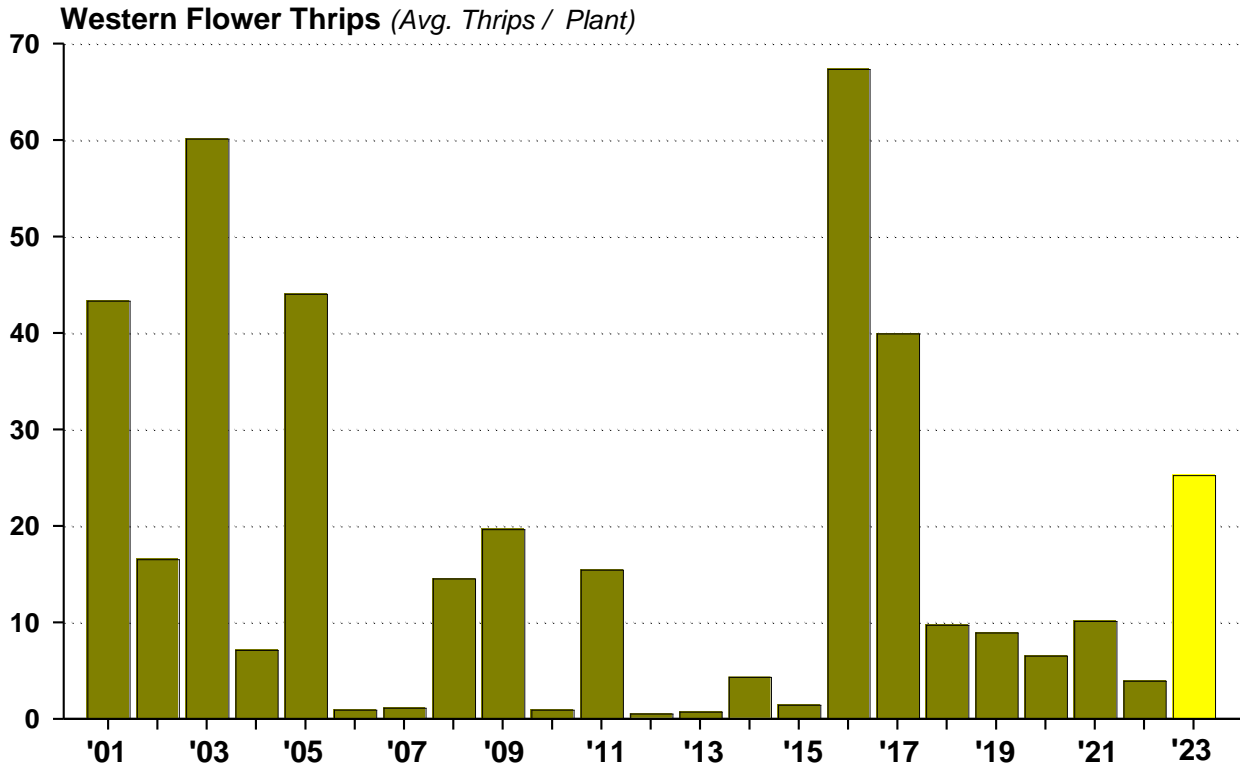


## Areawide Fall Aphid Immigration, Yuma County, 2013-2023



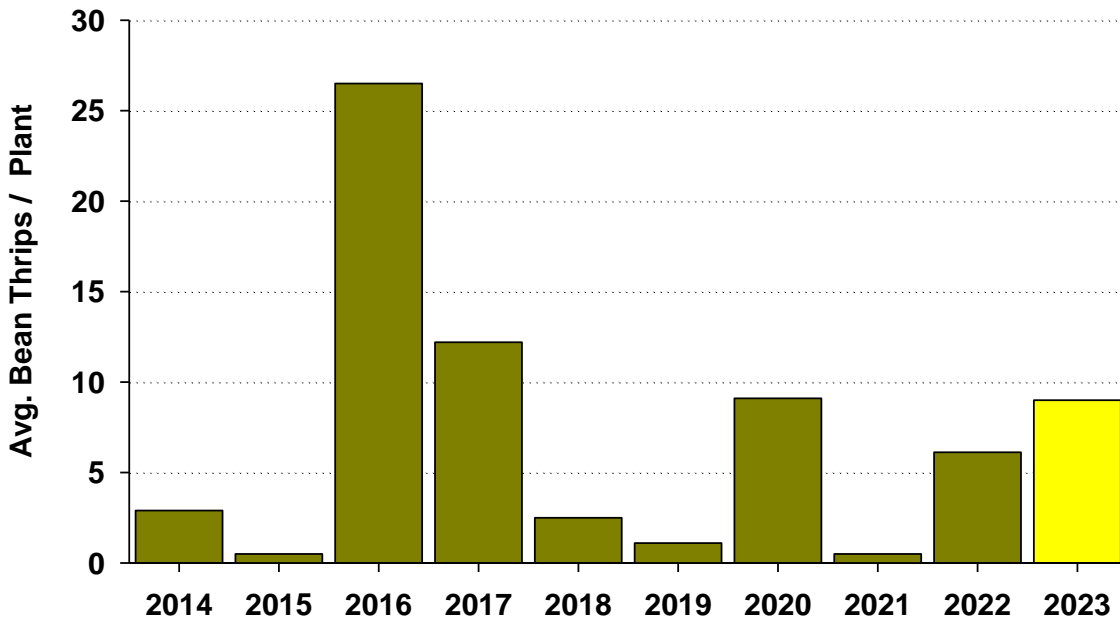
## Western Flower Thrips Abundance on Non-treated Fall Lettuce (Oct-Nov)

UA - Yuma Ag Center, 2001-2023



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

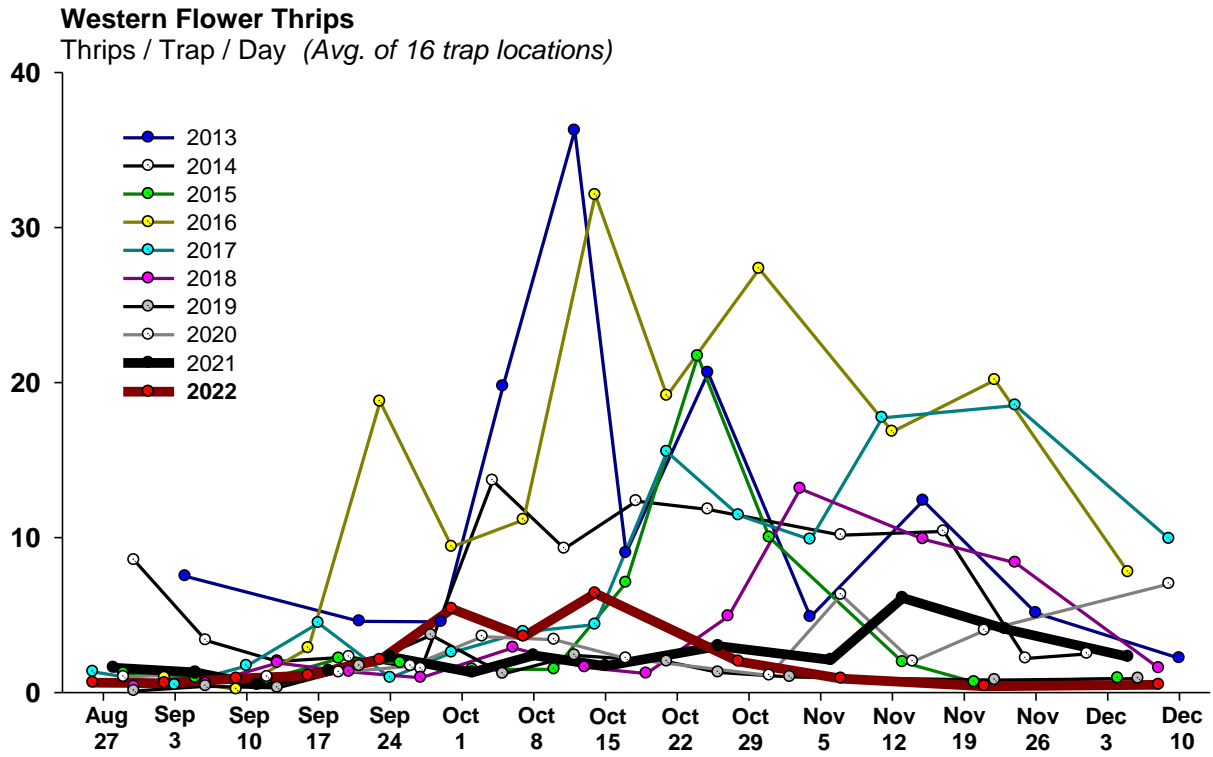
UA - Yuma Ag Center, 2014-2023





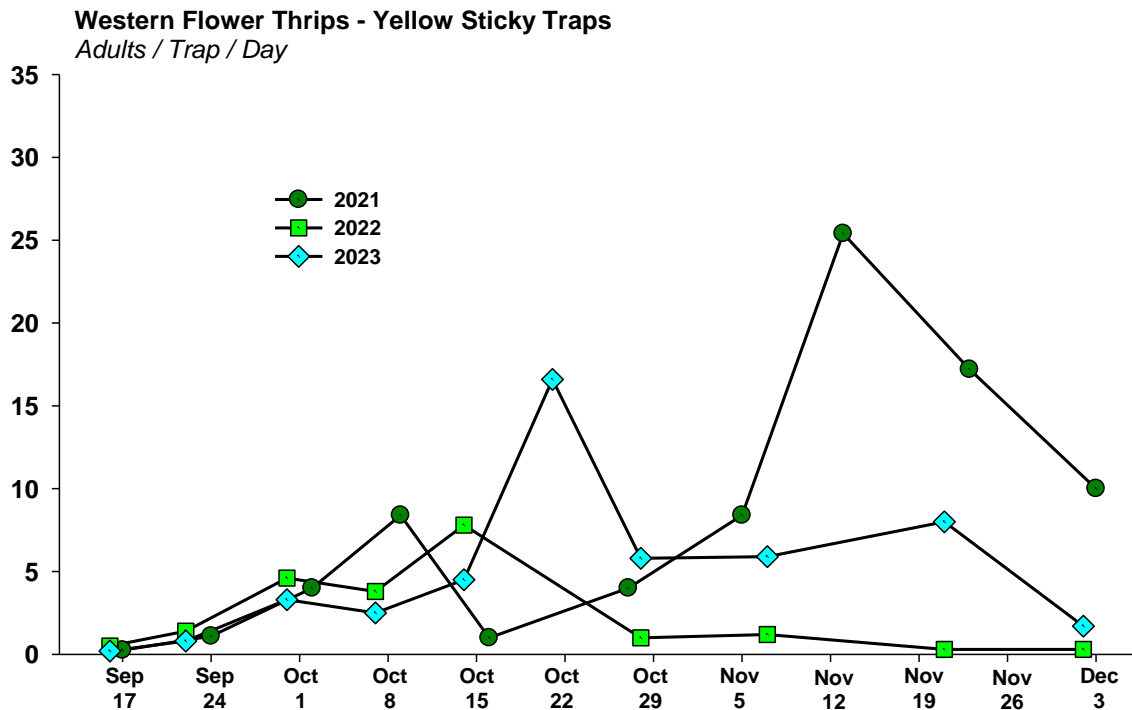
# Areawide Thrips Adult Abundance from Sticky Trap Captures

2013-2022

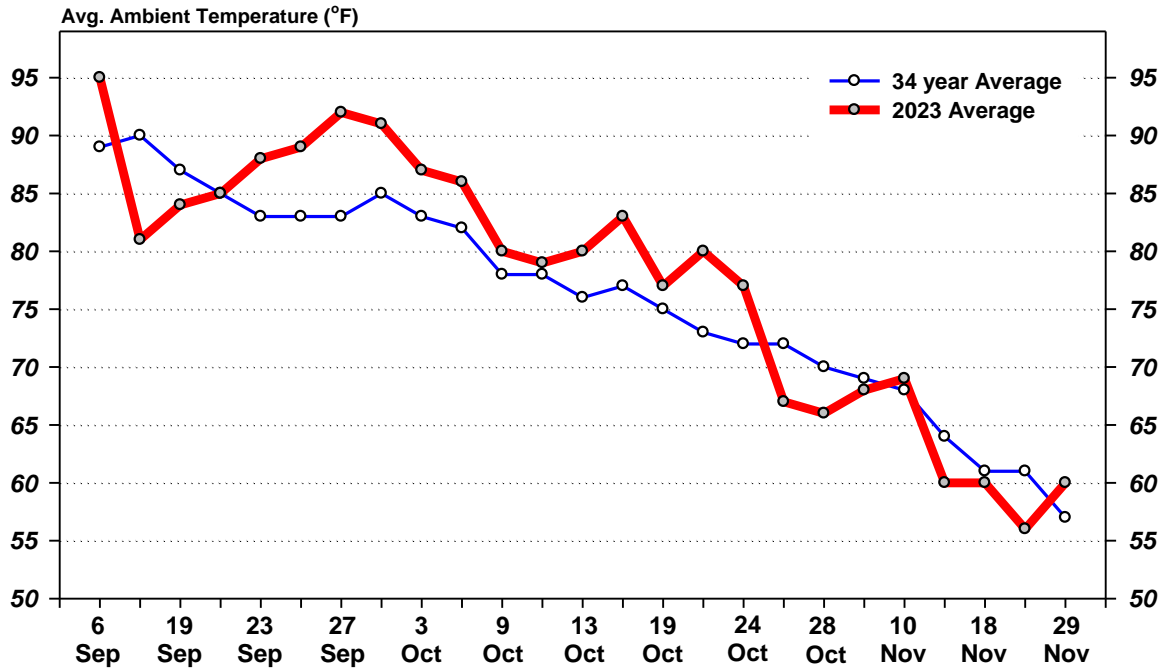


## Western Flower Thrips Adult Abundance from Sticky Traps in Lettuce Fields

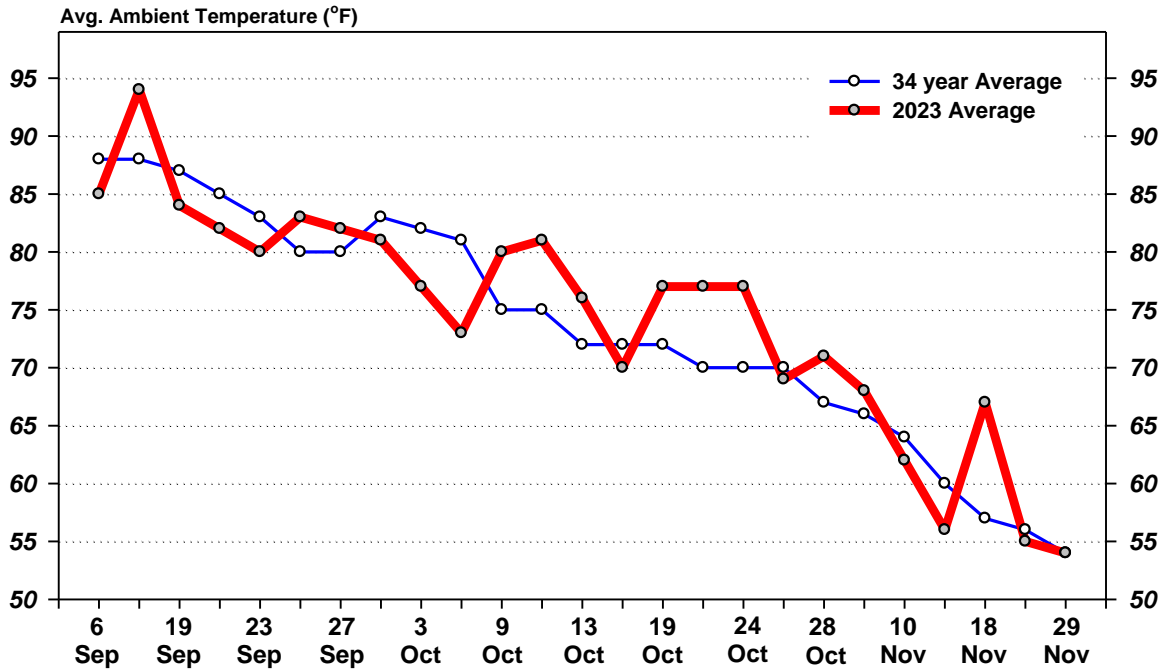
Lettuce, 2021-2023



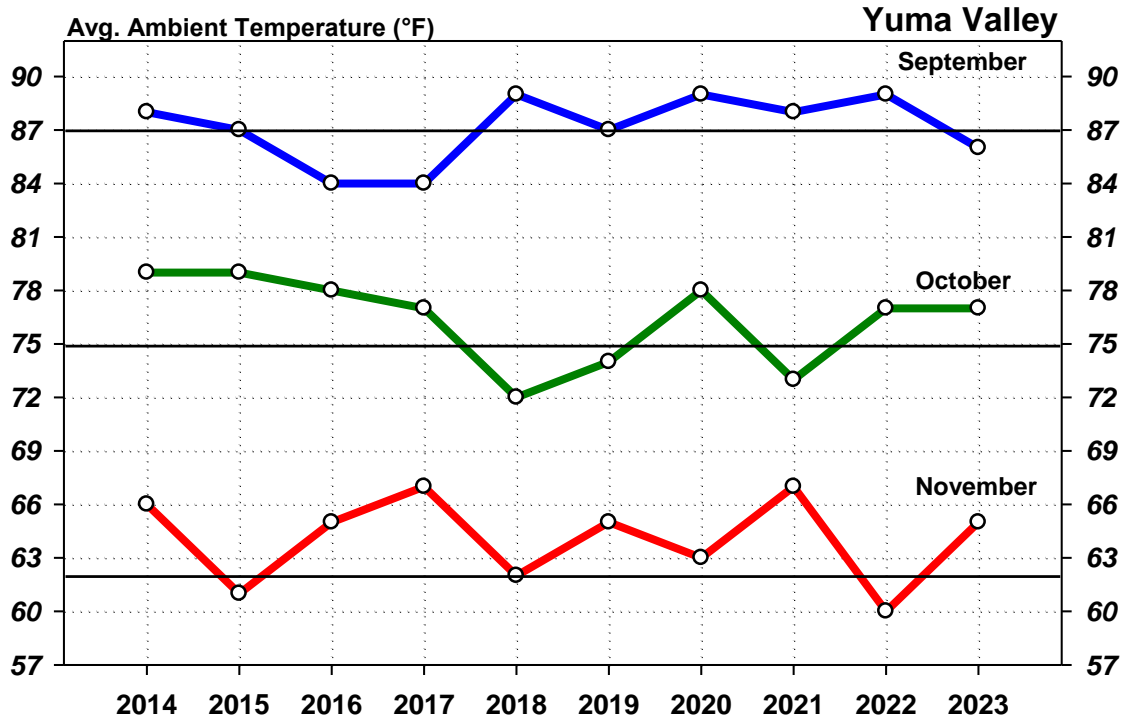
## Average Weekly Fall Temperatures - Yuma Valley, 2023



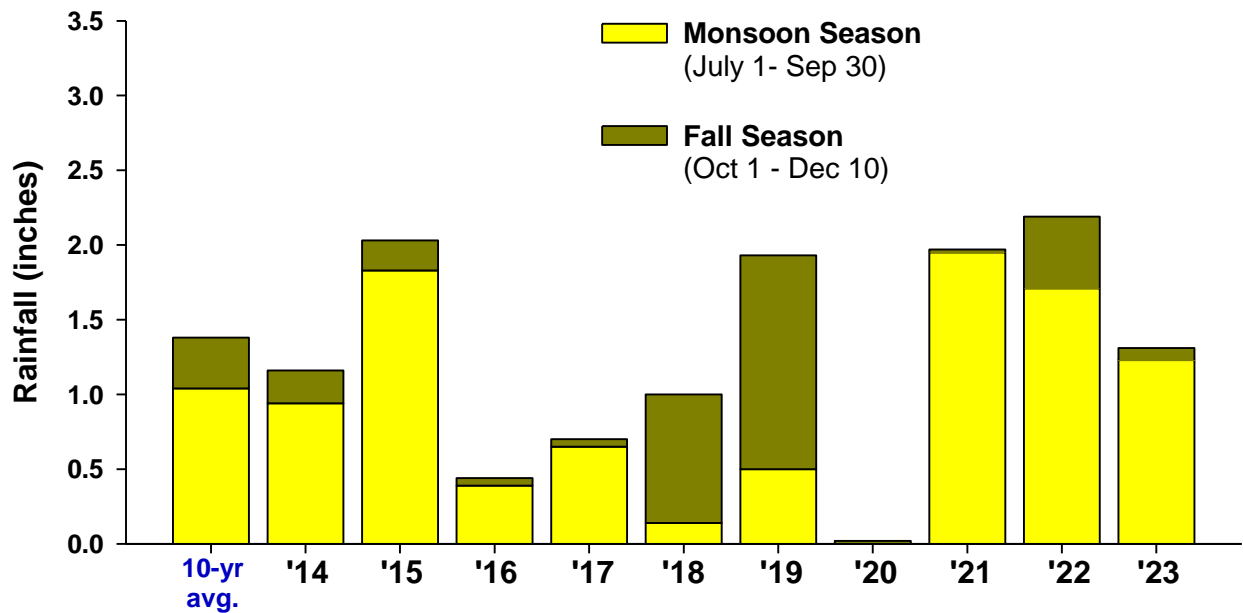
## Average Weekly Fall Temperatures - Roll, 2023



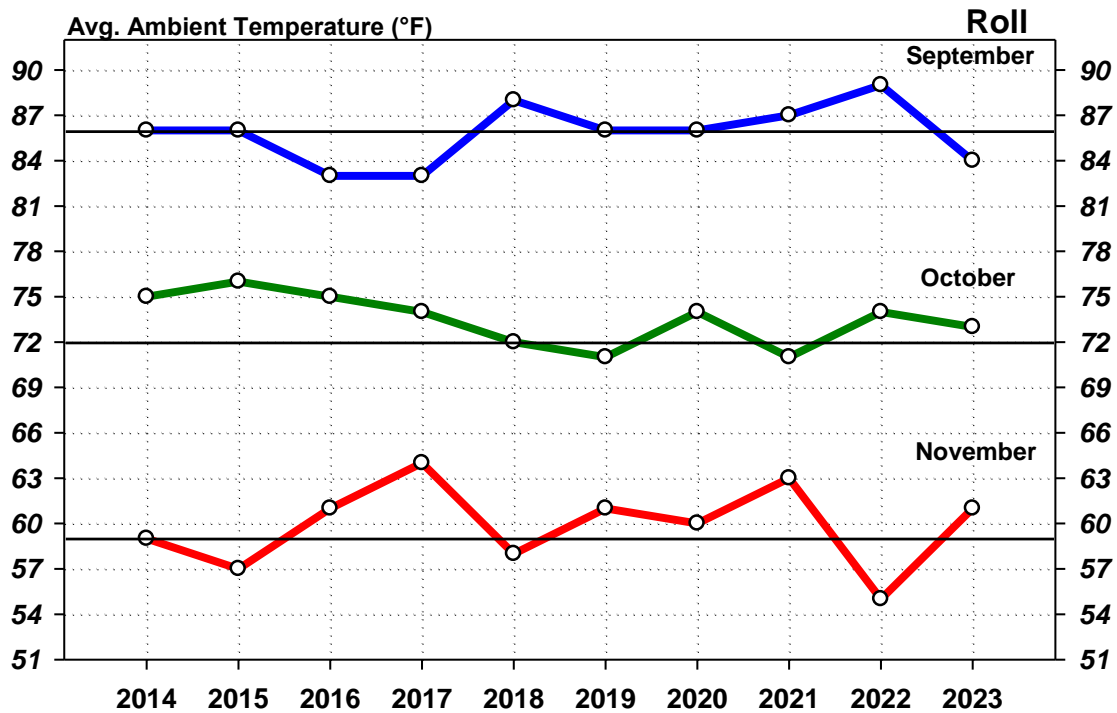
## Ten Year Trend in Average Monthly Fall Temperatures- Yuma Valley, 2014-23



## Ten Year Trend in Average Rainfall - Yuma Valley, 2014-2023



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



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

