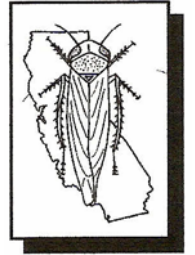


BEET CURLY TOP VIRUS MONTHLY REPORT



CURLY TOP VIRUS CONTROL PROGRAM

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Report for November, 2015

Program-wide notice

- Throughout the valley, beetle leafhopper (BLH) counts remained very low. Program personnel conducted surveys throughout the valley and began surveying the foothills for beetle leafhopper and winter host plants.
- The Program continued to collect BLH and host plant samples. The curly top virus wasn't as prevalent during the fall. Samples will continue to be collected to track the virus over the winter.
- Honey bees were observed in Fresno County in one location. The bees were foraging on Russian thistle. There were bee boxes about a mile away.

Fresno County

- Host plant development surveys took place from Highway 198 to Nees Avenue. Vegetation was beginning to emerge sporadically in the Tumey Hills area. The low lying areas showed an increase in plant development. Filaree was the predominant host plant. Surveys were also conducted on the eastside of the Tumey Hills. Sweep counts were less than one adult BLH per 10 sweeps.
- Surveys were conducted from Panoche Creek area north to Panoche Road. Filaree was the primary host plant. BLH counts were less than 1 adult per 10 sweeps. There were significantly more non-target leafhoppers observed than beetle leafhoppers.
- There was a slight increase in the vegetation development in the Chevron, North Chevron, and Domengine Ranch areas. Filaree was the predominant host plant.
- BLH and host plant development surveys took place in the Firebaugh area from Nees Avenue to California Avenue to monitor the valley floor. There were some viable host plants but the majority of the vegetation was very dry. No BLH were observed.
- The west side of Sutter Avenue north of State Route 33 was surveyed for BLH and host plant development. There was filaree and some winter grasses. BLH were not observed.
- Surveys on the east side of El Dorado Avenue and north of Jayne Avenue had spotty filaree. BLH counts were 1-3 adult BLH and zero nymphs per 10 sweeps.
- The oil fields west of Coalinga had an abundance of filaree and winter grasses developing in the low lying areas. BLH counts were 1-4 adults and zero nymphs per 10 sweeps. As sweep surveys continued north, filaree remained abundant. There was also some dried Russian thistle. The BLH counts dropped to less than 1 adult BLH per 10 sweeps but there was an increase in non-target leafhoppers.
- Eleven (11) beetle leafhopper samples were collected and submitted for virus analysis. Four (4) were positive for curly top virus.
- Seven (7) host plant samples were collected and submitted for virus analysis. Two (2) samples were positive for curly top virus.

Kern County

- The western portions of the County remained very dry and did not have any significant winter host plant emergence.
- Filaree began to emerge in the south eastern portions near Wheeler Ridge and near the Arvin area, along the El Tejon Hills. There were no BLH observed.
- Near Maricopa and Taft, the winter host plants have not yet emerged.
- There was a “hot spot” of BLH remaining in the Lost Hills area off of GP Road and North Lost Hills Road. There was some stressed Russian thistle and *Bassia* that the BLH were lingering on in this area. BLH counts were not consistent but had counts between 1-10 per sweep.

Kings County

- BLH and host plant development surveys were conducted north of Devil’s Den Road. The hillsides did not have any viable vegetation except some Russian thistle. Winter grasses and filaree germinated, with most of it along the roadsides of State Route 33. BLH counts were less than 1 adult and zero nymphs per 10 sweeps.
- The western hillsides of Kings County remained dry and void of new vegetation. The Russian thistle and *Bassia* in fallow fields east of Interstate 5 and Utica Avenue was dried up. BLH counts were 1-2 per sweep.
- The Program conducted an organic pesticide trial within a fallow field on the north side of Utica Avenue and 23rd Avenue at the end of October. Experimental test plots contained the organic pesticides, TriTek, Ecotec, and Azera, plus one test plot for malathion and one plot as a control, and replicated five times using ground rig application. Sweep counts were conducted prior to each application and again at 24, 48, and 72 hours post application.
- Although there were very windy conditions during the post application sweep counts, a statistical analysis of the data collected showed there were statistically significant differences when comparing the following treatment variables:
 - Malathion to Control
 - Malathion to Azera
 - Malathion to Tritek
- Since there were no statistically significant differences between any of the organic pesticide products and the control, it can be concluded that the organic pesticides used in this study were not effective in the control of BLH.
- Of the three organic pesticides, Ecotec had the lowest post treatment BLH counts, and there was no statistically significant difference between malathion and Ecotec. Ecotec appeared to have been the most effective of the three organic pesticides.
- Repeating the trial with Ecotec, malathion, and a control may be necessary to see if there is any statistically significant difference between them.
- These results reinforce that malathion is an effective pesticide for the control of beet leafhopper.
- Four (4) beet leafhopper samples were collected and submitted for virus analysis. Three (3) were positive for curly top virus.

Merced County

- Surveys were conducted along the west side of Pole Line Road between the road and the almond orchard. Filaree and winter grasses were emerging. There was also dry Russian thistle. BLH counts were 0-3 adults and zero nymphs per 10 sweeps.
- Along the west side of Pole Line Road west of the aqueduct, the hills were abundant in filaree. There was also stressed Russian thistle that had BLH sweep counts of 1-4 adults and 1-2 nymphs per 10 sweeps.
- Four (4) beet leafhopper samples were submitted for virus analysis. Three (3) were positive for curly top virus.

Imperial/Riverside Counties

- The week of November 16th, personnel conducted surveys throughout the historical hot spots of the desert counties. Host plant vegetation surveys revealed very little new growth. Host plants were sporadic and very limited, mostly along roadsides, with some goosefoot and *Bassia* available to survey. BLH counts were minimal with less than 1 adult BLH and zero nymphs per sweep.
- Three (3) beet leafhopper samples were submitted for virus analysis. All three (3) were negative for curly top virus.
- Seven (7) host plant samples from Imperial County were collected and submitted for analysis. Two (2) were positive for curly top virus.
- Two (2) host plant samples from Riverside County were collected and submitted for analysis. Both samples were positive for curly top virus.

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