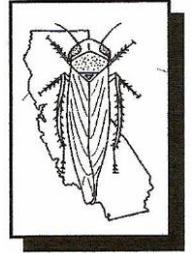


BEET CURLY TOP VIRUS

MONTHLY REPORT



CURLY TOP VIRUS CONTROL PROGRAM

2895 N. Larkin, Suite A
Fresno, CA 93727
PHONE: (559) 294-2031
FAX: (559) 294-2037

Report for February, 2015

Program-wide notice

- Overwintering adult beetle leafhoppers (BLH) remain low throughout each County surveyed. The first beetle leafhopper nymphs were detected the second week of February in isolated locations. The majority were 2nd instar nymphs. Because of the warm and dry winter, nymphs have hatched a little earlier than typically expected. In most locations BLH activity was inconsistent. By the end of February, BLH activity increased, more nymphs began to emerge, and counts increased and were more consistent. The weather was closely monitored throughout February and the Program's spring spray campaign will begin in early March.
- Program personnel observed very high numbers of aphids and thrips during BLH sweep surveys.
- One hundred forty-five (145) BLH host plant samples were collected throughout the month of February from Fresno, Imperial, Kern, Kings, Merced, Monterey, Riverside, San Joaquin and Stanislaus Counties. Complete results have not yet been received. Data will be listed under specific counties where results have been identified.
- Fifty-two (52) BLH samples were collected and sent for virus analysis. Complete results have not yet been received. Data will be listed under specific counties where results have been identified.
- Caltrans will be mowing portions of Interstate 5 in Avenal and Coalinga areas and Interstate 5 from Nees to Derrick Avenue. Caltrans will also be mowing portions of State Route 33 from Firebaugh to Mendota. They are planning to mow the first part of March.

Fresno County

- Program personnel continued monitoring BLH populations by conducting sweep surveys and host plant development surveys. Filaree, *Plantago*, pepper grass, and mallow were widespread and abundant in the Panoche Hills, Tumey Hills, Domengine Ranch, North Chevron, and Chevron areas.
- In the Panoche Creek property, BLH nymphs were observed in isolated locations where the *Plantago* was stressed. Average counts were 4-5 adult BLH and 20-25 nymphs per 10 sweeps on one southernmost draw. The next draw north averaged 4-5 adult BLH and 10-15 nymphs per 10 sweeps.
- Surveys in Tumey Hills were conducted in mid-February. Vegetation was still lush but the pepper grass was beginning to stress. Sheep were observed on the southeast corner of the property and in three separate locations in the flats east of Tumey Hills. Property owners will continue to move the sheep around to graze down the vegetation, thus eliminating viable host plants for the beetle leafhopper. BLH averages for this area was 1 adult BLH and 2 nymphs per 10 sweeps. By the end of February, the Tumey Hills vegetation showed advanced signs of stress.

Counts averaged 0-2 adult BLH and 3-6 nymphs per 10 sweeps. Nymphs were between the 2nd and 4th instar stage.

- The Domengine Ranch was surveyed at the beginning of February. Host vegetation was lush with filaree, mallow, pepper grass and *Plantago*. BLH activity was limited to areas with sparse vegetation and rocky habitat. Counts were 0-1 adult BLH and zero nymphs per 10 sweeps. By the end of February, the pepper grass was beginning to show signs of stress and nymphs were observed. Counts were 0-1 adult BLH and 2-7 nymphs per 10 sweeps.
- In Chevron and North Chevron, vegetation was extremely lush with only a few slopes that had adequate BLH habitat. BLH counts in early February were on average 1 adult BLH and zero nymphs per 10 sweeps. By mid-February, BLH counts in the North Chevron area increased to an average of 3 adult BLH. Nymphs were just beginning to be observed, but in low counts. In the Chevron area, adult BLH counts remained low with an average of 1-2 adult BLH and zero nymphs per 10 sweeps.
- Surveys were also conducted in Coalinga, Five Points, Huron and the surrounding areas. BLH counts in these locations were low, with average counts of 3-5 adult BLH and 2-4 nymphs per 10 sweeps.
- Seventy-three (73) plant samples were collected and sent to the lab for virus detection. Forty-eight (48) of those samples were positive for curly top virus and eleven (11) were negative. The remainder of the samples have not yet been analyzed, and results will be reported next month.
- Thirty-two (32) BLH samples were collected in February in Fresno County. Six (6) of the samples were positive for curly top virus and six (6) were negative. The remainder of the samples have not yet been analyzed, and results will be reported next month.
- Access was granted and surveys were conducted in the non-treatable properties on February 19th and February 25th. This property had a lot of filaree, *Plantago*, and pepper grass throughout. On both occasions, pepper grass was observed to be stressing and drying up quickly. On February 19th, overwintering adult BLH counts were low, averaging 0-3 per 10 sweeps. The first generation of spring beet leafhoppers were observed. The nymphs averaged 4-7 per 10 sweeps. Nymphs ranged from 2nd to 3rd instar with the majority of them being in the 2nd instar stage. On February 25th, overwintering adult BLH counts remained the same. The nymphs averaged 7-12 per 10 sweeps. Nymphs ranged from 2nd-4th instar stage, with an average being 3rd instar. Host plants and BLH samples were obtained and sent for virus analysis. Only six (6) of the seventeen (17) plant samples submitted have been analyzed. Those six samples were positive for curly top virus. The BLH samples submitted have not yet been analyzed, and results will be reported next month.
- Sticky traps were given out to growers and PCA's. The Program deployed traps mid- February along the same trap line as last year and will monitor traps weekly. Zero BLH were observed on the traps thus far.

Kern County

- Program personnel monitored BLH populations by conducting sweep surveys and host plant development surveys throughout February.
- Host plants were abundant and lush at the beginning of February and began to show signs of stress toward the end of the month. Filaree was widespread and the dominant host plant. Patches of pepper grass and *Plantago* were observed.
- In the Buena Vistas, along the north side of Gardener Field Road, there was good BLH host vegetation. Sweeps revealed minimal adult BLH counts and zero nymphs, however, there was a substantial population of aphids.
- The Elk Hills Naval Petroleum Reserve, Elk Horn Grade and Western Mineral near Maricopa were surveyed with average counts that were 0-3 BLH per 10 sweeps and zero nymphs.
- 36 Hills, No Names, Triple Fives and locations along Reserve Road also had minimal BLH counts. Average counts were less than one adult BLH per 10 sweeps and zero nymphs.
- In the Arvin area, Wheeler Ridge and Laval Road also had low BLH counts with less than 1 BLH per 10 sweeps and zero nymphs. Agailia's and sharpshooters were observed during the survey.
- Areas along Petroleum Club Road, and Cadet Road (Kitty Care) had minimal BLH counts and zero nymphs.
- Host vegetation appeared viable with few locations that began to stress by the end

- of February. The large aphid population could be causing the plants to stress.
- Overall, sweep surveys produced minimal adult BLH and zero nymphs per 10 sweeps. BLH seemed to be scattered and sweep survey counts were inconsistent.
 - Six (6) BLH samples were obtained and sent for virus analysis. Three (3) were positive for curly top virus and three (3) were negative. Personnel will continue to conduct sweep surveys and collect BLH samples for virus testing.
 - Twenty-two (22) plant samples were collected and sent for virus analysis in February. Ten (10) were positive for curly top virus and twelve (12) were negative.
 - The Program deployed traps along the same trap line as last year and will monitor traps weekly. Zero BLH were observed on the traps thus far.

Kings County

- Program personnel continued monitoring BLH populations by conducting sweep surveys and host plant development surveys throughout the Kettleman Hills. Host plants included filaree, pepper grass, *Plantago*, and shepherd's purse. Host plants were abundant with the majority being very mature and lush. By mid-February, a few hillside draws began to show stressed vegetation.
- In isolated locations within the Kettleman Hills, nymphs were just beginning to be seen in sweep surveys mid-February. Average counts were 2-4 adult BLH and 10 nymphs per 10 sweeps.
- On draws with stressed pepper grass and bands of *Plantago*, counts varied from 4-5 adult BLH and 1-2 nymphs per 10 sweeps to 1-2 adults and 10-12 nymphs per 10 sweeps. One location within the Kettleman hills had counts of 1-2 adult BLH and 15-20 nymphs per 10 sweeps.
- Both plant and BLH samples were collected and sent for virus analysis. Results will be reported next month.
- Aphids, lygus, and thrips were also very abundant in sweep surveys.
- Roadside BLH surveys were conducted along Interstate 5 and Utica Avenue, east for several miles. Zero BLH were observed.
- The Program deployed traps mid-February along the same trap line as last year and will monitor traps weekly. Zero BLH were observed on the traps thus far.

Imperial County

- Program personnel conducted a vegetation and BLH survey at the end of February.
- Average sweep counts were 0-5 adult BLH and 0-2 nymphs per 10 sweeps. Road side host plants consisted of London rocket, goosefoot, and shepherd's purse.
- Eight (8) plant samples and five (5) BLH samples were obtained and sent for virus analysis. Results will be reported next month.

Merced County

- Program personnel monitored BLH populations by conducting sweep surveys and host plant development surveys.
- Several sweep surveys were conducted within the western foothills of the County.
- In the San Luis Reservoir hills, the majority of the slopes were lush and overgrown with mature winter grass and filaree.
- Seven (7) host plant samples were collected and sent for virus analysis. Two (2) of the seven samples were positive for curly top virus. One (1) was negative. The remaining four samples will be reported next month.
- Beet leafhopper counts were not observed, with sweep counts of 0 adult BLH and zero nymphs per 10 sweeps. Personnel observed sharpshooter average counts of 20-30 and Agalia average counts of 2-3 per 10 sweeps.
- One (1) BLH sample was collected and sent for virus analysis. Results will be reported on next month.
- Personnel will continue to monitor BLH populations and collect both host plant and BLH samples for virus analysis.

Monterey County

- Program personnel surveyed the Salinas Valley for BLH populations and host plants at the end of February.
- Roadside vegetation was kept to a minimum and very few roadside host plants were observed. Areas of survey included Bradley, San Ardo, San Lucas, King City, Greenfield, Soledad, and Lockwood. Four (4) plant samples were obtained and sent for virus analysis. Results will be reported next month.
- BLH counts were minimal with an average of 0-1 adult and 3-5 nymphs per 10 sweeps. One (1) BLH sample was obtained and sent for virus analysis. Results will be reported next month.

Riverside County

- Program personnel conducted a vegetation and BLH survey at the end of February.
- Average sweep counts were 0-5 adult BLH and zero nymphs per 10 sweeps. Road side host plants consisted of London rocket, goosefoot, and shepherd's purse.
- Nine (9) plant samples and three (3) BLH samples were obtained and sent for virus analysis. Results will be reported next month.

San Joaquin County

- Program personnel continued monitoring BLH populations by conducting sweep surveys and host plant development surveys throughout February.
- Filaree and winter grasses were overgrown on most of the hillsides within the Contra Costa Water District. There were some patches of pepper grass also.
- Six (6) host plant samples were collected and sent for virus analysis. Four (4) were positive for curly top virus and two (2) were negative.
- BLH counts were 1-3 adult BLH and zero nymphs per 10 sweeps on all hillside slopes surveyed. Agalia's were observed in higher numbers of 3-5 per 10 sweeps. In some places, Agalia counts were 8-12 per 10 sweeps.
- Three (3) BLH samples were submitted for virus analysis. One (1) was positive for curly top virus and two (2) were negative.
- Sticky traps were given out to several growers and PCA's.
- Personnel will continue to monitor BLH populations and collect both host plant and BLH samples for virus analysis.

Stanislaus County

- Program personnel continued monitoring BLH populations by conducting sweep surveys and host plant development surveys throughout February.
- Vegetation remained thick and some south western facing slopes were completely overgrown. Filaree was the dominant host plant. Mallow, shepherds purse, and wild flowers make up the vegetation on the hillsides.
- Seven (7) host plant samples were collected and sent for virus analysis. Two (2) were positive for curly top virus. The remainder of the samples have not yet been analyzed, and results will be reported on next month.
- Sticky traps were given out to a few growers and PCA's.
- Personnel will continue to monitor BLH populations and collect both host plant samples and BLH samples for virus analysis.

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