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 April 2021

Program Wide Update

- April 6: Beet leafhopper (BLH) surveys conducted by the Curly Top Virus (CTV) Control Program (Program) near Coalinga observed counts of 20-40 BLH per 10 sweeps. In this area, there were a total of three fields with treatable BLH populations.
- April 14 & 15: The Program successfully conducted aerial treatments of the three fields near Coalinga with treatable BLH populations; a total of 6,170 acres were treated.
- April 16: Post-treatment BLH population surveys ("kill checks") observed a ninetyeight percent (98%) reduction in BLH across treated fields.
- With the exception of the Coalinga region, BLH surveys conducted by Program staff along the western foothills in Kern, Kings, and Fresno Counties observed low BLH counts. Filaree, peppergrass, and *Plantago* were dry and 80 percent stressed by mid-April. Around April 13, emergent thistle was present at all surveyed fields.
- April 19: After the majority of BLH spring host vegetation had fully dried out on the western foothills, the Program shifted focus of BLH surveys to roadsides and fallow fields across the San Joaquin Valley (Valley) floor.
- April 22: Treatable populations of BLH were found along Utica Ave between the Gates-Jones Canal and 23rd Ave. Roadside treatments along this corridor began the week of April 26.
- CTV pathology results for samples collected in April 2021 are on the following page.
 Overall, in April, there were three (3) CTV-positive BLH samples, and two (2) CTV-positive plant samples.
- The Program is also processing BLH samples collected from sticky traps set by Pest Control Advisors (PCAs) and growers in and around their agricultural fields; so far, zero (0) positive BLH have been found on these traps in 2021.

April Aerial Treatment Campaign

- 4/14/2021:
 - Field 14: 2,555 acres
 - o Field 15: 2,115 acres
- 4/15/2021:
 - o Field 12: 1,500 acres

April Ground Rig Treatments

- 4/27/2021:
 - Utica Ave, east of I-5; 23rd Ave between Hwy 41 and Utica Ave: 80 acres.
 25th Ave, south of I-5; Devil's Den Rd: 80 acres.
- 4/28/2021:
 - 25th Ave, west of Hwy 41; Devil's Den Rd: 80 acres.
 Utica Ave, between Hwy 41 and Hwy 33: 80 acres.
- 4/29/2021:
 - East of Kettleman City, along Quail Ave, Nevada Ave, Plymouth Ave, Omaha Ave: 40 acres.
 - City of Stratford, along Laurel Ave; Lansing Ave at 21st Ave; 20th Ave near Hwy 41 and Jersey Ave: 40 acres.

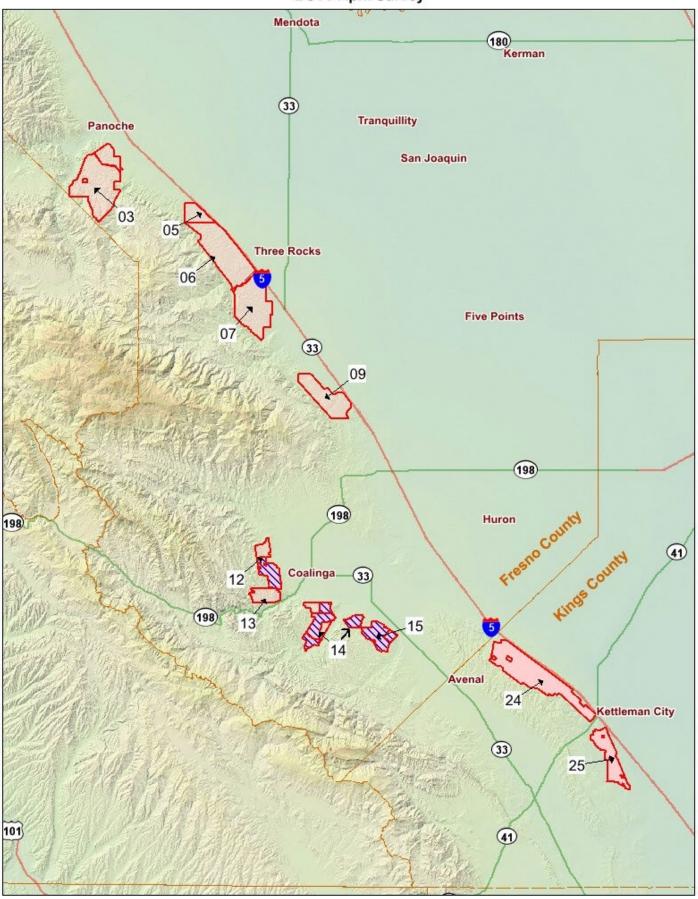
Pathology Results

- April 2021:

 - Kern County Sample Results
 BLH: 1 Positive; 0 Negative Plant: 2 Positive; 0 Negative
 - o Fresno County Sample Results
 - BLH: **2 Positive**; 1 Negative Plant: 0 Positive; 5 Negative
 - Kings County Sample Results
 BLH: 1 Positive; 0 Negative

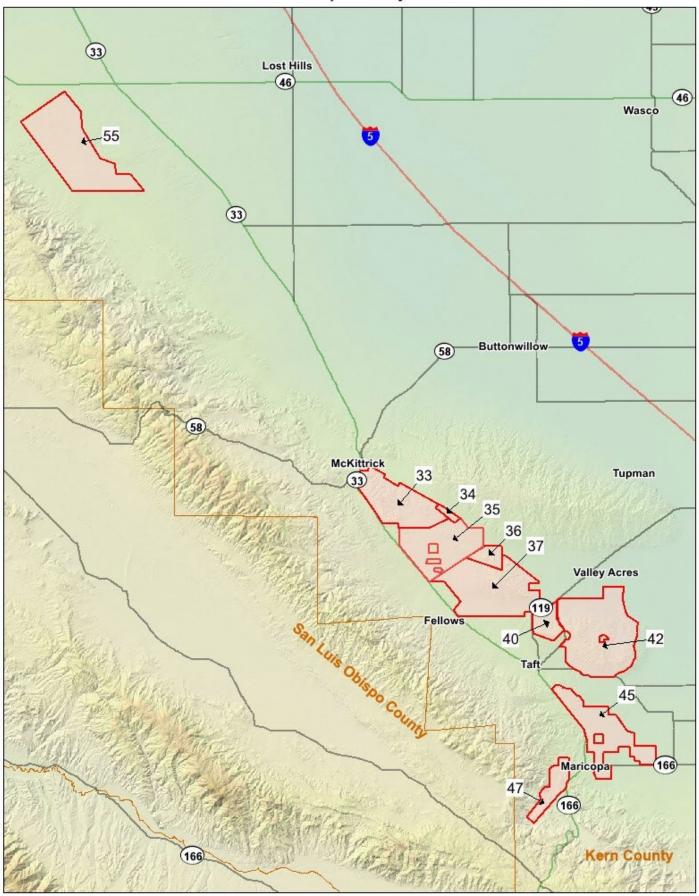
 - Plant: 0 Positive; 1 Negative

BCTV April Survey



April 2021 Surveyed Area Maps produced by Frank Herrera. *Blue stripes indicate fields that were both surveyed and treated.

BCTV April Survey



April 2021 Surveyed Area Maps produced by Frank Herrera

County Reports:

Fresno County

- Field #03, 4/02/2021
 - o Adult BLH count: 0-1 per 10 sweeps
 - Nymph BLH count: 0-1 per 10 sweeps
 - Overall BLH activity remained low in this field, with no major changes to the population.
 - Primary Host Vegetation: Plantago, peppergrass, and filaree. Vegetation was dried out with only small patches of host plants still showing viability.
 - Monitoring will continue in the flats and fallow areas directly east of this field to determine if treatments will be needed.
- Field #05, 4/02/2021
 - o Adult BLH count: 1-3 per 10 sweeps
 - Nymph BLH count: 1-3 per 10 sweeps
 - Primary Host Vegetation: *Plantago* and peppergrass. Vegetation die off was in the 85-95 percent range.
 - Update* 4/12/21
 - Adult BLH count: 3-4 per 10 sweeps
 - Nymph BLH count: 0-1 per 10 sweeps
 - Primary Host Vegetation: filaree and Plantago was 99 percent dry.
- Field #06, 4/02/2021
 - o Adult BLH count: 0-1 per 10 sweeps
 - o Nymph BLH count: 0-1 per 10 sweeps
 - There was a slight increase in BLH activity. However, it remained below treatment thresholds.
 - Primary Host Vegetation: Overall vegetation die off was in the 75-95 percent range.
 - Update* 4/12/21
 - Adult BLH count: 2-3 per 10 sweeps
 - Nymph BLH count: 0-1 per 10 sweeps
 - Primary Host Vegetation: 99 percent dry.
- Field #07, 3/26/2021
 - o Adult BLH count: 0-1 per 10 sweeps
 - Nymph BLH count: 0-1 per 10 sweeps
 - BLH activity was very low (9 BLH found across 600 net sweeps). Overall insect activity (non-BLH) was also low.
 - Primary Host Vegetation: Plantago and peppergrass. Overall vegetation die off was in the 85-95 percent range.
 - Update* 4/12/21
 - Adult BLH count: 1-2 per 10 sweeps
 - Nymph BLH count: 0-1 per 10 sweeps
 - Primary Host Vegetation: 99 percent dry.
- Field #09, 4/05/21
 - Adult BLH count: 2-3 per 10 sweeps
 - Nymph BLH count: 2-3 per 10 sweeps

- There were BLH "hot-spots" where counts averaged 3-4 adults and 4-6 nymphs per 10 sweeps. However, most of the field had low to moderate counts.
- Filaree and peppergrass were very stressed. Vegetation was not expected to last more than 2 weeks without rain. Non-south facing slopes were overgrown with grass.
 - Update* 4/07/2021
 - Adult BLH count: 0-1 per 10 sweeps
 - Nymph BLH count: 0-1 per 10 sweeps
 - BLH activity increased slightly, but the population remained below the treatment threshold.
 - Primary Host Vegetation: peppergrass and *Plantago*. Vegetation die off was in the 90-95 percent range. Annual grasses were overgrown on north facing slopes, flats, and hilltops.
- Field #12, 4/06/21
 - o Adult BLH count: 2-3 per 10 sweeps
 - Nymph BLH count: 5 per 10 sweeps
 - There were a couple BLH "hot-spots" where counts averaged 4 adults and 8 nymphs per 10 sweeps. However, most of the field had low to moderate counts.
 - Update* 4/13/2021
 - Adult BLH count: 14 per 10 sweeps
 - Nymph: 4 per 10 sweeps
 - Primary Host Vegetation: 80-90 percent dry. BLH populations exceeded treatment threshold; immediate aerial treatments were recommended.
 - Update* 4/15/2021
 - Successful aerial treatment of 1,500 acres was completed.
- Field #14, 4/14/2021
 - Successful aerial treatment of 2,555 acres was completed.
- Field #15, 4/12/2021
 - o Adult BLH count: 15 per 10 sweeps
 - o Nymph: 9-10 per 10 sweeps
 - Primary Host Vegetation: 80-90 percent dry. Emergent Russian thistle was present in some sections of this field. BLH populations exceeded treatment threshold; immediate aerial treatments were recommended.
 - Update* 4/14/2021
 - Successful aerial treatment of 2,115 acres was completed.
- Roadside Survey Southeast of Coalinga, 4/21/2021
 - o Adult BLH count: 3-5 per single net sweep
 - o Nymph: N/A
 - Primary BLH host vegetation: London rocket
 - Survey took place along Lost Hills Rd near Hwy 33

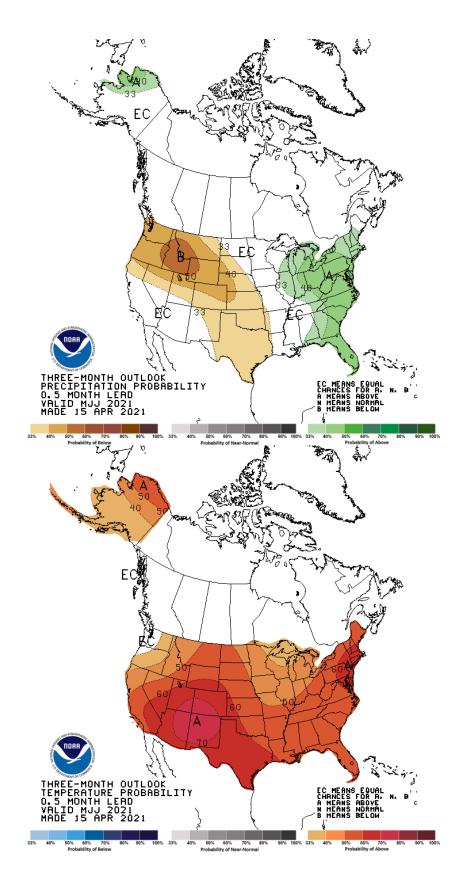
Kings County

- Fields #24 & 25, 3/30/21
 - o Adult BLH count: 2-3 per 10 sweeps
 - Nymph: 3-4 per 10 sweeps
 - o Primary Host Vegetation: stressed and dried out.
- Roadside Survey in Kings County, 4/21/2021

- o Adult BLH count: 5-10 per single net sweep
- o Nymph: N/A
- Primary Host Vegetation: Sporadic stretches of roadside host plants consisted of London rocket, mallow, and young emerging Russian thistle.
- Survey took place on 23rd Ave between Hwy 41/Utica Ave; 25th Ave between Hwy 41 down to Devil's Den Rd; east of I-5/Utica Ave to 10th Ave; Devils Den Rd to Hwy 33; and along Hwy 33/Pyramid Hills.
- Roadside Survey in Kings County, 4/22/2021
 - o Adult BLH count: 5-10 per single net sweep
 - o Nymph: N/A
 - o Primary Host Vegetation: London rocket, mallow, Russian thistle
 - Survey took place along Omaha Ave, Nevada Ave, Quail Ave, 30th Ave/Orange Ave, and Plymouth Ave, between Kettleman City and the City of Stratford.

Kern County

- Field #'s 33-37; 40, 42, 45, 47, 55; 4/12/2021
 - o Adult BLH count: N/A
 - o Nymph: N/A
 - Primary Host Vegetation: 95 percent dried out and stressed. Emergent Russian thistle was visible across much of the surveyed area.
 - Staff conducted an observational survey to check on the status of vegetation across the western foothills in Kern County. BLH activity remained below treatment threshold.
- Roadside Survey East of Taft, 4/2/2021
 - o Adult BLH count: 0-1 per 10 sweeps
 - Nymph: 3 per 10 sweeps
 - o Primary Host Vegetation: filaree, mallow, and London rocket.
 - o Roadside survey conducted near tomato crops on the Valley floor. BLH counts were inconsistent but averaged less than five (5) per 10 sweeps.



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