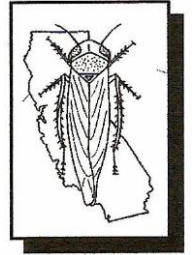


BEET CURLY TOP VIRUS MONTHLY REPORT



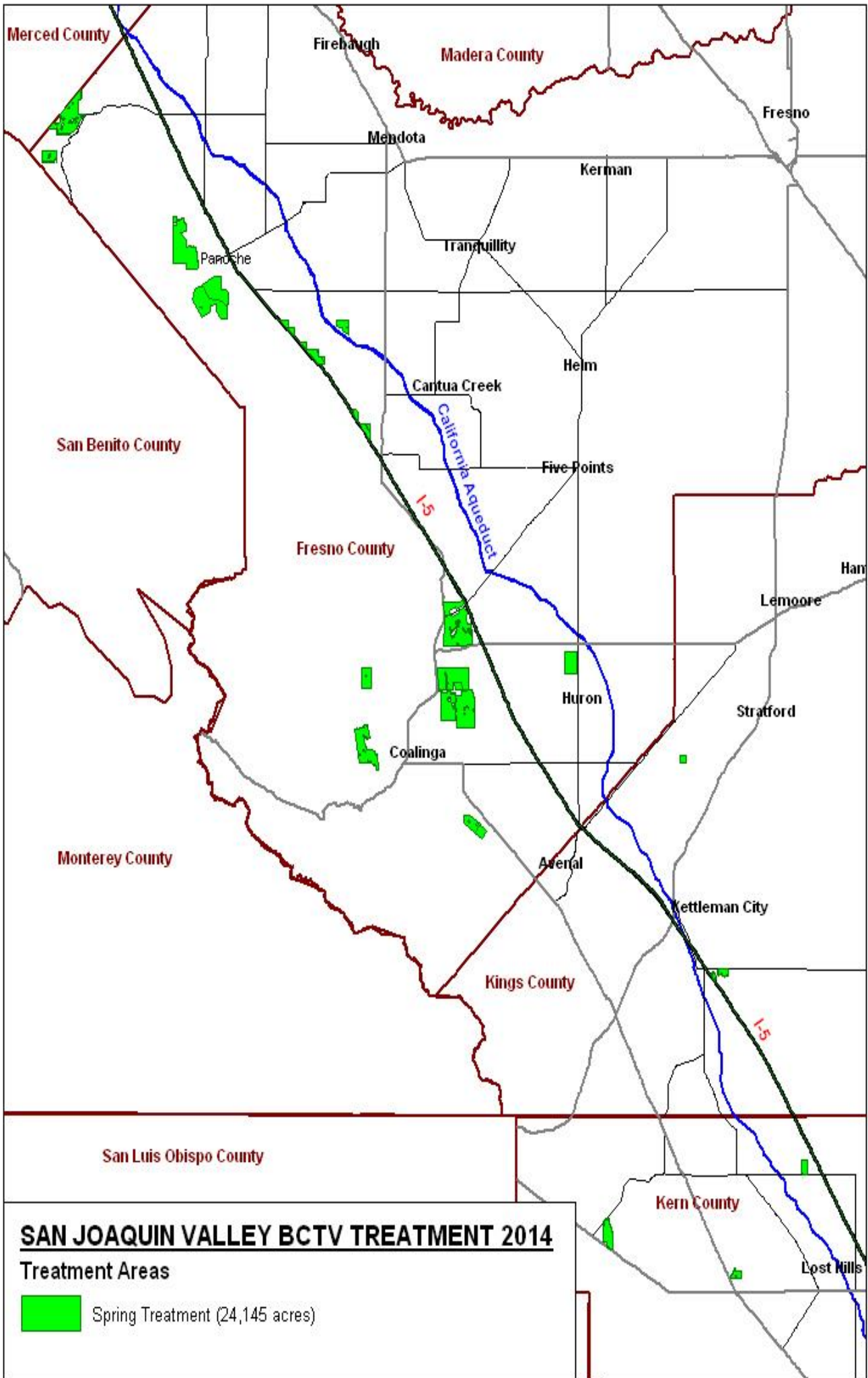
CURLY TOP VIRUS CONTROL PROGRAM

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Report for June, 2014

Program-wide notice

- The Beet Curly Top Virus Control Program (BCTVCP) continues to be vigilant in monitoring fallow ground and will continue to do so until the fall spray campaign. As beetle leafhopper populations reach treatment threshold, every effort is made to conduct either aerial or ground treatment applications. Beetle leafhoppers have been observed on Russian thistle in these fallow fields. Some fields have counts as high as 50 BLH per single sweep. Many of those fields that would normally be treated in the fall are currently being treated or will be treated in summer. The BCTVCP would like to remind growers to treat any fallow fields and roadside host plants before disking or mowing, to prevent movement of beetle leafhoppers into neighboring tomato fields. The program would also like to point out that almonds, pistachios and vineyards often have BLH host plants growing in the middles of each row. In one survey, BLH counts were 20+ (adults and nymphs) on Russian thistle that was growing in the middle of an almond orchard. When those host plants get mowed, it is likely the BLH will move through nearby tomato fields, potentially causing BCTV infection. It is in good practice to treat the host plant weeds with an insecticide prior to mowing or disking.
- As of July 1, 2014 treatment totals are as follows:
 - Fresno County: 22,370 acres (aerial)/ 1,280 gallons used of tank mixed Malathion by ground.
 - Kern County: 1,325 acres (aerial)/ 2,340 gallons used of tank mixed Malathion by ground.
 - Kings County: 450 acres (aerial)/ 480 gallons used of tank mixed Malathion by ground.
 - Merced County: 45 gallons used of tank mixed Malathion by ground
 - Total acres treated by air: 24,145
 - Total gallons by ground: 4,145
- The following map shows aerial treatment locations from Merced County to Kern County.



Fresno County

- Ground rig treatment applications continued throughout the month of June in the following areas:
- Treatment was conducted in the Three Rocks area from Manning Avenue to Mt. Whitney Avenue (north and south) and from Interstate 5 to Calaveras (east and west).
- Treatment was conducted from Mt. Whitney to Highway 198 (north and south) and Derrick Avenue to Highway 269 (east and west).
- Treatment was conducted in the Coalinga area between Palmer Avenue and Jayne Avenue (north and south) and Highway 33 and El Dorado (east and west).

Imperial/Riverside Counties

- Program personnel will be surveying the desert areas of Imperial and Riverside Counties in July. The survey was rescheduled for July due to treatment needs in Kern County. Results will be included in the next report.

Kern County

- Treatment was conducted throughout the month of June.
- The areas of concern were in Lost Hills, near Blackwell's Corner and Kecks Corner. BLH counts were 50+ in the fallow fields as the 3rd and 4th instar nymphs became adults. These fields were treated by aerial application and by ground rig. A total of 1,325 acres were treated aerially and 2,180 gallons of tank mixed Malathion was used in ground rig applications.
- Personnel will continue to monitor roadsides and fallow ground and treatment will be conducted as needed.
- Field survey had minimal tomato plants that looked as though they may have BCTV. Two suspect tomato samples were tested and were positive for curly top virus. Two BLH samples were tested and negative for curly top virus.
- Other beet leafhopper samples and Russian thistle samples were collected and sent for testing later in the month. Those results will be included in the next report.

Kings County

- Ground rig treatment applications were conducted along Pyramid Road. A total of 160 gallons of tank mixed Malathion was used.
- Ground rig applications will continue as needed.
- Personnel will continue to monitor the fallow fields and Russian thistle development.

Merced County

- Sweep surveys were conducted along roadsides and fallow fields. Beet leafhoppers were just beginning to be observed in early June.
- A fallow field on S. Poleline Road north of Nees Avenue and north of the Fresno/Merced County line consists of dry Shepherd's purse, sparse Bassia, goosefoot, and Russian thistle. 5 adult BLH and 1 nymph per sweep. 100 sweeps total.
- A fallow field on S. Poleline Road north of Eagle Field Road consists of Russian thistle, mustard, and London rocket. 7 adult BLH and 2-3 nymphs per sweep were observed. 100 sweeps total.
- There was a stretch of Russian thistle along Alvarado Trail in between S. Creek Road and Canyon Road that produced 6 adult BLH and 1 nymphs per sweep. 100 sweeps total.
- A stretch of Russian thistle along Orchard Road south of Taglio Road produced 9 adult BLH and zero nymphs per sweep. 100 sweeps total.
- A tomato field on Orchard Road south of Highway 140 has neighboring cherry and almond orchards. The orchards have a good mix of BLH host plants within them and some host plants were along the perimeter of the tomato field. BLH counts

were highest on sweeps over purslane found within the tomato field. Counts were 1-2 adult BLH and 3-4 nymphs per sweep along the south side of the field. Along the north side of the field, counts were less than 1 adult and less than 1 nymph per sweep. Plant samples and BLH samples were taken and submitted for testing. Contact was made with the field worker. The field worker claimed immediate action would be taken.

- A fallow field on the west side of Schmidt Road south of Highway 140 consisted of mostly Russian thistle and goosefoot. Counts were less than 1 adult and zero nymphs per sweep. This field is diagonal to the tomato field on Orchard Road.
- A tomato field on the east side of Whitworth Road south of Worthington Road contained purslane in the rows and along the perimeter. Counts were less than 1 adult BLH and less than 1 nymph per sweep.
- Two other tomato fields had purslane within the rows. BLH counts were 0-2 adult BLH and 0-1 nymph per sweep. One field is on the northwest corner of Highway 33 and Bambouer Road and the other is on the northwest corner of Fenter Road and Whitworth Road.
- Unfortunately, some roadsides that produced moderate numbers of BLH had been mowed before we could conduct ground treatment. Also, the program cannot treat areas within orchards or tomato fields.
- Program personnel are making arrangements for ground rig treatment applications along roadsides and in fallow fields.
- Personnel will continue to monitor vegetation and BLH populations.

Sacramento Valley

- Program personnel surveyed Sacramento Valley the week of June 16-19.
- On June 16th, survey was conducted in Sacramento County near Elk Grove and the southern end of Yolo County from Davis to Woodland. Sweeps and tomato field surveys were conducted. Sweeps yielded 1 confirmed BLH nymph. Roadside vegetation was abundant throughout the area with *Bassia*, goosefoot, Russian thistle, and London rocket. Tomato fields looked good with no apparent signs of BCTV.
- On June 17th, survey continued in Glen, Butte, and northern Colusa Counties. Survey area was defined by the foothills west of Interstate 5 and the Sacramento River on the east. Very few tomato fields were identified in these counties, most of the agriculture comprised of permanent crops, limited row crops, and rice fields. Roadside vegetation was well distributed throughout the counties with London rocket, Russian thistle, mallow, and *Bassia*. Sweeps were conducted on roadside host plants and zero BLH were identified.
- On June 18th, survey was conducted in Colusa County and northern Yolo County. Colusa County from Willows south to Arbuckle had a good mixture of crops with almonds, rice, and tomatoes accounting for the majority of acreage. Tomato fields looked to be in good condition with no apparent signs of BCTV. Roadside vegetation was not as abundant. Sweeps were conducted on London rocket, Russian thistle, goosefoot, and *Bassia* with zero BLH identified. Yolo County was similar to Colusa County. Tomato fields were in good condition. Sweeps were conducted and produced zero BLH. Tomato samples were collected and sent for testing. Results will be included in the next report.
- On June 19th, survey was conducted in Sutter and northwest Sacramento Counties. Tomato fields in the Knights Landing and Robins area were in good condition. There were 2 tomato fields that possibly had minimal BCTV infection. Sweeps were conducted with zero BLH identified. Samples were collected and sent for testing. Results will be included in the next report.

Salinas Valley

- Program personnel surveyed the Salinas Valley. Areas surveyed included Bradley, Lockwood, San Lucas, King City, Greenfield, and Soledad.
- Perimeters of row crops were clean of BLH host plants, however there was some mustard. Counts were minimal with less than 1 adult BLH per sweep.
- Tomato acreage is low compared to other parts of California. Tomatoes appeared to be in good condition.
- A few fallow fields were located and surveyed with zero hoppers identified.

San Joaquin County

- Sweep surveys were conducted in various locations. Beet leafhopper counts were minimal in all locations surveyed, despite having suitable host plants.
- Russian thistle along S. Koster Road on the southwest side of Highway 33 produced less than 1 adult BLH per sweep and zero nymphs. 50 sweeps total.
- On West Vernalis Road west of Highway 33 along the north side of Highway 132 there was a stretch of mustard. Counts were 1-2 adult BLH per sweep and zero nymphs. 50 sweeps total.
- There was a stretch of mustard and Russian thistle along McCracken Road north of Highway 33. Counts were less than 0-1 adult BLH and zero nymphs per sweep. 50 sweeps total.
- Near West Linne Road east of Interstate 5, along the perimeter of pistachios was Russian thistle. Counts produced 2 adult BLH and less than 1 nymph per sweep. 50 sweeps total.
- There was a good mix of roadside hosts along South Banta Road south of 11th Street. Hosts include Russian thistle, mustard, and some goosefoot. Counts were 2-3 adult BLH and zero nymphs per sweep. 100 sweeps total.
- Along a ditch off of East Durham Ferry Road, there was a long stretch of Russian thistle, goosefoot, and mustard. Counts were less than 1 adult BLH and zero nymphs per sweep. 100 sweeps total.
- There was a long stretch of mustard and Russian thistle west of Lorenzen Road east of Kasson Road. Counts were less than 1 adult BLH and zero nymphs per sweep. 100 sweeps total.
- On Kasson Road north of E. Durham Ferry Road there was a long stretch of mustard and Russian thistle. Counts were 0-1 adult BLH and zero nymphs per sweep. 100 sweeps total.
- Program personnel collected several samples of tomatoes and sent for testing.
- Two tomato samples submitted from Bonetti Road north of Clifton Court Road tested negative for Beet Curly Top Virus (BCTV).
- A tomato sample submitted from South Roberts Road and Howard Road tested positive for BCTV.

Stanislaus County

- Fallow field, tomato crop, roadside host vegetation and BLH population surveys were conducted. Tomatoes appear healthy and in good condition so far.
- Numerous sweep surveys were conducted at various locations. BLH counts remain minimal. Counts were 0-2 adult BLH and 0-1 nymph per sweep on average.
- Tomato samples and BLH samples were collected and sent for testing.
- A tomato sample submitted from Apricot Avenue west of Paradise Avenue tested positive for Beet Curly Top Virus (BCTV).
- A tomato sample submitted from the east side of Patterson, on Orange Avenue east of South 1st Street tested negative for BCTV, and positive for Tomato Spotted Wilt Virus (TSWV).
- A tomato sample submitted from Pomelo Avenue west of Sycamore Avenue tested positive for BCTV.
- A tomato sample submitted from Loquat Avenue west of Cottonwood Avenue tested positive for BCTV.
- A tomato sample submitted from Roger Road and Vineyard Avenue tested negative for BCTV.
- A tomato sample submitted from Oaklea Road east of Highway 33 tested positive for BCTV.
- Program personnel will continue to monitor these areas for BLH.