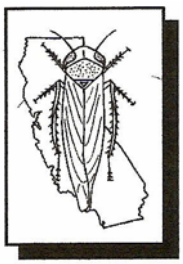
BEET CURLY TOP VIRUS MONTHLY REPORT



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Monthly Report for May, 2013

The Beet Curly Top Virus (BCTV) Control Program completed treatment for the control and suppression of the beet leafhopper (BLH). Aerial and ground rig treatments were conducted in Kern, Kings, and Fresno Counties. Aerial treatment was completed in April with a total of 38,950 acres. Ground rig treatment on various roadsides, ditches, and fallow ground concluded on May 14, 2013, with a total of 1,820 acres. BLH mortality rate, post treatment, on average was 95% for each county.

May continued to be a dry month with only trace amounts of precipitation on the West side. Host plants in the rangeland and foothills have completely dried, therefore BLH have migrated down into the host plants and cropland on the valley floor. BLH migration peaked in April and BLH populations will continue to reside on Russian Thistle, Goosefoot, and other host plants on the valley floor until late fall, when winter host plants begin to germinate in the rangeland/foothills.

Agricultural Pest Control Supervisor Randy Collins and Environmental Scientist Jennifer Willems, have met with several growers to visually inspect tomato fields for Curly Top Virus and to verify damage. Other BCTV crews have conducted crop surveys in various places on the west side. It is difficult to estimate at this time, the overall percentage of infection and damage. Many fields that BCTV crews inspected have shown little damage. Other fields had very high infection and damage.

Imperial/Riverside County

BCTV personnel conducted roadside survey in Imperial and Riverside Counties. Host plants were sporadic, except along fresh water canals or growing next to fields about to be harvested. Those locations are non treatable areas. BLH counts ranged from single digits on Russian thistle to 50+ on red top *Chenopodium* in non treatable areas. Approximately, 40% were adult BLH and 60% were nymphs of various instars. BLH samples were collected and will be tested for Curly Top Virus.

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Kern County

Roadside host vegetation is scattered and wide spread in Kern County. BLH counts average 5-15 adults per 10 sweeps. Occasional fallow fields with Russian thistle and other summer host plants contain BLH counts as high as 30-40 adults per 10 sweeps. It is important to remember those fallow fields containing high BLH counts should be treated prior to tillage.

Kings County

Survey of fallow fields and roadside host plants were spotty and BLH counts were low.

Fresno County

Crews surveyed the west side for fallow fields and roadside host plants for ground treatment. Weed samples were collected and sent to Dr. William Wintermantle for testing and virus characterization. At the end of May, crews conducted roadside survey again, identifying any fallow fields or roadside host plants for ground treatment. BLH counts were on average 8-15 adults per 10 sweeps.

Fresno Facility

BCTV personnel have planned BLH survey/monitoring, host plant survey, and crop survey in Sacramento Valley and Salinas Valley for the first week of June. Crews will get sweep counts to determine BLH population sizes in these areas.

With the BLH migration all but completed, the beet leafhopper will remain on the valley floor in various host plants until late fall. Any host plants in or on the perimeter of young orchards, vineyards, or fallow fields should be inspected for BLH, and treated with an insecticide before removal or plowing of host plants to prevent the beet leafhopper from migrating into a nearby tomato or other host fields. It is also important to inform non- host producing growers of the risk of plowing nearby fallow fields that contain BLH host plants. The photos below show a field in the process of being plowed. Goosefoot and Russian thistle were patchy, however; in one sweep there were 50+ adult BLH and several nymphs! The land owner was contacted and the BCTV program was able to spray the field before plowing was resumed. Tomato fields were located within ½ mile, with no other suitable host plants for the BLH to move into.

Fallow field partially plowed.

Patch of goosefoot and Russian thistle. BLH counts were 50+ just on this patch!