



Cranberry Station Newsletter

August 29, 2018

UMass Cranberry Station

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Plant Stress and Herbicides

Between the extreme heat, humidity, and long periods without rain, this has been a very stressful summer for cranberry vines. We have noticed a lot of temporary bleaching from Callisto and Yellow Vine Syndrome (YVS) on cranberry vines this season that are likely linked to the environmental stress.

Callisto/mesotrione bleaching. Whenever plants are stressed, their ability to metabolize (or breakdown) herbicides may be reduced. Over the past few weeks, we have seen “flashing” or whitening of the leaves at the tips of cranberry uprights following a mesotrione application. Mesotrione herbicides work by destroying the pigments in weeds. Usually, cranberry vines are very good at metabolizing Callisto and this ability is what give us such good crop safety with these herbicides. However, when the vines are having to use extra resources and “machinery” to stay cool and combat the heat, they cannot do this “breakdown” as well as when conditions are less stressful. The result is a temporary whitening of the leaves usually isolated to the tips of uprights where the new growth is most tender. In most instances, the vines will recover with a week or two. There is usually no need to attempt remedies, such as applications of extra fertilizer. The flashing symptoms are more severe on vines that have been spot-treated with the concentrated rates than those exposed to regular

rates during a chemigation application. Even if some injury does occur to vines during spot-treatments, the area is small and overall production won't be impacted.

Yellow Vine Syndrome. We have also noticed a lot of YVS showing up. YVS symptoms show up as a yellowing along the leaf margins while the area along the vein remained green, occurring first in the old leaves (and often remain visible in the old leaves the next season) whereas mesotrione flashing occurs on the tips of new growth and the leaves will usually re-green. The best evidence indicated that YVS is a nutritional imbalance exacerbated by water stress, either too much or too little. It is usually most apparent when fruit is maturing and the nutritional demands on the plant are highest. It is worsened when any other stressor is in the mix, such as the use of herbicides like Casoron. Casoron is often associated with YVS since it can inhibit root formation and this may interfere with the vines' ability to take up enough water to cool itself. Again, unless the YVS is really bad, the vines will grow out of this. At this point in the season, if your vines have severe YVS, you may want to consider a bit extra fertilizer to make sure the bud will be well set for 2019. Because the plants with YVS are likely having issues with their roots, a foliar fertilizer (not liquid, but a true foliar feed) may be more effective for getting nutrients into the plants. There is some indication that urea and/or magnesium applied separately may help alleviate symptoms.

Hilary Sandler and Katie Ghantous

Summer Scale

Scale damage (at some sites) continues to be seen as a result of heat stress. If you see areas of damage, report to Entomology (Marty) as we are monitoring the next crawler release! The heat stress from the long hot June and July have certainly exacerbated the scale damage just like it has with the symptoms of upright dieback and yellow vine syndrome.

Once again, we are seeing infestations of scale that were not managed earlier in the season. About a half dozen new or repeat sites have been confirmed this August in Rochester, Wareham, Middleboro and Carver. Most are Putnam Scale, the small darker species, and we are more commonly seeing scale on the leaves and berries! Since 2010, reports of infestations of scale have been growing with 10-20 confirmed infestations and damage in each of the last few years. If you hold late water or spray Diazinon in mid-June targeting crawlers, the population will be managed. However, many growers have had new populations turn up on adjacent fields.



Summer generation scale infesting leaves on the bog. Reddish discoloration appears where the scale have been feeding.

Scale are small insects that attach to the cranberry uprights and can usually be seen along the base of the upright - the female insects are immobile and protected under a waxy covering. The female feeds on the plant, but with its cover, it blends in with the bark. The eggs develop under the scale

covering in the spring and are released as tiny crawlers, generally in June.

Putnam scale undergoes two generations in MA, and if the spring population is not controlled, there is another set of crawlers in August. This is the activity we are seeing now on the berries and leaves. These crawlers will develop into 2nd instars that will overwinter and continue development in the spring.

Scale feeding weakens the vines and, under high enough numbers, eventually causes reddening of the foliage and vine death. Putnam scale, in very bad infestations, will form a crust over the vines, being most pronounced on the old wood. The scales are most abundant on the upright, but as infestations increase, they may be found on leaves and fruit as well, particularly in the 2nd generation in late summer.



Many scale on berry, with reddish discoloration from feeding.

If you have dead areas, or see little spots on the berries, it is wise to confirm it is scale and to plan accordingly to manage them now or in the spring. A sample of vines, down to the root, collected along the edge of the dieback can be brought to the Cranberry Station for inspection in a plastic bag. Please include your name, site and phone number.

Marty Sylvia, Entomology

For additional pictures of scale please click [here](#) or visit the Cranberry Station's website.

Save the Date

Oversight Committee Meeting
November 16, 2018
Cranberry Station Library
10:00 AM - 12:30 PM

The Cranberry Station Oversight Committee meets quarterly to discuss budgetary, legislative, and logistical issues to support and promote the activities of the Cranberry Station. These are open meetings and growers are invited to attend. The 8-member committee is co-chaired by Representative William Straus and Senator Michael Rodrigues. Commissioner of Agriculture, John Lebeaux, a representative from the UMass Dartmouth Chancellor's office, a representative from the UMass Amherst

College of Natural Sciences, and three growers comprise the remainder of the committee.

Meetings are currently held on Fridays in March, May, and November, starting at 10:00 AM in the Station Library and usually last 60-90 minutes. The summer meeting is held on the day of the CCCGA Summer meeting, following the conclusion of lunch and the business meeting.

The November meeting is the longest one of the year as Station personnel give 3-5 minute presentations, highlighting their work during the past year. The presentations are videotaped and past presentations can be viewed on the Cranberry Station YouTube channel. Click [here](#) to view.

For further information or questions, please contact Robyn Hardy at rmhardy@umass.edu or 508-295-2212 x10.

PLANT TISSUE TESTING FOR NUTRIENT ANALYSIS

If you plan to do tissue tests, collect your samples from mid-August through mid-September. Samples should contain no more than the top 2 inches of growth (no roots, soil, runners, or fruit). Collect tissue from vegetative and flowering uprights. You typically need about 1 cup of vine tissue. Do not collect samples when the vines are wet and do not send the samples in plastic resealable bags. Always request nitrogen determinations when you submit your samples. UMass labs (ag.umass.edu/services/soil-plant-nutrient-testing-laboratory) (413-545-2311) are currently having equipment issues and are presently unable to process samples. They recommend using Penn State (agsci.psu.edu/aasl/plant-analysis/plant-tissue-total-analysis) (814-863-4540) or UMaine (umaine.edu/soiltestinglab/) (207-581-2917) services until they are up and running again. If you need quick turnaround, you should probably look for a local commercial lab.

CRANBERRY STATION NEWS

Mark your calendars! The Winter meeting has been booked for January 30, 2019 at the Hotel 1620 in Plymouth, MA. Please look for the registration in the upcoming newsletters.

The Cranberry Station is looking for a mini excavator. Please contact Rick 508-295-2212 x14.



Hilary Sandler, Station Director



**CRANBERRY STATION
NEWSLETTER**

Inside this issue:

- **Plant Stress and Herbicides**
- **Summer Scale**
- **Oversight Meetings**
- **Tissue Testing**
- **Cranberry Station News**

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