

**Did you know that grapevine leaves are not normally supposed to turn red in the fall for most varieties?**

*(Exceptions include: Petite Sirah, Malbec, Carignan, Carmenere, Ruby's Red, Alicante, Teroldego, and possibly others – these may naturally turn red or reddish)*

**Although beautiful in color, grapevine leaves naturally turn yellow, orange, and brown. When leaves turn red it is an indication of a problem** – usually physical injury of the vine, a nutrient deficiency, or a grapevine virus disease. Since it is most expensive to test for and manage a virus disease, it is wisest to rule out all other causes of red leaves first.

NOTE: Vines with viruses may or may not express symptoms such as red leaves. Also, white varieties and rootstocks do not show the red leaf virus symptom.

**A few red leaf examples from around the LODI AVA ...**



This leaf is from a vine which tested positive for leafroll virus. Testing is crucial when it comes to viruses because visual identification alone is not accurate enough.



This leaf is from a Cabernet Sauvignon vine which was marked for roguing due to virus just weeks prior to harvest. The best time to scout for red leaf virus symptoms is around harvest.



The red colors in the leaves in this Merlot vineyard only showed up after the mites were controlled.



This Cabernet Sauvignon vineyard has mealybugs and ants, putting it at risk for leafroll disease, so leaves were sampled for viruses around harvest time.



The spotty red color in these Cabernet leaves is likely due to mites, not a virus.

## RED LEAF FLOW CHART (for red grape varieties only).

Adapted from the Rutgers University "Red Leaves in the Vineyard: Abiotic and Biotic Causes" Factsheet FS1260.

### I HAVE RED LEAVES ON AT LEAST A FEW VINES.

(PS this is almost everyone in California right now. You are not alone).



#### EXAMINE TRUNKS, CORDONS, AND PETIOLES FOR DAMAGE.

ex) trellising ties, physical damage from equipment, petiole girdling, trunk disease, crown gall



#### TEST FOR NUTRIENT DEFICIENCIES.

Potassium (K), Magnesium (Mg), Phosphorous (P)



#### TEST FOR APPLICABLE VIRUSES, especially if your vineyard is at risk for viruses (*example: there are/were mealybugs present*).

- Follow laboratory sampling protocols closely
- Speak with laboratory about most efficient and affordable testing method based upon percent of vineyard which may be affected
- Be sure to mark the vines you are testing carefully, numbering them and keeping records so you can match up the results (paint or zip ties work best)