Major Grapevine Diseases: Fanleaf and Leafroll

WASHINGTON STATE UNIVERSITY EXTENSION FACT SHEET • FS074E

Preventing the Spread of Grapevine Diseases

Preventing the spread of grapevine diseases is an important part of maintaining a productive and profitable wine industry. Currently, there are over 70 viruses and virus-like diseases that have reportedly infected grapevines. Of these, grapevine fanleaf and leafroll are the two major diseases affecting wine grape production in Washington State.

The chart below provides a quick field guide for recognizing and differentiating between these two diseases, as well as for recognizing nutrient deficiency and genetic abnormalities, which have very similar symptoms.

For more details on these diseases, see the WSU Grapevine Leafroll Disease Bulletin EB2027E and http://wine.wsu.edu/virology/.

FANLEAF	LEAFROLL
HOW DISEASES AFFECT CROPS	
Vines become weak and less productive Berries become uneven in size Yield loss can go up to 80%	Smaller fruit clusters Delayed fruit ripening Poor berry color in red varieties Decreased sugar levels Decline in production

Pinot Noir

healthy infected

Chardonnay

healthy infected

Cabernet Sauvignon

healthy infected

Chardonnay

healthy infected

FANLEAF

LEAFROLL

WHEN AND WHAT TO LOOK FOR

Best seen in spring, around flowering and fruit set, while pruning

Deformed leaves, vein-banding, yellow mosaic, ring and line patterns, flecks

Pinot Noir **Chardonnay**

healthy infected healthy infected

Best seen in fall

Red varieties: green veins and reddening between veins

White varieties: mild yellowing

Downward rolling of leaves

Merlot **Chardonnay**

DON'T BE FOOLED

Typically not visible in fall

Mistaken for herbicide injury, insect feeding damage, and genetic disorders

herbicide injury **genetic disorder**

Mistaken for discolorations due to mechanical or winter damage to the trunk

Similar symptoms seen with nutritional deficiency

nutritional deficiency **mechanical damage**

YOUR PART IN PREVENTION: START CLEAN, STAY CLEAN

Make sure cuttings sourced from nurseries are certified virus free.*

Do not compromise on the quality of cuttings.

Determine quality of cuttings by getting them tested for viruses—for advice, contact Naidu Rayapati.

Monitor new plantings and rogue infected vines as soon as possible.

Apply insecticides to eliminate insect vectors that spread leafroll disease.**

*A list of certified nurseries can be found at http://wine.wsu.edu/research-extension/nwgfs/certified/.

**See the WSU Grapevine Leafroll Disease Bulletin EB2027E and the 2012 Pest Management Guide for Grapes in Washington EB0762 for insect control options.

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