

Grapevine Crown Gall

by Maurus Brown

Many times grapevines will experience some type of winter damage. Some of the reasons for winter injury are mechanical (e.g. weed trimmers, lawn mowers), freezing temperatures or poor vine vigor. One disease, crown gall, caused by *Agrobacterium tumefaciens* can over time become detrimental to the survival of vines.



The bacteria can easily enter through wounds on the plant. Early signs of the galls will normally be at the lower most part of the vine's trunk - near the ground. This seems reasonable given the bacteria is native to the soil. Brown colored galls form as the disease progresses. At first, the galls appear small and round in appearance. Galls generally develop into large, knotted masses of tissue on the trunk over several months to a few years. To a lesser extent, galls can be found on cordons (arms of the vine) and canes. If crown gall is observed on the upper portion of the vine, it is probably due to infection of pruning sites.

Once the vine is infected, the bacterium can move systemically throughout the plant. The disease basically plugs up the vessels (xylem and phloem) that carry water and

nutrients throughout the plant. Any cuttings that are taken from an infected vine have a good potential of showing signs of the disease. Always inspect vines when you receive them from the nursery for any visible signs of crown gall. Discard all disease plants and notify the nursery.

To avoid possible disease infection, try to prevent injury to the vine during the growing season and in the winter. Be sure to select varieties (e.g. Concord, Niagara) that are less likely to experience winter injury. Varieties such as Thompson Seedless (widely grown in California) are easily injured due to vine's inability to adjust to the cold climate of Ohio. It is possible to maintain the life of a vine by replacing the trunk and pruning out infected areas on the upper portion of the vine.

Please refer to OSU Extension Bulletin #815 for more information on grape diseases. The following are definitions of words used to describe ***parts of the grapevine***.

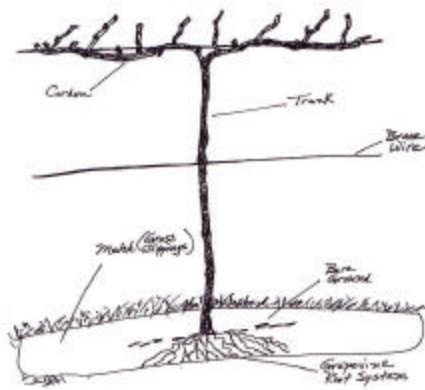
Cordon: A lateral extension of the vine's trunk, which is positioned along the top trellis wire.

Cane: A part of the grapevine that remains following leaf fall. This is a mature shoot that has hardened to woody plant tissue.

Node: The enlarged part of the cane in which the bud is located.

Bud: Grapes have a compound bud that consists of a primary, secondary and tertiary bud.

Spur: A cane that has been pruned to 1 node renewal, or pruned to 2-3 nodes for fruiting.



Winter Damage to Grape Buds

by Maurus Brown

The dramatic change in temperature across the Ohio in the last few days may have had a serious impact on bud survivability. Normally, late fall early winter temperatures can range from the upper teens to lower thirties. However, since the temperatures were warm into the middle of December, the vines had little opportunity to harden off properly. The hardening off process allows plants time to adjust physiologically to the oncoming winter temperatures. In this case, it may be a good idea to check your grapevines (and other woody perennial fruit crops) for bud damage. The major reason why we do not recommend pruning dormant vines until late February or March is due to the possible loss of viable buds during winter. This year may be even more important to wait and plan carefully your strategy of pruning the vines.

By taking a few random cuttings (pieces of cane approximately 3 nodes long) and placing them in a pitcher of water in the kitchen can screen potential bud damage. Take a sharp knife and carefully slice the buds open after they have adjusted to the warm temperature. If damage has occurred, the buds will appear brown to black in color - there

will not be the normal light to dark green tissue color.

Seedless Table Grape Varieties

by Maurus Brown

Jupiter was developed and released from the University of Arkansas fruit research program. The fruit is reddish-blue in color when mature. The non-slip skin berry is oval and weighs approximately 5.5g. Some seed traces have been found, but are not highly prevalent. Berries have a crisp texture and muscat flavor. Vines are semi-vigorous and suitable for shoot positioning. Testing in West Lafayette, IN indicated that the vines are somewhat winter hardy.

Neptune was also released from the University of Arkansas breeding program. This white grape is elliptical in shape and has a non-slip skin texture. Fruit cracking is not common and some seed traces are observed. Berries tend to be sweet to taste when fully mature and few seed traces are not noticeable in the fruit. Growers may want to space vines closer than normal since yields are not high. Vines have medium vigor and hardiness is good.



Websites of Interest:

Ohio Grape Web:

www.oardc.ohio-state.edu/grapeweb/

Grapevine Nurseries:

www.oardc.ohio-state.edu/grapeweb/nurseries.htm

Ohionline Website:

<http://ohionline.osu.edu/>

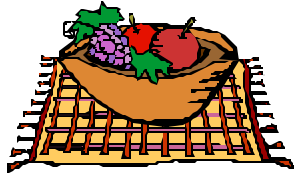
Soil Testing Labs:

www.oardc.ohio-state.edu/grapeweb/testing.htm

Eating Healthy with Grapes

by LuAnn Freppon

New Year's Resolutions... we all make them, whether formal or in fleeting thoughts. The most popular ones are related to health (eating better, exercising more, cutting back after the holiday season of rich and tasty feasts), better use of our resources (making a budget, using less credit, buying less), or breaking habits (anything from smoking to selfish actions). The possibilities are endless, and many times, we continue in our old habits and rituals, because they are so hard to break, or we do not know how to make changes.



When it comes to eating better, the choices can be complicated. We attempt to completely change our eating habits overnight, and commit to eating foods that can be difficult to prepare or that we are not accustomed to eating. Here is a quick and easy recipe that has healthy ingredients, gives the impression of a rich and creamy dessert, but has the nutrient benefits to help us succeed. Have a Happy New Year and Best Wishes as you attempt to meet your New Year's Resolutions.

21st Century Waldorf Salad

2 cups grapes, washed and halved
2 cups apples, washed, cored, and cubed (skins on)
½ cup coarsely chopped walnuts
½ cup chopped celery

Toss lightly while adding one, small container of low fat frozen whipped topping or one package prepared low fat vanilla pudding. Refrigerate before and after serving. Enjoy!
