

Crown Gall Prevention and Management

By Randall Miller

Just mentioning crown gall, more specifically *Agrobacterium vitis*, sends shivers down the backs of experienced growers in cold climates. Looking at the picture of it you can see why, that black gall slowly choking the life out the vine you've nurtured from a small rootling. The galls usually form near or at the graft union and/or soil surface. The infection can also remain asymptomatic until injured, either mechanically, by freezing temperatures, or even by twisting when training. In southern growing areas high temperatures and humidities are equally important factors. Aerial roots (from high humidity) and freeze damage at the graft union (without infection) should not be confused with actual infection. Abundant callus growth at the graft union can also be confused with crown gall. The crown gall pathogen can be spread by infected planting material, pruning equipment, irrigation water, and likely foot and machine traffic. The pathogen has been shown to live on plant debris in the soil for over two years after vines were removed, and vines roots have been known to last over five years in the soil.

So what should you do about crown gall? If you already have it, you can: Treat with Gallex™; this will stop gall growth, but not rid the bacterium from the plant. If the gall is high enough, prune it out and use a sucker to replace that trunk or cane. Maintain two or more trunks. Remove prunings from the vineyard and burn or bury. Do not graft onto vines exhibiting crown gall. If your entire vineyard is infected this may be an option to keep it producing. It is not recommended in most cases because uninfected vines will have a source of inoculum if you don't remove the infected vines. Copper compounds used for downy mildew may have some affect on crown gall. Minimize foot traffic and/or use a shoe pan with a sterilizing solution to prevent crown gall from being tracked into clean blocks. Always use a 10% bleach or shellac thinner (70% ethyl alcohol) solution to sterilize pruners and other equipment.

Buying vines without crown gall is the best way to avoid the problem initially. Piedmontese Nursery & Vineyard uses techniques that most (if any) in the industry do not. In my viticulture class, I teach variety, rootstock, and site selection are important. This is true for crown gall as well. Avoid frost prone areas and wet, heavy soils. Provide drainage, if needed, and anything that will minimize freeze or frost damage. I provide information on variety and rootstock selection as well as tips to minimize cold injury. See my adjoining ad for details and visit my website at PiedmonteseNursery.com