



Environmental Horticulture Notes

GRAPEVINES - GIRDLING AND CLUSTER THINNING TO INCREASE BERRY SIZE

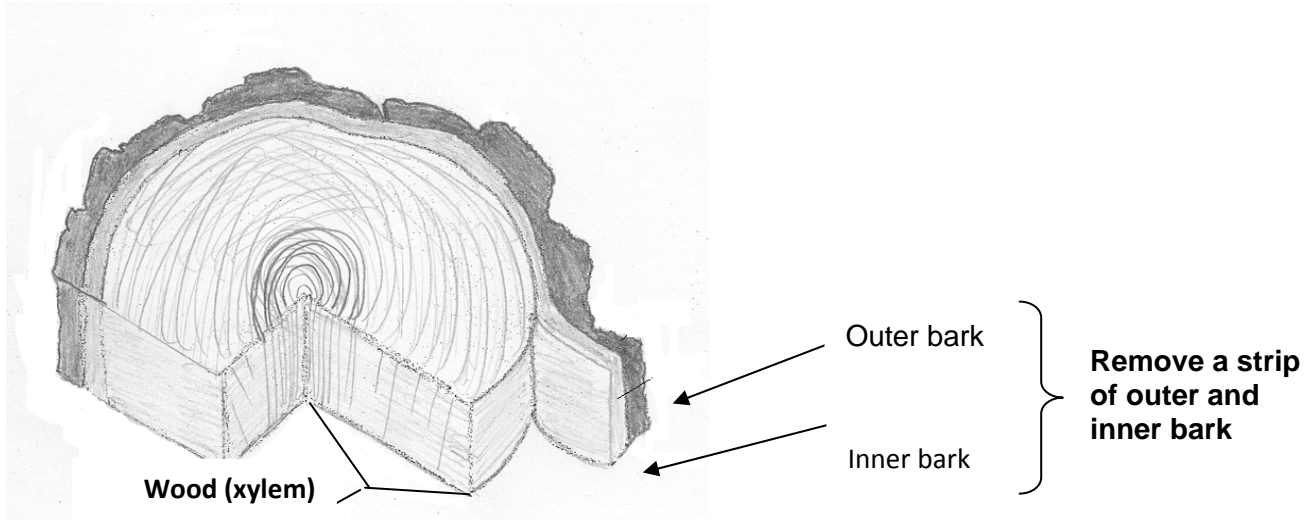
In commercial table grape vineyards, vines are routinely girdled each year during the fruit set period to increase berry size. Girdling can make berries about 10 to 30 percent larger if done correctly. It is particularly effective on seedless varieties, such as Thompson Seedless, Flame Seedless, Ruby Seedless, and Perlette. It has no effect on seeded varieties.

Girdle in late May, at 10 to 14 days past full bloom. Girdling removes the inner and outer bark from around the trunk. The inner bark, or "phloem" is where carbohydrates (sugars and starches) produced by photosynthesizing leaves move to developing organs (including the fruit and roots). Removal of a strip of bark prevents the translocation of carbohydrates to the root system, thus making more available for fruit growth until the girdle heals in about 4 weeks.

Another way to increase berry size is to remove a portion of the clusters in April, before May flowering, leaving one cluster on each shoot. You can also cut off the lower third of each cluster at that time.

HOW TO GIRDLE VINES

Remove a strip of bark, that is 1/8 to 1/4 inch wide down to the wood (see diagram). A double-bladed girdling knife makes the job easier. It is essential that all of the phloem tissue is removed, so press fairly hard. Check for completeness about 20 minutes after the girdle is made – a proper girdle will have the appearance of an all white, fibrous ring of wood (xylem). Remove any brown portions of the ring; if there is even 1/8" of phloem tissue left, the girdle's benefits are lost. Be sure not to cut so deep as to damage the water-conducting xylem and weaken the vine. With a proper cut, the ring should just pop out.



July 2004. Written by Chuck Ingels, Pomology, Viticulture and Environmental Horticulture Advisor
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