



FINGER LAKES VINEYARD NOTES

NEWSLETTER '96 #4 March 25, 1996

Written by David V. Peterson, Area Extension Grape Specialist,
Finger Lakes Grape Program (315) 536-5134, and Tim Weigle,
Area Extension Grape Pest Management Specialist for the
Finger Lakes and Lake Erie Grape Programs (716) 672-6830.
Edited by David V. Peterson.



IN THIS ISSUE

New Vineyard Plantings
Re-planting Concerns
Cold Injury Update
Calendar of Events

- NY Wine Industry Workshop (April 3-5)
- Finger Lakes Agriculture Leader's Forum (April 23)
- 4th International Cool Climate Viticulture Symposium (July 16-20)

NEW VINEYARD PLANTINGS

David Peterson

GROWING MARKETS. As most of you are now likely well aware, there are probably better markets in the Finger Lakes for new grape plantings than have existed in the past 20 years. While this is driven primarily by the growth of the premium wine industry, there appear to be select variety niches for the juice and possibly bulk wine industries that may offer alternatives as well. When the small farm wineries first emerged, they primarily utilized their own grapes, purchasing very few from other growers. Today, with about 50 farm wineries in the Finger Lakes alone, the wineries have not only grown in number, but also in terms of how much wine they sell and how many grapes they purchase. Several individual wineries now buy as much as hundreds of tons of grapes per year from other growers. Wineries that purchased 10 tons or less of total grapes

per year 10 years ago may buy 10 times that amount today! New plantings have been modest at best in recent years, but some estimates indicate that Finger Lakes wineries (as a group) need at least another 500-1000 acres of *Vitis vinifera* varieties alone, just to satisfy the market today (without taking into account the anticipated growth over the next 5 years before new vineyards come into production.) Strong demand from surrounding states (Ohio, New Jersey, Maryland, New England, etc.) has created even greater competition for the existing acreage of "desirable" varieties. Prices in 1995 reached record or near-record levels for some varieties.

WHAT VARIETIES? Wineries have indicated that basically all *vinifera* varieties except Chardonnay are in short supply, as are some hybrids. Riesling is probably the variety in shortest supply, and perhaps the one with the greatest growth potential in the near future. Finger Lakes wineries have created a reputation

for being one of the world's best producers of Riesling, and consumers appear to have finally taken notice. Riesling also has the advantage of having a name recognized by consumers, as opposed to all of the hybrids. Nearly every Finger Lakes winery makes Riesling, and most indicate that they cannot buy enough grapes to meet their demand. Other white wine *vinifera* varieties in demand include Pinot Gris and Gewürztraminer. High demand red varieties include Cabernet Franc, Cabernet Sauvignon, Pinot noir, and some lesser known alternatives such as Gamay noir and Lemberger. Cabernet Franc is probably the most cold hardy of the commercially grown *vinifera* varieties and has shown excellent wine quality potential, but the market for Finger Lakes Cabernet Franc is less developed than for Riesling. Pinot noir has many available clones, and the market for grapes from new plantings will likely be very "clone sensitive" (check with our office for current recommendations on Pinot noir clones). White hybrids with growing demand include Vidal blanc and Cayuga White, and reds include Chambourcin and Maréchal Foch. Varieties such as Seyval, Baco noir and Rougeon have increased in popularity, but existing acreage still appears to adequately supply the demand. As for juice varieties, National Grape Cooperative continues to offer planting contracts for Niagara.

No matter what variety you plan to plant, it would be wise to get a strong indication from a potential buyer that they would be interested in purchasing those grapes when they come into production.

SITE SELECTION. This continues to be one of the most critical issues for new vineyard plantings, especially since much of the demand is for cold tender *vinifera* varieties. Proximity to the lake, elevation, air drainage, internal soil drainage, and other factors are all critical to the economic success of new plantings. With *vinifera* varieties bringing \$800-\$1500 per ton, growers are often tempted to plant on marginal or unacceptable sites. Even with high prices, however, growers are unlikely to make money on marginal sites. Chambourcin and Cayuga White are more cold-hardy than most *vinifera* varieties, but they too are frequently injured on some sites. Even Niagara has experienced cold injury problems on some sites. Growers with

excellent sites likely will have the greatest economic opportunities with *vinifera* varieties, but somewhat colder sites still have options with more cold-hardy varieties such as Niagara and Maréchal Foch.

Please contact me if you have questions as to what varieties your site may be suited to. I would be happy to visit your site (Finger Lakes Region only) and to discuss soil test results and recommendations, etc.

PRE-PLANTING CONSIDERATIONS. Soil tests should be taken before field is worked and any drainage problems should also be corrected. *Vinifera* and hybrid varieties will grow better and be less subject to cold injury and nutrition problems if grown at a near neutral soil pH. I generally recommend pH 6.5 - 6.8 for most *vinifera* varieties and at least 6.0 for hybrids. Soil pH corrections are much easier if done prior to planting.

Vine and row spacing is a decision that you will have to live with for many years. The decision is affected by equipment considerations as well as soil, variety and rootstock. Consider using 8 feet between rows instead of 9 feet (if your equipment allows it) as a means of improving efficiency. If vine size is typically small on the soils that you are planting on, consider using 5-6 feet between vines instead of 7-8 feet. You may find that you end up using less nitrogen as well as increasing yields. Nitrogen fertilizers are also increasing significantly in cost (and decreasing in availability), so this may be an even bigger issue in the future.

Cutting corners on trellis supplies may not be a good investment. Use high quality posts. Treated southern yellow pine is generally your best bet, although metal, black locust and cedar can also be used. Quality of used posts obviously varies. **Avoid treated red pine, as they are structurally weaker and frequently snap off when under the weight of the mature vines, or even while they are being driven in the ground.** Red pine is an especially poor choice for end posts!

High tensile wire is generally the best choice, due to its strength and it eliminates the need for annual tightening (assuming the end posts are well anchored - see below). Crimped wire is generally unnecessary and results in substantially higher cost (since there is less length/cwt weight, as compared to the non-crimped).

Most existing vineyards have been poorly anchored, resulting in the need for more frequent wire tightening and even resetting end post and anchors. Using a standard post (driven in the ground 5-6 feet, if possible) as an anchor instead of a metal screw-type anchor will give better support.

Planting as early in the spring as the ground can be worked is not necessarily the best way to give the vines a head start. In fact, there is some evidence that vines planted when the soil is too cold will actually be somewhat "stunted" compared to vines planted several weeks later. In addition, vines planted in April have a greater risk of frost injury to swelling buds. Therefore, waiting until mid-May or so will help avoid these problems in most years..

REPLANTING CONCERNS

David Peterson

As the previous article points out, changing market conditions have resulted in shortages of some varieties and excesses of others. Since most growers are likely to have a block or two that for one reason or another is no longer profitable, replanting onto an old vineyard site is likely to be at least as common as planting new sites. As growers plan for this change, many considerations and options must be examined.

FIELD GRAFTING VS. REPLANTING. This is an option for some growers instead of replanting. It is commonly done in California as the result of changing market conditions. Field grafting has been done on a limited scale in Eastern vineyards, although it has generally been more successful in regions with milder winters. A major advantage is that the vineyard is back into production sooner and the cost of conversion is usually lower. Growers should consider many factors in this decision,

especially rootstock variety, age and condition. If the existing rootstock is in poor condition, or if it is not suited to the site or the fruiting variety, replanting would likely be the better choice. Unfortunately, most of the blocks and varieties that Finger Lakes growers currently would like to convert over are poor candidates for field grafting. Trellis condition may also be an important factor, as would any needs for site modifications (need for tile drainage, for example). Nonetheless, there are some situations in the Finger Lakes where field grafting would be a good choice.

Please contact our office if you would like to discuss this option with me.

HOW LONG BEFORE THE FIELD CAN BE REPLANTED? Historically, recommendations often suggested not replanting for 5 or more years after removing the old vineyard. In actual practice, this rarely occurs. New vines on replant sites, however, sometimes appear stunted and in some cases never achieve the vigor of the original planting. This may occur for several reasons, including presence of soil borne pests such as phylloxera, nematodes, or possibly other pests. Fumigation has commonly been used on replant sites for many crops, but it is not effective against many pests and is subject to increasing restrictions for environmental reasons. Grapevine roots are also known to give off substances that actually inhibit growth (especially of young vines), which is thought to be a major reason why nurseries generally must rotate sites where they grow their stock. Herbicide residuals are another factor that can limit growth.

The condition of the vineyard soil itself probably holds some of the answers as to the potential performance of replanted vines and how long before the site should be replanted. Vineyard sites with compacted or eroded soils, for example, would benefit from alternative cropping and adding soil amendments for several years. Vines replanted on deeper, more fertile soils often seem to suffer less of a setback. Some growers have even interplanted vines the year before removing the existing vineyard with good results. While first year growth is inevitably reduced with the presence of the older vines (due to shading, competition for nutrients and water, etc., among other

factors), it can potentially get the vineyard back into production faster. If the vine rows are offset from the original vine rows (planting in the area that was previously a row middle), new vines tend to grow better than if they were set in the same place as the old vines.

TRELLIS REMOVAL VS. PLANTING WITHIN EXISTING TRELLIS. This is a critical decision that is often difficult to evaluate. The decision is easier with old trellises in a poor state of repair, but with trellises that are less than 20 years old or those that have had significant post and wire replacements, the decision is more difficult. If the trellis is in reasonable condition, growers should also ask themselves whether or not the spacing is what they would use if they were installing a new planting from scratch. Since spacing is a major decision in the vineyard planting, it is likely best to remove the old trellis if it is not the most desirable spacing. Sound posts and wire are generally salvageable and can be used in the new planting, or as replacements in other blocks. Removing the trellis provides the additional advantage of giving the option of offsetting the rows from the old block, which can improve initial vine growth. If you do not remove the trellis, try raising the wires to the top of the posts (or even removing the wires if your equipment will not go under) and working the ground in a direction perpendicular to the rows so that soil from the row middles is mixed with that under the old trellis.

While we always recommend grafted vines for *vinifera* varieties, even hybrid and Native American varieties are likely to benefit from using rootstocks (especially when replanting into the old rows).

LOOK AT THE BIG PICTURE. Changing varieties with a perennial crop such as grapes is obviously not as simple as with annual field crops. The decisions you make are ones that you are likely to be living with for decades. A balance often must be struck between ideal situations and necessary short term cash flow. Cash flow also dictates what percentage of the vineyard that can be converted over each year, as most growers can only afford to take a certain percentage of their farm out of production. Most vineyards show better long-

term performance if they are not replanted for at least a year after removing the old block, but each situation must be evaluated independently. Although replanting is expensive and has few short-term rewards, it does give the opportunity to upgrade the production systems as well as the varieties.

COLD INJURY UPDATE

David Peterson

Although this has not been one of the colder winters in recent years as far as minimum temperatures go, there is some injury in *vinifera* varieties. All but a few sites went at least a few degrees below 0°F, and some were colder than -10°F. Fortunately, most *vinifera* growers have waited until about this time of year to prune so that adjustments can be made.

Generally, I am finding 20-50% primary bud mortality on *vinifera* varieties. Although 20% mortality requires little adjustment in pruning, vineyards with 40-50% mortality should leave some extra buds. These blocks should still have full crop potential if adjustments are made when pruning. On the coldest sites, primary bud mortality is as high as 75%, although this appears to be on only a few sites. These sites should have only very light pruning done until after bud break, if possible.

All Native American and hybrid varieties that I have checked appear to have only minor bud injury at most. Trunk injury from 2 and 3 years ago, however, is widespread and trunk renewal is needed in many blocks.

The primary point here is that you need to be sure to check some buds of cold-tender varieties before pruning. I hope that the severe winters 2 and 3 years ago reminded everyone of the importance of this!

CALENDAR OF EVENTS

April 3 - 5. 25TH ANNUAL NEW YORK WINE INDUSTRY WORKSHOP. Jordan Hall, New York State Agricultural Experiment Station, Geneva, NY. Contact: Dr. Thomas Henick-Kling, Dept. of Food Science & Technology, NYSAES, Geneva, NY 14456-

0462. Tel: (315) 787-2277 or Fax: (315) 787-2284 or e-mail at: th12@cornell.edu.

April 23. FINGER LAKES AGRICULTURE LEADER'S FORUM. Jordan Hall, New York State Agricultural Experiment Station, Geneva, NY. Topics include: Property Tax Impact on Farm Businesses; Changes in the Real Estate Property Tax Laws That Impact Agriculture; Legislative Proposals to Reduce Impact of Real Property Taxes on Farms; Statewide Agriculture Updates - Agricultural Environmental Planning; Pesticide Updates; Breast Cancer - Environmental Risk and State Legislation; Agriculture/Farm Transportation Update. Contact: Cornell Cooperative Extension, 1581 Route 88N, Newark, NY 14513. Tel: (315) 331-8415 or (716) 394-4110.

July 16 - 20. 4TH INTERNATIONAL SYMPOSIUM ON COOL CLIMATE VITICULTURE AND ENOLOGY. Rochester, NY. Contact: Cool Climate Symposium, Dept. of Food Science & Technology, NYSAES, Geneva, NY 14456-0462. Fax: (315) 787-2284 or e-mail at: wde1@cornell.edu.

David V. Peterson

David V. Peterson
Area Extension Specialist
Finger Lakes Grape Program

Cornell Cooperative Extension and its employees assume no liability for the effectiveness or results of any product. No endorsement of products is made or implied. When using any recommendation, check the product label which is the final word with respect to product usage, or check with the manufacturer or supplier for updated information."



EXTENSION
COOPERATIVE
COLLEGE

5