



FINGER LAKES VINEYARD NOTES
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**GROW TUBES FOR NEW VINEYARD
PLANTINGS AND
GROWER/PROCESSOR FIELD
MEETING - AUGUST 20**

With the surging demand for new grape plantings, a study was set out this year to investigate the potential benefits of using "grow tubes" to aid in vine establishment. These tubes, which have been widely advertised the past few years, are essentially plastic sleeves that create a greenhouse effect for the developing vine. They offer many potential (advertised) benefits, such as accelerated growth, more efficient water use, protection from contact herbicides used around the vine, etc. Since there are many claims made as to their benefits and many different types and sizes available, a study was set up to evaluate the potential benefits (and drawbacks) and to compare various tube lengths. The study is set up in a replant vineyard site (where the old vineyard was removed last fall), and also in an existing vineyard which will be removed this

fall. These situations were chosen since many vineyards are being removed and replanted to other varieties. We are, of course, interested in seeing if the tubes will help overcome some of the poor growth often associated with replant sites. Also of interest is seeing if the tubes would allow vines to become well established before the old vines are removed, which would reduce the time the vineyard is out of production. Both Native American and *Vitis vinifera* varieties are included in the planting. This will be your opportunity to see the "tubes in action!"

As part of the meeting, we are also continuing our "Getting to Know the Processor" series. This will be with Swedish Hill Winery on Cayuga Lake. Swedish Hill has emerged as one of the fastest growing farm wineries in the Finger Lakes. They are also the largest buyer of grapes of any of the Finger Lakes farm wineries. Native American, hybrid and *Vitis vinifera* varieties are purchased. We will also get a chance to look at a number of

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different varieties in the vineyard, many of which are quite unique. Varieties which will be looked at include: Traminette, Melody, Vincent, St. Vincent, Chambourcin, Cabernet Franc, Cabernet Sauvignon, Merlot, and several red and white numbered selections (hybrids) from the breeding program at Geneva. A wine tasting will be included as part of the meeting.

This is the third meeting of this type. These meetings provide an ideal opportunity to get an in-depth look at what issues the winery faces, and how these issues impact the grower. Growers are also able to interact personally with the winery, which can lead to marketing opportunities.

The meeting will be held on Tuesday August 20 at 3:00 pm at Swedish Hill Winery, located 8 miles south of Seneca Falls on Route 414. From Geneva, take Route 96A south, then left on Route 336 to Route 414, then right for .25 miles. From Watkins Glen, take Route 414 north to the winery (approximately 30 miles). Driving time is about 20 minutes from Geneva or 35 minutes from Watkins Glen. **Preregistration is required.** The meeting is free to all growers enrolled in the Finger Lakes Grape Program. **Please call Katie at (315) 536-5134 on Monday - Friday between 8:30 am and 4:30 pm if you plan to attend. Registration is limited to 50 people.**

NUTRITIONAL ANALYSIS

David Peterson

Petiole analysis is generally considered the best means of determining the status of most major nutrients in grapevines. Soil analysis is helpful in making fertilizer recommendations when used in conjunction with the petiole test, but it is not a reliable indicator of nutrient status in the plant. The recommended frequency of petiole testing depends on the condition of the vine and the amount of fertilizer additions made within the past year or two. As vines come into bearing, production generally increases dramatically during the first few years (usually the first 2 or 3 crop years). During this period, it is advisable to do petiole tests yearly. Where

high rates of fertilizers were applied within the past year or two, it is also advisable to test yearly to determine if additional applications are necessary. For vineyards that received no adjustments or only minor adjustments over the past year or two, sampling every other year is probably adequate. Soil analysis need not be done as often, once every 3-5 years is generally adequate unless major adjustments are made.

Although we offer both complete analysis and no nitrogen tests, we recommend only the no nitrogen for all but a few situations. Foliar analysis of grapevines is not always considered to be a reliable quantitative indicator of nitrogen status and needs. Petiole samples taken at bloom are also considered to be more useful than the fall samples for nitrogen analysis, but shoot growth and trellis fill are probably still the best indicators for most growers to use. Heavy nitrogen applications should not be expected to make up for poor management practices or other factors limiting vine size and shoot growth. Petiole tests for nitrogen may be useful for comparing weak sections of a field to more vigorous sections or for comparing blocks of a particular variety that received different rates of nitrogen, but this test would likely be best done at bloom. Please feel free to contact me if you have any question as to whether a test for nitrogen might be warranted in your vineyard.

Samples should be taken no earlier than about 70 days after full bloom, although waiting somewhat longer than the 70 day minimum will generally provide a better assessment for some nutrients, especially potassium. They may be taken later into the fall as long as the leaves remain in good condition (but prior to harvest). **In the Finger Lakes in 1996, samples should be taken in the last week of August or first week of September for early varieties such as Aurore and in early to mid September for most other varieties.**

Samples from non-bearing vines or very lightly cropped vines are usually not very useful unless major problems exist (distinct visual symptoms are often evident in these cases). The "optimum levels" which recommendations are based on generally assume some crop load;

non-bearing vines generally have much higher levels of most nutrients due to the lack of crop stress.

Instructions for sampling are provided with the kits. Separate samples should be taken from "problem" and "normal" areas within a block. The size of the block that a test is useful for depends on the uniformity of the field. Different varieties should be sampled separately.

The test kits are for sampling only. The collected samples are then sent back to our office and analyzed in the laboratory at Cornell. Recommendations are provided with the analysis, and I will follow up with a letter to further explain the details in the recommendations.

Petiole testing kits can be obtained from the Finger Lakes Grape Program Office between the hours of 8:00 a.m. and 4:30 p.m. or requests can be made through the mail. The kits are to be paid for at the time they are requested or picked up. Make checks payable to: Finger Lakes Grape Program. The fees are as follows:

| | |
|-------------------------|------|
| New York State samples: | |
| no nitrogen tests | \$16 |
| complete analysis | \$18 |
| Out of state samples: | |
| no nitrogen tests | \$19 |
| complete analysis | \$21 |
| Soil Test Kits | \$15 |

BOTRYTIS BUNCH ROT

Tim Weigle

Looking at the Rovral label indicates that there is not much new to discuss. The best management strategy for Botrytis is still an integrated approach of leaf removal in the fruiting zone prior to bunch closing, combined with the application of fungicides. The Rovral label states that a minimum of 50 gallons of water be used per acre. However, the label also states to use enough water to ensure adequate coverage. The amount of water which needs to be used will vary depending on

canopy density and whether leaf removal was done. As mentioned by Wayne Wilcox in the May 6, 1996 Finger Lakes Vineyard Notes, we have inadvertently suggested through the recommends that under certain conditions, three pre harvest applications Rovral sometimes may be necessary. This is illegal! The Rovral label allows for a spray at early mid-bloom, prior to bunch closing, beginning of fruit ripening (verasion) and a final application prior to bunch closing, beginning of fruit ripening (verasion) and a final application prior to harvest as needed. NOTE: Growers in Europe and Canada have found Botrytis becomes resistant to Rovral when more than 3 applications per year were used over a period of 3-5 years.

GRAPE BERRY MOTH

Tim Weigle

The third week in August is the time to scout high risk vineyards for grape berry moth using the Grape Berry Moth Risk Assessment protocol. A damage threshold of 15% damaged clusters is used at this time. This is also an excellent time to monitor leafhopper populations to determine if further treatment is warranted. For more complete information on the Risk Assessment protocol, Bulletin 138, Risk Assessment of Grape Berry Moth and Guidelines for Management of the Eastern Grape Leafhopper, is available at the Regional Grape Program Office for \$.50 a copy.

FINANCIAL RATIOS PART 2 SOLVENCY

Barry Shaffer

Financial ratios and measures are like vital signs. Just as doctors monitor percentage body fat, blood pressure, etc., financial analysts monitor financial ratios over time.

There are five categories of financial ratios:

- Liquidity
- **Solvency**
- Repayment Capacity
- Profitability
- Financial Efficiency

Solvency measures the firm's ability to repay all financial obligations if all assets were sold and provides an indication of the ability to continue operation as a viable business after adversity.

Solvency values are influenced by deferred taxes. Values calculated from data excluding deferred taxes will appear more favorable and need to be compared to standards that also exclude deferred taxes.

WNY Farm Credit has been doing a Grape Farm Financial Summary for the past five years. For our examples we will use Farm Credit's average farm data. I'd like to look at one commonly used ratio per category and for solvency, the Equity/Asset ratio (% equity). This is:

$$\frac{\$ \text{ Equity (net worth)}}{\$ \text{ Assets}}$$

This indicates the proportion of the capital used by the business that is provided by the owner. This also shows how much leverage the farm has. Higher debt generally reduces the likelihood that all payments can be made when due. There is great variability in the level of debt that individual farm businesses can handle. Here are the Equity/Asset ratios for the Farm Credit average grape farm with yield per acre underneath:

| 1991 | 1992 | 1993 | 1994 | 1995 |
|----------|----------|----------|----------|----------|
| .67 | .64 | .57 | .65 | .60 |
| 7.29 t/a | 5.24 t/a | 4.19 t/a | 7.48 t/a | 5.83 t/a |

One way to view these ratios is like a traffic light. For percentage equity the guidelines are:

| | |
|------------------|----------|
| Green (good) | Over .7 |
| Yellow (caution) | .3 to .7 |
| Red (unhealthy) | Under .3 |

We see that our average farm is in the strong side of the caution area. We really don't see much of a trend other than following average yields. Notice the erosion of the Equity/Asset ratio in years of less than 6 tons per acre yields! Generally, I like to see 50% equity or better and trending higher.

To do this calculation on your own operation, you need a balance sheet. If you don't have a

balance sheet from yearend, your lender or accountant should have one.

FINANCIAL RATIOS PART 3 REPAYMENT CAPACITY

Barry Shaffer

There are five categories of financial ratios:

- Liquidity
- Solvency
- **Repayment Capacity**
- Profitability
- Financial Efficiency

Repayment capacity ratios measures the ability of the farmer to repay term farm debt from farm and nonfarm income. Good ratios to use include debt coverage ratio, repayment margin, and debt payments as a percentage of grape sales.

I'd like to look at one commonly used ratio per category and for repayment capacity we'll use the debt payments as a percentage of grape sales. This is:

$$\frac{\text{Total Debt Payments}}{\text{Grape Sales (\$)}}$$

This indicates the percentage of total grape sales that are committed to debt payments:

| 1992 | 1993 | 1995 | 1995 |
|---------------|---------------|---------------|---------------|
| <u>11,577</u> | <u>11,002</u> | <u>15,384</u> | <u>18,572</u> |
| 80,712 | 67,412 | 128,847 | 88,312 |
| or | | | |
| .14 | .16 | .12 | .21 |

One way to view these ratios is like a traffic light.

| | |
|------------------|------------|
| Green (good) | under .15 |
| Yellow (caution) | .15 to .20 |
| Red (unhealthy) | Over .30 |

These calculations show that 1995 was the worst year lately for repayment capacity. Twenty-one cents of every dollar in 1995 sales was needed for debt repayment.



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