Cornell Cooperative Extension

Grape Program in Ontario, Schuyler, Seneca, Steuben, and Yates Counties

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FINGER LAKES VINEYARD NOTES

Newsletter #10
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1997 HARVEST SUMMARY

Tim Martinson

1997 started out as a replay of the 1996 growing season. As in 1996, bud break was delayed by 1 to 2 weeks. May was one of the coldest on record. As a result, bloom was delayed by about a week to 10 days. However, warm, dry weather in July improved the situation somewhat. August was, again, colder than average. Fortunately, warm, dry weather in September and October provided almost ideal ripening conditions, and allowed most varieties to attain good maturity levels by harvest. In addition, most vineyards were carrying a lighter crop, which also helped them obtain maturity. While a few of the colder sites experienced an early October frost, most vineyards held their leaves through about the 3rd week in October. Cane maturity should be good at most sites, setting the stage for higher crop levels next year.

Despite early-season concerns about disease pressure from the abundant disease inoculum carried over from 1996, and continuing concerns about fungicide performance, disease control was good to excellent in most blocks. Dry weather in mid-summer and fall lowered disease pressure. The dry, sunny weather after veraison greatly moderated bunch rot problems. As a result, tight-clustered varieties were very clean.

Several unusual problems with insect pests emerged during 1997. Throughout the Finger Lakes, infestations of potato leafhopper were heavy, and many vineyards showed the characteristic symptoms of leaf cupping and yellow margins as a result. *Vinifera* varieties, Cayuga White, and Catawba showed the most severe symptoms. This was also the year that growers of native varieties on both east Seneca Lake and the north part of Keuka Lake (Branchport and the bluff) had trouble

controlling Easter grape leafhopper with both carbaryl (Sevin®) and methyl parathion (Penncap-M®). Spotty, severe infestations of European red mite were also observed in *Vinifera* vineyards on Seneca and Cayuga lakes, and also in some native blocks throughout the Finger Lakes.

Yields were variable. Statewide, the total crop is expected to be down by 20-40%, due in large measure to sharply lower Concord yields and cooler temperatures present in the Lake Erie region. In the Finger Lakes, Concord yields were reported to be 30-40% lower than last year's, with reports of many blocks in the 4-7 ton range. In contrast to Lake Erie, however, maturity was good, with many blocks reaching 16 to 17° Brix by harvest. The low yields were due, in part, to late harvest and stress imposed by heavy crops in 1996, as well as early frost in some areas. Yields of Niagara and Elvira were average to slightly higher than last year, and many Elviras were harvested at lower maturity levels (8-10° Brix). Aurore yields were down sharply, and harvest was 1 to 2 weeks later than normal. Red hybrids were reported to be light, but maturity and color levels were good.

Vinifera yields were good, with many growers reporting yields in the 3-5 ton range. Mild winter weather in 1996-1997 resulted in low levels of winter injury. Quality of almost all varieties should be good to excellent, with minimal bunch rot, good sugar levels, and low acids, even with late-maturing varieties. While the exceptional ripening weather in the fall played a major role, more widespread use of canopy management techniques that improve fruit exposure (such as vertical shoot positioning and leaf removal) also played an important role. Several growers built or purchased machines to mechanize leaf removal, which should make the cost of leaf removal more reasonable.

The market for almost all varieties was strong, reflecting increased demand as well as the short supply of some varieties. As was the case last year, late frosts in other production areas (notably Ohio and Virginia) probably increased the short-term demand for Finger Lakes grapes. However, demand for wine grapes appears to be steadily increasing both locally and regionally. Juice and bulk wine grapes were in strong demand, reflecting short supply, and there were few problems selling most varieties. Prices paid for most varieties including juice, bulk wine, and premium varieties increased significantly (see following article).

Change in Prices Paid By Processors From 1996 to 1997

Variety	1996			1997			%change (1996-1997)		
	Average	High	Low	Average	High	Low	Average	High	Low
Native									
Catawba	276	350	220	289	350	230	5%	0%	5%
Concord	262	310	220	277	310	250	6%	0%	14%
Delaware	278	400	200	305	425	200	10%	6%	0%
Diamond	299	320	275	318	325	300	6%	2%	9%
Dutchess	250	300	200	242	325	200	-3%	8%	0%
Elvira	236	260	220	243	260	230	3%	0%	5%
Golden Muscat	300	300	300	300	300	300	0%	0%	0%
Isabella	320	320	320	340	360	320	6%	13%	0%
Ives	294	320	275	298	320	275	1%	0%	0%
Niagara	273	320	180	282	320	200	3%	0%	11%
Average	**279**	**320**	**241**	**289**	**330**	**251**	**4%**	**3%**	**4%**
Red Hybrid									
Baco Noir	390	500	280	429	500	300	10%	0%	7%
Chambourcin	463	600	390	575	650	400	24%	8%	3%

Chancellor	413	450	390	475	550	400	15%	22%	3%
Chelois	397	400	390	456	500	400	15%	25%	3%
Colobel	397	400	390	443	500	400	12%	25%	3%
DeChaunac	292	300	275	331	400	300	14%	33%	9%
Leon Millot	400	400	400	488	500	450	22%	25%	13%
Marechal Foch	411	450	380	467	500	400	13%	11%	5%
Rosette	300	300	300	360	400	300	20%	33%	0%
Rougeon	333	410	285	380	500	300	14%	22%	5%
Vincent	390	400	350	417	450	400	7%	13%	14%
Average	***381***	***419***	***348***	***438***	***495***	***368***	***15%***	***18%***	***6%***
Table grapes									
Glenora	500	500	500	500	500	500	0%	0%	0%
Himrod	450	500	400	450	500	400	0%	0%	0%
Lakemont	300	300	300	300	300	300	0%	0%	0%
Average	***417***	***433***	***400***	***417***	***433***	***400***	***0%***	***0%***	***0%***
White Hybrid									
Aurora	257	380	225	271	365	225	6%	-4%	0%
Cayuga White	389	450	325	420	500	360	8%	11%	11%
Seyval	382	450	300	410	560	300	7%	24%	0%
Traminette	1250	1250	1250	925	1250	600	-26%	0%	-52%
Ventura	230	230	230	230	230	230	0%	0%	0%
Vidal Blanc	404	450	375	440	520	375	9%	16%	0%
Vidal late harvest	500	500	500	700	700	700	40%	40%	40%
Vignoles	492	600	380	497	600	400	0%	0%	5%
Vignoles late harvest	500	500	500	850	1000	700	70%	100%	40%
Villard Blanc	375	375	375	450	450	450	20%	20%	20%
Average	*361*	*419*	*316*	*388*	*461*	*334*	*7%*	*10%*	*6%*
Average Late Harvest	**500**	**500**	**500**	**775**	**850**	**700**	**55%**	**70%**	**40%**
Red Vinifera									
Cabernet Franc	1337	1500	780	1458	1600	1300	9%	7%	67%
Cabernet Sauvignon	1406	1600	1200	1485	1600	1350	6%	0%	13%
Lemberger	1125	1250	1000	1150	1300	1000	2%	4%	0%
Merlot	1394	1600	1200	1546	1700	1350	11%	6%	13%
Pinot Noir	1288	1450	1000	1342	1600	1100	4%	10%	10%
Sangiovese	1600	1600	1600	1600	1600	1600	0%	0%	0%
Average	*1358*	*1500*	*1130*	*1430*	*1567*	*1283*	*5%*	*4%*	*14%*
White Vinifera									
Chardonnay	1082	1500	780	1186	1450	1000	10%	-3%	28%
Chardonnay (Premium)	1250	1250	1250	1300	1300	1300	4%	4%	4%
Chardonnay (Sparkling)	1150	1150	1150	1250	1250	1250	9%	9%	9%
Gewurztraminer	1092	1250	800	1250	1450	800	15%	16%	0%
Pinot Blanc	1175	1300	1000	1233	1400	1100	5%	8%	10%
Pinot Gris	1475	1500	1450	1475	1500	1450	0%	0%	0%
Sauvignon Blanc	1200	1200	1200	1275	1350	1200	6%	13%	0%
Sereksia	1200	1200	1200	1300	1300	1300	8%	8%	8%
White Riesling	1018	1350	900	1159	1450	900	14%	7%	0%
Viognier	-	-	-	1500	1500	1500	-	-	-
Average	**1182**	**1300**	**1081**	**1270**	**1383**	**1144**	**7%**	**6%**	**6%**

1997 Grape Prices Summary

Tim Martinson

Prices paid by individual Finger Lakes processors for grapes were reported in the previous issue of *Vineyard Notes* (#9, September 4, 1997). In this issue, changes in prices paid by processors from 1996 to 1997 are summarized in the accompanying table. This table provides average prices (paid by processors who responded to the survey), high and low prices for each variety, and the percentage change in prices from 1996 to 1997. While these prices reflect all responses to our survey, keep in mind that very limited quantities of some varieties were sold, and that results from some varieties reflect prices of one or two processors that may buy only limited quantities. Low-end prices may reflect a much greater volume of grapes than the higher prices listed.

As shown in the table, prices increased across all categories over 1996. The increase held true for average prices, but also for the lower end - which may be more significant as it probably reflects larger-volume sales to larger processors. By category:

- **Native Varieties** saw a 4% increase in prices across varieties and processors. Notably, low-end prices for the major varieties increased by a greater percentage - 14% for Concord, and 11% for Niagara. Average prices were in the $200 - 350 range.
- **Red Hybrid** prices averaged $438 (range: $300 - $650) across varieties and processors, posting an average increase of 15%. The increase was remarkably consistent across varieties.
- **White Hybrid** prices averaged $388 (range: $225-$600, excluding Traminette and late-harvest Vidal and Vignoles). Cayuga White posted the largest gains at the low end (11%), while Aurore prices remained steady. Late-harvest Vignoles and Vidal posted whopping 40 - 70% increases in listed prices.
- **Red *Vinifera*** average prices went up by about $80 a ton, or about 5%, with the low-end of the range increasing by an average of 14% or $150/ton (range: $1000-$1700). Most notable increases were for Cabernet Sauvignon, Merlot, and Cabernet Franc.
- **White *Vinifera*** prices increased by an average of $100/ton, or 7% overall (range: $800 - $1500). Notably, average prices for the varieties with the largest acreage (Chardonnay, Riesling, Gewurtztraminer) went up an average of 10-15%.

Changes in Petiole and Soil Test Recommendations

Dr. Warren Stiles
Department of Fruit and Vegetable Sciences
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In response to grower concerns about grape berry set problems the petiole analysis standards used in making fertilizer recommendations have been revised. Studies being conducted this season indicate that deficiencies of three nutrient elements (boron, zinc and magnesium) may be involved to varying degrees in the flower development and berry set problems. Consequently, standards for interpreting petiole analysis for all nutrient elements have been examined and redefined in an effort to minimize the potential adverse impacts of nutrient deficiencies or excesses on fruit set and yield.

These petiole standards apply to samples from the youngest mature leaf collected 60 to 70 days after bloom. This timing is recognized as giving the best indication of the potassium status of the vines. However, this timing is generally not as sensitive for determining the status of elements such as boron and zinc. Therefore, studies are in progress to determine whether it may be necessary to establish an additional set of standards for use with prebloom samples that could allow diagnosis of potential problems in time to make adjustments in the nutrition management program before the vines come into bloom.

Likewise, standards for interpreting soil tests for grapes have been reviewed. In light of the frequent occurrence of magnesium deficiency, particularly on soils of low pH, the relative supplies of available potassium and magnesium must both be considered when potassium is being applied. High magnesium dolomitic lime is the least expensive source of magnesium, but soil pH also influences its availability to the vines. Therefore, soil pH being suggested for established vineyards of American type varieties is 5.5, and 6.5 for Vinifera and hybrid varieties.

Petiole analysis provides an indication of the amounts of various nutrient elements that the grape plant has been able to take up from the soil. It is helpful in identifying nutritional problems, however, when used alone it may not indicate the basic cause of a particular problem or the appropriate steps needed to overcome the problem. Likewise, soil testing is helpful in determining the available supplies of some elements such as potassium and magnesium, but does not predict how efficiently the vines may have been in utilizing these supplies. Therefore it is recommended that both petiole analysis and soil testing be used along with careful observation of the vines in developing the most appropriate nutrient management program for the specific vineyard in question.

Specific Changes in Petiole Analysis Recommendations

Tim Martinson

Those of you who have submitted petiole samples for analysis through our office will notice some changes in computer-generated recommendations that are sent back with analysis results. Reasons for the changes are detailed in the accompanying article by Dr. Warren Stiles. Specific changes are listed below- and highlighted:

Table: Comparison of Standards Used for Grape Petiole Sample Recommendations

Element	Satisfactory Range	
	Previous Standards	**Revised Standards**
Potassium	***1.1-1.8%***	***1.3-2.0%***
Phosphorus	-	0.10-0.30%
Calcium	-	1.20-2.00%
Magnesium	***0.25-0.50%***	***0.35-0.50%***
Iron	-	30-100 ppm
Copper	-	5 - 15 ppm
Boron	***25-50 ppm***	***30-50 ppm***
Zinc	***25-50 ppm***	***35-50 ppm***

In addition to the standards, fertilizer recommendations have been modified as follows:

- **Potassium:** For values in the 'satisfactory range' (between 1.3 and 2.0%), a maintenance application of 90-120 lb/acre of K_2O is recommended, which corresponds to the amount of potassium that a moderate to heavy crop should remove.
- **Boron:** For samples below the satisfactory range, (<30 ppm) 2-3 foliar applications and a soil applications of boron are recommended. Previously, 1-2 foliar applications only were recommended.
- **Calcium:** For values at or below the satisfactory range, a soil test is recommended to determine pH and calcium levels in the soil for possible adjustment.
- **Other Elements:** Satisfactory ranges for iron, copper, and phosphorus are suggested (previously no ranges were reported); reasons why it may be outside the acceptable range (e.g. root injury, low or high pH, etc.) are listed in the recommendations.

While these changes may require a bit of getting used to, this is the first adjustment in computer-generated recommendations that has been made since 1984. Higher cropping levels necessary to maintain profitability, and the emergence of the berry set problem have been motivating factors

in revising them at this time. I remain committed to providing additional interpretation of samples that pass through my office, because the diversity of grape varieties grown in the Finger Lakes, past cropping history, and other factors may influence what shows up in tissue analysis, and what the appropriate soil amendments may be. My goal is to provide recommendations that are economically sound and that will provide the best short and long-term results.

GETTING A JUMP ON YOUR 1998 PEST MANAGEMENT STRATEGY

Tim Weigle

Now is an excellent time to gather critical information for use in planning your 1998 pest management strategy. The major components for this information gathering are maps of each vineyard block that you operate. With the increased tonnage per acre that has come with the new production practices introduced over the past several years, comes a real need for an increase in the hours spent on managing vineyards on a block by block basis. Treating all vineyards together with a farm wide approach to pest management, nutrition, and production has become more difficult as we push vines to their full potential.

Taking the time to create a map of each vineyard block and using it during a walk through your vineyards can be one of the most important management practices that you accomplish. By noting pest infestations you can pinpoint problems that will need attention next year. After several years of mapping, you will have a vineyard history which can be used as an invaluable resource when preparing a management strategy during the dormant season. Some pest mapping which should be accomplished at this time of year would include rating of grape berry moth cluster damage, leafhopper infestation, presence of rootworm feeding in the canopy, levels of overwintering inoculum for powdery mildew, downy mildew, black rot, and Phomopsis, and crop loss due to any of the pests. Noting weed species, population size and where they occur can be essential in developing a weed management program next spring.

Vineyard maps can also be useful in developing fertilization programs. Used in conjunction with soil and petiole testing, they can be used to pinpoint areas where vine growth is weak or excessive and/or nutrient deficiencies were noted. Tonnage records can be quickly written on a vineyard map by a harvester or tractor operator to give you a better idea of what the average tonnage a particular block is producing. Blocks producing tonnage which is historically below farm average may deserve a look at what is needed to either bring the tonnage up, to reduce inputs to make it more cost effective, or to decide whether the block should be removed.

A vineyard map should include not only the vineyard block but also the surrounding terrain as well. Knowing whether wooded edges are present or absent is critical in assigning a risk category for the Grape Berry Moth Risk Assessment protocol. Wooded edges also extend wetting periods in certain vineyard blocks. Anything that will hamper airflow through a vineyard should also be displayed on the map. The map should have sufficient detail to allow you to pinpoint problems when referring to the map during the dormant season or in future years. While every row does not need to be drawn on the map, it may be useful to make a line to represent every 5 or 10 rows depending on block size. Figure 1 provides an example of a good field map. Notice the vineyard has been broken into blocks.

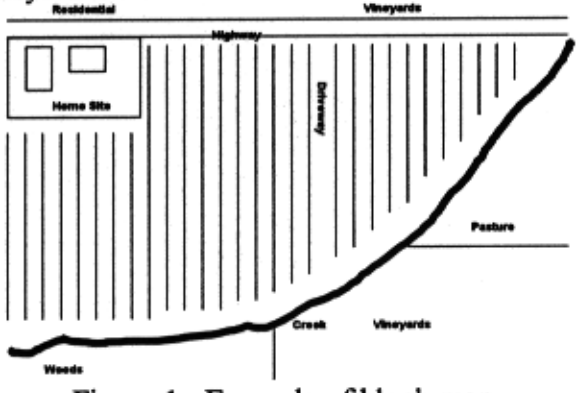

Figure 1. Example of block map.

Take the first step and create block maps for your vineyard operation. Then make it a habit to have them readily available during the growing season. In this way, as you see a problem such as rose chafer, herbicide injury, etc., you can write it down immediately. From past experience, I know this is a difficult routine to develop. However, once you start developing an information base using vineyard mapping, you will wonder how you managed without it.

ANNOUNCEMENT

The Seneca Lake Winery Association has a made a second donation toward the creation of the new Vinification and Brewing Technology Laboratory to be located at the Experiment Station.

In early July, the Seneca Lake Winery Association became the first industry group to step forward with a donation toward the anticipated cost of $1.5 million needed to establish and staff the laboratory. The Trail's initial gift of $5,000 is now being followed with a second award of over $600 representing moneys raised by the group during the recent US Vintage Grand Prix in Watkins Glen.

Association Present Scott Osborn of Fox Run Vineyards said, "in this time of reduced State funding, it's important for our industry to join together and stop forward to support an institution whose enology and viticultural research has directly contributed to our success, and brought us recognition as one of the world's great wine-producing regions.

UPCOMING MEETINGS

November 3,5, & 6 7:45 - 9:30 p.m. Free Informational meetings on *Farm and Food Processors Pilot Program for Deregulation of Electric Power.* Representatives of your local electrical utility (NYSEG) will be on hand to answer questions about a two-year pilot project that will allow all farms and food processors with gross revenues of over $10,000 to buy power from competing 'energy service providers' at a discount. *This pilot project becomes available on November 1.*. Remember telephone deregulation and how confusing it was? This is your chance to find out how it works and how much money you might potentially save. Organized by Carl Crispell, Cornell Cooperative Extension. There are three dates and locations:

November 3 Monday, Auditorium, Rural Urban Center, Montour Falls
November 5 Wednesday, The Forum at Tompkins Cortland Community College, Dryden
November 6 Thursday, Auditorium, Tioga County Office Building, Owego

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