FINGER LAKES VINEYARD NOTES

Newsletter #8
August 5, 1997

Written by Tim Martinson, Area Grape Extension Educator, 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 Tim Martinson

IN THIS ISSUE

- Variety Field Tour at Geneva
- Current Situation
- Petiole Tests for Vine Nutrition
- Current Pest Update
- Nelson Shaulis Receives ASEV Award
- Grape Pest Management Video
- Upcoming Meetings
  - Organic Vineyard Tour
  - Vineyard Canopy Management Seminar and Virginia Vineyard Association
  - A visit to the 'no spray' vineyard of Bruce Reisch's program, where early selections for disease resistance are made.

This will be a good opportunity for everyone to see for themselves how these selections and clones are performing in the vineyard. For those of you who attended the hybrid and vinifera wine tasting earlier this spring, this tour will be an opportunity to get a good look at the vines that made those wines.

Please call our office at 315-536-5134 between 8:30 AM and 4:30 PM to register for this program. There will be no fee, but pre-registration is required. Jordan Hall is located on the North side of North St. at the Station.

Variety Field Tour at Geneva
Tim Martinson

A field tour and explanation of viticultural characteristics of new hybrid selections and vinifera clonal selections will be held at the New York State Agricultural Experiment Station in Geneva on Tuesday, August 12, 1997 at 9:00 AM. We will meet in the parking lot behind Jordan Hall at 9:00 AM sharp, and proceed to station vineyards where hybrid grape breeding lines and vinifera selections are planted. The tour will feature:

- Advanced hybrid selections from Dr. Bruce Reisch's breeding program.
- Alternative vinifera varieties and clones of Pinot Noir and Chardonnay from Dr. Robert Pool's program.
As of today (Monday, August 4, 1997) heat accumulation is currently at 1336 growing degree days at Geneva. For comparison, by this date in 1996, we had 1410 degree-days. The long-term average is 1520 growing degree-days by this date. At an average accumulation of 20 to 25 degree-days per day, this suggests that we are about three days behind last year, and 7 to 9 days behind 'average' accumulations.

In practical terms, what this means is that vine development is about on a par with last year’s development (In Western New York, Phil Throop reports a more severe 10 day lag in heat units from 1996) - and slightly later than normal. Harvest will likely be delayed to a similar extent as was last year’s harvest.

Speaking of which ...

The late 1996 harvest, coupled with an early frost in some areas has led to the reappearance of fruit set problems in some vineyard blocks. I have seen it mostly in native blocks. There are two patterns. Pattern 1 is where vines have weak shoot growth and few or no clusters. This appears to be a straightforward case of crop stress, exacerbated by the early frost, leaving the vines with depleted reserves this season. The second pattern is distinct - shoot growth appears to be normal to very vigorous, and clusters have poor set, some seedless berries along with full-sized seeded berries (chicks & hens), and deformed rachises. Pattern 2 is more consistent with what we have been calling 'millerandage' than with overcropping and biennial bearing. Contrary to conventional wisdom, the problem is not confined to hedged vineyards, or vineyards with extremely heavy crops. I have seen it in hand-pruned vineyards and vineyards with quite reasonable 6-7 ton crops last year. While the symptoms are similar to boron deficiency, it is not yet clear that the low boron levels are cause or effect of other problems (e.g. limited root growth).

As many of you know, research is underway both here in the Finger Lakes and at Fredonia to determine the causes of this problem and potential solutions. Look for a more complete discussion and report of research plot results in a future Vineyard Notes. Meanwhile, if you think you have this problem in your vineyard, I would like to know the extent of the acreage affected and the geographic patterns of these set problems in Finger Lakes vineyards. Please give me a call and I will come out for a look.

PETIOLE TESTS FOR VINE NUTRITION

As we move into mid August, it is time to plan for nutritional analyses to determine your fertilizer needs. Petiole analysis is the most reliable method for determining the status of most major nutrients in grapevines. While soil tests, when used together with petiole tests, can be helpful in making fertilizer recommendations, they are not reliable for indicating nutrient status of the plant. Here are some guidelines:

What tests are available?

Complete analyses (including nitrogen) and non-nitrogen petiole tests are available through our office. We generally recommend the non-nitrogen test, for several reasons. Fall foliar analysis of nitrogen is not considered to be a reliable indicator of nitrogen needs and status. Nitrogen tests may be useful in comparing weak and strong vineyard sections, or for testing the effects of different rates on a particular variety. However, bloom-time samples are considered to be better for these purposes. Shoot growth and trellis fill are considered to be the most practical indicators of N status in the field.

When should samples be collected?

More than 70 days (10 weeks) after bloom. Samples can be taken later, as long as leaves remain in good condition, but should be collected before harvest. This year (Here in the Finger Lakes) that puts us into the first week of September for early varieties (e.g.
Aurore) and mid-September for other varieties.

What blocks should I sample?

- Accuracy of the recommendations depends on a representative sample. Thus a sample taken from a particular block may not necessarily apply to another block of the same variety, or even another part of the vineyard block, if it is large. Generally one sample should not be expected to provide useful information for more than 10 acres.

- Sample different varieties separately.

- For young vines just coming into bearing, sample every year. Production generally changes rapidly during the first few crops, and fertilizer needs also change.

- For mature vines that have had no major additions of fertilizer, sample every other year. If high rates of fertilizers were made over the past few years to improve the nutrient status of the vines, collect samples yearly to track changes in the vines, and to determine if additional amendments are needed.

- For nonbearing vines or lightly-cropped vines, samples may not be useful unless distinct visual symptoms or obvious problems appear. Without crop stress, most nonbearing and lightly cropped vines have higher levels of nutrients.

- For problem areas in vineyards, collect two samples - one in the area showing the problem, and one in a 'normal' area. Doing so and comparing samples will allow you to diagnose whether or not the problem is related to nutrient status of the vine.

- Soil Tests are recommended every 3 to 5 years, and prior to planting new blocks.

Where do I get petiole and soil test kits?

Petiole and soil test kits are available through the Finger Lakes Grape Program office. Show up in person between 8:00 AM and 4:30 PM to pick them up, or send a request to the program through the mail. Kits are paid for at the time they are picked up. They will not be mailed out until paid, either. Make checks payable to: Finger Lakes Grape Program. Fees are as follows:

New York State petiole samples: $17 for non-nitrogen, $19 for complete analysis.

Out of State petiole samples: $20 for non-nitrogen, $22 for complete analysis.

Soil test kits: $13.

What do I do with the sample, and what happens to it then?

Detailed instructions are included with the kit. After you collect samples and return them to our office, they are analyzed at the plant tissue laboratory at Cornell. Cornell then sends you recommendations based on the recommendations and information from the form provided with the kit. I get a copy, too, and will follow up with a letter to you to further explain the recommendations.

CURRENT PEST UPDATE

Tim Weigle

Diseases continue to bear close examination in most vineyards as it is not difficult to find black rot, powdery mildew, downy mildew and Phomopsis in area vineyards. Presence and severity of any particular disease can vary drastically from vineyard to vineyard and block to block.

The most important pest management practice you can do at this time of year is get out and look in your vineyard. Second is knowledge of the pests you are looking for. An example of this is Phomopsis Cane and Leaf Spot. While every vineyard appears to have Phomopsis this year there is really no reason to treat for this disease at this time of year. However, take some notes as you look in the different vineyard blocks on the severity of the disease. This will be helpful in developing a disease management
strategy next spring when Phomopsis management is crucial.

Black rot, downy mildew and powdery mildew all have the potential to keep going from secondary inoculum produced by existing lesions. Develop a disease management strategy by first looking at all the options you have available for use against each particular pest. This will vary whether you grow grapes for juice, wine or fresh market. I will once again refer you back to Wayne Wilcox’s article earlier this spring where he went over all the available materials and what they could be used for. Because of the variability of disease pressure we are seeing this year between vineyards, it is even more difficult to come up with a cook book recommendation for spraying.

The one thing I would like to say about the choice of materials for this time of year is to keep resistance management in mind while making your decision. If you have a raging case of black rot or powdery mildew do not apply any of the sterol inhibitors hoping to burn it out. This will greatly increase the chances of resistance development. A better choice for continued black rot protection, and resistance management, would be Carbamate or Ziram if you are growing grapes for a juice processor, and Captan or an EBDC for wine grapes (watch the 66 days to harvest for EBDC’s).

Existing powdery mildew infections can be managed using copper and lime or sulfur applications (depending on sensitivity of the variety to either of these chemicals) followed by a sterol inhibitor if more protection is needed. Copper and lime is a very good material for downy mildew and has provided good management of this disease in past years.

With those cautions out of the way I am still suggesting the continued protection of vineyards if there are few or no existing infections of black rot, powdery mildew or downy mildew using the appropriate sterol inhibitor or Ridomil. These are excellent materials that will do the job for you. I am just saying that we should use them with some common sense so we have them for a long time to come.

Abound is still a new material for most growers. This material is not a silver bullet that will allow you to go in and eradicate all the disease found in your vineyard. Abound provides protection against powdery mildew, downy mildew, black rot and Phomopsis but it is not without it’s problems. In the Lake Erie Region we are seeing problems from legal applications on grapes drifting into apple orchards. This drift can cause gramoxone like damage to Macintosh and it’s relatives and to ornamental crabapples. With damage being seen at 0.5 ppm we are also hearing reports of damage when a sprayer is used for Abound on grapes, rinsed, and then used for application of other materials in apples. What I am suggesting to growers is that you do not use Abound if there is even the smallest potential for drift from your grapes to an apple orchard or to an ornamental crabapple in a neighbor’s yard. If you use the same sprayer for apples and grapes, I would suggest that you not use Abound on your grapes until we know more about a cleaning process that will eliminate Abound from the tank. Where there are no orchards around the grapes, Abound has shown that it does an excellent job on the above diseases without any problems. Abound can be a useful tool for this time of year and an asset to your resistance management strategy.

It is important with all these materials that enough water per acre is applied to ensure adequate coverage. The amount of water will vary with the type of training system used, I am suggesting as close to 100 gallons of water per acre be used to ensure the larger canopies get coverage.

Grape berry moth and leafhopper scouting should have been accomplished by the time you get this newsletter. Andy Muza of the LERGP Vineyard Lab in North East, Pa reported on July 21 that they were just starting to pick up grape berry moth eggs on the clusters. Trap catches
and scouting indicate that Route 20 vineyards may be close to the traditional timing while vineyards along Route 5 may be delayed a bit in development of grape berry moth. If you scouted your vineyards the third week in July and did not find much new damage, I would suggest you go back in during the fourth week to look again. The reason I say this is I have been in several vineyards with evidence of webbing and egg-laying during the bloom period that are not showing signs of the second generation of grape berry moth. In these cases, the second generation may be a bit delayed and you could miss it if you scout only once and find nothing.

Leafhopper is easily found but the severity of feeding varies drastically. If no insecticide application is planned for grape berry moth then you have to look at the need for leafhopper management. Vines with large canopies and a lot of exposed leaves can stand more leafhopper feeding than those vines which are not as vigorous and have fewer leaves. If leafhopper feeding on the exterior canopy is easily found at this point in time, you may want to apply an insecticide solely for this pest in the near future. Remember that vineyards in New York can have a 50% reduced rate of Sevin or Penncap-M if the spray is put on only for leafhopper. This would work out to 1 lb of Sevin 50WP, 0.5 qt of Sevin 4F, 0.75 lb of Sevin 80S, and 1 qt of Penncap-M.

If you ever have any questions on integrated pest management strategies please give me a call at (716) 672-6830. For those of you with computer e-mail access you can get hold of me at my Internet address: timweigl@netsync.net. I typically check my e-mail at least once a day and have found this method of communication to be an excellent way to get the information quickly to growers and eliminating playing phone tag.

**NELSON SHAULIS RECEIVES ASEV AWARD**

_Linda McCandless_

GENEVA, NY: Nelson Shaulis, Professor Emeritus at Cornell University, received the American Society for Enology and Viticulture's (ASEV) highest award at the society's annual meeting in San Diego on July 2. The ASEV Merit Award recognizes outstanding individual achievement in the field of enology or viticulture and is given to those persons who have contributed to the field in an outstanding and distinguished manner.

"I was very pleasantly surprised that the 1997 ASEV Award of Merit was made to me," said Shaulis, who retired from the New York State Agricultural Experiment Station in Geneva, NY, in 1978. "Because the award comes 19 years after my retirement, it obviously reflects on the viticulture research program that was conducted during my pre-retirement career at the Experiment Station. That program involved many other people, including department and Station administration, as well as support specialists at Geneva and the Vineyard Laboratory in Fredonia."

Shaulis was the viticulturist on two celebrated research teams. One team, consisting of research specialists Herman Amberg, the late Donald Crowe, and Shaulis, developed the Geneva Double Curtain (GDC) training system over 30 years ago. A second team, consisting of Professors E.S. Sheppardson, the late James Moyer, and Shaulis, worked concurrently to develop a mechanical grape harvester designed for the GDC that has since become the industry standard.

"Dr. Shaulis is being recognized by his peers for his lifelong commitment to viticulture research and teaching," said Robert Pool, current Professor of Viticulture at Cornell. "As a former student and colleague, I know the extent to which he has been responsible for many important advances including research on..."
mineral nutrition, rationalization of pruning, and membership on the Cornell team that developed machines to harvest vineyards.”

Shaulis has made lasting and important contributions to the industry. “Dr. Shaulis’ concepts have been applied in every major grape producing region of the world, and served as the knowledge base which allowed new world wine growing to emerge as a major factor in international trade during the last 20 years,” said Pool.

Industry representatives agree. “Dr. Shaulis’ contributions have shaped the modern grape growing industry not just in New York, but throughout the United States,” said Jim Trezise, president of the New York State Wine & Grape Foundation. “The Geneva Double Curtain training system is his landmark, but he has made so many contributions, it is impossible to list them all.”

Geneva Double Curtain - An Industry First. The Geneva Double Curtain (GDC) system was initiated at the Experiment Station in Geneva in 1960 and grower trials started in 1964. It was the first divided canopy training system. Under this system, vines are trained to bilateral cordon wires located 5-6 feet above the vineyard floor, and the vines are short cane pruned. There is a four-foot division between the two top wires for each row of grapevines, and cordonels are established along each wire. Vines in the row are alternated to the left or right cordon wires which gives the celebrated double curtain effect. The system effectively doubles the cordon length per acre of vineyard and is used for vigorous vines of certain varieties of grapes used for processing.

Advantages of the GDC system are many. It increases leaf exposure to sunlight, which results in better fruit and vine maturation, and increases yield. Vineyards managed in this way are better adapted for mechanical harvesting. The GDC is documented in Bulletin 811, dated July 1967, which is still one of the Experiment Station’s most frequently requested bulletins, according to Bulletin librarian, Beverly Dunham.

Shaulis’ has also conducted important research on factors to consider in siting vineyards, grapevine physiology, vineyard mechanization and management, mineral nutrition, rootstocks, and canopy microclimates. He is an expert in defining attributes of site, growth, canopy, and crop in vineyard management. He also has pioneered the current interest in canopy management by documenting the negative impact of interior leaf shading and by providing new ways of measuring and expressing canopy density.

Shaulis’ long and distinguished career began at Penn State, where he graduated with a B.S. in horticulture in 1935, and a M.S. in agronomy in 1937. He received his Ph.D. in Soils from Cornell University in 1941. He served as a Soil Conservationist with the USDA Soil Conservation Service from 1938-44, while he was also the assistant pomologist at Penn State. In 1944, he became Assistant Professor of Pomology at Cornell at the Agricultural Experiment Station in Geneva where he served as Professor of Pomology from 1948-67. From 1967-68, he was a Fulbright Scholar in Australia. He became Professor of Viticulture at Cornell from 1967 until 1978, when he retired. He remains very active in the field, and walks to his office from his home almost every afternoon.

Shaulis is a Fellow of the American Society of Horticultural Science, and a member of the American Society of Agronomy, the Soil Science Society of America, and an honorary member of the ASEV. He received an Award of Merit from the Society of Wine Educators, and the American Wine Society, and received the award for Outstanding Achievement from the Eastern Section-ASEV, in 1984. In 1990, he was cited for his extraordinary contributions in viticultural research from the New York Wine & Grape Foundation.
The Merit Award has been awarded annually since 1955. Past award winners include Charles Nagel, Robert Mondavi, Charles Fournier, Ernest Gallo, Edmund Rossi, and Elbert Brown.

**GRAPE PEST MANAGEMENT VIDEO**

A VHS video is now available entitled *An Introduction to Integrated Pest Management for Grapes*. This 1997 video provides the basis for developing an insect and disease management program that integrates the use of cultural practices, resistant cultivars, knowledge of insect and disease behavior and biology, and the use of pesticides. This video was developed by Dr. Roger Williams, Dr. Michael Ellis, and the Department Center for the Ohio Grape Industries Program. This project was sponsored by the Ohio Grape Industries Program. This video is available from the Ohio State University Extensions Publications Office, 385 Kottman Hall, 2021 Coffey Road, Columbus, OH 43210.

Telephone: 614-292-1607. Fax: 614-292-2270. E-mail: cripe.2@osu.edu.

**UPCOMING MEETINGS**

**August 16, 1 p.m. Organic Vineyard Tour.**

Experienced and beginner grape growers are invited to a free tour of Glenside Organic Vineyards in Naples on Saturday, August 16 at 1 p.m. The tour is sponsored by Northeast Organic Farming Association of New York (NOFA-NY) Owner John Braum has grown labrusca type grapes since 1974, and is currently certified by NOFA-NY. Glenside offers “pick your own grapes” and produces grape juice without preservatives. Its grape juice is marketed to home wine makers, wineries and to retailers such as Wegman’s supermarkets. The tour will include a viewing of the juice processing equipment. Glenside Organic Vineyards is located at 8370 Hunts Hollow Road in Naples. For directions or questions about the tour, call 716-374-2091.

**August 16. Vineyard Canopy Management Seminar and Virginia Vineyard Association (VVA) Annual Meeting.** Horton Cellars, Orange County, VA. Dr. Richard Smart, author of Sunlight Into Wine, will be the featured guest speaker. Registration is $50. Further information on the program or on the VVA can be obtained by calling Mr. Chris Pearmund, President VVA at 540-347-3475.

Timothy E. Martinson
Area Extension Educator
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."