



VINEYARD NOTES

IN THIS ISSUE...

- Current Situation
- Vinifera Clone and Variety Update: See the Vines and Taste the Wines
- Petiole Testing in 1999
- 'Elite' Fungicide Approved for Grapes in New York
- Viticulture 2000 - Joint Lake Erie - Finger Lakes Grape Grower's Convention
- Update on Planned Australia Trip
- Retired Pathologist Al Braun Dies
- Upcoming Events

CURRENT SITUATION

Timothy E. Martinson

Hard to believe, but we are again approaching the start of harvest. Canandaigua Wine Company will be tentatively opening for Aurore's sometime around 17 August, which is less than three weeks away! Without taking into account the possible effects of drought on the ripening process, it looks like we are set to follow the same pattern of harvest as last year.

Growing degree days (Figure 1) show almost identical degree day accumulations in 1999 as we had in 1998. Overall, more of the heat units came earlier (April and May) in 1998. This year, the higher average temperatures in June and July are what has caught us up to last year's levels.

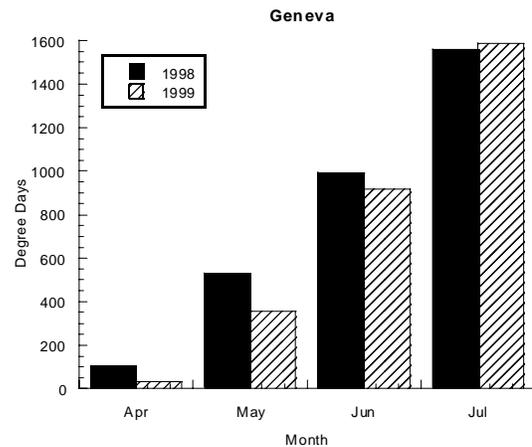


Figure 1. Growing degree days in 1998 and 1999 at Geneva, NY.

I expect moisture (i.e. lack thereof) to play a larger role in determining maturation of grapes this year. Current dry conditions started last year, as shown in Figure 2. What this figure shows is that we have had less than average precipitation in 10 of the last 12 months.

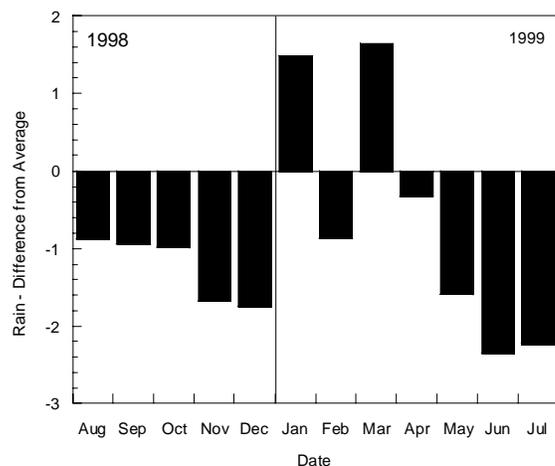


Figure 2. Departure of rainfall from average from August 1998 through July 1999 at Geneva, NY.

Rainfall has also varied in different locations in the Finger Lakes (**Figure 3**). Weather stations at Geneva and Branchport show much higher rainfall in June and particularly July at Geneva.

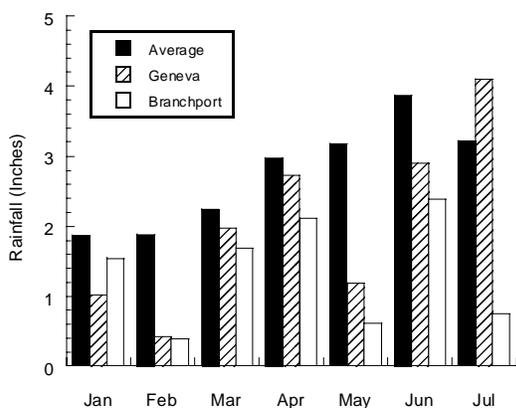


Figure 3. Average rainfall (Black), and rainfall at Geneva (stripes) and Branchport (white) from January - July.

Moisture stress shuts down photosynthesis, as leaf stomates (pores on the underside of leaves that allow respiration) shut to conserve moisture. As photosynthesis shuts down in water stressed vines, sugar accumulations and brix readings often level off. This will certainly delay harvest in some blocks, and will lead to more variability in maturity — both among different vineyards and within individual vineyards.

Moisture stress will also reduce berry size in some blocks - particularly because stress started in some areas during the 'cell division' phase of berry growth. Even with adequate moisture for the rest of the season, berries affected in this way will be smaller than average. Tonnage in these blocks will be lower than expected based on cluster counts alone. While small berries might benefit red wine quality in some cases, lack of moisture around veraison also has been associated with a wine defect called 'untypical aging', which can reduce flavor and aging ability of white wines, particularly riesling and chardonnay.

The only actions a grower can take at this point are to: 1) keep weeds and row middles free of vegetation to conserve water; 2) keep leaves free of injury from diseases (powdery mildew) and

foliage feeding insects such as leafhoppers and european red mite. Leaf injury has a much greater impact when vines also lack moisture.

Finally, irrigation is an option growers may want to consider for the future. Although this year has been extreme, the Finger Lakes often has periods of dryness in late July and August. Even transient water stress can affect ripening, yield, and storage of reserves for the subsequent year's growth. Those who attended the July 20 twilight meeting at Jim & Vince Bedient's farm found out that installing drip irrigation is less expensive than many thought. A small scale system using pond water can involve nothing more than a small pump and filter for around \$300, a PVC trunk line, and drip tape (\$.03/foot; \$150/acre) or more durable tubing (\$.12/foot; \$600/acre). The benefits can include faster early vineyard growth and establishment, more even yields for mature vineyards, and more predictable, earlier ripening, particularly for premium grapes grown on soils with low water holding capacity.

VINIFERA CLONE AND VARIETY UPDATE SEE THE VINES AND TASTE THE WINES

Who: Bob Pool, Thomas Henick-Kling and Tim Martinson

When: August 16 – 9 am till 12:30 p.m.

Where: Entrance to Fruit and Vegetable Farm off Castle Rd. 1 Mi. West of the Experiment Station. Meet near buildings inside the gate.

Bob will lead a tour of the Geneva variety/clone plantings. Several varieties and clones have shown promise in recent years. Bob, Steve Lerch and Tim will also be available to answer questions about other vinifera management such as rootstock, training and crop control.

The morning will end with a tasting of selected 1997 and 1998 experimental wines conducted by Thomas Henick-Kling. **Please pre-register by calling Michele Campbell at 315-536-5134.**

PETIOLE TESTING IN 1999

Tim Martinson

As we move into 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 as reliable for indicating nutrient status of the plant. Here are some guidelines:

What tests are available?

Complete analyses (including nitrogen) and no-nitrogen petiole tests are available through the our office. We generally recommend the **no-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 1st - 2nd week in August for Aurore, and late August 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 for a few years. 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 2 to 3 years. 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 or mailed out after payment has been received in our office. Make checks payable to: *Finger Lakes Grape Program*. Fees are as follows:

Petiole samples:
\$17 for no-nitrogen
\$24 for complete analysis.

Soil test kits: \$15.

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 analysis alone. I will follow up with a letter detailing further recommendations, based on analysis results *and on information you include on the form provided with the kit.*

'ELITE' FUNGICIDE APPROVED FOR GRAPES IN NEW YORK

Timothy E. Martinson

The New York State Department of Environmental Conservation approved the label for the fungicide 'Elite 45 DF' for use on grapes in New York on July 22, 1999. Elite is a fungicide of the sterol inhibitor (SI) group manufactured by Bayer Corporation. It is labeled for powdery mildew and black rot at an application rate of 4 oz. per acre. Mode of action is similar to other SI fungicides such as Nova and Rubigan.

VITICULTURE 2000 JOINT LAKE ERIE - FINGER LAKES GRAPE GROWER'S CONVENTION

Timothy E. Martinson

Plans are underway for a special winter grape grower's convention called *Viticulture 2000*. The conference will be held *Friday February 18 and Saturday February 19, 2000* at the Adam's Mark Hotel in Buffalo, NY. The meeting is sponsored by the New York State Wine & Grape Foundation, Cornell Cooperative Extension's Finger Lakes Grape Program and Lake Erie Regional Grape Program, and Cornell University.

This two-day conference will bring local, national, and internationally known industry, research, and extension experts together to focus on *Growing Grapes in the 21st Century*. The

meeting will combine (only for the year 2000) the annual *Lake Erie Grape Grower's Convention* and the *Finger Lakes Grape Grower's Convention*. The program will be designed for both wine and juice grape growers, and will focus on what grape growers will need to know to *stay competitive in the new millenium*.

The agenda is in the early stages of development, but will include topics in *Viticulture, Market outlooks, Farm business management, Pest management, and Labor issues*. In addition to broad topics of interest to all growers, concurrent breakout sessions will focus on more specific areas of interest. Expect more than the 'average' annual updates. Expect to hear from prominent industry leaders as well as researchers and extension specialists. Expect practical information of use to *your vineyard operation*.

The meeting will also feature an expanded indoor trade show, pre-meeting reception, wine reception and banquet with keynote speaker, and activities for spouses. Save the dates on your calendar, and look for further details as planning for the meeting progresses.

UPDATE ON PLANNED AUSTRALIA TRIP

Barry Shaffer

Our planned trip to Australia is shaping up to be a good blend of viticulture and sightseeing. We are looking at a 14 night/16 day stay and an additional 7 night New Zealand tour.

The Australia tour will include staying in Melbourne for the Cool Climate Viticulture & Enology Symposium. Other highlights will include visiting two wine regions, Canberra (the capital of Australia), and finishing in Sydney. Estimated price for this package including 23 meals is \$4300 pp. plus \$300 pp. for the Symposium (delegate cost). The dates for this leg would be January 11-27, flying out of Buffalo.

We have a wonderful add on tour of New Zealand for people that can take the extra time

away from home. We will visit both major islands including Christchurch, Queenstown, Milford Sound, and Auckland. Estimated price for this deluxe tour is \$5500 pp. plus Symposium fees. The dates would be January 11-February 3, flying out of Buffalo.

If you are interested in more information, please give me a call at (716) 679-3185 (e-mail bes9@cornell.edu) and we will put you on our tour mailing list. We are planning to have an informational meeting during the latter half of August. once we decide on the tour company.

RETIRED PATHOLOGIST AL BRAUN DIES

R.E. Krauss
Communications Services
NYSAES

Dr. Alvin Braun, retired professor of plant pathology at Geneva, died Monday June 7. Dr. Braun served as plant pathologist specializing in small fruit and grape diseases at Geneva from July 1945 to his retirement in 1997. He was responsible for developing up-to-date spray recommendations for grape disease control, research on spray equipment, and cooperating with other scientists for developing disease-resistant varieties.

UPCOMING EVENTS

August 16. *Vinifera Clone and Variety Update: See the vines and taste the wines.* 9:30 - 12:00, New York State Agricultural Experiment Station, Geneva, NY. See article elsewhere in this newsletter. **Preregister by calling 315-536-5134.**

August 18. *Research Field Day.* Fredonia, NY. 12:30 - 6:00 PM. The Lake Erie Regional Grape Program is hosting a tour of field research conducted in the area by Cornell and Penn State workers. The tour will include stops at the Vineyard Laboratory, Bob Betts farm, Randy Graham farm, and the North East (Pennsylvania) Laboratory. Topics to be discussed include root biology, mineral nutrition, plant pathology, weed control, juice quality, pruning/thinning practices,

entomology, and new technology. A cook-out will follow at the North East Lab.

Preregistration is required. *To preregister call Michele Campbell at 315-536-5134. Indicate whether you will be staying for dinner (compliments of the Lake Erie Regional Grape Processors and the New York State Production Research Fund), and whether you are interested in car pooling to this event.*

August 25. *An afternoon on Grape Integrated Pest Management & Grape Open House.* Vineland Station, Canada. 2:00 - 5:30 PM.

Topics include:

2:00 - 3:00 Mating disruption technology for grape berry moth

3:00 - 4:00 Does Stylet Oil have a fit to control both Powdery Mildew and European Red Mite?

4:00 - 5:00 Trellising and pruning for grapevine disease management; Evaluation of new fungicides to control grape diseases

5:00 - 6:00 Assessing pests in your vineyard.

6:00 - 7:00 *Vinifera* cultivars/Rootstock and Training Systems

7:15 Back Bacon and Hamburgers, Refreshments.

For information call: 905-562-4147.

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