



# FINGER LAKES VINEYARD NOTES

Newsletter #2  
February 6, 1998

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## 49<sup>TH</sup> ANNUAL GRAPE GROWERS' CONVENTION

*Timothy E. Martinson*

Everything is set for the **49<sup>th</sup> Annual Finger Lakes Grape Growers' Convention**, to be held on March 7, 1998 at the Waterloo Holiday Inn. All of you should have received a program and registration form with the January issue of the Finger Lakes Vineyard Notes. Just a reminder that pre-registration is \$25 for those enrolled in the program and \$30 for non-enrollees (includes lunch), and the deadline for pre-registration is **February 24**. A late fee of \$10 per farm will be charged after that date. Same-day registration is \$40 and doesn't include lunch! If you do not have the registration form, contact our office at 315-536-5134. A total of **2.58 pesticide application recertification credits** will be available. A new feature of the trade show will

be a **publications table**, with new bulletins available for purchase. I look forward to seeing you at the convention!

### Morning Program

8:55 Welcome **Tim Martinson**

9:00 New developments in disease management in 1997. **Wayne Wilcox**

- Update on Abound
- Results of 1997 Field Trials

9:30 Focus on 'Hot' insect Pests of 1997

- European red mite: Identification, biological control, and treatment guidelines. **Greg English-Loeb**
- The potato leafhopper invasion of 1997 and control of insecticide-resistant grape leafhopper. **Tim Martinson**

- 10:00 New developments in sprayer technology in Michigan. **Richard Ledebuhr**
- 10:30 Break and visit exhibits on display in Exhibit Hall.  
Keuka Lake Watershed Project-Agricultural Environmental Management Program. **Tom Eskildson**, Yates Co. Soil and Water Conservation District. Find out about cost sharing for conservation practices available to Yates and Steuben county growers in the Keuka Lake watershed.
- 11:00 New technologies for precision farming and weather prediction. **Joe Russo**
- 11:30 Update on promising *Vinifera* clones and varieties for the Finger Lakes. **Bob Pool**
- 11:50 The planting boom in California: How will it affect markets for Finger Lakes grapes? **Gerry White**
- 12:10 Tomato Ringspot Virus: Can replanting on rootstock extend the life of existing hybrid vineyards? **Dennis Gonsalves**
- 12:30 Lunch

### Afternoon Program

- 1:45 Question box, **Nelson Shaulis**
- 2:15 New findings concerning grape set malady. **T. Martinson, M. Goffinet, W. Stiles**
- Status of set problems in the Finger Lakes in 1997.
  - Abnormal flower development associated with set problems.
  - Effect of hand-pruning, irrigation, cluster thinning, and mulch on set problems.
  - Nutritional deficiencies associated with set problems.
- 3:00 Soil pH and nutrient availability. **Warren Stiles**

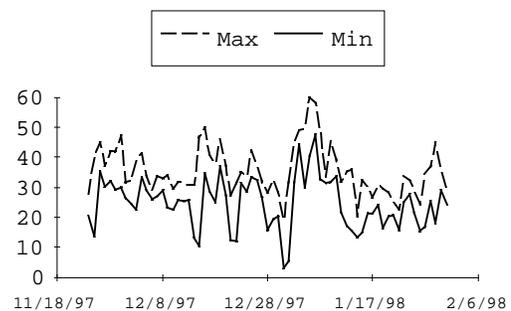
- 3:15 Market trends for Finger Lakes grapes: Focus on French hybrids and native varieties
- National Grape Cooperative, **Rich Erdle**
  - Cliffstar, Inc., **Jim Gloss**
  - Springledge Farms, representing Royal Wine Corp., **Philip Crooks**
  - Walker's Fruit Basket, **Rich Walker**
  - Canandaigua Brands, **Tom Collins**

Questions to processor panel

- 4:15 Wine and Cheese Reception, Featuring wines made from Riesling, red Bordeaux varieties (Merlot, Cabernet Sauvignon, Cabernet franc), Cayuga White, Seyval, Baco Noir, Delaware and Concord. - Women for NYS Wine and Finger Lakes Wineries participating.

### CURRENT SITUATION

*Timothy Martinson*



*Maximum and minimum temperatures at Branchport, December 1997 - January 1998.*

Winter weather in the Finger Lakes has been exceptionally mild, for the most part hovering in the 15° - 40° F range. The only significant low temperatures occurred on New Year's eve. Our program has established a network of 24 recording temperature sensors throughout the Finger Lakes. Low temperatures to date recorded at 5 of these stations are as follows:

SW Keuka Lake	-2° F
Bristol Springs	3° F
Glenora	0° F
Lodi	3° F
N Valois (Caywood)	6° F

Based on these figures, winter bud injury to date should be minimal. Of more concern to some was the 3-5 days of unseasonably warm temperatures that followed, and whether or not this would cause buds to lose cold hardiness. Several of you expressed this concern, and mentioned to me that sap was flowing from pruning cuts.

There are several reasons that a short period of warm temperatures such as we experienced should have a minimal effect on bud hardiness:

- 'Sap flow' or 'weeping' results from physical processes that allow water to be drawn up through the xylem (water conducting tissue) from the soil. This process occurs when soil is warm enough, and has little to do with bud hardiness.
- Cold hardiness of buds results, in part, from a gradual 'drying out' process in which soluble compounds in cells become concentrated, and water is removed from spaces between cells. It is a separate process, not closely related to 'sap flow'. Both the onset and loss of bud hardiness is gradual.
- Even with mild loss of hardiness in mid-winter, buds can also *regain* cold tolerance as more seasonable temperatures return. Freezing points of 'Concord' buds measured this winter at Geneva (by Steve Luce) apparently showed less cold hardiness at the end of the warm period (-12° F), but have since shown greater hardiness (Freezing point at 17-18°F). Hybrids and *vinifera* varieties (not measured) would typically show somewhat higher freezing points, but also tend to lose cold tolerance more slowly than 'Concord'. Our lows of 0 to 6° F should

be well above temperatures at which significant bud injury occurs.

In short, you can enjoy the relatively mild weather, hope it continues, and stop worrying!

## **RESEARCH REPORTS MEETING AT GENEVA**

All interested grape growers are invited to attend a meeting at the Experiment Station in Geneva, NY on February 24, 1998 to hear reports of ongoing research projects funded by the industry. Also, presentations will be given on research proposals submitted to the New York Wine and Grape Foundation, Lake Erie Regional Grape Research and Extension Program and the Grape Production Research Fund. The meeting will be held on the second floor of Jordan Hall beginning at 10:00 am and will continue until approximately 5:00 p.m. A detailed schedule of the presentations is available at our office.

This is an excellent opportunity for growers to learn more about the direction and the progress of research being conducted in New York and Pennsylvania on behalf of the industry. Reports on current research programs and new research initiatives will be presented by researchers in a concise, focused manner. Lunch will be provided. **Please contact the Finger Lakes Grape Program office at 315-536-5134 by February 13 to pre-register.** There is no charge for this program, but we need a count of participants to provide lunch.

## **1997 POSTEMERGENCE VINEYARD WEED MANAGEMENT TRIALS**

*Tim Weigle*

Under-the-row weed management in New York State vineyards has traditionally relied on the use of a pre-emergence herbicide application in the spring followed by an application of a postemergence herbicide in June (around grape bloom). Concerns over the potential for ground

water contamination through the use of pre-emergence herbicides applied directly to the soil, the persistence of these herbicides in the soil and the need to increase the rates of these herbicides to achieve reliable weed management has caused researchers to examine other weed management options.

Research conducted by R. Dunst and Bob Pool at the Fredonia Laboratory indicated that two properly timed applications of a broad spectrum, postemergence herbicide (early June and mid-late July) could be as effective as a conventional weed management program using persistent pre-emergence herbicides. In these experiments, the postemergence program managed annual grasses along with annual and perennial broadleaf weeds while leaving less competitive, low growing, winter annual weed species.

During the 1997 growing season the NYS IPM Program provided funding to support a postemergence weed management implementation project in the Lake Erie grape growing region. The goals of this project were to move the results of research into growers' fields to determine if: 1) it fit into a grower's schedule of production practices, 2) it was economically feasible, and 3) any persistent weed problems would result from yearly use of a postemergence weed management program.

Four vineyard blocks were used in this experiment. Each block contained two treatments: 1) the growers conventional weed management program and 2) the postemergence weed management program. Vineyards used in the project were selected due to the growers' description of persistent weed problems such as foxtail, velvetleaf and field bindweed. Growers were instructed to apply one of the postemergence herbicides (Roundup,

Gramoxone, or Rely) when first weeds were 4-6 inches in height. Research conducted by Dunst reported that this typically occurred during the first week in June. A second application was to be made when the weed regrowth reached a height of 4-6 inches, typically in mid-July. All growers involved with this project chose Rely as the herbicide used in the postemergence blocks.

The postemergence weed management program was successfully completed in two of the four vineyard blocks in this project. In the remaining two blocks the second application was not made until early September when average weed height was 12 inches.

Table 1 shows the results of the pre-harvest weed evaluation in the two blocks in which the program was fully implemented. In these blocks the postemergence weed management program compared favorably with the traditional pre-emergence herbicide approach. Weed growth covered approximately 27% of the under row herbicide strip with the conventional program in Westfield as compared to 3% weed cover in the postemergence program. Weed management was comparable in both blocks of the Niagara county vineyard with the conventional program having approximately 4% ground cover with weeds as compared to 3.5% in the postemergence block.

Growers involved with the program were satisfied with the results obtained by using the postemergence herbicide program. The grower in Niagara county also saw a reduction in his weed management costs with the postemergence program. Due to a dry period during mid-late summer, regrowth of weeds after the first Rely application in June was delayed. This resulted in season long weed management with just one application.

**Table 1. Comparisons of Weed Species and Percent Ground Cover in Conventional and Postemergence Vineyard Weed Management Programs.**

Weed Species	Westfield Conventional*	Westfield Post Emergence	Niagara Conventional	Niagara Post Emergence
Crab Grass	<b>9.80</b>	0.05	0.21	0
Grounseal	<b>5.70</b>	0.20	0	0
Foxtail	<b>2.60</b>	0.02	0	0
Dandelion	<b>2.20</b>	0.60	0.60	0.60
Wild Carrot	<b>1.80</b>	0	0.90	0.14
Buckhorn Plantain	<b>1.50</b>	0.02	0.04	0.02
Velvetleaf	0.70	0.01	0	0
Fescue	0.60	0	0	0
Barnyard Grass	0.50	0.20	0	0
Pig Weed	0.40	0	0.11	0.1
Horse Nettle	0.30	0	0	0
Broadleaf Plantain	0.30	0	0.06	0
Smartweed	0.10	0.02	0.04	0
Poision Ivy	0.10	0	0	0
Sumac	0.10	0	0	0
Chickweed	0.02	<b>1</b>	0.30	0.09
Bluegrass	0	0.80	0	0.02
Burdock	0	0.10	0.20	0.40
Johnson Grass	0	0	0.04	0.02
Milk Weed	0	0	0.02	0
Field Bindweed	0	0	<b>1.85</b>	<b>2.11</b>
Vetch	0	0	0	0.02
Virginia Creeper	0	0	0	0.05
<b>Total Weed Cover</b>	<b>26.72</b>	<b>3.02</b>	<b>4.37</b>	<b>3.57</b>

\* Percent ground cover calculated over entire treatment block.

Table 2 shows the spray programs, along with costs in two vineyards which fully implemented the postemergence program. The Niagara costs really show the potential for savings using the postemergence herbicide program in years with summer dry spells which delay weed regrowth. Not only was the weed management comparable to the conventional program but the cost was almost \$4 an acre less in materials alone. Figuring in labor and equipment costs for the second spray needed with the conventional program would increase per acre savings to

approximately \$11. The Westfield area received ample to excessive rainfall during the summer months and a second postemergence herbicide application was necessary. As shown in Table 2, this increased the cost of materials to over twice that of the conventional program. However, the postemergence program using Rely resulted in only 3% total ground cover under the row from weeds as compared to approximately 27% for the conventional, a reduction in ground cover of approximately 90%.

**Table 2. Comparison of Herbicide Costs of a Preemergence and Postemergence Herbicide Program in Lake Erie Vineyards.**

Treatment	Date	Herbicide	Rate/Acre	Cost of Herbicide*	Total Cost of Program
Niagara Conventional	May 22	Karmex 80DF	4 lbs	\$7.92	
	May 22	Gramoxone	3 pts	\$6.00	
	July 1	Gramoxone	3 pts	\$6.00	<b>\$19.92</b>
Niagara Post-emergent	June 9	Rely	3 Qt	\$16.02	<b>\$16.02</b>
Westfield Conventional	April 11	Princep	4 lbs	\$6.24	
	April 11	Karmex	4 lbs	\$7.92	
	June 15	Roundup	1 Qt	\$5.70	<b>\$19.86</b>
Westfield Post-emergent	June 9	Rely	1 Gal	\$21.36	
	July 20	Rely	1 Gal	\$21.36	<b>\$42.72</b>

\* Per acre sprayed

The failure to fully implement the postemergence herbicide program in two vineyards (second application of Rely was delayed until September) was due more to the small size of the treatment blocks than in the difficulty of implementing the practice. It is felt by the grower involved that an entire block treated with the postemergence program would be more of a priority and would be accomplished in a timely manner. With three- and four-row vineyard plots in the project, the herbicide application became a “when I have time” priority.

There are several ways to evaluate the use of pesticides in vineyards. One common method is to examine the amount of active ingredient applied for the total pesticide program. The postemergence weed management program greatly reduced the amount of active ingredients applied to vineyards in this project. In the Westfield vineyard, the total amount of active ingredient applied due to herbicide use was over 400% lower with the postemergence program when compared with growers traditional herbicide program (2.1 lb a.i./acre sprayed vs. 8.2 lbs a.i./acre sprayed). The vineyard in Niagara county which used only one application in the postemergence program produced a decrease of approximately 670% with the

postemergence weed management program (0.75 lb a.i./acre sprayed vs 5.06 lbs a.i./acre sprayed).

The first year’s results of this program are very encouraging. Not only did we see exceptional weed management using the postemergence program in two of the blocks, there was an example of the cost-saving possibilities of this program in some years. The reduction in the amount of active ingredient applied directly to the soil is also very encouraging. However, with only one years results it is still too early to determine the long-term success of the postemergence program. We are hoping to continue the project in the Lake Erie Region and start a project in the Finger Lakes region in 1998. If you have questions concerning the postemergence weed management project, or would like to participate in the project in 1998, please call Tim Weigle at (716) 672-6830 or email me at thw4@cce.cornell.edu.

### UPCOMING MEETINGS

**January - April.** *Pesticide Training and Recertification Series.* A comprehensive series of 4 sessions for anyone seeking to obtain a pesticide certification license, private or commercial. Certified applicators seeking

additional pesticide training and review may also attend any or all classes, and obtain **Recertification Credits**. Classes offered in Romulus, Penn Yan, Rochester, and Canandaigua. For more information, contact Russ Welser, Cornell Cooperative Extension, 480 N. Main St., Canandaigua, NY 14424, (716)-394-4110 ext. 31 or 38.

**February 16, 1998.** *1998 Lake Erie Grape Growers' Conference*, Westfield Central Academy, Westfield, New York. Contact The Lake Erie Regional Grape Extension Program at (716)-672-6464 for more information

**March 7, 1998.** *49<sup>th</sup> Annual Finger Lakes Grape Growers' Convention*, Holiday Inn, Waterloo. For a registration form contact our office at 315-536-5134.

**March 15-18, 1998.** Lancaster PA. *Wineries Unlimited*. Sessions will focus on Pinot Noir, Ice wines and Late Harvest wines, as well as Technical and Marketing sessions. Trade Show.

Call 800-535-5670 for admission and registration information.

**March 14 & 15, 1998.** *Annual Conference of the Northeast Organic Farming Association-NY*, "Biological Balance: Growing Healthy Farms, Folks, and Foods" at Tompkins-Cortland Community College in Dryden, NY. Discount for registration by 2/13/98. NOFA-NY, PO Box



21, South Butler, NY 13154-0021; phone: 315-365-2299; fax 315-365-3299.

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