

FINGER LAKES Vineyard Notes

NEWSLETTER NO. 14

FEBRUARY 12, 1999

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50TH ANNUAL FINGER LAKES GRAPE GROWERS' CONVENTION APPROACHES

Timothy E. Martinson

I invite you all to attend the 50th Annual Grape Growers' Convention on March 6, 1999 at the Waterloo Holiday Inn. We have an excellent program planned, a trade show with 42 exhibitors, and a wine and cheese reception featuring Finger Lakes wines. A program and enrollment form was mailed out in the January Vineyard Notes. Just a reminder that the pre-registration deadline is **February 22**, after which a late registration fee will be added. The deadline for even late enrollments to include lunch is **March 1**. Attendees will be eligible for **2.75 pesticide recertification credits**.

I have enclosed a special letter of invitation for retired grape growers and industry personnel that were active in the industry from 1948 to 1958. **Please help us out by forwarding this letter to those you know who might not receive this newsletter.** Retired (or not retired) persons will be recognized as a group during the final portion of the convention.

Here is the meeting schedule:

- | | |
|-------|---|
| 8:00 | Registration, Trade Show opens |
| 8:55 | Welcome |
| 9:00 | Minimizing spray drift in vineyards |
| 9:30 | European red mite - 1998 trials
Prebloom stylet oil
Why dormant oil doesn't work
Establishing and maintaining beneficial mites for biological control
1998 field trials |
| 10:30 | Break and visit exhibits on display |
| 11:00 | Nutrition update
What soil and petiole tests can and can't tell you |
| 11:25 | Remote sensing and mapping software for vineyard management
Commercial applications in California
Digital soil maps and infrared vineyard Finger Lakes |
| 12:20 | Lunch |
| 1:40 | Question Box |
| 2:15 | Performance of 10 different grow tubes in Ontario vineyards |
| 2:40 | Weed control options for non-bearing vineyards |
| 3:05 | Renewing hybrid vineyards infested with tomato ringspot virus
What are the options
Economics of replanting
Brief comments from buyers |
| 3:45 | 50 years of the Grape Growers' Convention
Recognition of industry 'veterans'
A look back at grape growing in 1948
The Eastern Wine and Grape Archive |
| 4:05 | Wine and Cheese Reception |

NITROGEN FERTILIZATION - WHY EFFICIENT NITROGEN USE IS IMPORTANT

Timothy E. Martinson

Nitrogen is the most commonly applied fertilizer in New York Vineyards, yet is the element for which fertilizer recommendations are most vague. Unlike potassium, magnesium, and boron, for which fall petiole samples or soil samples provide a good basis for application rates, recommendations for nitrogen rely on judgements of 'vine vigor' and 'canopy fill'. Bloom-time petiole analyses for nitrogen can provide indications of the nitrogen status of vineyards, but we generally recommend them only for comparing 'good' and 'problem' areas in the vineyards.

While growers have changed *timing* of nitrogen applications in response to recent information on N uptake (i.e. delaying application until after budbreak; using split applications shortly after budbreak and bloom to improve application efficiency), the question of adjusting the *amount* of N has received less attention. The standard in the Finger Lakes seems to be 100 lb actual N per acre for natives and hybrids and 30 - 50 for *vinifera* (or less). This one-size-fits rate seems to work for most growers. If that is the case, then why consider changing it? And how *do* you adjust rates based on 'vine vigor' and 'canopy fill'?

In the next few issues of *Vineyard Notes*, we will be taking an in-depth look at issues surrounding N fertili-

zation. Previous articles (*Finger Lakes Vineyard Notes*: April 6, 1995, #3; April 23, 1996, #5; April 17, 1997, #3) over the past few years have provided practical guidelines for N use. In these articles, I will draw on recent research publications and summarize some of the ideas behind N guidelines. In this issue, I focus on *Why Efficient Nitrogen Use Is Important*.

Why efficient N use is important. Nitrogen applied to vineyards behaves differently than other commonly applied fertilizers, such as potassium and magnesium. With these elements, it's a pretty safe bet that they will stay pretty much where you put them - they leach at a slow rate. Nitrogen is different, in that it moves and changes form easily. For this reason, it is important to apply N in the amount needed at the right time. A few important reasons why timing and amount are important and can vary are:

- ◆ **Nitrogen is subject to losses.** Nitrogen, in whatever form it's applied, is commonly converted to the nitrate form (NO_3) by microorganisms in the soil. Most N is taken up by roots in this form. Because it carries a negative chemical charge, nitrate is subject to leaching (downward movement within the soil). Other forms (e.g. urea and ammonium) are also subject to losses through volatilization (evaporation into the atmosphere). Other nutrients such as potassium, magnesium, and calcium, carry a positive chemical charge and adhere to soil particles. They are much more likely to stay put within the root zone, where they remain available to the vine.
- ◆ **Nitrates can contaminate ground water.** Nitrogen, if put on in excess of the vines' needs or at the wrong time, can end up in the ground water, where it can have detrimental effects on human health. Nationwide, nitrate contamination of well water is a major concern, particularly in agricultural areas. In some areas, (not here, I need to emphasize) up to 2/3 of rural wells show nitrate levels exceeding water quality standards. Believe me, this will be an area that will see increasing scrutiny in coming years. European grape growers are increasingly seeing restrictions - or outright bans - on N applications due to water quality concerns.
- ◆ **Soils vary in their ability to supply nitrogen.** Soils supply a significant amount of N - both from break-

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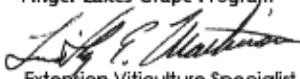
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down in organic matter and from conversion and weathering of soil materials. In the Finger Lakes, mineral soils can supply 40-75 lb N per year. This 'native nitrogen' is released slowly - and can provide available N even if your application timing is a little too late - for example early in the season. In some cases, N supplied by decomposing organic matter is sufficient to supply most of the vines' demand.

- ♦ **Vines vary in nitrogen needs.** Too much nitrogen sometimes promotes excessive vigor - leading to canopy shading, lack of winter hardiness, and ultimately less fruit of poorer quality. Applying a 'standard' amount of N to a vineyard with a low crop load can promote excessive growth. Cultivars vary - *vinifera* grapes typically need less than heavily-cropped native cultivars. Ground cover also influences nitrogen demand - sod will use up more nitrogen than clean-tilled vineyard floors - and also can absorb N at times when there is little demand by vines. This can cut both ways - sod can compete with vines for N, but also is beneficial in soaking up excess N when vine demand is low. This can dramatically reduce leaching - and conserve N, later releasing it after the sod is killed.

- ♦ **Nitrogen demand varies over the growing season.** Uptake of N from the soil is not a constant, steady process. According to the literature, most uptake takes place during the active phase of canopy growth (roughly bloom to veraison) and after harvest. At other times nitrogen stored in canes and trunks of the vines is used (bud break to prebloom) or N is moved from leaves to fruit and other tissue (veraison to harvest). N applications should be timed to coincide with these periods of uptake (more details to follow in future articles) to be used most efficiently.

These and other factors suggest that applying a standard rate of nitrogen is not always the best strategy. In fact, studies comparing high, low, and no nitrogen application over several years sometimes have a difficult time documenting any yield advantage for fertilized vines (more on this in future articles). This doesn't mean that no vineyards need nitrogen, but rather that some vineyards could probably cut back the standard 100 lb/acre actual N by 25% with little difference in yield or quality. In *vinifera* vineyards, which often have excess vigor, it's hard to make a case for anything exceeding

50-60 lb/acre actual N.

Next time: Determining nitrogen status of vineyard; How nitrogen cycles through the vine.

Reference:

Rantz, J.M. 1991. [ed] *Proceedings of the International Symposium on Nitrogen in Grapes and Wine, 1991*. American Society of Enology and Viticulture, Davis, CA.

1998 CROP STATISTICS

Timothy E. Martinson

Official crop statistics for 1998 are in. Total crop declined by 10% over 1997, with a larger overall 22% drop in the Finger Lakes. Statewide, the total crop was 21% below the 5-year (1994-1998) average. Both statewide and in the Finger Lakes, crop declined only for natives, with hybrids and *vinifera* posting 19 and 10% gains over 1997, respectively. Reported *vinifera* tonnage in the Finger Lakes was up 27% over 1997.

Table 1. New York and Finger Lakes 1998 Estimate of Grapes Received by Processors

Year (Tons)	Natives	Hybrids	<i>Vinifera</i>	Total
Statewide 1996	159,880	9,930	3,700	180,000
Statewide 1997	121,985	6,355	3,650	134,000
Statewide 1998	109,235	7,590	4,015	123,000
Statewide 5 year				
Average	140,654	8,856	3,187	155,800
% Change from 97	-10%	19%	10%	-8%
% Change from				
Average	-22%	-14%	26%	-21%
Finger Lakes 1996	34,517	7,949	1,530	45,676
Finger Lakes 1997	28,139	6,153	1,700	37,572
Finger Lakes 1998	21,838	7,302	2,152	33,026
Finger Lakes				
3 year average	28,165	7,135	1,794	38,758
% Change from 97	-22%	19%	27%	-12%
% Change 3 year				
Average	-22%	2%	20%	-15%

CROP DISASTER INSURANCE SIGN-UP

Timothy E. Martinson

Compiled from Farm Services Agency Newsletters

As mentioned in previous newsletters, Congress passed a law to provide a program to assist producers that suffered over 35% loss of their 1998 crop. This program may provide assistance to grape growers suffering losses in 1998. **The sign-up period for this program will run from February 1 to March 12, 1999.** A few important points:

- ♦ The program will be available both to those who had 1998 crop insurance and those who did not.
- ♦ Those who had crop insurance in 1998 will be eligible based on Actual Production History (APH).
- ♦ Even if you have received a 1998 crop insurance indemnity, you may also be eligible for the new crop loss disaster program payment.
- ♦ If the producer does not have a crop insurance actual production history (i.e. have not had crop insurance), yields will be based on 5-year average state or county yields.
- ♦ Those who sign up will be required to obtain crop insurance for the next 2 years.
- ♦ The deadline for applying for crop insurance has been extended to March 15.
- ♦ 1999 Crop Insurance premiums should be up to 30% less than previous years.

Contact your local Farm Services Agency for more information. Local office are:

Chemung County: (607) 565-2106
Ontario County: (716) 394-0525, Ext. 2
Schuyler County: (607) 257-2737
Seneca County: (315) 568-6346, Ext. 2
Yates County: (315) 536-4012

An additional note: Several commercial insurance agencies offering crop insurance for 1999 will be available at the trade show associated with the Finger Lakes Grape Growers' Convention on March 6.

USDA EQUIP PROGRAM SIGN-UP FOR THE

KEUKA LAKE WATERSHED

Yates Farm Services Agency Newsletter

The Keuka Lake Watershed in Yates and Steuben Counties has been awarded \$120,000 from USDA's new Environmental Quality Incentives Program for fiscal year 1999. This will be the third year that the Keuka Lake Watershed in Yates County has received funding from the program. The objective of the program is to control soil erosion and to protect water quality in cooperation with state, federal, and local agencies.

ELIGIBLE PRODUCERS are those farmers having an interest in a farm within the Keuka Lake Watershed that produces crops such as fruit, grain or row crops, or livestock such as beef or dairy cattle.

ELIGIBLE LAND is land within the Keuka Lake Watershed that is cropland, pasture, hayland, forestland or vineyards.

The program utilizes 5 to 10 year contracts to provide technical assistance and to pay up to 75% of the cost of conservation practices such as manure management systems, pest management, and erosion control. Cost sharing and incentive payments are limited to \$10,000 per person annually and to \$50,000 for the life of the contract.

INELIGIBLE PRACTICES are those:

- ♦ that enhance productivity,
- ♦ that the producer has already adopted,
- ♦ that the producer is likely to apply without EQIP financial assistance and
- ♦ animal waste management storage and treatment facilities on large confined livestock operations exceeding 1,000 animal units.

Applications for EQIP contracts will be prioritized by working with the producer to evaluate the conservation needs and to determine the offer index.

This means that there will not be any FY99 USDA conservation practice assistance for farms outside the Keuka Lake Watershed. However, another priority area for FY2000 will be selected soon and if all goes well, it may be funded.

Yates farmers who have an interest in land located in the Keuka Lake Watershed must apply for EQIP assistance by March 2, 1999 at the Farm Service Agency Office, (315) 536-4012.

UPCOMING EVENTS

March 22 - 24, 1999. *Planning, Financing, Establishing and Expanding Vineyards and Wineries*, Ramada Inn, Geneva NY.

This workshop, featuring university and industry speakers, will cover all aspects of starting or expanding new vineyards and wineries.

March 22, 1999. Business and Financial Planning for Grape Growers and Wineries is intended for beginning growers and will cover initial planning for vineyard/winery operations, including overview of vineyard enterprises, developing a business plan, costs of vineyard establishment, economics of startup wineries, and financing new operations.

The New York Wine and Grape Foundation's annual Unity Banquet will be held at Belhurst Castle, Route 14, 2 miles south of Geneva. **Dinner: \$50.**

March 23, 1999. Vineyard Establishment is intended for both new and established growers, and will cover vineyard establishment, including site selection, variety options, pre-plant preparation, vineyard layout and planting and vine training.

A discussion of clones and buffet dinner will follow the program at the Ramada Inn. **Dinner: \$25.**

March 24, 1999. Winery Planning, the 28th Annual New York Wine Industry Workshop will cover starting and expanding wineries, including legal requirements, siting a winery, winery design, equipment needs and waste handling.

A winemaker's dinner will be held at Spinnakers' on Seneca Lake, Route 14, Geneva with a choice of sundried tomato and goat cheese stuffed filet mignon or potato crusted salmon with pesto cream.

Dinner: \$35.

Registration - you may register for any or all sessions that interest you. Registration for each day includes lunch at the Ramada Inn, technical sessions, and extensive written material. Additional registrations from the same business will be discounted by \$10. Enrollees of Cornell Extension Programs (Finger Lakes Grape Program, Lake Erie Regional Grape Program, Long Island Grape Program, regional fruit programs) will receive an additional discount of \$10 for each day.

Please note that this applies to enrollees from the geographical area covered and not to newsletter subscribers from outside the geographical area covered by the program.

Trade Show. Commercial and university publications will be offered for sale by commercial and university publishers.

For further information, contact Nancy Long, NYS Agricultural Experiment Station, (315)787-2288.