**Twilight Meeting on Frost Injury and Ponnex ~ June 13**

*Timothy E. Martinson*

You are invited to a twilight meeting this Thursday, which will focus on managing frost injured vineyards and details of using Ponnex to increase fruit set. The meeting will take place at 7PM at the *June, Dave, and Jeff Pendleton farm* in NW Yates County. Speakers will be *Bob Pool* and *Chris Becker* (research scientist with BASF), both of whom have experience with Ponnax in research and demonstration trials.

Travel directions: From Penn Yan - Take Rte 364 from Penn Yan to Potter. West of Potter, take rte 247 (veer right up hill), and go approximately 3 miles to Ward Simmons Rd. Take a right on Ward Simmons, and go to the vineyard drive just past the first house on the right (there is a quonset hut shop at the house). I should be there in a purple minivan after about 6:40.

Bring your questions about any aspect of the growing season or grape growing to this meeting.

---

**Small Sprayers for Smaller Vineyards**

*Andrew Landers*

Pesticide Application Technology Specialist  
Cornell University, NYSAE Station  
Geneva, NY 14456

There are many important points to consider before purchasing a sprayer, not least of which is the area to spray, the proximity of the local supplier, standard of manufacture etc. A fact sheet on Machinery selection entitled Crop Sprayers for orchards and vineyards is available from the author. There are many growers with small vineyards who don’t require airblast sprayers and have a need for spraying equipment ranging from backpack sprayers to small truck or ATV-mounted machines.

**Canopy sprayers**

1. *Backpack sprayers*. Small capacity (4-5 gallon) sprayers will produce up to 150 psi pressure. Weight is an important consideration and growers should select a sprayer with good, wide, padded straps to ease the load. Correct nozzle selection according to the target is very important to ensure even coverage. A good size filling hole at the top is also important. $95-150 approx. Maintaining a constant flow is crucial for good application. The use of a spray management valve such as a CF valve will ensure a constant output irrespective of hand pump action that costs approximately $10. An alternative to the hand pump backpack is the electric backpack, which utilizes a small rechargeable battery. Maximum pressure is quite low and it costs approximately $265.

2. *Portable gas sprayers*. If weight is a problem, and ground conditions are relatively smooth, a sprayer with a small 1/4hp gas engine, 12 gallon tank and 16” wheels is available from Dramm for $930. Larger capacity tanks (14—100
gallons) are often trailed and can be pulled by a lawn tractor, ATV or small tractor. Often fitted with a small electric, battery powered pump or a 4-10hp gas engine for $289-3000

3. **Portable Mist and air blower backpacks.** These are ideal for greenhouses where a controlled environment prevents the wind blowing away the droplets but outside in a vineyard they are too dangerous! Besides creating fine drift-prone droplets, they are noisy and you are walking into a mist. Cost is not available.

4. **Small mounted sprayers.** Ideal for mounting onto the carrier rack of an ATV, 15-25 gallons, they use a small electric pump to provide up to 70 psi for $230-350.

5. **Large skid mounted sprayers.** Ideal for fitting into the back of a pick-up truck these sprayers have a tank capacity of 35-200 gallons, and electric or gas engine power for $400-2700

6. **Small trailed airblast sprayers.** Very small airblast sprayers, such as the interestingly named Lil’ Squirt from PMB sprayers with a tank up to 110 gallons, a 5.5hp gas engine and which can be towed by an ATV are available. Larger tank capacity up to 300 gallons is also available. Remember the larger the gas engine, the more important it is to buy an electric start option. The cost is $5000

7. **Small mounted airblast sprayers.** Three-point hitch, PTO driven models with a 22 or 24” fan, for fitting onto 25hp tractors are available for $3700.

**Herbicide application**

1. **Sprayers Listed Above.** All the sprayers, #1-5 above, (except the airblast) can be used for herbicide application BUT be very careful that there is no carry-over from herbicide residues in the sprayer, therefore wash out very thoroughly.

2. **Controlled Droplet Applicators.** The use of Controlled Droplet Applicators (CDA) will considerably reduce the need to carry vast amounts of water. A spinning disc (battery powered) will produce 95% of the same-size droplets, thus reducing chemical rates by 50% and water rates. Herbi and Mantis (trade names) are hand-held sprayers that cost $200-400. ATV or tractor mounted shielded CDA sprayers such as the Environmist from BDi also reduce spray rates and cost $2100

3. **Wick wipers.** Where occasional weeds are a problem, the use of a hand-held wick wiper is an easy-to use, effective option that costs $35 –55.

**Where to look/buy**

BDi Machinery Sales, Macungie, PA
1-800-808-0454
Bdi@fast.net

CF Valve by G.A.T.E, Deerfield Beach, FL
1-800-303-2099
www.cfvalve.com

Demco, Boydien, IA
1-800-543-3626
www.demco-products.com

Forestry Suppliers Inc., Jackson, MI
1-800-647-5368
www.forestry-suppliers.com

Gemplers, Belleville, WI
1-800 332-6744
www.gemplers.com

Orchard Supply OESCO, Conway, MA
1-800 –634-5557
www.oescoinc.com

PBM Sprayers, Chico, CA
1-800-688-1334
www.pbmsprayers.com

Rittenhouse, St Catherines, Ont. CA
1-800-461-1041
www.rittenhouse.ca

Please note: Where trade names, manufacturers or distributors names appear, no discrimination is intended and no endorsement by the author or Cornell University is implied.

**MULTI-ROW SPRAYER TOUR TO CANADA IN AUGUST**

*Andrew Landers*

Timeliness of spray applications is a crucial factor in good disease and insect management. Do you find you are spending too long driving your sprayer up and down the rows? Is your spray program slipping?
Are you missing key dates for spraying? Will the bad weather affect your timeliness of application? Have you thought it is time to match your sprayer to your increased area of grapes?

Why not join a select band of Finger Lakes growers on the great International expedition of 2002 to the vineyards of the Niagara peninsula, Canada. Andrew Landers is organizing a day-long visit to see 4 different types of multi-row (2-4 row sprayers) at work on 4 vineyards.

Meet the owners of these high output sprayers, discuss output/day, spraying regimes, kick the tires, talk to the operators and see how well they have performed this season.

Date for your diary: TUESDAY 13th AUGUST

Pre-booking is required and will be via Tim Martinson at the Penn Yan Cooperative Extension office.

UNDERSTANDING INCOME FLUCTUATIONS
Risk Management Series
Jerry White
Applied Economics & Management
Cornell University

Farming is an inherently risky business, whether you are growing grapes, tree fruits, small fruits, vegetables, ornamentals, or any other crop. But there are steps you can – and should -- take to protect your business from the occasional really bad year, in which receipts are so low that the survival of the business is threatened. In this newsletter I look at the issue of income fluctuation, and why the goal of risk management is to stabilize, not maximize, income.

This is a timely topic, because early indications are that severe freeze damage to vineyards this spring in western New York may mean that some grape growers will get only one or two tons per acre from the 2002 crop. Of course it’s too late to buy insurance for this crop year (signup for perennial crops is in mid-November) but such a season is a graphic reminder of the role of crop insurance and other risk management measures.

To examine income fluctuations over a longer term, I'll use the example of grape growers in the Lake Erie Region. These growers have been affected by a variety of events over the past two decades, beginning with the collapse of prices in the mid 1980s. This resulted in cash prices for some growers that were under $150 per ton, while average costs of production were closer to $280 per ton. The factors which produced this price crash included a surplus of grape production both in the US and world-wide; changes in the demand for wine grapes (reducing demand for those varieties that were the staple of the NY industry); and an increase in the value of the dollar that led to a dramatic increase in imports into the U.S. market.

Table 1. Average receipts per acre, price per ton and yield per acre, Lake Erie Grape Farm Cost Survey, 1991 – 2000.

<table>
<thead>
<tr>
<th></th>
<th>10-Year Low</th>
<th>10-Year High</th>
<th>10-Year Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average gross receipts per acre ($)</td>
<td>1,189</td>
<td>2,026</td>
<td>1,614</td>
</tr>
<tr>
<td>Average price per ton ($)</td>
<td>203</td>
<td>338</td>
<td>254</td>
</tr>
<tr>
<td>Average yield (T/Ac)</td>
<td>4.8</td>
<td>8.3</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Table 1 shows the variability in average gross receipts per acre, average price per ton, and average yield per acre, among Lake Erie grape growers between 1991 and 2000. Average yield was as low as 4.8 tons per acre in 1993 and as high as 8.3 tons per acre in 1999. Average price varied from 203 per ton to as high as $338 per ton. Average gross receipts per acre varied from $1,189 in 1995, a year of low yields and low prices, to as much as $2,026 per acre in 1999 with a very large crop and favorable prices. Grape growers need about $1,500 to break even on total costs, and when income falls as low as $1,189, some farms will be unable to cover even cash costs.

This situation illustrates the importance of taking measures to stabilize gross receipts. Crop and/or revenue insurance is designed to protect against this situation. If you do not have insurance and you are unable to cover costs in a bad year, your options include: (1) using up savings, which reduces your net worth; (2) borrowing more money, which increases your debt-to-asset ratio; and (3) subsidizing the loss with off-farm income. For those with extremely high debt-to-asset ratios, the options include bankruptcy and or voluntary foreclosure, or sale of the farm. (But be aware that in the case of sale of the farm or some assets, there is often a sizable income tax liability. Consult your accountant or tax advisor before exercising this option!)
Figure 1 shows the variability in gross income per acre between 1991 and 2001 for all grape farms in the sample. It shows both variations between growers in the region (high, low and average) and between years. In 1995, a particularly low year, gross income per acre was less than 60 percent of what it was in 1999, the highest year, and less than 75 percent of the 10 year average. Figure 1 also indicates the highest and lowest individual farm for each year. For example in 1993, one farm in the sample had gross income of only $600 per acre, which may very well have been below cash outlays for that crop year.

Figure 1. Gross income per acre among Lake Erie grape growers. Lake Erie Grape Farm Cost Survey, 1991 – 2000

Keep in mind that the year-to-year variability on a single farm will be even greater than the variability shown by a group of farms. Use trend analysis to understand how your own farm’s income fluctuates, and how likely it is to dip below a critical level. Analyzing these data for the most recent 10 years will enable you to make better decisions regarding crop insurance and other strategies for dealing with low-income years.

Some degree of fluctuation in gross income occurs in every kind of horticultural enterprise. Remember that risk management is all about reducing these fluctuations, not necessarily increasing profits! Most risk management tools have a cost associated with them. The goal is to ensure that you can meet your financial obligations, both business and personal, even in a bad year.

For more information on risk management, visit the new Risk Management section of Cornell’s Horticultural Business Management and Marketing web site:

http://aem.cornell.edu/special_programs/hortmgtrisk/

**UPCOMING EVENTS**

**June 18.** Lancaster Pennsylvania. **New Grower Seminar** in Pennsylvania. Please contact Penn State Cooperative Extension of Lancaster Co for registration information at 717 394-6851 or e-mail Mark Chien at: mlc12@psu.edu.


**10-12 July 2002.** **ASEV Eastern Section Annual meeting** at Baltimore, MD. Theme is ’Focus on Red Varieties for the East’, and the program will feature national and international experts on Merlot, Cabernet Franc, and Chambourcin. Both the vineyard and winemaking techniques will be covered. Registration forms and a program available at:

http://www.nysaes.cornell.edu/fst/asev/AnnualMtg.htm

**July 15-17 2002,** Hobart and William Smith College, Geneva New York **Wine Marketing, Branding and Wine Tourism Seminar** featuring Dr. Johan Bruwer and Rob van Zanten, from the Adelaide University, Australia. The premier wine marketing program in the world for over 25 years! Save the Dates, Registration will be limited! Sponsored by the Finger Lakes Wine Council. The Finger Lakes Wine Council (FLWC) is an association of Finger Lakes wineries and growers dedicated to the production and promotion of quality wines from the Finger Lakes Region of New York State. The FLWC promotes Finger Lakes wines and tourism in markets beyond the Finger Lakes wine region.

**August 6-8.** Arnot Forest, Newfield NY. **3rd Annual Eastern Pinot Noir Conference.** Pinot Noir producers from New York, Pennsylvania, Ontario and other parts of the east will converge on Arnot Forest for 2 days of discussion and wine tasting. Call our office 315-536-5134 for more information.
Cooperative Extension

The information, including any advice or recommendations, contained herein is based upon the research and experience of Cornell Cooperative Extension personnel. While this information constitutes the best judgement/opinion of such personnel at the time issued, neither Cornell Cooperative Extension nor any representative thereof makes any representation or warrantee, express or implied, of any particular result or application of such information, or regarding any product. Users of any product are encouraged to read and follow product-labeling instructions and check with the manufacturer or supplier for updated information. Nothing contained in this information should be interpreted as an endorsement expressed or implied of any particular product.

Finger Lakes Vineyard Notes Newsletter No. 6 June 11, 2002

Timothy E. Martinson
Area Extension Educator

Building Strong and Vibrant New York Communities

Cornell Cooperative Extension provides equal program and employment opportunities. NYS College of Agriculture and Life Sciences, NYS College of Human Ecology, and NYS College of Veterinary Medicine at Cornell University, Cooperative Extension associations, county governing bodies, and U.S. Department of Agriculture, cooperating.