



VINEYARD NOTES

NEWSLETTER NO. 5

May 5, 2000

IN THIS ISSUE...

- Recognizing and Responding to Drought Stress in Vineyards
- 1999 Harvest Price List for Grapes
- PennCap-M and Guthion Use Limited

ANNUAL SPRING PEST MANAGEMENT MEETING

Timothy E. Martinson

May 23, 2000, 3:00-6:00 PM, Lance Fullager Vineyard Supplies, Old Bath Rd, 4 Mi S of Penn Yan.

This year's update will include insect and disease updates by Greg English-Loeb and Tim Weigle, an update on the Food Quality Protection Act by Dr. George Good, Director Pesticide Management and Education Program, Changes in DEC recertification procedures by , updates on label changes and new products from industry representatives, and a presentation and demonstration by Dr. Andrew Landers, Extension Associate in Pesticide Application Equipment. Tim Weigle, Grape IPM Specialist will host.

Sprayer Demonstrations.

The meeting will be followed by a barbecue featuring food, grape juice and wine, chaired by Ed Pinneo (If you are associated with a winery, consider bringing a bottle of wine to share with the group – we will also purchase ½ case of wine from three area wineries).

We recommend that you bring a portable lawn chair to sit on. Please preregister with our office by calling 315-536-5134, by e-mail (tem2@cornell.edu) or by filling in the registration form included with the newsletter. **Please bring your pesticide certification number. Up to 3 Recertification credits are anticipated.**

Schedule:

- 3:00-3:20 **Insect Management Considerations for 2000**, Dr. Greg English-Loeb, Dept Entomology, NYSAES
- 3:20-3:40 **Disease Management Considerations ;** Tim Weigle, Grape IPM Specialist, Finger Lakes and Lake Erie Regional Grape Programs
- 3:40-4:05 **Update on the Food Quality Protection Act;** Dr. George Good, Pesticide Management and Education Program, Cornell University
- 4:05-4:30 **Changes in Pesticide Applicator Certification Program;** Ron Gardner, Senior Extension Specialist in Pesticide Education
- 4:30 – 5:30 **Improving Spray Deposition and Reducing Drift.** Dr. Andrew Landers, Dept. of Agricultural and Biological Engineering, Cornell University, will speak on this topic and demonstrate several pieces of spray equipment.
- 5:30-6:00 **Industry Representative Updates on Label Changes and New Products.** Technical representatives from chemical companies will speak about label changes and product updates.
- 6:00 **Barbecue**, Bluff Point Growers Benevolent Barbecue Association, Ed Pinneo, Chair.

MANAGING WEEDS IN NEWLY PLANTED VINEYARDS

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Some of the most important pest management decisions a grower will make in establishing a new vineyard are those regarding weeds. The goal of vineyard weed management during establishment is to minimize weed competition with the vines for water, nutrients, and sunlight. Inadequate control of weeds prior to and during vineyard establishment can reduce vine growth and yield and long-term vineyard profitability.

Year prior to planting. One of the most important weed management decisions for your new vineyard will be made prior to planting. Planting vines into a field infested with perennial weeds (for example, quackgrass, nutsedge, morning glory, goldenrod, or poison ivy) will almost certainly result in reduced yields and profitability in the early life of the vineyard. Future vineyard sites infested with perennials should be treated with a systemic herbicide such as glyphosate (Roundup®) or sulfosate (Touchdown®) in the year prior to planting. Applications made in the fall prior to first frost and while target weeds are actively growing are most effective. The optimum rate and timing depends on the weed species present - consult the herbicide label for specific recommendations. Once perennials are controlled, options are fall plowing with or without cover crop establishment or spring plowing. Fall plowing is usually preferred because it generally allows earlier planting in the following spring.

Cultivation. Mechanical cultivation is generally discouraged as a primary means of weed control in established vineyards because of the deleterious effects including damage to trunks (making them more susceptible to crown gall infection), root pruning, increased hazard of erosion, decrease in soil organic matter, breakdown of soil structure resulting in decreased percolation rate, and reduced footing which results in delays for fungicide applications and other vineyard tasks. On the other hand, some cultivation and/or berming is necessary during

vineyard establishment, and covering graft unions on tender varieties for winter protection is a common practice.

In my experience, a combination of mechanical hoeing and use of herbicides can be effective in managing weeds during vineyard establishment. A common mistake growers make is planting the vineyard and then delaying further weed control measures. Once weeds have germinated they are usually not controlled with preemergence (soil residual) herbicides. Once the newly planted vines begin to grow, the use of postemergence herbicides can be problematic as contact with newly emerging foliage must be avoided. One suggested approach is to complete any berming or hilling-up operations soon after planting and then apply a preemergence herbicide in the row before shoot growth occurs. Another suggested method is to wait a few weeks after planting and cover newly germinated weeds (no more than an inch or two in height) with soil. At this point, Surflan® (oryzalin) can be applied over the top of the vines, or better yet, make another hilling pass in two to three weeks and then apply Surflan®.

Mulching. I've yet to see an effective method of applying plastic mulches during vineyard establishment. Organic mulches are discouraged because of the risk of harboring rodents and other pests that may feed on the vines as they begin to grow.

Grow Tubes. Weed control may not be the primary reason a grower might decide to use planting tubes, but it's a good one. Postemergence herbicide applications in newly planted vineyards can be difficult because of the risk of injury or damage to the vines. The use of planting tubes greatly alters this situation. A combination of pre- and postemergence herbicides can be used in conjunction with planting tubes, or you might even decide to use postemergence herbicides only - as long as you are willing to make two or three timely applications during the season.

Herbicides. Chemical methods of weed control are most commonly used in vineyards during establishment. Unfortunately, options are somewhat limited. Here's a quick review of herbicides labeled for young (third year or younger) vines. (A more comprehensive review can be found in the "Managing Weeds in New York Vineyards" series of fact sheets available through Cornell Cooperative Extension.)

Pre-emergence Herbicides. Preemergence herbicides generally control weeds as they germinate. The two most commonly used preemergence herbicides, Karmex® (diuron) and Princep® (simazine) cannot be used until vines are established for three years. The following herbicides can be used during vineyard establishment, but some have restrictions based on vine age or phenology. No one herbicide is likely to provide control of all weeds in the vineyard.

Surflan® (oryzalin). Surflan® is the most commonly used herbicide used in new plantings in New York. It can be applied on newly planted vines, and will not cause injury to new growth on the vines. Weaknesses include poor control of ragweed, mustard, dandelion, and wild carrot.

Gallery® (isoxaben). Gallery® is an excellent compliment to Surflan® in new plantings, unfortunately it is not currently registered in New York.

Prowl® (pendimethalin). Prowl® is chemically similar to Surflan® with similar strengths and weaknesses in terms of weed control, but can only be used on non-bearing vines. Only fully dormant applications are permitted to avoid injury to vines.

Devrinol® (napropamide). Devrinol® can be applied to newly planted vines but is weak in controlling some of the same broadleaf weeds as Surflan® and Prowl®. It is very susceptible to photodecomposition and must be incorporated into the soil within 24 hours of application to be effective.

Goal® (oxyfluorfen). Goal® provides good control of most annual weeds but is weak on summer grasses. Only fully dormant applications are permitted, and vines must be established on a trellis wire at least 3 feet above ground level to avoid injury.

Solicam® (norflurazon). Solicam® is frequently used in bearing vineyards to control summer grasses, and is one of the better herbicides in controlling velvetleaf. Common broadleaf weeds such as pigweed and smartweed are not controlled, and vines must be established a minimum of two years before Solicam® can be applied. We like to use Solicam® plus Surflan® applications in third year vineyards at the Vineyard Lab as it has proven to be an effective combination.

Kerb® (pronamide). Kerb® is effective in controlling annual and perennial grasses, but will not

provide control of most broadleaf weeds or summer grasses. It is most effective as a fall application and activity is both pre-and postemergence. A systemic herbicide such as Roundup® or Touchdown® is probably a better choice in controlling established perennial grasses due to cost considerations and wider spectrum of weed control.

Casoron® (dichlobenil). Casoron® can be used four weeks after planting and is effective on many weed species. Unfortunately, it is sold only as a granular formulation and is very expensive.

Treflan® (trifluralin). Treflan® can only be used as a pre-plant incorporated treatment and hence doesn't fit well into most vineyard planting schemes.

Postemergence herbicides. Postemergence herbicides control existing weeds and generally have no activity in the soil. In most cases, contact with new growth on vines must be minimal to avoid damage. Certainly a major advantage to using planting tubes is that postemergence herbicides can be used with little risk of vine injury. Postemergence herbicides registered for newly planted vines can be grouped into three categories - broad-spectrum contact, broad-spectrum systemic, and grasses-only systemic.

Broad-spectrum contact herbicides. Gramoxone® (paraquat) and Rely® (glufosinate) act primarily as burn down agents (Rely® does have limited systemic action in some weed species). Both herbicides provide excellent control of most annual grasses and broadleaf weeds and suppression of perennials. Contact with green tissue on young vines should be minimal to avoid injury.

Broad-spectrum systemic herbicides. Roundup® (glyphosate) and Touchdown® (sulfosate) are translocated in plants and can provide control of most annual and perennial weeds. Contact with green tissue on young vines should be completely avoided because of the risk of severe damage to vines.

Grass-control-only systemic herbicides. Poast® and Fusilade® are chemically different but have similar activity, and control annual and perennial grasses when applied at the proper growth stage (generally, prior to heading out). Most broadleaf weeds are not controlled with these herbicides. Poast® is labeled for over-the-top applications while Fusilade® is labeled for shielded applications only. Perennial grasses may require more than one application for adequate control.

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**NEWSLETTER NO. 8
AUGUST 24, 1999**

FINGER LAKES VINEYARD NOTES
is published monthly by

Cornell Cooperative Extension

Finger Lakes Grape Program

in Ontario, Schuyler, Seneca, Steuben, and Yates Counties
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