

FINGER LAKES

Vineyard Notes



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Pre-emergence Herbicides for Vineyard Weed Management

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Grape growers have many choices in the way they manage competitive vegetation in vineyards. Several research projects have demonstrated the need for reducing weed competition in 'Concord' vineyards in order to maintain optimal vineyard productivity. Effective vineyard weed management programs utilize one or more applications of pre-emergence herbicide, usually tank-mixed with a post-emergence herbicide to control emerged weeds, or they rely solely on the use of post-emergence herbicides to burn down weed growth as it occurs. This article will focus primarily on the first strategy, the use of pre-emergence herbicides with residual activity in the soil that interfere with weed growth as weed seedlings germinate. There are many herbicides that can be used to provide effective soil residual activity in vineyards, and they all have unique characteristics that should be understood in order to be used most effectively. This article will summarize our understanding of the characteristics of several new and/or commonly used soil residual herbicides so they can be used most effectively for vineyard weed management, with a focus on use guidelines and some recent label changes. The author acknowledges the Ninth Edition of the Herbicide Handbook¹ as the source of most of the information contained in this article related to the causes of herbicide losses, and how to potentially mitigate those losses once an herbicide is applied to the soil.

How much water is needed to effectively apply pre-emergence herbicides?

Unlike insecticide and fungicide applications, water volume and herbicide rates are based on the proportion of land actually sprayed. For example, if you are spraying 5 lbs. of Herbicide X in 40 gallons per acre sprayed in a 3' band under the trellis in a vineyard with 9' rows, with proper calibration, 5 lbs. of Herbicide X in 40 gallons of water will spray exactly 3 acres of vineyard. Herbicide band width and distance between rows will change the proportion of land surface being treated. For a more detailed explanation, consult page 73 in the 2010 New York and Pennsylvania Pest Management Guidelines for Grapes.

The primary goal in applying pre-emergence herbicides is to apply the herbicide uniformly to obtain thorough coverage of the soil. Most modern pre-emergence herbicide labels suggest 10 to 40 gallons per acre, with

20 to 40 GPA being most common, to achieve this goal. Many (if not most) pre-emergence herbicide applications are made in a tank mix with a post-emergence herbicide(s) to control weeds (and sometimes grapevine suckers) present at the time of application. The mode of action of the post-emergence herbicide should be considered when determining the desired spray volume for an herbicide tank-mix application. The systemic herbicide glyphosate (the active ingredient in Roundup®, Touchdown®, and numerous generic brands) is most effective when applied at higher concentration, so minimum water rates should be considered for tank mixes with those products. The contact herbicides glufosinate (Rely®) and paraquat (Gramoxone Inteon®) only kill contacted plant parts, so thorough coverage of the target weeds is necessary for maximum effectiveness. The Gramoxone Inteon® label states the

The take home message is that 10-40 GPA is the optimal range for most pre- and post-emergence herbicide tank mixes, with the lower end of the range being more applicable for glyphosate tank mixes, and the mid to upper range being more applicable for tank mixes with a contact herbicide.

minimum total spray per acre is 10 gallons, but spray volumes should be increased to obtain complete coverage of the target weed without runoff from the foliage. The Gramoxone® label also states that when spraying less than 20 GPA, only flat fan nozzles should be used, and target weeds should not exceed 6 inches in height. The Rely® (glufosinate) label states that the product should be applied with a minimum of 15 GPA and under dense weed canopies, the label recommends 20-40 GPA to ensure thorough spray coverage will be obtained. The take home message is that 10-40 GPA is the optimal range for most pre-and post-emergence herbicide tank mixes, with the lower end of the range being more applicable for glyphosate tank mixes, and the mid to upper range being more applicable for tank mixes with a contact herbicide.

Application timing for the most effective residual activity of pre-emergence herbicides

Many factors need to be considered when deciding on the most appropriate time to apply pre-emergence (or pre- plus post-emergence) herbicide applications. Post-emergence herbicides are applied to control existing weeds, while pre-emergence herbicides are applied to control weeds that have not yet emerged. Every herbicide has known characteristics that influence the optimal timing for most effective

weed control, including:

- **Label restrictions.** Are fall applications permitted? Can the herbicide be applied beyond dormancy? Is “incidental” contact with grapevine foliage permitted? Are multiple applications within a season permitted? Is there a pre-harvest interval?
- **Herbicide solubility.** How much rainfall is needed to “activate” the herbicide by moving it into the zone of weed seed germination, and how quickly will the herbicide move beyond the zone of weed seed germination and potentially move into groundwater?
- **Photo-degradation.** Is the herbicide susceptible to degradation by exposure to sunlight?
- **Volatility.** Is the herbicide susceptible to losses by volatility under certain weather conditions?
- **Degradation in the soil.** Is the herbicide degraded in the soil by either chemical or microbial means? The rate of microbial decomposition can be influenced by previous herbicide use.

Several herbicides have recently been registered for vineyard use, and some “older” herbicides have undergone label changes that affect how they can legally be used in vineyards. The characteristics and label restrictions of these herbicides are summarized as follows:

Diuron (Karmex®, generics)

Diuron herbicides have been used in vineyards for about fifty years. There are currently at least three different product labels for diuron products, based on the date of manufacture. These products all carry the same EPA registration number. This is your (first) annual reminder that “the label is the law” – the specific language on the product container you are using dictates how the product may be legally used. Specific guidelines and restrictions for each of the diuron products are as follows:

- **Karmex DF®**, manufactured by Griffin and dated 7/22/04. The labeled use rate is 2-6 lb. 80 DF or 1.6-4.8 qt. 4L, equivalent to as much as 4.8 lb. active ingredient per acre (ai/A). Lower rates (1.6 – 2.4 lb. ai/A) are recommended for soils low in clay or organic matter (1-2%). Only one application per season is permitted, and “contact of crop foliage and/or fruit with spray or mist must be avoided.”
- **Karmex XP®**, manufactured by Griffin and dated

11/7/05. The recommended use rate is 2-5 lb. 80 DF or 1.6 – 4 qt. 4L (4 lb. ai/A). Two applications per season are permitted with a minimum of 90 days between applications. The label states to “avoid direct or indirect spray contact to foliage...with the exception of undesirable suckers.” Clearly, this product label permits diuron applications targeted to control grapevine suckers as well as weeds. Typical tank mix partners used to control suckers include Aim[®], Rely[®], and Gramoxone[®].

- **Karmex XP[®]**, manufactured by DuPont and dated 7/13/09. This product label carries the same use guidelines as the Griffin Karmex XP[®], but this product is now classified as a restricted use product in New York State. You must be a certified pesticide applicator to purchase a restricted use product. Karmex XP[®] may be applied in non-crop sites that contain areas of temporary surface water, and it is permissible to treat intermittently low lying sites. According to Mike Helms of the Cornell Pesticide Management Education Program (PMEP), NYSDEC is concerned about the potential application to water, so they have classified the product as restricted use. According to Helms, this restriction will also apply to other pesticides with similar label statements for applications within New York State.

In terms of its behavior in soils, diuron is not strongly photo-degraded, nor is it susceptible to loss through volatility, unless the herbicide remains exposed on the soil surface for several days or weeks. Degradation of diuron in the soil is primarily by microbial activity. This activity can be enhanced (degradation can occur more quickly) after repeated use over several years. For this reason, diuron has become less effective in providing season-long weed control in vineyards after repeated use. It is highly recommended that weed management programs not rely on the repeated use of the same herbicides or those with related chemistry.

Diuron is fairly soluble, making it somewhat susceptible to leaching through the soil. In our experience, fall applications of diuron are not as effective as spring applications. It is likely that exposure to moisture over the winter moves some of the herbicide beyond the top few inches of soil where weed seeds germinate, making it less effective in controlling weeds. For this reason, diuron is not recommended for fall applications.

Simazine (Princep[®], generics)

Simazine is another herbicide that has been used in vineyards for about fifty years. Older product labels allow use

at 2 – 4.8 lb. ai/A, but newer product labels restrict applications to 2 – 4 lb. ai/A. One application per year is permitted, anytime between harvest and early spring, avoiding contact with fruit, foliage, or stems. Fall applications are permitted, but in our experience, weed control “breaks” earlier in the season following fall rather than spring applications. In terms of its behavior in soils, simazine is not very susceptible to photo-degradation or volatility, and it has limited leaching potential. Degradation in the soil is primarily by chemical (rather than biological) means, and chemical degradation occurs more rapidly at lower soil pH.

Solicam[®] (norflurazon)

Solicam[®] is a relatively persistent herbicide in the soil. It is not uncommon to see bleaching from Solicam[®] uptake in emerging weeds well over a year after application. Use rates vary from 1.25 to 5 lb. product/acre and rate guidelines are based on soil texture.

Solicam[®] has low solubility, and it is not expected to leach appreciably in the soil. Because of its low solubility, up to several inches of precipitation are needed to carry the herbicide into the weed seed germination zone in the soil. Photo-degradation can contribute significantly to field dissipation when it remains on the soil surface for several weeks. In our experience, fall applications of Solicam[®] can be just as effective as early spring applications, often providing season long control of susceptible weeds. However, we have seen less than optimal results when Solicam[®] was applied in early May (around bud break) when only a scant rainfall occurred over the next several weeks. Expect the best activity from Solicam when it is exposed to several inches of rainfall prior to weed seed germination. Some suppression or control of susceptible perennial weeds (mainly grasses) should be expected if sufficient precipitation occurs between herbicide application and weed emergence in the spring.

Chateau[®] (flumioxazin)

Chateau[®] has been registered in vineyards for several years, and use guidelines continue to be updated regularly. Chateau[®] can be used at 6 – 12 oz. product per acre, with no more than two applications at least 30 days apart permitted per year (up to a maximum of 24 oz. product per acre per year). In some cases, a single application of Chateau[®] at the 12 oz. rate has provided good season-long weed control. Applications can be made around bud break, or can be delayed until 6” sucker growth. When applied for sucker control, an appropriate post-emergence burn-down herbicide should be included in the tank mix. In situations of heavy weed pressure, especially on heavier-textured soils, a single application often results in weed

control “breaks” in mid-summer. In cases such as these, a split application is recommended. Although the label permits two applications at 12 oz. product per acre, we have seen consistently excellent results from two applications at the 6 oz. rate. The first application can be made at bud break or at 6” sucker growth, with a second application at least 30 days later. Although Chateau® has some post-emergence activity, the product label recommends the addition of an appropriate post-emergence herbicide to control existing weeds. Tank mixes with glyphosate products are allowed, but restrictions on the use of glyphosate must be followed. Applications made after grape bloom require the use of hooded or shielded application equipment so that spray drift will not contact fruit or foliage. Additional restrictions which can be found on a supplemental label, apply in New York. Specifically, shielded application equipment is required in New York State anytime after bud break, to ensure spray drift will not come into contact with fruit or foliage. The supplemental label states “shielded applications *should not* be made with glyphosate or products containing glyphosate” (italics mine). Our interpretation of this language is that the manufacturer is not liable for damages if glyphosate is added to a tank mix with Chateau at any time after bud break.

Soil applications of Chateau® are not susceptible to photodegradation or volatility, and it is not persistent in the soil (with a half life of 12-18 days), so the potential for leaching is low. Soil losses of Chateau® are primarily by microbial decomposition.

Prowl H₂O® (pendimethalin)

Prowl H₂O® is a newer, water-based formulation of pendimethalin and is currently registered for use in bearing and non-bearing vineyards. Older EC formulations of pendimethalin can still be used in non-bearing vineyards only. EC formulations have a maximum use rate of 4 lb. ai/A pendimethalin, whereas the Prowl H₂O® formulation can be applied at up to 6.3 qt. product, or 6 lb. ai/A annually. Prowl H₂O® can be applied anytime after fall harvest, winter dormancy, and in the spring. (Our program has not evaluated fall applications of pendimethalin). The most recent supplemental label for Prowl H₂O® allows sequential applications at least 30 days apart, up to a maximum of 6.3 qt. product per year. Applications to grapevine suckers are not prohibited on the label, add an appropriate post-emergence herbicide at 6” sucker growth if sucker control is desired.

Pendimethalin is relatively immobile in the soil as it is strongly bound to clay and organic matter, and it is not susceptible to photodegradation. However, pendimethalin

is moderately volatile and losses can occur under conditions of high temperature, moist soil, and wind. Activation by rainfall within seven days of application should prevent appreciable losses, something to keep in mind if you are planning a late spring application of pendimethalin and several days of dry weather are predicted.

Casoron CS® (dichlobenil)

Casoron CS® is a newer formulation of dichlobenil herbicide. The older formulation (Casoron 4G®) is still labeled for use in grapes, but must be applied with a granular applicator. Use guidelines for Casoron 4G® recommend applications only during late fall or winter to minimize losses due to volatility. Casoron CS® is formulated to reduce losses due to volatility. It is a broad-spectrum, pre- and post-emergence herbicide that can be absorbed by leaves and roots, and it is effective in controlling most annual and perennial grasses and broadleaf weed species. However, well established weeds with roots below the herbicide layer in the soil will not be controlled.

Our experience with Casoron CS® is fairly limited. In two experiments at CLEREL in Portland in 2009, Casoron CS® provided less than 60 days of effective weed control following early May application.

Matrix® (rimsulfuron)

Matrix® is the first in the sulfonylurea family of herbicides to become registered for use in grapes, with New York registration occurring in 2009. Matrix® is a broad spectrum herbicide that controls many annual grasses and broadleaf weeds and suppression of nutgrass. It provides both pre- and post-emergence activity, but tank mixes with an



Treatments with a single, short residual pre-emergence herbicide application at bud break tended to become infested with large crabgrass by mid-summer.

appropriate post-emergence herbicide are recommended for control of emerged weeds. The application rate for Matrix® is 4 oz. product per acre. If applying as a banded treatment (50% band or less, typical of under-the-row herbicide applications in grapes), two applications of 4 oz. product per acre can be made annually, at least 30 days apart. We have included Matrix® in our herbicide trials for the past several years. In our experience, single applications of Matrix® provided less than 60 days of effective weed control, but split applications (made around bud break and bloom) have been fairly effective.

Soil degradation of Matrix® is primarily via chemical pathways, with the rate of degradation affected by soil pH. Degradation occurs more rapidly in alkaline or acidic soils than in pH neutral soils. Losses due to volatilization are negligible, and leaching into ground water is not anticipated. Because of its low use rate and rapid degradation, persistence in the soil is low.

2009 Herbicide Trial Results

Each year, we conduct herbicide evaluations in one or more studies in the Lake Erie region. Our work for the past two years has been a cooperative effort with Cornell scientists Dr. Robin Bellinder (Ithaca) and Dr. Andy Senesac (Riverhead). We received funding from the Viticulture Consortium to investigate the potential of several new herbicides for registration in grapes. The following graph includes selected herbicide treatments (those you could legally use in your vineyard this year) from an experiment conducted

in a mature Concord vineyard at CLEREL in Portland. The predominant weed species present were horseweed, also known as marestail (*Conyza canadensis*) and large crabgrass (*Digitaria sanguinalis*). Single applications of pre-emergence herbicides, including 4 oz. Matrix®, 2.8 gal. Casoron CS®, 6.3 qt. Prowl H₂O®, and 12 oz. Chateau® were made on May 4, 2009, in a tank mix with 1.5 qt. Roundup Ultra® (1.5 lb. ai/A glyphosate). Split applications of 4 oz. Matrix® and 6 oz. Chateau® were made on May 4 and June 24, with 1.5 qt. Roundup Ultra® included in the first application, and 77 fl. oz. Rely 200® (1 lb. ai/A glufosinate) included in the second application. Split applications of the post-emergence herbicide Rely 200® were made on June 12 and July 24.

Weed pressure was fairly heavy in this vineyard in 2009 as evidenced by the percent ground cover of weeds in the unsprayed plots. Matrix®, Casoron®, Prowl®, and Chateau® all provided a good level of weed control at the first evaluation date in mid-June. However, by mid-July, weed control had “broken” in the Casoron® and single application Matrix® plots. The remaining treatments provided arguably acceptable weed control through the season. By mid-September, Prowl® treatments had about 30% ground cover of weeds, single application Chateau®, split application Matrix®, and split application Rely® (note the different application timings for this treatment) treatments had less than 20% ground cover of weeds, and the split application Chateau® treatment resulted in essentially bare ground. Weed management was difficult in many vineyards in 2009, but

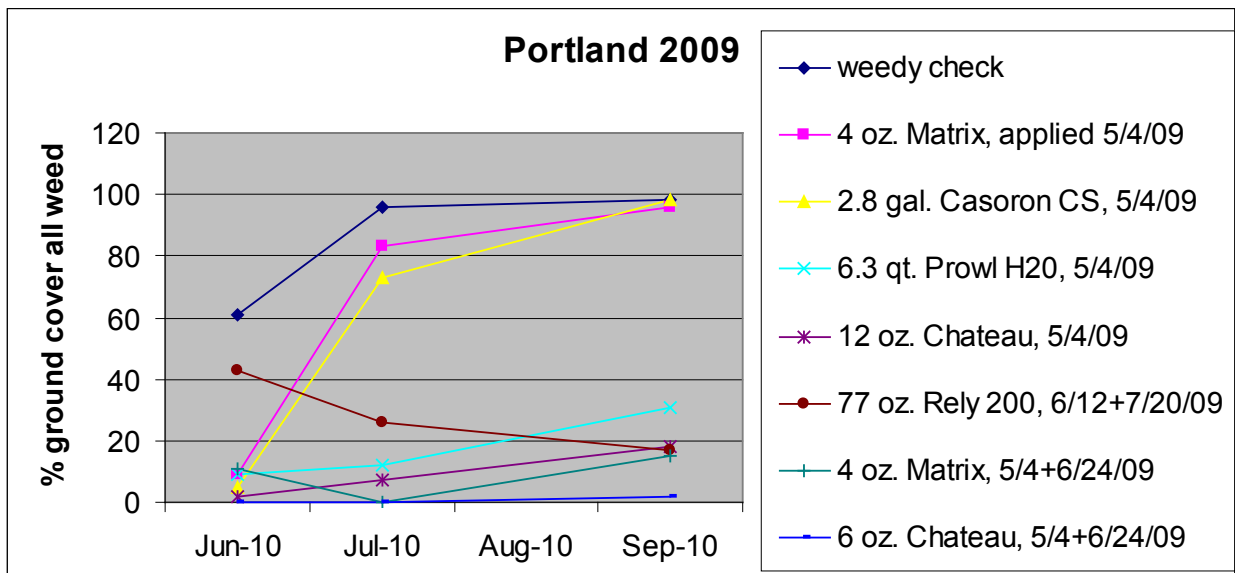


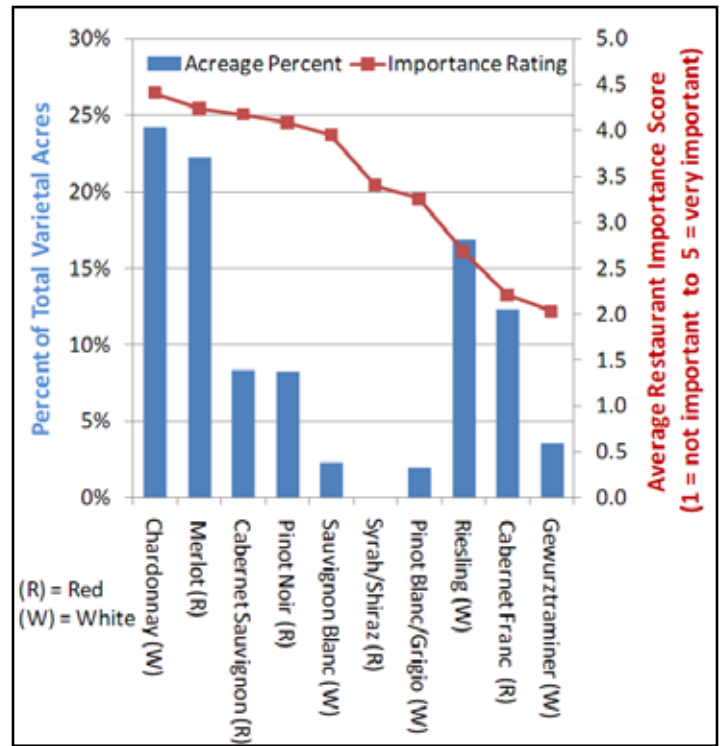
Chart 1. Percent ground cover of weeds from selected herbicide treatments in a 2009 experiment at CLEREL, Portland, NY.

reasonable weed control was achieved in this experiment, despite four consecutive months with above average rainfall each month May through August, 3.68” in May, 5.53” in June, 7.58” in July, and 5.7” in August, for a total May through August precipitation in Portland of 22.5”.

Summary

Pre-emergence herbicides used in vineyards all have one thing in common – incorporation by rainfall is necessary to “activate” the herbicide. Incorporation is accomplished by carrying the herbicide into the top inch or two of soil where weed seeds germinate. Knowledge of the unique characteristics of each herbicide regarding its solubility and susceptibility to volatility, photodecomposition, and chemical and biological decomposition, can be used to time herbicide applications so they will be most effective in minimizing weed competition and maximizing vineyard productivity.

¹Herbicide Handbook, Weed Science Society of America, Ninth Edition, 2007.



Factors Affecting the Presence of New York Wines in Upscale New York City Restaurants

Trent Preszler (PhD candidate, Department of Horticulture) and Todd M. Schmit (Assistant Professor, Department of Applied Economics and Management)

Consumer interest in local foods has increased sharply, including both fresh and processed products. As such, appropriate marketing strategies need to be developed at the firm and/or association level to effectively capture this growing demand. For example, the New York Wine and Grape Foundation has expended significant efforts recently in funding research and outreach programs aimed at helping growers improve quality, as well as in promoting New York’s wines and wine-producing regions.

In an effort to target the largest nearby market, recent activities have been tailored to the hospitality industry, including promotional programs with New York City restaurants that pairs NY wines with menus created using NY farm products (e.g., New York Wines and Dines). These markets show significant opportunities for NY wines and increased presence would improve NY’s image as a quality wine producing state. Still, despite sizable public and private efforts, stakeholders in NY’s fine wine sector are questioning why their products are not more broadly accepted in their closest urban market.

To address these issues, we use data from a survey of chefs, sommeliers, wine directors, and general managers of fine

dining restaurants in NYC to better understand the factors associated with the presence of NY wines and their preferences for various wine styles, regions of origin, grapes, prices, and other product attributes.

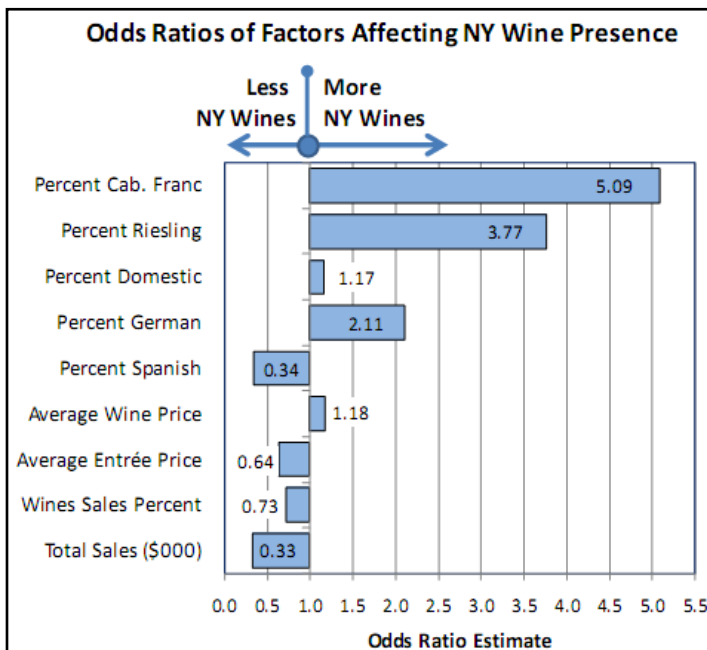
The restaurants’ wine lists featured a cumulative total of over 6,000 wines from around the world, or about 120 wines per restaurant. Nearly 60% of the wines were imported, and of those, 58% were French, 28% Italian, and 14% from the rest of the world. As expected, domestic selections were dominated by California wines (88%), and distantly followed by Oregon and Washington (7%), New York (4%), and all other states (1%). Red NY wines were priced, on average, below those from other U.S. states, particularly CA; however, average white wine prices were more similar. Comparable differences in prices were shown for imported wines, with an even larger price premium for red wines relative to NY.

Before assessing the relative market penetration of NY wines, it is useful to understand the overall value that restaurants place on the preferential inclusion of wines made from some grape varieties over others. Surveyed restaurants were asked to rate the importance of various grape varieties to their overall wine sales, where 1 was “not important” and 5 was “very important.” As shown below, Chardonnay received the highest average rating (4.40) across all restaurants, followed by Merlot (4.23), Cabernet Sauvignon (4.17), and Pinot Noir (4.08). At the bottom of the ratings were Riesling (2.68), Cabernet Franc (2.21), and Gewurztraminer (2.03). These ratings present

both opportunities and obstacles from the NY perspective. While significant plantings of both Chardonnay and Merlot exist in NY, red wine varieties have not been as well received compared to other domestic regions and imports. In addition, significant industry attention has been paid to promoting the quality Riesling wines produced in NY, but this variety rates among the lowest of importance with respect to sales volume of NYC upscale restaurants.

We investigated the effect of restaurant and wine list characteristics on the number of NY wine list placements. Restaurants in the sample (N=40) were categorized by the number of wines on their wine lists: non-users with zero NY wines on their wine list (27%), light users with between one and four NY wines (48%), and heavy users with five or more NY wines (25%). Characteristics considered most important were cuisine style, average dinner entrée price, total sales volume, wine sales' relative contribution to total sales, percent domestic wines, percent red wines, percent Spanish and German wines (given their small market presence similar to NY), average wine price, and percents of Riesling and Cabernet Franc wines.

The primary drivers of NY wine presence in NYC restaurants are shown below. The odds ratios are interpreted as the odds of being in a higher user category when that factor is increased by one unit. An odds ratio greater than one implies that the odds of being in a higher category increase with a higher value of the variable, while an odds ratio between zero and one implies that the odds of being in a higher category decrease when that variable increases. For example, a one-unit increase in the percent of Cabernet Franc listings increases the odds of being in a higher user category by over 5 times (5.09).



Summary of Results:

- The type of cuisine and food-pairing preference did not influence the propensity to adopt NY wines, nor did a restaurant's desire to offer a large wine selection or a broad range of wine styles.
- Larger restaurants with higher entrée prices (more 'upscale') and a larger dependence on wine sales (like wine bars and bistros) were less likely to sell NY wines.
- The propensity to include NY wines was positively related to restaurants that offered more Riesling, Cabernet Franc, and domestic wine listings; and the combined listings of Cabernet Franc and Riesling had the largest effect on increasing NY wine presence.
- Listings of German wines also improved the odds of NY wine listings, which make sense since Germany's wine regions have many similarities to the climatic and soil conditions found in NY's Finger Lakes region. As such, similar NY wines may be well situated to expand this area of a restaurant's wine list.
- Higher average wine prices increase the odds of higher NY wine listings, which (as shown above) are generally lower-priced. In context, if there is a higher price generally for wines, perhaps lower-priced NY wines are used to balance the list.

These results should help improve the understanding of wine selection criteria for upscale, urban restaurants and, with it, provide useful management and marketing recommendations to NY wine industry stakeholders. In particular, firms can use these results to better target potential restaurant customers, and for the industry in addressing barriers that may be preventing further acceptance of NY wines in large metropolitan markets.

For more information on this study, please see: Preszler, T. and T.M. Schmit. "Factors Affecting Wine Purchase Decisions and Presence of New York Wines in Upscale New York Restaurants." *Journal of Food Distribution Research*, 40/3(2009):16-30.

"Smart Marketing" is a marketing newsletter for extension publication in local newsletters and for placement in local media. It reviews elements critical to successful marketing in the food and agricultural industry. Please cite or acknowledge when using this material. Past articles are available at <http://marketingpwt.aem.cornell.edu/publications.html>.

Can You Afford Not To Do IPM?

*Tim Weigle, Grape IPM Extension Associate,
Lake Erie Regional Grape Program*

As the growing season approaches it is a great time to start putting the finishing touches on your Vineyard IPM Strategy. To assist you with this article (reprinted in part from the *Proceedings and Program of Viticulture 2010*) provides links to some of the resources that are available, and those that are being developed, to assist grape growers in implementing IPM.

While reviewing the list these resources it is important to note that many of these resources will be eliminated or greatly curtailed if funding for the NYS IPM Program is not reinstated. For those who have written letters to your state politicians, thank you! The initial flush of letters has been received and has made an impact in the NY State Senate. It would be helpful if members of the NYS Assembly and Senate were reminded with a second wave of letters during the budget negotiations currently underway. Those resources that would be lost if funding is not restored for the NYS IPM Program include; NEWA, NYS IPM Web site (currently houses Fact Sheets, Grape IPM In the Northeast, Trac Grape and the Production Guide for Organic Grapes).

A great place to start, and a key component in developing a Vineyard IPM strategy, is to become familiar with the life cycle of a pest, and the conditions which favor its development. A good starting point would be the NYS IPM Fact Sheets for Grapes series:

<http://nysipm.cornell.edu/factsheets/grapes/default.asp>

While you cannot control the weather, the Network for Environment and Weather Applications (NEWA) provides you with free access to weather stations across New York State as well as some surrounding states. NEWA collects temperature, rainfall, leaf wetness and relative humidity data for use in disease and insect models to provide the grape industry near real time information on what could be happening in the vineyard.

<http://newa.cornell.edu/>

A picture is worth a thousand words and the Production and Pest Management Videos found on YouTube provide a look at how scouting operations are conducted as well as many more vineyard production practices. This is an excellent tool to learn more about a production practice

before implementing it the vineyard.

<http://www.youtube.com/LERGPvids>

Knowing the latest in materials, IPM practices and varietal susceptibility for specific diseases, copper and sulfur is the best way to plan a vineyard IPM strategy. The NY & PA Pest Management Guidelines for Grapes provides information on a products mode of action to assist in planning a resistance management strategy. The New York and Pennsylvania Pest Management Guidelines for Grapes is updated annually by research and extension staff from Cornell and Penn State Universities.

<http://ipmguidelines.org/grapes/default.asp>

The 2010 Production Guide for Organic Grapes is not just for those who are looking at the organic grape market. The guide, funded in part by NYS Ag & Markets, contains information that should be of interest to anyone growing grapes in the Northeastern United States.

http://nysipm.cornell.edu/organic_guide/grapes.pdf

Check out the Lake Erie Regional Grape Program website for economic worksheets developed as companion pieces for the production videos found on YouTube. These worksheets provide the means to compare costs between production practices currently in use in a vineyard, proposed production practices and the actual cost of implementing the practice.

<http://lergp.cce.cornell.edu/>

The Cornell Fruit Resources for Grape home page provides links to a little bit of everything needed to develop a vineyard IPM strategy from an Interactive NY Vineyard Site Evaluation System to articles on management of disease or insect pests.

<http://www.fruit.cornell.edu/grapes.html>

Recordkeeping is extremely important in a vineyard IPM program and TracGrape Software is designed specifically for grape growers to record pest management applications on a block by block basis and develop the paperwork necessary to keep reporting agencies and processors happy. And it is still available free of charge from the New York State IPM Program.

<http://www.nysipm.cornell.edu/trac/>

Grape IPM in the Northeast is a collection of information on developing and implementing a vineyard IPM strategy. Pertinent fact sheets and bulletins can be found in one stop by going to <http://nysipm.cornell.edu/publications/grape-man/default.asp>.

For more information on how IPM fits into your vineyard management strategy feel free to contact me at 716.792.2800 ext 203 or thw4@cornell.edu.

USDA Pesticide Recordkeeping Inspections

We received word last week that the USDA will be conducting pesticide recordkeeping inspections in Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates counties this summer. The USDA will randomly select farmers who are certified applicators in those counties and contact them to schedule a time for the inspection. If the inspectors find any problems, they will provide guidance on how to bring the records back into compliance. They will not be issuing any kind of penalties as a result of this first inspection, but will plan a follow-up inspection, usually within one year, to make sure that the records are in order.

The USDA inspectors are only concerned about records concerning restricted use pesticides, but this does not necessarily mean that you shouldn't make sure your records

are up to date and in order if you don't use those kinds of materials. If you haven't done so already, it would be beneficial to make sure your records from the past couple of seasons are up to date (the USDA requirement is to keep records from the past 2 years), and that you have the necessary forms for this year's growing season. If you need forms, you can contact Ed Hanbach at the DEC office in Bath (607-776-2165 x21 or elhanbac@gw.dec.state.ny.us) to get them.

The USDA's Agricultural Marketing Service, which administers the Pesticide Recordkeeping Program, has more information about the program's requirements and the inspection process [at their website](#) (or search for 'USDA pesticide recordkeeping' in Google, and the site should show up at the top of the list). They also have recordkeeping forms that you can download from the site as well.

For those who use the IPM program's TracGrape software to track their pesticide and fertilizer applications, the forms that the software generates will also satisfy the requirements for the USDA, Worker Protection Standards regulations, and the DEC. The 2010 version of TracGrape is now available to download at the IPM website, <http://nysipm.cornell.edu/trac/default.asp>.

If you have any questions or concerns about the inspections, please feel free to contact our office, or Ed Hanbach with the DEC.



UPCOMING EVENTS

Using NEWA Weather Data for Pest Management

Wednesday, April 28 3:00 - 5:00 PM

Room 108

Finger Lakes Community College - Geneva Campus

63 Pulteney Street Geneva, NY

A hands-on workshop for growers to learn how to apply NEWA information at newa.cornell.edu to improving pest and crop risk management decisions. Limited to 20 growers. Register with Linda at leb15@cornell.edu or 315-536-5134. Attendees will be eligible to receive 2.0 NY pesticide recertification credits.

Spring Grape IPM Meeting

Tuesday, May 18 3:30 - 6:00 PM

Darren Simmons' Farm

3243 Fingar Road Bluff Point, NY 14478

Join us for our annual spring IPM field meeting with dinner and social time afterwards. Updates on pest management practices and materials, DEC requirements and more. NY pesticide recertification credits have been applied for.



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