

# The Grape Communicator

*A Newsletter for the Illinois Grape & Wine Industry*

---

**Volume 1, Number 4**

**Sept/Oct 2005**

## *Harvest Season*

The work of planning and execution for another season is reaching its fulfillment, for better or worse, as the 2005 growing season comes to a climax. Grapes are being harvested throughout Illinois and are being subjected to the winemaker's discipline. No doubt, for all of us in Illinois it has been a challenging season. But when is a growing season not challenging? Drought was the primary theme for 2005, but it was worse in some places than others. Late season rains in southern Illinois may have overshadowed the effects of drought, bringing it's own troubles. But I don't think anyone doubts that Illinois' winemakers will be making some fine wines from the 2005 vintage. That is part of what makes this industry so fascinating. Every vintage has a unique stamp on it, provided by the distinct experience of each growing season.

I'd like to comment on my experience at Vintage Illinois, the northern region wine festival held annually at Starved Rock State Park near LaSalle/Peru, IL. My wife, Barb, and I served as volunteers on Saturday, giving us an opportunity to really experience the response of patrons as they entered and began to enjoy the mix of music, wine, food and the beautiful natural surroundings along the Illinois River. The event was well-run and congratulations need to be given to Maria Mamoser and Teri Wenzel for doing a great job organizing the event. I was very impressed by how many people came and how uniformly they seemed to be enjoying themselves. No troubles, just an opportunity to put the everyday routine behind and enjoy the better qualities of being alive. Like our other wine festivals, this event is painting a great face on our industry, exposing Illinoisans to the delights of the wine lifestyle. I believe these events will contribute significantly to building our industry's foundation in Illinois. It helped me to sense that this industry is really going to continue it's impressive growth.

I hope you enjoy this issue of the Grape Communicator and find it useful. We have an extended article on weed control in grapes and an article on the threat of root-phase phylloxera on own-rooted hybrid grapes. There are also a couple of reports on activities in the industry. Our goal is to make this newsletter useful to all members of Illinois' grape and wine industry. If you have ideas for subjects to cover, let us know. Thanks for reading the Grape Communicator.

*Bill Shoemaker*

## Fall Weed Management in Grapes

John Masiunas, Professor of Horticulture  
*University of Illinois, Department of Natural Resources and Environmental Sciences*

Weeds can be a major management problem in vineyards. They compete with grapes for nutrients, light, and water. Competition slows vine growth, reduces fruit yield and quality, and makes harvesting more difficult. Weeds can harbor insect pests and create an environment favorable to grape diseases. Weeds can also make applications of pesticides more difficult, reducing their effectiveness.

In the fall, you want to kill any perennial weeds, maintain the grass sod between rows, prevent summer annual weeds from seeding, control winter annual weeds, and set the stage for spring weed control. Your management strategies for each of these objectives will depend on identifying the weeds present and understanding their biology. There are a number of good weed identification guides available either as books, CDs, or web sites. The book I recommend is "Weeds of the Northeast".

The first step is to identify the life cycle of a weed. Is the weed an annual (lives a single year, Figure 1), a biennial (lives 2 years), or a perennial (lives more than two years)? Annual weeds can either be summer annuals or winter annuals.

Annual weeds survive from year-to-year, as seed in the soil, thus the key to long-term control of annuals is to prevent seed production. Summer annuals emerge in the spring, grow during the summer, and produce seed during the late summer and fall. Winter annual weeds emerge in late summer until a hard freeze, overwinter as a rosette of leaves, produce seed, and die by May or June.

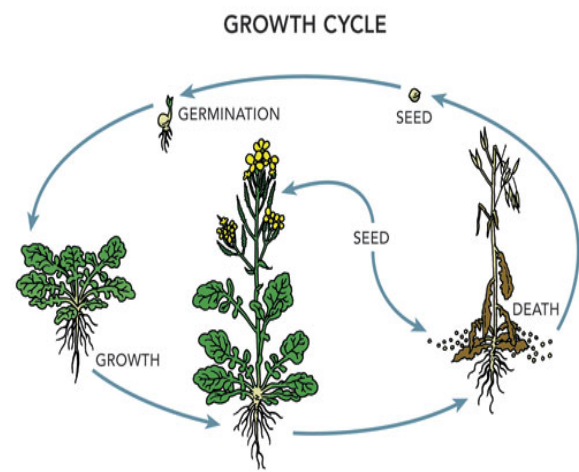


Figure 1. The life cycle for annual weeds. Summer annual weeds emerge in March through June and die in the fall. Winter annual weeds emerge in August through October and die in May or June. From Midwest Grape Production Guide, OSU Bulletin 919-05, available at <http://ohioline.osu.edu/b919/0013.html>

Perennial weeds reproduce and spread by both seed and vegetative structures (such as creeping roots, tubers, rhizomes and stolons). Thus, seed production must be prevented and the vegetative structures killed. Perennial weeds can be divided into simple perennial weeds (i.e. dandelion) which are plants with tap roots that spread mainly by seed or spreading perennial weeds (i.e. yellow nutsedge, Canada thistle) that spread mainly by vegetative structures. Perennial weeds can be herbaceous (i.e. Canada thistle, field bindweed), the shoots die back to the roots each year, or woody (i.e. poison ivy or brambles), the shoots remain alive multiple years and produce secondary growth.

Both annual and perennial weeds can also be divided into grass, sedge, or broadleaf weeds. Sometimes all you need to do is to determine if the weed is an annual or perennial and a grass, sedge, or broadleaf weed before you initiate management.

**Table 1.** Some common summer annuals, winter annuals, and perennial annual weeds.

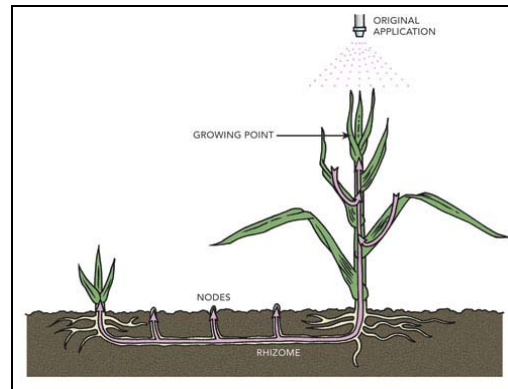
Category Weeds	Summer annual	Winter annual	Perennial weeds
Broadleaf	Redroot pigweed	Horseweed	Canada thistle*
	Smooth pigweed	Virginia pepperweed	Field bindweed
	Common waterhemp	Wild mustard	Pokeweed
	Velvetleaf	Field pennycress	Musk thistle*
	Cocklebur	Shepherd's purse	Hemp dogbane
	Ladysthumb		Swamp smartweed
	Pennsylvania smartweed		Poison ivy
	Common lambsquarter		Blackberry
	Common ragweed*		Perennial sowthistle*
	Giant ragweed*		Dock
	Eastern black nightshade		Virginia creeper
	Jimsonweed		
	Morningglory		
Grass			
	Giant foxtail		Quackgrass
	Green foxtail		Johnsongrass*
	Large crabgrass		Sorghum alnum*
	Barnyardgrass		
	Goosegrass		
	Shattercane		
	Fall panicum		
Sedge			Yellow nutsedge

Table 1.\*Illinois noxious weed

The key to controlling perennial weeds is to apply control measures when food reserves in the underground structures are depleted, photosynthesis is active, and the plant is rebuilding root reserves by translocating sugars downward into the rhizome or root system. Systemic herbicides such as glyphosate (Roundup and numerous generic products) when applied during this stage, translocate downward from the foliage into the underground vegetative propagules (Figure 2). Nearly all grass and herbaceous broadleaf perennial weeds can be managed by fall applications of glyphosate because the weeds are building root-reserves in the fall.

Woody perennial weeds, such as brambles, poison ivy, and Virginia creeper, are particularly hard to control, requiring multiple applications of glyphosate over a period of years. Only make spot treatments with glyphosate. Grapes are extremely sensitive to glyphosate. Do not contact grapes, especially green bark and foliage, with glyphosate or severe injury may occur. The weeds have to be actively growing. Make fall herbicide applications before a killing frost.

Most vineyards have grass sod alleys between rows of grapes. If there are perennial weeds within the grass sod then use spot treatments of glyphosate to kill the weeds.



**Figure 2.** The translocation of glyphosate from the mother plant to the rhizome and daughter plant. From Midwest Grape Production Guide, OSU Bulletin 919-05, available at <http://ohioline.osu.edu/b919/0013.html>.

Glyphosate will also kill the grass sod if it contacts, so you may have to reseed those patches. If the sod is thin or patches are without grass plants than you can reseed the grass alleys. If you have yellow nutsedge in non-bearing vineyards you can apply Basagran (bentazon). In order to control 6 to 8 inch tall yellow nutsedge you need to make sequential Basagran applications 7 to 10 days apart. Crop oil concentrate at 1 qt/acre should be included with Basagran. Basagran will not injure established grass sod.

**Figure 3.** Five particularly problematic perennial weeds: a) Canada thistle; b) field bindweed; c) Virginia creeper; d) poison ivy; and e) johnsongrass from left to right. From a variety of sources.



Summer annual weeds are flowering and producing seed in late summer and early fall. It is too late to apply preemergence herbicides to prevent germination of summer annual weeds. It is also too late to worry about competition between summer annual weeds, thus tillage is not recommended during the fall to control

summer annual weeds. The critical thing you should do is to prevent summer annual weeds from seeding. Seeds produced by summer annual weeds will increase the future management problems. Gramoxone (paraquat) or Rely (glufosinate) can kill summer annual weeds before they flower and produce seed. Mowing or cutting can remove most of the flower heads of upright summer annual weeds (barnyardgrass, foxtails, cocklebur, velvetleaf, lambsquarters, pigweed, waterhemp, giant ragweed) but must be done before seed mature. If a few annual weeds have mature seed, the seed heads can be bagged and the entire plant removed from the vineyard.

A major objective of fall weed management is control of winter annual weeds that emerge during late summer and fall. Winter annual weeds are best controlled before emergence with preemergent (PRE) herbicides or when seedlings with shallow tillage, flaming, and postemergent (POST) herbicides. Fall seeded cover crops are not effective against winter annual weeds because both the cover crop and weed emerge at similar times. Your control strategies should concentrate on managing winter annual weeds within the grape row. The first decision is whether to use PRE herbicides or rely on control methods after winter annual weeds emerge.

If you decide on using PRE herbicides then several options exist. Four factors are important in deciding on which herbicide(s) to use in the fall. These

factors are: 1) how long your vineyard has been established; 2) what winter annual weeds are likely to be present, 3) what residual weed control do you need in the spring; and 4) the herbicide cost. Chateau (flumioxazin), Gallery (isoxaben), Goal (oxyfluorfen) and Surflan (oryzalin) can be applied to newly established vineyards. But there are restrictions. Chateau can be applied at 12 ounces/acre but grapes established less than 2 years must be shielded from contact with Chateau and trellised three feet above the ground. Goal at 8 pints/acre should not be applied to grapes established less than 3 years unless the vines are trellised three feet above the ground. Surflan can be used on newly planted grapes provided the soil has settled. Gallery at 1.00 to 1.33 lb/acre can be applied only to nonbearing grapes. Other herbicides can only be applied after grape establishment. Kerb (pronamide) can be applied to vineyards at least one year old. Karmex and its generic forms (diuron) and Princep (simazine) can only be applied to vineyards established at least three years.

You should be aware of additional restrictions and limitations. Surflan must be activated by rainfall or shallow irrigation. Do not use Karmex on soils with less than 2% organic matter. Kerb at 2 to 8 lb/acre can be applied only when temperatures are below 55 F. Princep 90 DF at 2.2 to 4.4 lb/acre should not be applied on gravelly, sand,

or sandy loam soils or grape injury may occur. Weeds have developed resistance to some grape herbicides. Resistance management is critical. Use herbicide tank mixes, tillage and hand-removal, and do not use the same herbicide mechanism of action year-to-year. For example, Chateau and Goal have the same mechanism of action. Most PRE herbicides can only be applied after grape harvest or grape plant dormancy and before soil freezing. This time period is after many winter annual weeds emerge. If winter annual weeds have emerged then combine the preemergent herbicide with a burndown herbicide such as Gramoxone or Rely. If you use a tank mix containing Gramoxone or Rely then avoid all contact with the grapes.

You should consider the winter annual weeds that have been present in your vineyards. Not every winter annual weed is likely to be in your vineyard nor will each herbicide control all winter annual weeds. Table 2 lists herbicide control of some winter annual weeds. For example, if horseweed is a problem then choose Chateau, Gallery, or Goal. If your vineyard has henbit and field pennycress then combine Surflan and Karmex. This combination combines a good grass herbicide, Surflan, with a good broadleaf herbicide, Karmex, both of which will persist into the following spring. Table 3 lists some possible herbicide combinations.

Table 2. Control of winter annual weeds by preemergence herbicides for grapes.

Weeds	Chateau	Gallery	Goal	Surflan	Karmex	Kerb	Princep
Common chickweed	G	G	NR	G	G	G*	G
Mouseear chickweed	G	F	NR	NR	G	G*	NR
Henbit	G	G	G*	G	NR	G	G
Horseweed	G	G	G	NR	NR	NR	NR
Black mustard	NR	F	G	F	NR	NR	NR
Wild mustard	G	G	G	F	NR	G	G
Field pennycress	NR	NR	NR	NR	G	NR	NR
Shepherdspurse G		G	G*	G	G	G	G
Virginia pepperweed	NR	G	G	NR	NR	NR	G

G = good control; F = fair control; and NR = not recommended.

\* = Postemergent and preemergent control.

Table 3. Herbicide combinations registered for use in fall on grapes. Always do a compatibility test before tank mixing any herbicides.

Herbicide	Herbicides								
	Chateau	Gallery	Goal	Surflan	Karmex	Kerb	Princep	Glyphosate	Rely
Gramoxone									
Chateau	--	No	No	Yes	Yes	No	Yes	Yes	Yes
Gallery	No	--	No	Yes	No	No	No	Yes	Yes
Goal	No	No	--	Yes	Yes	Yes	Yes	Yes	Yes
Surflan	Yes	Yes	Yes	--	Yes	No	Yes	Yes	Yes
Karmex	No	Yes	Yes	--	No	No	Yes	Yes	Yes
Kerb	No	No	Yes	No	No	--	No	No	No
Princep	No	Yes	Yes	No	No	--	Yes	Yes	Yes
Glyphosate	Yes	Yes	Yes	Yes	Yes	No	Yes	--	No
Rely	Yes	Yes	Yes	Yes	Yes	No	Yes	No	--
Gramoxone	Yes	Yes	Yes	Yes	Yes	No	Yes	No	--

Thirdly, when selecting a PRE herbicide think about weed management the following spring. Some herbicides registered for grapes will persist and control weeds the following spring. Persistence also depends on application rate, with the higher herbicide rates persisting into the spring. For example, Surflan DF at 6.0 to 7.0 lb/acre can persist for 6 to 12 months after application, providing weed control the following spring.

The final factor in selecting a PRE herbicide is cost. Older herbicides, such

as Karmex or Princep that have generic alternatives are cheaper than newer herbicides such as Chateau and Gallery. But even the most expensive herbicides are cheaper than hand-weeding which may cost as much as \$500/acre. Also in most vineyards, herbicides will only be applied within the row of grapes. This will only be a small fraction of an acre. Negotiating prices or purchasing before hand can reduce costs. You may be able to combine with other grape growers to purchase case or bulk amounts of herbicides at lower prices.

Herbicide	Herbicide rate	Cost/ acre*
Gallery	1.0 to 1.33 lb	\$182.00 to \$241.00
Goal	8 pints	\$197.00
Surflan	2 to 4 quarts	\$40.00 to \$80.00
Karmex	0.5 to 2.0 lbs	\$2.00 to \$8.00
Kerb	2 to 8 lbs	\$71.50 to \$286.00
Princep 90DF	2.2 to 4.4 lbs	\$9.50 to \$18.50
.....		
Gly-4 Plus	0.75 to 4.0 quarts	\$5.00 to \$27.50
Roundup WeatherMax	1.0 to 2.7 pints	\$7.00 to 19.50
Rely	3 to 8 pints	\$22.50 to \$60.00
Gramoxone Max	0.5 to 2.0 pints	\$2.50 to \$10.50

**Table 4.** Approximate 2005 herbicide prices. These prices are only for comparison purposes; the prices from your supplier are likely to differ.

\* Cost is to apply the herbicide over a whole acre of land and does not include adjuvant and application costs.  
 Sources: R. K. Zollinger, 2005 North Dakota Weed Control Guide (<http://www.ag.ndsu.edu/weeds/>); University of Tennessee Knoxville, Weed Science (<http://weeds.utk.edu/>); and Hummert International catalog.

If you wait until winter annual weeds emerge and decide to use not to use PRE herbicides there are still management options. Initiate control while the weeds are still in the seedling stage. You can use hand-hoeing to cut small weeds off at the soil surface and expose weed roots to desiccation on the soil surface.

Shallow rotor-tilling also can be used to bury emerged annual weeds. Care must be used if you use rotor-tilling or hand weeding because they can injure grape stems and roots. Flaming can also desiccate small winter annual weeds but care must be used to avoid injuring grapes.

Postemergent (POST) herbicides can be used to control emerged winter annual weeds. But you must identify which winter annual weeds in the seedling stage. Figure 4 are pictures of seedlings of some common winter annual weeds. You can use herbicides that have PRE and POST activity, such as Goal or Kerb. Goal will control emerged henbit and shepherdspurse. Kerb will control emerged common or mouseear chickweed. Another approach is to use directed applications of nonselective herbicides, glyphosate, Rely, and Gramoxone. These herbicides have no residual activity and cannot contact grape plants or injury will occur. POST herbicides need to be applied when weeds are actively growing.

Finally, you should set the stage for spring weed control. Fall-seeded cover crops can suppress spring emerging weeds. Winter cover crops such as cereal rye or winter wheat can be seeded in mid-September to early October. The earlier the seeding the more likely the cover crop will tiller, develop a dense stand, and survive the winter. Cereal rye has greater cold weather survival than winter wheat and should be used for late seedings or plantings in northern Illinois. In the spring, the cover crop is killed and left as a mulch on the soil surface.



**Figure 4.** The seedling stage of five common winter annual weeds. The weeds are (left to right): common chickweed, henbit, horseweed, shepherdspurse, and field pennycress. Winter annuals emerge in late summer and fall, overwinter as a rosette of leaves (as in the shepherdspurse picture), and flower in the spring. From Corn, Soybean, Wheat, and Alfalfa Field Guide, OSU Bulletin 827, available at [http://ohioline.osu.edu/b827/b827\\_137.html](http://ohioline.osu.edu/b827/b827_137.html)

Higher rates of persistent herbicides will control spring-emerging weeds. Generally you want to use a herbicide that has good grass and broadleaf control, such as Chateau, or combine a grass-active herbicide, such as Surflan, with a broadleaf-active herbicide, such as Karmex or Princep. All PRE herbicides need to be applied before the soil freezes so they can move into the soil.

Combining these approaches and considerations you can obtain good weed control in your vineyard. Always prevent new weed infestations and control weeds at as young a growth stage as possible.

## Root Infestations of Grape Phylloxera in Illinois Vineyards

Rick Weinzierl, Extension Entomologist,  
*University of Illinois*

Significant injury to grapevines by root phase infestations of grape phylloxera was observed in hybrid grapes in a northern Illinois vineyard during the summer of 2005, and subsequent sampling in a limited number of vineyards confirmed root infestations in other Illinois production areas as well. Grape phylloxera is a worldwide pest of grapes. Separate forms feed and cause galls on leaves and roots, with leaf forms most common on *Vitis* species native to North America and root forms most prevalent and damaging on *Vitis vinifera* cultivars. Most Illinois growers are familiar with the leaf galling form of phylloxera, but they are less knowledgeable about root infestations which can be far more damaging. In root infestations, damage to grapevines is caused by secondary soil-borne pathogens that enter at the feeding sites and by physiological interactions between the plant and insect. Resistant rootstocks derived from native American species provide the primary means of phylloxera management; hybrids containing *V. vinifera* parentage show varying degrees of susceptibility correlated to the extent of *V. vinifera* heritage. Granett et al. (2001) have written an extensive review of grape phylloxera life history, population dynamics, viticultural damage, and management; that review (on which this newsletter article is based) is accessible

at:

<http://arjournals.annualreviews.org/doi/abs/10.1146/annurev.ento.46.1.387?cookieSet=1>.

Granett et al. (2001) distinguish between the significance of root galling on new roots near the tips (called nodosities) and galls that form on mature, suberized roots (called tuberosities). Galls on mature roots are associated with decline in vigor and death of vines; galls on new rootlets generally are not. Initial above-ground symptoms of root damage include a fading of leaf color similar to that observed in potassium deficiency; this occurs in midsummer when vines are heat-stressed. Vine decline is most rapid in heavy clay soils. Where galls occur on mature roots, fungal pathogens such as *Fusarium oxysporum* infect and girdle roots and may cause the death of plants. Measuring root necrosis is suggested for assessing severity of infestations and effectiveness of resistant rootstocks or hybrids.

Resistant rootstocks prevent the formation of galls on mature roots, however, phylloxera and galls (nodosities) may be common on new rootlets. A biotype of phylloxera (biotype B) that produced tuberosities and damaged the weekly resistant AXR#1 rootstock was discovered in California in 1983; it does not damage other resistant rootstocks. Other biotypes have been described based on their infestation of and population growth on specific rootstocks in France, Germany, and New Zealand.

In the last 5 years, phylloxera and subsequent fungal infections have been observed in California causing decline of vines on rootstocks previously thought to be strongly resistant. Personal communication with Dr. Granett indicates that the current hypothesis to explain this damage is related more to the development of virulent strains of *F. oxysporum* than to a new biotype of phylloxera. Preliminary data has led Granett and coworkers to suspect that infections by virulent strains of *F. oxysporum* that developed at sites where AXR#1 was used are now occurring where phylloxera has made feeding probes on mature roots even though galls (tuberosities) were not induced on these resistant rootstocks.

Applying the information in Granett's review and other relevant publications and communications to recent observations of phylloxera in Illinois suggests that surveying phylloxera populations (root phase and leaf phase) and root injury in Illinois vineyards is warranted. Understanding the extent of infestations -- geographically in the state and across rootstocks and hybrids -- and the damage they are causing is essential to the success of the Illinois grape and wine industry. Successful management of current plantings and selection of rootstocks and hybrids for future plantings require knowledge of the status of phylloxera infestations and damage. Plans to conduct such a survey in 2006 and 2007 are under development.

One of many informative fact sheets on grape phylloxera is available on line from Ohio State University at :  
<http://ohioline.osu.edu/hyg-fact/2000/2600.html> .

Literature Cited:

Granett, J., M.A. Walker, L. Kocsis, and A.D. Omer. 2001. Biology and Management of Grape Phylloxera. Annual Review of Entomology 46: 387-412.

### Illinois State Wine Competition



**Congratulations to all those that entered their wines and won at the Illinois State Wine Competition.**

**Too see a listing of the results, visit the Illinois Grape Growers & Vintners Website at:**  
[www.illinoiswine.com](http://www.illinoiswine.com)



## SMART VISIT YIELDS SURPRISES

Bill Shoemaker, Sr. Research Specialist  
*St. Charles Horticulture Research Center*

During the last week of July, Dr. Richard Smart paid a visit to Illinois. A viticulturist from Australia, Dr. Smart is well known worldwide for his leadership in management of wine grape production. Thanks need to be given to the Illinois Grape Growers and Vintners, who provided support to bring Dr. Smart to Illinois and provide workshops and consultation services. The workshops were held in Galena, Bellevue and Carbondale, IL. This gave growers an opportunity to hear Dr. Smart address relevant issues of grape production and to comment on the unique challenges of growing grapes in Illinois from the perspective of someone who has seen grapes produced in every corner of the globe.

I was fortunate to be the one to receive Dr. Smart in Chicago on July 25, where I took him to Lynfred Winery for a brief welcome reception and an overnight stay, compliments of Fred Koehler. Fred's hospitality and delightful wines clearly impressed Richard. Next morning the work began as we started touring the northern region industry with Dr. Smart. The surprises began immediately as Dr. Smart discovered serious infestations of root-phase phylloxera on hybrid wine grapes in a local vineyard. This vineyard has a wide selection of hybrid varieties, almost all of which had root-phase phylloxera infestations. Some suffered more damage than others but all showed some decline in vigor due to these infestations. Dr. Smart recommended that, in this vineyard, all grapes should be grown on phylloxera-resistant rootstocks. This

situation set the stage for examining vines in other vineyards throughout the state to determine whether root-phase phylloxera was infesting vines and whether their infestations could be considered problematic or not. Clearly, the first vineyard had suffered economic damage and would need to be addressed. Other vineyards showed varying levels of infestation, many having minimal infestations that may or may not need to be addressed in the future. This subject is the topic of another article in this issue of Grape Communicator and promises to be a controversial subject for our industry as we begin to gauge the scope and nature of this problem. Stay tuned.



**Dr. Smart examining grapevine roots**

The first workshop was held at Galena Cellars Winery and Vineyard in Galena, IL. A good crowd attended and was quite receptive to the issues he addressed, including the unique nature of our industry, the issues of canopy management, particularly when vigor is as high as in our industry, and the challenge of phylloxera facing our growers. Dr. Smart compared grape-growing in Illinois to the major wine-grape growing regions of the world, pointing out a clear distinguishing feature, which was rainfall levels. Most areas of the world where wine-grapes are grown, such as Italy, California, Spain, Australia, etc., have modest rainfall, usually occurring outside

the growing season. Illinois has approximately double the natural rainfall of these regions and much of it occurs during the growing season. During our growing season we can easily have more rainfall than some of these regions have in their whole year.

Why is this significant? First, this introduces problems for disease-management in grapes. While this is not news to our growers, it certainly is one of their most serious challenges. But second, and just as important, is the issue of rainfall promoting grape plant vigor. Our rainfall patterns induce vigorous vegetative growth in grapes, making management of this crop a larger challenge than in areas where lack of moisture creates a natural limitation on vegetative growth. Excessive vegetation can have a negative impact on grape quality if not handled properly, which is why Dr. Smart considers this factor highly significant.

This set the stage for Dr Smart's presentation on canopy management in wine grape production, the principles of which are described in his popular book, *Sunlight into Wine*. In his presentation he described the key role of management in the vineyard and the appropriate focus on meticulously managing the growth of the vegetative canopy. He discussed the many trellis system choices and praised Illinois growers for their choice of Single High-Wire (Single Curtain Cordon) and Geneva Double Curtain trellis systems as good for managing the high vigor of Illinois grapes. He described the impact of shading on fruit quality and the role of key canopy management techniques, such as balanced

pruning, shoot thinning, combing down shoots, cluster thinning and the critical timing of these techniques. Dr. Smart then took the group into the vineyard to demonstrate these techniques and describe the status of the vineyard. He also sampled for root-phase phylloxera and showed the group evidence of a modest infestation.

The Lawlor family provided a great cookout and lodging for myself and Dr. Smart for the evening. It was a great experience to witness Dr. Smart's reaction to early morning in the quiet hills of Jo Davies county, the quaint beauty of Galena, the majesty of the Mississippi River and the endless acres of corn and soybeans as we traveled south to Belleview, IL during the following day. We visited more vineyards and were hosted by Jim and Sharla Nickell for another workshop and cookout that evening. Elizabeth Wahle and Alan Dillard provided Dr. Smart with more Illinois experiences as they traveled with him through southwestern and southern Illinois, visiting more vineyards and conducting more grower consultations the ensuing two days.



**Dr. Smart Visits Illinois Vineyards**  
(Rocky Waters Vineyard pictured)



**Dr. Smart Presents at SIU**

Dr Smart's trip to Illinois culminated in a final workshop at Southern Illinois University's Horticulture Research Center. Hosted by Dr. Brad Taylor, the workshop gave Dr. Smart an opportunity to address another group of Illinois grape growers after having seen vineyards across the state. It was gratifying to hear his praise of the work done by Dr. Taylor and his grad students at the Research Center, describing it as one of the best managed research operations he has had the opportunity to visit. Equally gratifying was his praise for some of the growers he had visited earlier in the day. He had clearly been given a positive impression of the work being done by members of our state's industry.

Dr. Smart has written a summary report of his trip to Illinois which he will be providing to the board of the IGGVA. In it, he will be providing a record of his observations and recommendations for building our grape-growing base in Illinois. This will contribute to further efforts to address phylloxera in Illinois vineyards. It will also contribute to our effort to bring our grape-growing skills to the highest possible level.

## **AVA Divides Southern Illinois**

Denise Cimmarrust, Vineyard Technician  
*St. Charles Horticulture Research Center*



There is little doubt that grape growers in Illinois favor the establishment of AVA's for our grape growing areas. After all, France, California and many other grape growing regions have successfully been split into AVA's for years. Illinois has the geological as well as climatic facets that would make many AVA's across the state a possibility. Although the formation of AVA's in Illinois is looked at positively, it seems growers in this state are not in a cohesive agreement on the issue. Not that anyone thinks the formation of AVA's wouldn't be of benefit to the industry, but the way the proposal has been drawn up has many divided over the issue.

The current plan for the formation of Illinois first AVA comes from Southern Illinois. A proposal has been put forth, the "Shawnee Hills" AVA, that if passed, would seek to drive a wedge through the Shawnee region. While most growers are in favor of having AVA's, much of the debate centers on the defined boundaries of the proposed plan. The way the current plan defines its boundaries, is to use Route 13 as the defining boundary line. While some may

argue that this boundary is justified for an AVA boundary line, others do not agree. Using this boundary, the current AVA plan for the “Shawnee Hills AVA” excludes some growers by as little as a ¼ mile to only a few miles.

The Greater Shawnee Grape Growers Association (GSGGA) offers an alternative solution. The GSGGA has proposed a solution that would encompass the Shawnee region into an AVA, but not exclude any grower in the region. What the GSGGA is proposing is a regional AVA, known as the “Shawnee AVA”. Within this regional AVA, smaller micro AVA’s could then be established. These micro AVA’s would be established to delineate any site-specific vineyard differences.



**Chambourcin in Southern Illinois Vineyard**

This regional “Shawnee AVA” takes into consideration all the growers in the region and offers a less confusing benefit to consumers. The boundary line for the regional AVA proposal begins at the Mississippi River and I-64 on the Missouri border, then East along I-64 to the Indiana border, south along the Wabash River along the IL-IN border to the confluence of the Wabash and the Ohio Rivers, southwest

along the Ohio River along the IL-KY border to the confluence of the Ohio and Mississippi Rivers, then Northwest and North along the Mississippi River to the point of beginning. Essentially this boundary means, the regional AVA would include all of the land in the state of Illinois south of I-64.

The GSGGA regional AVA plan offers many benefits to the industry as a whole and it keeps the Shawnee region intact and undivided among growers. This plan sees the benefit of having a unification of efforts and marketing. Some suggestions offered in support for a regional AVA come from some members of the GSGGA, they include using USGS data for the regional AVA as well as trying to foster state support for scientific instrumentation of climatic differences for the formation of micro AVA in the Shawnee region. It also seeks to involve universities, colleges, and grape grower associations in the study of these micro AVA boundaries within the regional AVA’s.

Having this alternative AVA proposal available, growers and winemakers should begin discussion talks and work to arrive at the best possible solution for the industry, for the region and for the growers.

The GSGGA initiative to promote dialog among growers and wineries makes a lot of sense. Without dialog at a state level, the growers may be left out of decisions that may impact their freedom to market their products on a level playing field.

## Vineyard Update from Southern Illinois –

Alan Dillard, Winemaker  
*Limestone Creek*

August 13, 2005 - Remember the old Chinese curse, “may you live in interesting times”; well we have been having some this season in the vineyard. Since the late frost/freeze in May, things have gotten even more interesting for many of you with lots of heat and too little water. I have seen vine death and extreme vine stress in many vineyards from Springfield and Decatur south to Union County. Grapes are ripening too quickly in the heat and the sugar/acid balance is “interesting” in many cases.

Birds have not yet been a problem for most vineyards in this area, but harvest isn't over yet either. I have a low tech bird control idea for you to try if you do think you may have bird issues. Mike White from Iowa State told me of visiting a vineyard out his way where the owner had used disposable aluminum pie plates strategically attached to the top of end and line posts with screws and with some dry dog food in each plate. He says the crows are attracted to the shiny plates, find the dog food and stick around. They are pretty aggressive and territorial and as long as you keep them happy with the dog food, they will scare other birds out of the vineyard. It's worth a try.

I have also seen some problems with Japanese beetle in the mid part of the state, and during Dr. Smart's visit to our area, he found a few other potentially “interesting” things, including the virus we first saw here in Vidal back in the mid to late 90's, which is also showing up in Chardone. The virus is spreading slowly in these vines and at this

point we don't know what the vector (the critter or mechanism which is carrying the virus from vine to vine) is. Signs of the virus include many undersized leaves with yellowing and what I refer to as “ball peen hammer marks”, small cupped areas on the affected leaves, as well as severely stunted shoots. If you have any Reisling planted, you may also see the virus on those as well. Take a look in your vineyard and if you see these signs, please give me a call at (618) 534-9049.

Not to alarm you, but I would also like to hear from anyone who may see Chardone shoots, perhaps on vines near the end of rows, which are losing or have lost many of their leaves, the leaves remaining are rolled downward around the edges and the shoot is speckled with black dots or is dark gray and is not hardening off like a normal shoot. The probable cause is too complex and I don't know enough to write intelligently about this, but it is important to let me know if you see this in your vineyard. Call as above and I will get in touch so we can find out what is happening with the vines.

August 30, 2005 - Well, the interesting times continue with wind and fairly heavy rain in the southern region, due to hurricane Katrina, the third time this season a hurricane remnant has hit us with extra moisture. Some grapes have been harvested, but I have also visited several vineyards with major disease problems, particularly bunch rot/"sour rot", and the current weather is only going to increase the problem. In addition, deer are causing some pretty obvious losses in some vineyards. Try parking a truck, tractor or even a riding lawn mower in the area of the vineyard where you see deer. They have

plucked off the bottom half (or more) of clusters. This should help, although harvesting as many does as possible (legally of course) will do even more good, since each one gone means two or probably three (mom plus two fawns) less deer eating next year. Having a buck rack mounted in your den will not do any good for your vineyard, so eat more tender doe venison!!

September 5, 2005 - Harvest is proceeding in the south with Frontenac, Vignoles, Cayuga and Traminette being picked. Looking at harvest records for the past five years, it appears we are about one week to 10 days ahead this season on some varieties, while others are still recording titratable acids too high for picking.

The weather has improved drastically and if the forecast is accurate, this week should really improve acid and sugar correction, since the lows will be in the upper 50's to low 60's and highs in the 80's, and no rain;

Another issue, which has come up as it does every year at this time is people trying to figure out how much crop they have in the vineyard. I will be sending out, along with some other one page guides, an updated crop assessment guide which includes some more recent cluster weight averages that I had back in '99 and 2000. In the meantime, for your own purpose, it is a good idea to randomly check cluster weights on about 10 to 20 (better) clusters of each variety as you bring it in and keep a record. Over time you will get a much closer estimate of your grape crop.

I have seen some pretty serious problems with grape berry moth larva in some fruit, so Take a close look at your grapes at harvest and watch for signs, berries with small holes will often have a larva inside when you cut it open. If you see a lot of this, make sure to spray for grape berry moth next year ( see the Midwest Grape Spray guide for details).

Please contact me at (618) 534-9049 or [adillard@midwest.net](mailto:adillard@midwest.net) if you see any signs of the above mentioned problems in your vineyard and I hope your harvest is dry and excellent this season.



---

### **Newsletter Submissions:**

If you have a topic that you would like to see covered, please contact us for submission requirements.

Send an e-mail to us at:

[cimmarru@uiuc.ed](mailto:cimmarru@uiuc.ed)

OR

<mailto:wshoemak@inil.com>

## Vineyard Update From Northern Illinois -

Denise Cimmarrusti, Vineyard Technician  
St. Charles Horticulture Research Center

This growing season has been very challenging for us in many ways. We have endured drought conditions for most of the summer with the weather being hot and dry. Early in the season as shoots were beginning to elongate, drought caused vine shoots to become stunted and stress became apparent in the vines. Supplemental irrigation had to be put into place and the season progressed.

Aside from the high temperatures and lack of moisture, Mother Nature had other things in store for us as well. From the beginning of the growing season onward, several insects were observed in our trials. The insects observed were: Grape Flea Beetle, Grape Berry Moth, Japanese Beetle, False Japanese Beetle, leaf phase Phylloxera, and the Grape Tumid Gallmaker (see image 1 & 2). With IPM strategies in place, none of the insects caused major problems for us.

During the summer season, the Research Center has fielded several requests for diagnosis identification of what some growers may have noticed in their vineyards this summer. These two images are included here to help growers make possible visual identification of galls from the Grape Tumid Gallmaker. In our trials, we have seen several instances of the galls from this insect.

For more information on this insect, growers can visit this link:

<http://www.nysipm.cornell.edu/factsheets/grapes/pests/gtg/gtg.html>



Image 1. Gall of Grape Tumid Gallmaker



Image 2. Gall of Grape Tumid Gallmaker

Despite the application of bird netting near veraison, birds became a nuisance problem in one of our vineyard trials that did not also employ an audio bird scare device.

As the season progressed and ripening began to commence, stink bugs, wasps, and yellow jackets arrived. Yellow jackets were more numerous than wasps but these two insects were held in check by the application of an insecticide when needed. Despite the prediction of an invasion of the Multicolored Asian Lady beetle, populations have been very minor and no control has been used for this insect.

Pressure from disease has been minimal although some Powdery Mildew is now visible on the leaves of some varieties. Fruit has not been affected. Powdery Mildew symptoms are very mild and no control is warranted at this time.

September 19: Temperatures have now moderated although it is still fairly warm for this time of year. This past week, we have had daily high temperatures in the 80's and lows in the 50's. Some rainfall is expected later this week

Although harvest season is now in full swing with many varieties already having been harvested, there is still much further to go to make it through this busy season. Harvest of the table varieties in our Cold Hardiness Evaluation Trial is as follows: Einset, Canadice, Vanessa, Reliance, Marquis, Fredonia and Sunbelt and Glenora is complete.



*Norton*

Our harvest of wine grapes is about at the midway point with GR-7, MN1197, Valiant, NY62.1221, Maracheal Foch, St. Pepin, & Bianca & Frontenac and Melody already having been harvested. The remaining varieties of NY70.809, Chardonel, Traminette, Chancellor, Seyval, and Rosette are showing good lab numbers and will be

harvested in the next week or so. MN1162, Norton and Chambourcin are continuing to ripen and these varieties will be harvested as their ripening process proceeds.



### **YellowJackets & Traminette: A Problem For Southern Illinois**

Denise Cimmarrusti, Vineyard Technician  
*St. Charles Horticulture Research Center*

As growers of grapes realize, many insects can pose a problem to a successful season. One such insect is the yellowjacket. This insect not only causes problems for the quality of grapes being harvested due to this insect's feeding habits, but also poses a threat to vineyard workers.

Although the yellow jacket appears throughout Illinois and infests vineyards throughout the state, Southern Illinois and growers of Traminette, seems most affected.

The following text is taken from recent dialog between Mike Boegler (IGGVA viticulture committee chairman) and Rick Weinzierl (U of I, Extension Entomologist). It is reprinted here to help offer aid to those growers who may be experiencing similar problems with the yellow jacket invasion during harvest.

**Mike Boegler writes:** *"Rick - I wanted to alert you to a problem that grape growers in southern Illinois are experiencing. Traminette grapes, one of our most important commercial varieties, are being heavily invaded by bee's and wasps. Not*

only do they make it very difficult for picking crews but they destroy a large percentage of the grapes. This situation has occurred for several years and appears to be getting worse. The economic impact is substantial enough to cause some growers to pull out their traminette vines and to deter others from planting traminette. In the past various insecticides have been used prior to harvest to knock down the population; this approach seemed moderately successful. This year I have noticed an apparent resistance to malathion; rates as high as 4pts./acre seem to have little impact. If a control method is not found I suspect this grape variety could be lost from our inventory. Your thoughts on this matter would be of interest.”

**Rick Weinzierl responds:**

“Yellowjackets have been an increasing problem in fall fruit crops in Illinois since the german yellowjacket spread into the region a couple of decades or longer ago. They are consistently worst in falls following mild winters and/or dry summers (not necessarily dry falls). Now is not the time of year to mount a project on them, but I can work with you and others next year either on some projects to implement recommended practices or to research some additional options. The recommended practices are (1) early summer baiting programs using protein baits (canned chicken or tuna or other fish products) combined with an insecticide (fipronil has been identified as particularly effective); (2) early- to mid-summer nest poisoning with insecticides applied at the openings; (3) late summer baiting / trapping with sugary solutions as the baits (some work better than others); and (4) insecticides applied in the vineyard as harvest approaches (Bill

Shoemaker has reported success with Provado, though his his situation has not allowed comparisons with untreated checks). Minimizing earlier injury by fruit rots and grape berry moth also can reduce early yellowjacket attraction to fruit. In areas or seasons of high pressure, early season baiting programs may be essential.”

Finally, there's a good summary of work on this problem in Australia on the web at:

<http://www.gwrdc.com.au/downloads/ResearchTopics/DAV%2099-1.pdf>

This deals with the same wasps / yellowjackets we see here.

Hopefully, many of you who are experiencing this problem will find the above information helpful and by sharing these types of communication, we can all learn from one another. By learning triumphs as well as tragedies from one another, our industry can build itself into a strong and knowledgeable one, in which we can all find benefit.



This newsletter welcomes new contributors. If you would like to make a newsletter contribution, please contact Denise Cimmarrusti at [cimmarru@uiuc.edu](mailto:cimmarru@uiuc.edu) or Bill Shoemaker at [wshoemak@inil.com](mailto:wshoemak@inil.com) .

If you are a vineyard or winery and would like to be included in the business profile, please contact Denise Cimmarrusti before submitting material.



*The Grape Communicator is an electronic newsletter, free of charge, to those interested in the Illinois Grape and Wine Industry.*

*For further information contact:*

*Bill Shoemaker, Publisher  
Denise Cimmarrusti, Newsletter Editor  
University of Illinois  
St Charles Horticulture Research Center  
535 Randall Road,  
St. Charles, Il. 60554  
(630) 584-7254  
Web site link: [www.illinoiswine.com](http://www.illinoiswine.com)*

*We hope you have enjoyed reading this edition.  
As always, we welcome your feedback.*