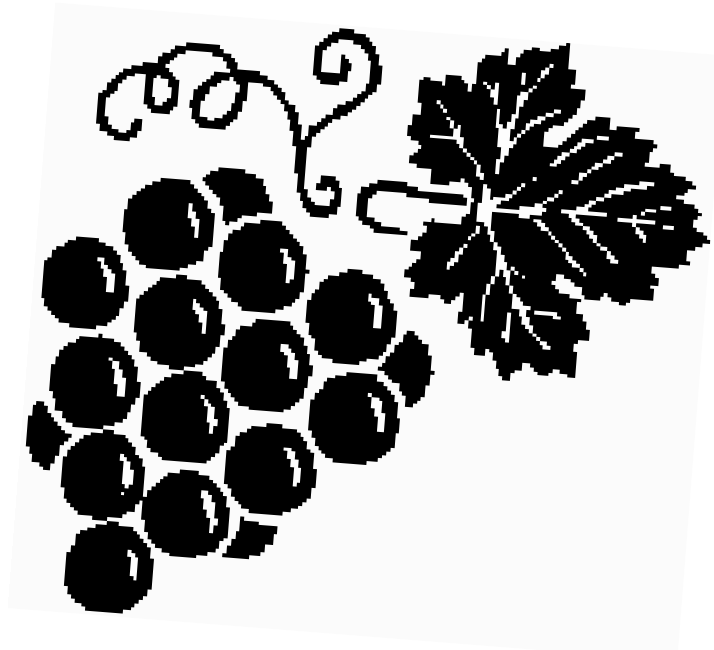




VINEYARD



BUSINESS PLAN WORKBOOK



**SIUC Small Business Development Center
Office of Economic and Regional Development
Dunn-Richmond Economic Development Center
150 E. Pleasant Hill Road, Suite 110
Carbondale, Illinois 62901-6890
(618) 536-2424 sbdc@siu.edu**



This program has been developed through a partnership between the U.S. Small Business Administration and the Illinois Department of Commerce and Community Affairs as a service to Illinois small businesses under cooperative agreement #0-7620-0014-17.

INTRODUCTION 2

EXECUTIVE SUMMARY 3

THE BUSINESS DESCRIPTION 5

 Business Description and Products Offered 5

 General Business Conditions 6

 Site Selection 8

 Other Possible Influences On Your Business 10

 History of Existing Business 11

THE MARKET 12

 Target Market 12

 Distribution Strategy 13

MANAGEMENT/OPERATIONS 14

 Business Organization 14

 Management & Key Personnel 15

 Resumes 16

 Personnel & Payroll 18

 Insurance 19

 Suppliers 20

 Professional Services 20

 Licenses & Permits 21

FINANCIALS 22

 Financial Plan Checklist 22

 Vineyard Establishment Cost Worksheet 23

 Equipment and Tool Needs Worksheet 24

 Equity Investment Worksheet 25

 Sources and Uses of Funds Worksheet 26

 Sales Projection Worksheet 27

 Operating Expense Worksheet 28

 Personal Financial Statement 29

ADDITIONAL RESOURCES 31

 Viticulture Practices for the Midwest by Alan Dillard 31

 Vineyard Suppliers 33

 Nurseries 39

 Muscadine 43

 References: Books 44

 References: Other Useful Publications 45

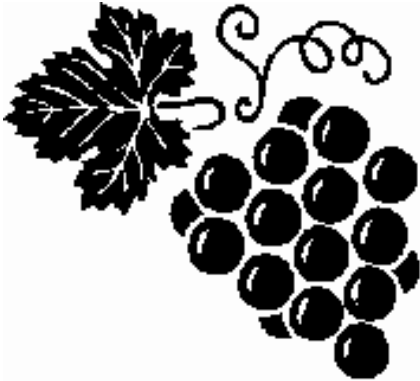
 References: Newsletters 46

 References: Magazines 47

 References: Consultants 48

This Vineyard Business Plan Outline and Workbook has been prepared through a joint venture between the Small Business Development Center (SBDC) and the Office of Economic and Regional Development at Southern Illinois University, Carbondale. The workbook is intended to serve as a guide to help us help you write your vineyard business plan. After completing this workbook you should have a clearer understanding of your business concept and the requirements and commitment it will take to turn your concept into a reality. You will also be more prepared to discuss your project with others such as bankers or investors.

It is important to remember that a Business Plan serves two primary purposes: (1) to be your “road map” in setting up and managing your business and (2) to support a loan request. To develop a good business plan, you need to write down the answers to quite a few questions. This guide will take you through the process. It may be necessary to alter the contents of the workbook to suit the particular circumstances involved in your business. Some areas may not relate to your business concept at all and some areas may require additional information.



Becoming an entrepreneur involves a deep financial and emotional commitment, there is more to owning your own business than just writing a business plan. It's important to remember that you are risking your money and perhaps your financial security. Lending institutions and/or investors are also sharing the risk in your business venture and your business plan is the necessary tool they will use to evaluate their willingness to assume that risk. Many small businesses fail and often this is due to inadequate planning. While others can help with the planning effort, only you really know what you want your business to be. The Small Business Development Center is here to assist and counsel you through the planning process.

The introduction to the business plan is called the Executive Summary and provides an overview of the business plan in one page or less. *This section provides the banker or investor a “first impression” of your business concept. Although it appears near the front of the plan it is most effectively written after the rest of your plan is completed. We recommend that you work closely with your counselor in preparing this very important component of your business plan.*

The Executive Summary should include:

- *The name and address of the business.*
- *The owner(s) names.*
- *Legal form of the business.*
- *Brief description of the business to be conducted.*
- *Product(s) and/or service(s) to be offered.*
- *Purchase terms, if buying an existing business.*
- *Requested loan amount and how the loan will be repaid.*
- *How the loan amount will be spent (broken down into broad categories).*
- *Amount and form of owner(s) equity (owner’s investment in the business).*
- *Expected outcome of business operations.*



The General Business Conditions.

This section should include general business conditions affecting your vineyard and future outlook for the industry.

The Illinois Grape and Wine Industry

Midwesterners enjoy wine. According to US Wine Stats, Illinoisans consumed 25 million gallons of wine in 1996. As a result, Illinois is the fifth largest wine consuming state in the country. Although consumption of wine in this state is quite substantial, production of Illinois wines amount to less than one percent of total gallons consumed (1997 Illinois Winemakers Benchmarking Development Project).

Establishment of the Illinois Grape and Wine Resources Council (Wine Council) in 1997 has provided assistance for the reemergence of this industry. In 1995 there were nine wineries in Illinois. By the end of 1999 there were 19 wineries. While Missouri is a less populated state to the west of Illinois, over two million visitors frequent the 37 wineries every year, making Missouri wineries the second most popular tourist attraction in the state.

Most Illinois wine is made from grapes. Past estimates indicated that less than 20 percent of the wines made by Illinois wineries use Illinois-grown grapes. In 1998 10,000 gallons of wine was produced in Illinois using Illinois grapes. This low percentage is not due to wineries distaste for Illinois grapes. As a follow-up survey to the 1997 Illinois Winemakers Benchmarking report, all wineries questioned indicated a preference for Illinois grapes, assuming quality and taste standards were in place.

Prior to prohibition, Illinois was dominant with grape production. With establishment of the Wine Council, grape growers are also seeing growth in Illinois. As of 1999 there were 90 vineyards identified by the Wine Council. Total vineyard acreage amounted to 270 acres, with 64 acres projected in new plantings. Refer to Table 1 for the history of Illinois Grapes.

Table 1
History of Illinois Grape Industry

Year	Acres Planted	Growers	Wineries
1925	+3,000	1954	400
1996	82	41	10
1998	180	82	14
1999	270	90	19

Source: Illinois Grape and Wine Resources Council

Site Selection

Proper site selection is one of the most important factors in realizing the goal of growing quality grapes. High quality fruit can be, and is being, produced in vineyards situated on less-than-ideal locations, but the prospective vintner can save himself a lot of work and avoid numerous problems by choosing a site with favorable topography, soil and temperature conditions. No one site is going to provide the perfect combination of elements, but the fewer compromises the better.

The likelihood of dangerously low winter and spring temperatures is the most significant factor relating to site suitability. Excessively low winter temperatures can result in trunk damage and bud kill, especially in the more sensitive varieties. Sustained temperatures below -5 F are risky for these varieties. In general, areas given to early fall frosts, spring frosts, excessive and frequent temperature shifts and sustained low winter temperatures should be avoided.

Topography also plays a significant role in the quality and consistency of quality of wine grapes. A gentle slope promotes good cold air drainage as long as there are no significant barriers to the flow. Steep slopes, however, pose problems for machinery and increase potential for erosion. A southern facing slope has the advantage of greater daily maximum temperatures and longer daily heating of fruit and vines. Fields that have been cultivated in previous years offer the best potential for vineyard sites. Otherwise, the area should be cleared of large rocks, tree stumps, heavy brush, etc, then cultivated and planted in grass or grain for one or two years.

Soil types and suitability range widely throughout the state. Fortunately, grapevines are tolerant of what might be considered risky areas for other crops. They are grown in soils ranging from heavy clay to sand to shale and rock. Ideally, the soil will be loamy (approx equal proportions of sand, silt and clay), deep (30 - 40 inches of permeability) and well-drained, with moderate fertility. Too much fertility can result in excessive vegetative growth, whereas mildly deficient soil can encourage the vines to extend their root systems to greater depths, often resulting in higher quality fruit. Soil pH should be between 5.5 - 6.5, but can be adjusted by an application of lime. The primary nutrients for grapevines are nitrogen, phosphorus and potassium, and to a lesser extent boron, calcium and magnesium. Soils severely deficient in any of these can be adjusted with applications of appropriate fertilizers.

Soils which tend to be waterlogged, shallow, primarily heavy clay, hardpan (impervious subsoils which limit root penetration) and excessively acidic should be avoided. Sandy soils provide good aeration but have poor water retention, whereas clay soils have good water retention and nutrient supplies but poor aeration. Where feasible, deep tilling with a subsoiler to a depth of at least 2' prior to planting can be beneficial.

Other Possible Influences On Your Business.

Other issues that are not necessarily within the control of the business must also be addressed. Many of these issues may directly affect your sales both positively and negatively. Complete the following sections as they apply to your business.

Describe the economic factors that will affect your product or service. *(Examples include: economic trends, spending trends, taxes, inflation, interest rates, etc)*

Describe any legal or governmental factors that will affect your business. *(Examples include: potential changes in laws or ordinances, IRS, OSHA, EPA, Health Department, ADA, and zoning regulations.)*

Describe any environmental factors that will affect your business. *(Examples include: raw material availability, weather, pollution, and waste management.)*

MARKETING: TARGET MARKET

Marketing plays a vital role in successful business ventures. How well you market your business, along with a few other considerations, will ultimately determine your degree of success or failure. The key element of a successful marketing plan is to know your customers – their likes, dislikes, and expectations. By identifying these factors, you can develop a marketing strategy that will allow you to attract customers and fulfill their needs.

- Define your target market by general category.
- Identify and analyze your direct and indirect competition.
- Develop a marketing plan to reach this target market.



Define your target market.

Type of Customer	% of Business
Self/Winery	
Illinois Wineries	
Midwest Wineries	
Other	
Total (<i>must equal 100%</i>)	100%

Personal Information	
Name	_____
Address	_____ _____
Telephone #	_____

Education	
High School	_____
College	_____ _____
Technical	_____

Work Experience		
Dates Employed <i>(from - to)</i>	Employer	Positions/Duties

Personal Information	
Name	_____
Address	_____ _____
Telephone #	_____

Education	
High School	_____
College	_____ _____
Technical	_____

Work Experience		
Dates Employed <i>(from - to)</i>	Employer	Positions/Duties

MANAGEMENT/OPERATIONS: PERSONNEL & PAYROLL

Operational Considerations

The purpose of this section is to provide information that deals with operation of the business such as: employees, schedules, insurance, suppliers, professional services, licenses, etc.

Develop a Personnel Hiring & Pay Schedule.

Job Title	Duties	Qualifications	Salary (\$)	Hiring Date

Develop a Work Schedule. The work schedule shows work coverage for the scheduled operating hours of the business. A sample schedule and worksheet schedule are provided below.

Job Title	Sun.	Mon.	Tue.	Wed.	Thur.	Fri.	Sat.	Total Hours/ Week

Calculate the monthly cost for employee salaries and wages.

[a] Job Title	[b] Wage Rate	[c] Hours/Week	[d] Weekly Wages <small>Column (b) x Column (c)</small>	[e] Monthly Wages <small>Column (d) x 4</small>
Total Monthly Wages				

Total Monthly Payroll Tax Multiply total monthly wages by an estimated 15%.	
--	--

Define Your Insurance Needs

Identify the potential risks of loss inherent to your business. These risks form the basis for your business insurance needs. Some of the typical types of business insurance are listed below:

- **Workers Compensation**
- **Fire or Structural Damage**
- **Business Liability**
- **Vehicle Coverage**
- **Loss & Theft of Building Contents**
- **Glass & Sign Breakage**
- **Business Interruption**
- **Dram Shop**
- **Care, Custody & Control**

After considering your insurance needs and regardless of whether you deal with independent agents, insurance brokers or work directly with insurance companies, be certain that you've done some comparison shopping before you sign up. Some sources of information on business insurance are listed below.

- Illinois Department of Insurance – *Maintains experience information on insurance companies.*
- Best's Key Rating Guide – *Maintains financial strength information on insurance companies.*
- Local insurance agencies – *Check yellow pages for listings.*

Include copies of your insurance carriers' cost quotes.

Insurance Company	Type of Insurance	Upfront Cost	Monthly Cost
Total Insurance Costs			

MANAGEMENT/OPERATIONS: SUPPLIERS & CONSULTANTS

Identify Major Suppliers

Include information on suppliers of cuttings, pesticides, equipment, etc. Include their address, their product lines, and any special credit terms.

Supplier	Address & Phone #	Products/Services/Terms

Identify Professional Consultants

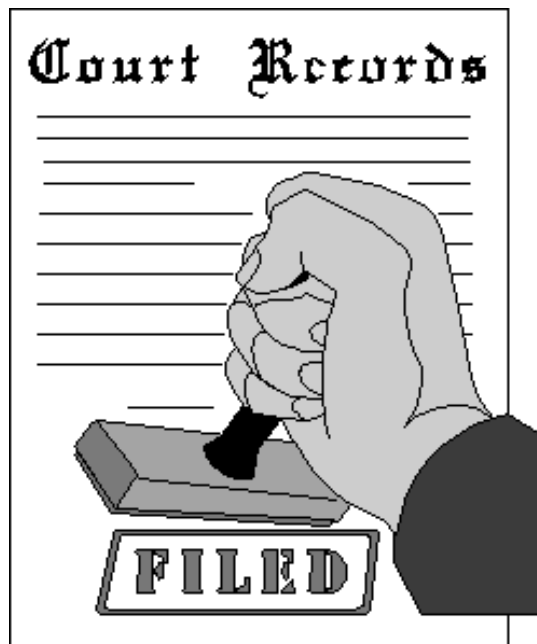
Provide a list of professional services providers to be utilized (e.g., attorneys, accountants, etc.), the type of services to be rendered, and the anticipated costs.

Type	Name	Address & Telephone #	Start-up Costs (\$)	Recurring Costs (\$)
Accountant				
Attorney				
Other (list)				
Other (list)				
Total Professional Fees				

Provide a List of Required Licenses, Permits, and Registrations

Provide information on required special licenses, permits, and registrations if applicable. (e.g., liquor license, EPA permit, state professional license, vehicle license, food handler's certification, Assumed Name Act Registration, etc.). Provide a copy of the required Licenses/Permits/Registrations if available.

Name of Permit/License	Issuing Agency	Valid Time Period	Start-up Costs (\$)	Recurring Costs (\$)
Total Permit and License Cost				



For any type of loan request the financial section of the business plan must include the following:



- **Historical Information on Existing Business** - Three (3) years of past income tax returns, financial statements (Balance Sheets & Income Statements), and aging of accounts receivable/payable should be included.
- **Personal Income Tax Returns** - Three (3) years of personal income tax returns of the principals involved in the business are required. A principal is an individual or entity who owns or will be owning 20% or more of the business.
 - **Financial Projections** – A five (5) year projection of financial data is suggested in most vineyard loan requests including Pro Forma Balance Sheet, Cash Flow Statement, Income Statement, and Ratio Analysis. The first year cash flow should be shown on a monthly basis and shown quarterly for the second through fifth years. **(See note below).**
 - **Personal Financial Statement** - This form must be completed for each principal who owns or will own more than 20% or the business, or who have a significant say in the operations of the business. See Personal Financial Statement Worksheet.
- **Letters of Commitment** - If the plan includes multiple loans, each loan must be documented in commitment letters. Loans from financial institutions must have language indicating the loan amount, the specified term and interest rate, collateral, any other conditions attendant to the loan, and the fact that the loan is approved (loan approval can be contingent on securing other financing).

Note: The SBDC can help prepare the financial projections if the following worksheets in this workbook are completed.

FINANCIAL PLAN: VINEYARD ESTABLISHMENT COSTS

Vineyard Establishment Costs

A sample vineyard establishment cost is included in Appendix B. For your planning purposes, actual current price quotes are needed.

Item	Source <i>If you already own the asset be sure to include it in the Equity Investment Worksheet on page 25.</i>	Cost (\$)
Land		
Site Preparation		
End Posts		
Line Posts		
Anchors		
Wire		
Stakes/Vine Shelters		
Tensioners		
Vines		
Chemicals		
Other		
Total Vineyard Establishment Costs (Excluding Labor)		

List Equipment and Tool Needs

List equipment, fixtures, furniture, vehicles, tools and other fixed assets that are needed for the business and their associated costs. (Written quotes should be provided including item name, model number, cost, and installation expense when possible). If leasing equipment, include a copy of the lease agreement. Items below are listed as possible equipment needs but are not considered requirements.

Item Description	Source <i>if you already own the asset be sure to include it in the Equity Investment Worksheet on page 25.</i>	Cost (\$)
Tractor		
Sprayer		
Mower		
Post Driver or Drill		
Picking Lugs		
Vehicle		
Trailer		
Other:		
Total Cost of Equipment and Tools:		

Equity Investment

List all assets (land, buildings, equipment, fixtures, and cash) **you now own** that had an original value greater than \$500.00 that will be used in the business.

Helpful Tip!
 Banks and lending agencies usually require at least a 20% investment by the owner into the project.

Item Description	Year Acquired	Purchase Price (\$)	Current Value (\$)	Amount still owed on the asset (\$)	Name of Lienholder
Land: (Include acreage and address)					
Building(s): (Include type & address)					
Equipment: (Include Model # & Serial #)					
Cash Investment					
Total Equity Investment					

FINANCIAL PLAN: SOURCES & USES OF FUNDS

Sources and Uses of Funds Worksheet

	Uses of Funds	Total Cost
1.	Vineyard Establishment Costs <i>(From Page 23.)</i>	
2.	Equipment & Tools <i>(From Page 24.)</i>	
3.	Insurance–Upfront Cost <i>(From page 19.)</i>	
4.	Licenses/Fees-Upfront Cost <i>(From page 21.)</i>	
5.	Professional Fees-Upfront Cost <i>(From Page 20.)</i>	
6.	Utility & Telephone Deposits	
7.	Cash/Working Capital	
8.	Other <i>(Specify)</i>	
9.	Other <i>(Specify)</i>	
10.	Other <i>(Specify)</i>	
	Total Uses of Funds	

	Sources of Funds	Total Amount
1.	Equity Investment	
2.	Financing Requested	
3.	Other <i>(Specify)</i>	
	Total Sources of Funds	

Sales Projections

Include sales projections for your vineyard. A vineyard takes about 3 to 4 years to make a return on the investment. A good estimate, if you use vine shelters, is to project a 50% harvest in year 3 and full harvests in year 4 and 5.

	Year 1	Year 2	Year 3	Year 4	Year 5
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Total Sales					

FINANCIAL PLAN: MONTHLY OPERATING EXPENSES

Monthly/Annual Operating Expenses Worksheet

	Item	Monthly Amount	Annual Amount
1.	Accounting & Legal Services	(\$)	
2.	Chemicals	(\$)	
3.	Employee Salaries/Wages	(\$)	
4.	Employee Payroll Tax	(\$)	
5.	Insurance	(\$)	
6.	License & Fees (<i>permits, vehicle..</i>)	(\$)	
7.	Machine Maintenance/Repair	(\$)	
8.	Rent (<i>property</i>)	(\$)	
9.	Supplies	(\$)	
10.	Taxes (<i>Property Tax</i>)	(\$)	
11.	Travel	(\$)	
12.	Utilities & Telephone	(\$)	
13.	Miscellaneous	(\$)	
14.	Vine/trellis maintenance, materials Other (<i>specify</i>)	(\$)	
15.	Other (<i>specify</i>)	(\$)	
16.	Other (<i>specify</i>)	(\$)	
17.	Owner's Withdrawal	(\$)	

PERSONAL FINANCIAL STATEMENT

U.S. SMALL BUSINESS ADMINISTRATION					As of:	
Name			Business Phone			
Residence Address			Residence Phone			
City, State, & Zip Code						
Business Name of Applicant/Borrower:						
ASSETS			(Omit Cents)		LIABILITIES	
(Omit Cents)			(Omit Cents)		(Omit Cents)	
Cash on Hand & in Banks		\$	-	Accounts Payable		\$
Savings Accounts		\$	-	Notes Payable to Banks & Others		\$
IRA or Other Retirement Account		\$	-	Installment Account (Auto)		
Accounts or Notes Receivable		\$	-	Mo. Payment		\$
Life Insurance-Cash Surrender Value Only				Installment Account (Other)		
(Complete in Section 8)		\$	-	Mo. Payment		\$
Stocks & Bonds				Loan on Life Insurance		\$
(Describe in Section 3)		\$	-	Mortgages on Real Estate		
Real Estate				(Describe in Section 4)		\$
(Describe in Section 4)		\$	-	Unpaid Taxes		
Automobile - Present Value		\$	-	(Describe in Section 4)		\$
Other Personal Property				Other Liabilities		
(Describe in Section 5)		\$	-	(Describe in Section 4)		\$
Other Assets				TOTAL LIABILITIES		\$
(Describe in Section 5)		\$	-	NET WORTH		\$
TOTAL ASSETS		\$	-	TOTAL LIABILITIES & NET WORTH		\$
Section 1. Source of Income			Contingent Liabilities			
Salary		\$	-	As Endorser or Co-Maker		\$
Net Investment Income		\$	-	Legal Claims & Judgments		\$
Real Estate Income		\$	-	Provision for Federal Income Tax		\$
Other Income (Describe below)		\$	-	Other Special Debt		\$
Description of Other Income in Section 1						
Section 2. Notes Payable to Bank & Others						
Name & Address of Noteholder(s)	Original Balance	Current Balance	Payment Amount	Frequency (monthly, etc)	How Secured or Endorsed	
	\$ -	\$ -				

PERSONAL FINANCIAL STATEMENT

Section 3. Stocks & Bonds					
Number of Shares	Name of Securities	Cost	Market Value Quotation/Exchange	Date of Quotation/Exchange	Total Value

Section 4. Real Estate Owned				
	Property A	Property B	Property C	
Type of Property				
Address				
Date Purchased				
Original Cost				
Present Market Value				
Name & Address of Mortgage Holder				
Mortgage Account Number				
Mortgage Balance				
Monthly Payment Amount				
Status of Mortgage				

Section 5. Other Personal Property and Other Assets				

Section 6. Unpaid Taxes				

Section 7. Other Liabilities				

Section 8. Life Insurance Held				

I authorize SBA/Lender to make inquiries as necessary to verify the accuracy of the statements made and to determine my creditworthiness. I certify the above and the statements contained in the attachments are true and accurate as of the stated date(s). These statements are made for the purpose of either obtaining a loan or guaranteeing a loan. I understand FALSE statements may result in forfeiture of benefits and possible prosecution by the U.S. Attorney General (Reference 18 U.S.C. 1001).

Signature:	Date:	Social Security Number:
Signature:	Date:	Social Security Number:

VITACULTURE PRACTICES FOR THE MIDWEST

**Alan Dillard, Limestone Creek Viticultural Resources,
1250 State Route 127 South, Jonesboro IL 62952 (618) 833-4683**

My experience at Alto Vineyards and in interchanges with other “winegrowers” throughout the Midwest over the past ten years have led me to the conclusion that, while there are very few hard and fast rules about grape growing in this region, there are definitely some basic approaches in site selection, vineyard design, including trellis choices, and selection of cultivars (types of grapes) which greatly increase the likelihood of success. This is true whether you want to grow table grapes, wine grapes for your own use, or go into grape growing as a commercial endeavor.

The material presented is intended as a BASIC guide for the beginning grape grower, but I can offer more technical information and resources to anyone who wants to pursue either area more fully. In particular, for those who already own suitable land and some basic farm equipment. I suggest seriously considering establishing a small (2 to 3 acres) vineyard planted to certain cultivars, since there is already a “crunch” in the supply of suitable grapes throughout the region and this is likely to continue for many years.

We will be starting with a look at cultivars, proceeding through site considerations, vineyard design, vineyard management for quality production, trellis/training decisions and several other areas of concern.

Cultivars

The types of grapes grown in France or in California, such as Chardonnay or Cabernet Sauvignon can only be grown in this area with a LOT of effort, including burying the vines each Fall and digging them up and re-training them each Spring! In addition, even if you succeed in keeping them alive, it is very unlikely you will get them to produce grapes of quality with the balance of fruit, acid and tannins to create a great wine of the type. However, there are a few cultivars which were developed in France late last century and into the present in an attempt to overcome a pest called phylloxera, or simply to develop new varieties suitable for wine production. These cultivars are well suited to being grown in the region and can produce excellent wines.

These vines were developed by crossing *Vitis vinifera* grapes such as Chardonnay with native American vines such as *Vitis aestivalis*. The best of the resulting “French Hybrids” have become the main vines planted in the Midwest and the East and, indeed, even though the French do not like to talk about it, some of these cultivars (Chambourcin, for example) are grown fairly extensively in France and are used in their wines. These hybrid vines are less susceptible to extreme cold and just as importantly, they do not react to a week of unusually mild weather in February or March as if Spring has arrived. While they are hardier than *vinifera* grapes, hybrids do have varying levels of winter hardiness and susceptibility to various diseases which makes some easier than others to grow successfully.

There are many cultivars in the French hybrid category, but only six to eight varieties, in my opinion, which are both suitable for our area and of significant quality to make them desirable either to the home winemaker or to commercial wineries. Here’s a listing and brief description of those cultivars.

Red Varieties

Chambourcin - Dark blue-black grapes in large open clusters or medium size berries. Medium to high cold hardiness and relatively low susceptibility to disease. Wine quality is very good to excellent.

Norton/Cynthiana - There is an ongoing discussion as to whether this is a single cultivar or two different ones. Recent genetic tests indicate it is the same vine. This is also not considered a hybrid, but is a member of the native American genus/species *Vitis aestivalis*, but no one knows for certain where it originated. This cultivar is a very vigorous type with considerable variation possible in crop level from year to year. Small blue-black berries in small rather tight clusters. Good hardiness and very good resistance to most diseases. Wine quality is excellent.

Chancellor - Also blue-black with medium berries in clusters which are slightly smaller and tighter than Chambourcin. Good hardiness, but susceptibility to downy mildew and to crown gall, particularly on poorer soils or when vines are stressed or have been injured. Wine quality is excellent, but disease pressure and the tendency to over-crop if not cluster thinned makes this a high maintenance cultivar. Most, if not all, the Chancellor formerly grown in Missouri have been replaced by other cultivars due to severe crown gall problems. However, at Alto Vineyards the Chancellor vines are 16 years old and are still doing well. Even though they do have some crown gall, it is not so severe as to destroy the vine or affect the quality of grapes.

There are a few other "red" varieties which were planted in the past, but most have fallen out of favor with commercial wine producers due to either wine quality from the cultivars or disease problems. Probably the most common varieties still seen as vines or in the bottle are Baco Noir and Foch, both of which can make good quality wine. However, Chambourcin is easier to grow and in most cases is superior in taste, balance and longevity to either, at least in my experience.

White Varieties

Seyval Blanc - Yellow-white medium size berries in large fairly tight clusters. Medium winter hardiness. Moderately susceptible to both downy and powdery mildew. Wine quality is very good, but in most cases, rather neutral in flavor. Overcropping in this cultivar is automatic unless they are cluster thinned.

Vidal Blanc - Yellow-white, medium berries in large tight clusters. Very vigorous on all but the poorest sites with medium to low winter hardiness. Slightly susceptible to downy mildew and moderately to highly susceptible to powdery mildew. Can produce very high quality wine if not overcropped. Cluster thinning is not always necessary, but can be a good idea on vigorous sites.

Vignoles - Yellow-white small berries in small, usually very tight clusters. Good winter hardiness and medium vigor. Slight susceptibility to both mildews and moderate to heavy susceptibility to botrytis and bunch rot due to the tightness of clusters. In my opinion this cultivar is by far the best available for excellent, perhaps world-quality white wine at this time. While the botrytis/bunch rot issue makes this grape difficult to ripen well, it is so superior to the two previously mentioned varieties that I would still rather grow Vignoles and make potentially great wine.

Chardonel - I have no personal experience in growing this cultivar, but it makes very good to excellent wine, although Richard Vine says he doesn't think it compares to Vignoles. This variety is closely related to the Chardonnay vine and there is, therefore, some concern about its winter hardiness in this region. There are some four year-old vines in Missouri near St. Genevieve, which are apparently doing well, but the jury is still out. Alto Vineyards now has a small planting and is adding more this Spring (1997), but only time will tell whether this variety will thrive in our area. Certainly, it is imperative to plant these only on the very best locations, as they WILL NOT tolerate wet feet.

All these cultivars have their own good and bad points which we can discuss more fully as we go along, but if one is considering planting a small vineyard for commercial purposes. Norton, Chambourcin, Vignoles and probably Vidal or Chardonel would clearly be the best choices, at least at this time. One white variety I have not mentioned is a new release called Traminette, which has very good potential as wine, but which I don't feel I have enough data on to recommend one way or another at this time. The jury is really still out on this grape, since it has no commercial track record in the Midwest yet.

VINEYARD SUPPLIES, NURSERIES, & REFERENCES

This list of suppliers is intended to be a resource tool for grape growers and winemakers; it is not necessarily a recommendation nor is it considered a complete list. You may want to re-search the companies, compare prices, and talk to others about product choices prior to purchase.

SUPPLIES: ANIMAL CONTROL

Deer Fence by Benner

P.O. Box 875, Bala Cynwyd, PA 19004
(800) 753-4660 Fax (215) 477-9429
email: Benners@erols.com

Deerbusters - deer and animal repellents, fencing, and scaring devices.
<http://www.deerbusters.com>

Reed-Joseph International Company

P.O. Box 894, Greenville, Mississippi 38702
(601) 335-5822 Fax (601) 335-8850

Southeastern Outdoor Supplies, Inc.

Route 3, Box 503, Bassett, VA 24055
(800) 368-5924

SUPPLIES: BINS

Carson-Brooks Plastics, Inc.

2120 Auto Centre Drive, Glendora, CA 91740
(909) 592-6272

Macro Plastics, Inc.

2250 Huntington Drive, Fairfield, CA 94533
(800) 845-6555

Western Square Industries

1621 N. Broadway, Stockton, CA 95205
(800) 367-7810

SUPPLIES: FENCING

Maplehurst Deer, Inc.

P.O. Box 697, Dellville, Texas 77418
(409) 865-9601 Fax (409) 865-9922

Munro Engineers PTY LTD

PO Box 80, Ballarat, Victoria 3353 A.H. (03) 53 335 301
Phone +61 (0)3 5334 2770 FAX +61(0)3 5334 2755
email: munro@netconnect.com.au
www.munroeng.com

SUPPLIES: GRAFTING SUPPLIES

Naurie's Vineyard

16495 Rt. 37, Johnston City, IL 62951
Pruning supplies, budding and grafting knives, and garden knives
On-line catalog at www.premiumknives.com

Phytotronics, Inc.

13688 Rider Trail North, Earth City, MO 63045
(314) 770-0717 • Fax 314-506-4587
email: sales@phytotronics.com
www.phytotronics.com

Wilson Irrigation & Orchard Supply

1104 E. Mead Yakima, WA 98903
Local (509) 453-9983 Fax (509) 453-1258 Out of State (800) 232-1174
email: diane@wilsonirr.com
www.wilsonirr.com/english.htm

SUPPLIES: GROWTUBES

Jim's Supply Company, Inc.

Bakersfield, CA, 1-800-423-8016,
www.jimssupply.com

Orchard Valley Supply

Fawn Grove, PA, 717-382-4612,
email: ovs4grapes@juno.com

The Grower's Supply Center

Fallston, MD, 410-931-3111

Midwest Vineyard Supply

Sell a number of items including Snap-N-Grow tubes.
P. O. Box 428, Mulkeytown, IL 62865
(618) 724-9074 Fax: (618) 724-2365
email: midvine2@midwest.net
www.midwestvineyardsupply.com

Teel Plastics, Inc.

Baraboo, WI,
(888) 476-9882 (info), (800) 322-8335 (sales)

Glunt Enterprises (CA)

(916) 636-4884

Pacific Western Container (CA)

(800) 241-3513,
www.pacificwestern.com

Snap N' Grow Growtubes

<http://www.snap-n-grow.com>
Treessentials Company (MN)
2371 Waters Drive, Mendota Heights, MN 55120-1163
(800) 248-8239 (612) 681-0011
www.treessentials.com
www.growtubes.com

Berry Hill Irrigation, Inc.

Located in Clarksville, VA right above Oxford.
email: jennifer@kerrlake.com
(800) 345-DRIP (3747) Fax (804) 374-0131
<http://www.berryhilldrip.com/>

Darron Bryant Irrigation

Drip Irrigation supplier.
<http://www.dripirrigationonline.com/>

GRA-MAC Irrigation

2310 NC Hwy 801 N, Farmington, Mocksville NC 27028
(336) 998-3232 toll free in North Carolina 1-800-422-3560 Fax 336-998-3111
GRA-MAC specializes in the sale, design and installation of irrigation equipment for agricultural facilities.
email: gramacirr@yadtel.com

SUPPLIES: IRRIGATION DESIGN & INSTALLATION (CONT)

Darron Bryant or David Hiers,
Valdosta, Georgia 31605
(912) 241-0994
email: rainbydesign@webtv.net
<http://www.angelfire.com/ri/rainbydesign>

Johnson & Company, Inc.
Highway 801 South, P.O. Box 122, Advance, NC 27006
(910) 998-5621 or (800) 222-2691 Fax (910) 998-9833

SUPPLIES: PESTICIDES

Helena Chemical Company
P.O. Box 480, 120 Settle Road, Inman, SC 29349-0480
(803) 472-2017

Southern Agricultural Insecticides, Inc.
P.O. Box 85, Boone, NC 28607
(704) 264-8843

Southern Agricultural Insecticides, Inc.
P.O. Box 429, Hendersonville, NC 28793
(704) 692-2233

SUPPLIES: PNEUMATIC PRUNING SHEAR

Lake View Vineyards
3878 State Route 14, Himrod, NY 14842-9794
(607) 243-7568 Fax (607) 243-5251

SUPPLIES: SAFETY

Gempler's Inc.
P.O. Box 270, Mt. Horeb, WI 53572
(608) 437-4883

U.S. Aid
P.O. Box 669306, Charlotte, NC 28266
(704) 357-1717 Fax (704) 357-1528

Agrotec, Inc.

Highway 35 North, P.O. Box 49, Pendleton, NC 27862-0049
(800) 638-9363

Leinbachs, Inc.

4995 Reynolda Road, PO Box 11786, Winston-Salem, NC 27116-1786
(910) 924-6933 FAX: (910) 924-6847 (800) 334-6119

Specialty Ag. Equipment

344 E. Dinuba Ave, Reedley, CA 93654
(209) 638-3631 Fax: (209) 638-4710
<http://www.speciatlyag.com>

Spectrum Electrostatic Sprayers (Canada) Inc.

Ste:126-100-1039-17 Ave SW, Calgary, Alberta, Canada, T2T-0B2
(403) 235-6876 Fax (403) 235-6983
<http://www.spectrumsprayers.com/>

Spray-Air, USA, Inc.

PO Box 37, Grangeville, Idaho 83530
(208) 983-2002 FAX (208) 983-1103

ESS, Electrostatic Spraying Systems, Inc.

PO Box 151, Watkinsville, GA 30605
(706) 769-0025
email: cooper@maxcharge.com
www.maxcharge.com

ESS Manufactures air-assisted electrostatic sprayers for vineyard, vegetable crops, and nurseries.

A.M. Leonard, Inc.

241 Fox Drive, P.O. Box 816, Piqua, Ohio 45356-0816
(800) 543-8955 Fax: (800) 433-0633

CAL-PAC

Specializing in Trellis and Shade Structures
P.O. Box 25848, Fresno, CA 93729-5848,
(209) 435-5893 Fax: (209) 435 3253
www.cal-pac.com

Central Elastic Corp. SDN Berhad

UV-Resistant Rubber Band

(604) 390-6212 Fax: 604-3908052

e-mail: central@po.jaring.my

<http://www.cec.com.my/>

E.C. Geiger, Inc.

Route 63, Box 285, Harleysville, PA 19438

(800) 443-4437 Fax: (800) 432-9434

Forestry Suppliers, Inc.

205 West Rankin Street, P.O. Box 8397, Jackson, Mississippi 39284-8397

(601) 355-5126

Gentrees

395 Pisgah Highway, Candler, NC 28715

(704) 665-1514

Jim's Supply Company, Inc.

Bakersfield, CA

(800) 423-8016,

Also carry fencing for animal and erosion control.

<http://www.jimssupply.com/>

Minute-Man Products, Inc.

305 West King Street, East Flat Rock, NC 28726

(800) 438-7277 Fax: (704) 692-0258

The Growers Supply Center

2415 Harford Road, Fallston, MD 21047

(410) 931-3111

Orchard Valley Supply

734 Main Street, Fawn Grove, PA 17321

(717) 382-4612

email: ovs4grapes@juno.com

SPEC

39 Indian Dr., Ivyland, Pa 18974

(215) 322-5588 (800) 237-4594 (outside Pa) Fax: (215) 357-3122

email: wire@spechardware.com

<http://www.spechardware.com/>

Factory direct dealer of hi-tensile smooth and crimped vineyard/fence/orchard wire. All wire and staple inquires welcome.

BrewBetter Supply Inc.

10207 C Chapel Hill Road, Morrisville, NC 27560
 (919) 467-8934 Fax: (919) 467-8954
 email: brewbetter@aol.com

Presque Isle Wine Cellars

9440 Buffalo Raod (US Rt 20), North East, PA 16428
 (814) 725-1314 (800) 488-7492

Wine-Art Winemaker's Supply Store

<http://www.wine-art.com/store>

NURSERIES

KEY TO VARIETIES

"H" denotes hybrid varieties

"T" denotes seedless table varieties

"A" denotes native American varieties

"R" denotes rootstocks

"V" denotes vinifera varieties

American Nursery (V,H,R) (703) 948-5064
 Rt. 1 Box 87B1, Madison, VA 22727

Arkansas Berry & Plant Farm (A,H,T) (501) 634-7120
 22339 N. Hwy 71 Winslow, AR 72959
 email: ArBerryFarm@prodigy.net
<http://www.alcasoft.com/arkansas>

Asgard Vineyards (A,H,V) (336) 835-6736
 106 Johnny Couch Road, Elkin, NC 28621

Bien Nacido Vineyards (V) CA (805) 969-5803

Blossomberry Nursery (T) (501) 754-6489
 Rt. 2 Box 158A, Clarksville, AR 72830

Boordy Nursery (H) (410) 823-4624
 Box 38 - 7812 Ruxwood Rd., Riderwood, MD 21139

California Grapevine Nursery, Inc. (V) CA (800) 344-5688

Casa Cristal Nursery (V) CA (805) 792-3151

KEY TO VARIETIES

"H" denotes hybrid varieties

"T" denotes seedless table varieties

"A" denotes native American varieties

"R" denotes rootstocks

"V" denotes vinifera varieties

Congdon & Weller Wholesale Nursery (A,T) (716) 337-0171
Mile Block Rd., North Collins, NY 14111,

Concord Nurseries, Inc. (A,V,H,T) (800) 223-2211, (716) 337-2485
10175 Mile Block Rd., North Collins, NY 14111-9770

Double A Vineyards (A,V,H,T) (716) 672-8493
10275 Christy Rd., Fredonia, NY 14063

Duarte Nursery, Inc. (V) CA (209) 531-0351

Evergreen Vineyard & Nursery, Inc. (V, H) (314) 390-2301 Fax: (314) 390-2332
17 Southwinds Circle, Suite 7, Washington, MO 63090
email: vineyard@usmo.com
Full service vineyard management. Complete design, layout, and vineyard maintenance.
Custom grapevine orders to your specifications.

Euro Nursery & Vineyards, Inc. (V) ONT Canada (905) 562-3312

Foster Grapevines (H) NY (800) 223-2211

Foundation Plant Material Service (A,V,H,T,R) (916) 752-3590
University of California, Davis, CA 95616

Ge-No's Nursery (V) CA (209) 674-4752
Will work with small orders

Grafted Grapevine Nursery (V,H) (315) 462-3288
2399 Wheat Rd., Clifton Springs, NY 14432,

International Viticultural Services Inc. (V,H) (905) 945-0719 Fax: (905) 945-6584
38 Murray Street, Grimsby Ontario, Canada L3M 3N8
email: Ischmidt@niagara.com

Dr. Konstantin Frank Nursery (V) (800) 320-0735, (607) 868-4884
9749 Middle Rd., Hammondsport, NY 14840

Lake Sylvia Vineland Nursery

13835 51st Avenue, South Haven, MN. 55382

Specializes in cold hardy grapes, particularly the grapes of Elmer Swenson and the U. of Minnesota; also offers own selections, including some excellent new wine grapes.

KEY TO VARIETIES

"H" denotes hybrid varieties

"T" denotes seedless table varieties

"A" denotes native American varieties

"R" denotes rootstocks

"V" denotes vinifera varieties

Madera Nursery (R) (707) 544-4000 Fax: (707) 544-4013
Kendall-Jackson Winery Ltd. 421 Aviation Blvd. Santa Rosa, CA 95403

Miller Nurseries (A,H) (800) 836-9630

Mori Nurseries, Ltd. (V,R)(905) 468-3218
RR 2, Niagara on the Lake, ONT LOS IJO Canada

Omega Virginia Grapevine Nursery (V) VA (703) 547-3707

Pense Nursery (A,H,T) (501) 369-2494
16518 Marie Lane, Mountainburg, AR 72946, Ph/fax
email: ppense@cei.net
<http://www.alcasoft.com/pense>

Plaisance Viticulture (V) (541) 846-7175
Williams, Oregon
email: joeginet@echoweb.net
Oregon Certified grafting and propagation

Premium Grape Shippers (V) CA (707) 545-2310

Carl Remkus Nursery (A,H,R) (216) 354-8817
858 Bank St., Painesville, OH 44077

R.A. Ripken Grape Nursery, Inc. (V) CA (209) 369-5961

Ripley County Farms, Harrison Wells (A,H) (573) 996-3449
P.O. Box 614, Doniphan, MO 63935
email: rcf@semo.net

Lon J. Rombough, B.S., M.S., ATM. (503) 678-1410
P. O. Box 365, Aurora, Oregon, 97002-0365, U.S.A.,
email: lonrom@hevanet.com
<http://www.hevanet.com/lonrom>

Sonoma Grapevines, Inc. (V,H) (707) 542-5510
1919 Dennis Lane, Santa Rosa, CA 95403
<http://www.sonomagrape.com/>

KEY TO VARIETIES

"H" denotes hybrid varieties

"T" denotes seedless table varieties

"A" denotes native American varieties

"R" denotes rootstocks

"V" denotes vinifera varieties

Stark Brothers (800) 325-4180
Has seedless hybrids

Sterling Nursery (805) 725-1832 Fax: (805) 725-4190
PO Box 1987, Delano, CA 93216
email: matt@sterlingnursery.com
<http://www.sterlingnursery.com/>

Sunridge Nursery (V,R) (805) 363-8463
441 Vineland Rd., Bakersfield, CA 93307

University of Texas Lands (V) (915) 684-4404
PO Box 553, Midland, TX 79702

Vinifera, Inc. (V) OR (503) 634-2128

Vintage Nurseries (V,T,R) (800) 499-9019 Fax: (805) 758-4999
550 Highway 46, Wasco, CA 93280,
Grafted and own rooted plants, both dormant and greenvines, informed rootstock guide to assist growers in determining rootstock needs.

Walter S. Voltz Vinifera Vineyard and Nursery (V) (607) 776-2270
109 Gibson St., Bath, NY 14810

Herman J. Wiemer Vineyard, Inc. (V) (607) 243-7971
Rt.14 Box 38, Dundee, NY 14837

Womack's Nursery (817) 893-6497
Rt 1, Box 80, De Leon, TX 76444-9660

Bottoms Nursery (770) 884-5661
Edward Bottom, Rt. 1 Box 281, Concord, GA 30206,

Classical Fruits (205) 974-8813
8831 Al HWY. 157, Moulton, AL 35650

George Sturgis Nursery Georgia (912) 763-2207

Greenleaf Farm (919) 365-6348
John Earp, 4295 Lake Wendell Rd., Wendell, NC 27591

Ison's Nursery & Vineyards (770) 599-6970
Brooks, Georgia 30205 (ask for color catalog)

Johnson Nursery (888) 276-3187
Rt 5, Box 29-J, Ellijay, GA 30540,

L. Gore
1705 Mill Br. Church Road, Tabor City, NC 28463
(Carlos, Noble, Dixie, Thomas, Magnolia, Summit, 3/\$10)

Tinga Nursery (910) 762-1975
2918 Castle Hayne Road, Castle Hayne, NC 28429,
Carlos, Catawba, Concord Doreen, Magnolia, Nesbitt, Niagra, Noble, Tara, Tarheel and Tri-
umph
email: tinnur1913@aol.com

“Carolina Wine Country: The Complete Guide” by Pamela Watson is a complete listing of vineyards and wineries, local attractions, B&B’s, people and history of the North Carolina grape and wine industry. It is available for \$14.95 from Woodhaven Publishing, 104 Woodhaven Ct. Greenville NC 27834, toll free 1-877-353-2800 or www.NCBooks.com.

Cox. **“From Vines to Wines”**, Provides some general info on vine selection for different climates, winemaking procedures, and some references of its own.

Munson, T.V., **“Foundations of American Grape Culture”**, 1909. Available as a hardcover reprint from The Denison Public Library, 300 West Gandy St., Denison, TX. 75020. Phone 903 465-1797 Book is about \$18.50, plus postage.

One of the best references around for American grapes and species; the techniques in the book are still very valid. Munson was the man who laid the foundations of all modern viticultural techniques.

Shoemaker, James S., **“Small Fruit Culture”**, Connecticut: AVI Publishing Company, Inc., 1978, pp. 1-102.

Smart, Richard & Mike Robinson, **“Sunlight Into Wine: A Handbook for Winegrape Canopy Management”**, Wine titles (1991). Available through Practical Winery & Vineyard (see magazines listed below) 1992- \$35.00 + S/H

Weaver, Robert J., **“Grape Growing”**, New York: John Wiley & Sons, Inc., (1976). Available through Practical Winery & Vineyard (see magazines listed below) 1992 - \$42.95 + S/H

Winkler, A.J., J.A. Cook, W.M. Kliewer, and L.A. Lider, **“General Viticulture”**, Berkeley, CA: University of California (1974). Available through Practical Winery & Vineyard (see magazines listed below) 1992 - \$42.50 + S/H

REFERENCES: OTHER USEFUL PUBLICATIONS

Compendium of Grape Diseases

The American Phytopathological Society
3340 Pilot Knob Road, St. Paul, MN 55121
Edited by R.C. Pearson and A.C. Goheen, 1988;
121 pages; 188 color photographs; 30 black and white photographs and illustrations
ISBN 0-89054-088-8, Item No. 40888, \$37

Grape Pest Management (Pub. No. 4105)

Grapevine Nutrition and Fertilization in the San Joaquin Valley (Pub. No. 4087)
Division of Agricultural Sciences, University of California, Berkeley, CA 94720

Oregon Winegrape Grower's Guide (1992 - \$29.95 + S/H)

Vineyard & Winery Management

Box 231, Watkins Glen, NY 14891-9989

Pest Management Guide for Horticultural & Forest Crops

(Publication No. 456-017)
Extension Distribution Center
112 Landsdowne Street, Blacksburg, VA 24060

1996 Pest Management Recommendations for Grapes (revision issued annually)

Catalog of Extension Publications (Free)
Distribution Center
7 Business and Technology Park, Cornell University, Ithaca, NY 14850

Rootstock Seminar: A Worldwide Perspective (1992 - \$40.00)

Vineyard Pest Management: Alternatives for the Future (1992-\$15.00)

Proceedings of the International Symposium on Nitrogen in Grapes and Wine (1991-\$50.00)

Alternative Rootstock Update (1991-\$5.00)

American Society for Enology and Viticulture
P.O. Box 1855
Davis, CA 95616-1855

Winemaking from Grape Growing to Marketplace

By Vine, Harkness, Browning, Wagner
1997, Chapman & Hall Enology Library
Hardback, 6 x 9, 464 pp, \$59.95
115 Fifth Avenue, NY, NY 10003
1-800-842-3636
email: order@chaphall.com

The Maryland Grapevine (\$15)

Maryland Grape Growers Association
1116 E. Deep Run Road, Westminster, MD 21158
(410) 848-7577

Vineyard & Vintage View (no charge)

Department of Fruit Science
Southwest Missouri State University
Research Campus, Mountain Grove, MO 65711-9252

Vineyard & Winery Information Series (\$10.00)

Winchester Agricultural Research and Extension Center
595 Laurel Grove Road, Winchester, VA 22606

Finger Lakes Vineyard Notes (\$60)

Cornell Cooperative Extension
Roberts Hall, Cornell University, Ithaca, NY 14853

The Maryland Grapevine (\$15)

Maryland Grape Growers Association
1116 E. Deep Run Road, Westminster, MD 21158
(410) 848-7577

Vineyard & Vintage View (no charge)

Department of Fruit Science
Southwest Missouri State University
Research Campus, Mountain Grove, MO 65711-9252

Vineyard & Winery Information Series (\$10.00)

Winchester Agricultural Research and Extension Center
595 Laurel Grove Road, Winchester, VA 22606

Finger Lakes Vineyard Notes (\$60)

Cornell Cooperative Extension
Roberts Hall, Cornell University, Ithaca, NY 14853

Illinois Grape and Wine Resources Council Consultants:

For Vineyard and Grape Growing Information:

Imed Dami, State Viticulturist
 Plant and Soil Science Department
 College of Agriculture Mailcode 4417
 Southern Illinois University, Carbondale, IL 62901-4417
 (618) 453-1782 Fax: (618)453-7457
 email: imeddami@siu.edu

For Winery and Wine Making Information:

Stephen Menke, State Enologist
 Food Science and Human Nutrition
 College of ACES (Agricultural, Consumer, and Environmental Science)
 University of Illinois at Urbana-Champaign
 1304 W. Pennsylvania Avenue, Urbana, IL 61801
 (217) 244-9222, (217) 898-9624 (cell phone), Fax: (217) 333-9329
 email: menke@uiuc.edu

For General Council/Industry Information:

Rhonda Vinson, Interim Executive Director
 Illinois Grape and Wine Resources Council
 College of Agriculture Mailcode 4416
 Southern Illinois University, Carbondale, IL 62901-4416
 (618) 453-4041 Fax: (618) 453-8428 email: rvinson@siu.edu

Other Vineyard Consultants:

Midwest Vineyard Supply, P. O. Box 428, Mulkeytown, IL 62865
 (618) 724-9074 Fax: (618) 724-2365 email: midvine2@midwest.net
 www.midwestvineyardsupply.com

Javier Calderon, Route 3, Box 295, Dobson, NC 27017, (336) 366-2816

David Lucas, The Lucas Winery & Vineyards, 18196 N. Davis Dr. Lodi, CA, 95240, (209) 368-2006

Stephen Lyons, Design & Construction Consulting, 3808 Rockford Rd., Boonville, NC 27011, Office phone: (336) 367-7345 Cell phone: (336) 830-91638

Lloyd Schmidt, International Viticultural Services Inc., 38 Murray Street, Grimsby Ontario, Canada L3M 3N8, (905) 945-0719 Fax: (905) 945-6584
 email: lschmidt@niagara.com

Jeanette Smith, Vinesmith, 7 Frye Court, Lovettsville, VA 20180, (540) 822-5976