



Vines to Wines
Should You Be Growing Grapes?
Pros, Cons, and Site Selection

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Pros:

- 1. Michigan has excellent sites for quality wine grape production.**
- 2. Approximately 3,050 acres of wine grapes planted.**
- 3. Michigan is 5th in wine production in the US.**
- 4. The Michigan Grape and Wine Industry Council has set a goal of 10,000 acres of wine grapes by 2024.**
- 5. Consumption of Michigan wine has increased from only 1.5% of the wine drunk in Michigan to 5.2%.**
- 6. Even in this economy, wine sales in the US have increased.**
- 7. The number of wineries in Michigan have increased to 146.**

Important Steps to take before planting a vineyard

- What do you need to learn?
- What are your objectives?
- What is your business plan?
- How much does it cost?
- How much time and money will it cost to break even?
- How will you market the grapes?
- What are the regulatory issues?
- Where will you plant?
- What will you plant?
- How will you plant?

What do you need to learn?



What are your objectives?

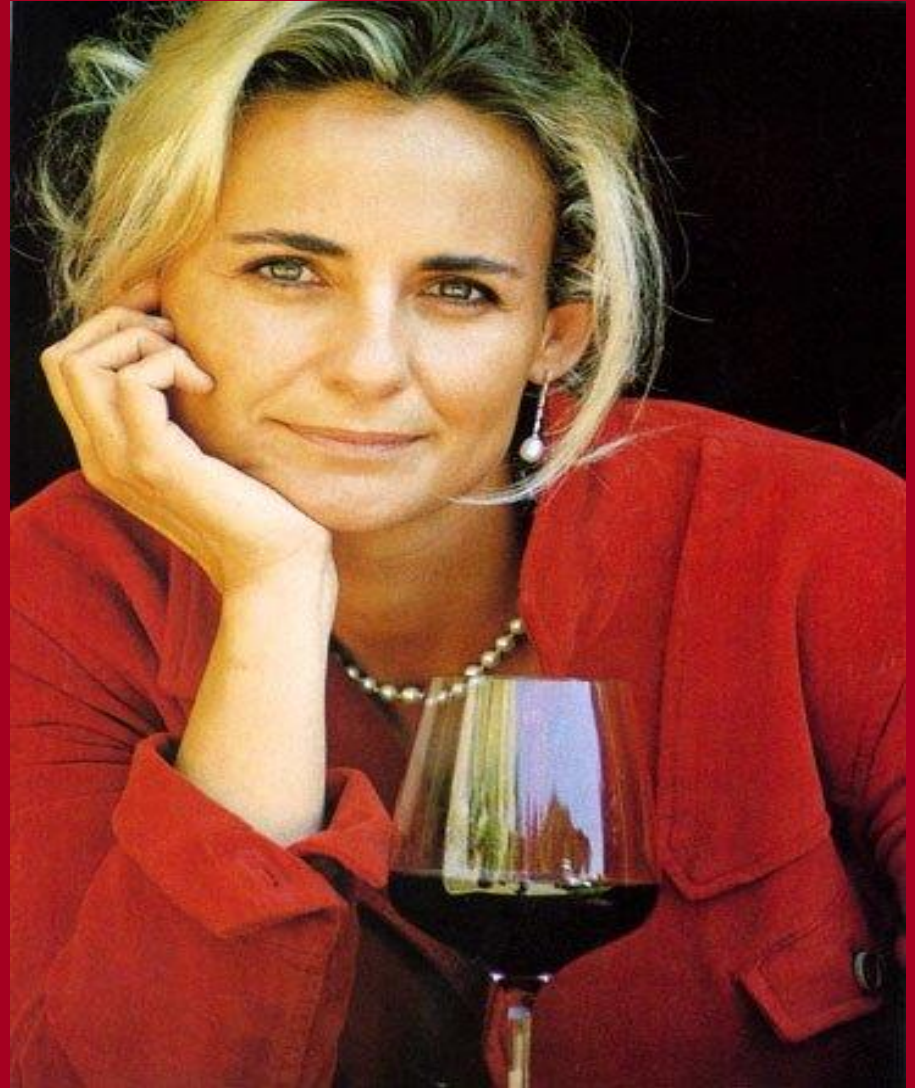


(c) 2007 Villa Milagro Vineyards

What is your business plan?

Creating a business plan is the first step in starting a successful vineyard.

There are very good on line business plan workbooks.



How much does it cost to start a vineyard?

Vineyard Establishment Costs Year 0 & 1

• Site Prep	Yr. 0	\$1,527	• Operating interest	217
• Vineyard layout		141	• Dormant pruning	43
• Plants/planting		3,291	• Irrigation (annualized)	171
• Trellis		2,396	• Deer fence(annualized)	39
• Weed control		74	• Equipement(fixed cost)	3,644
• Fertilization		35	• Total	\$11,925
• Canopy Mgmt.		88		
• Disease control		206		
• Mowing		53		

Usually establishment costs
Between \$10,000 -\$15,000/A

There is the issue of TIME

**Growing grapes is labor intensive: Pruning, Spraying,
Harvesting, Mowing, Fertilizing**

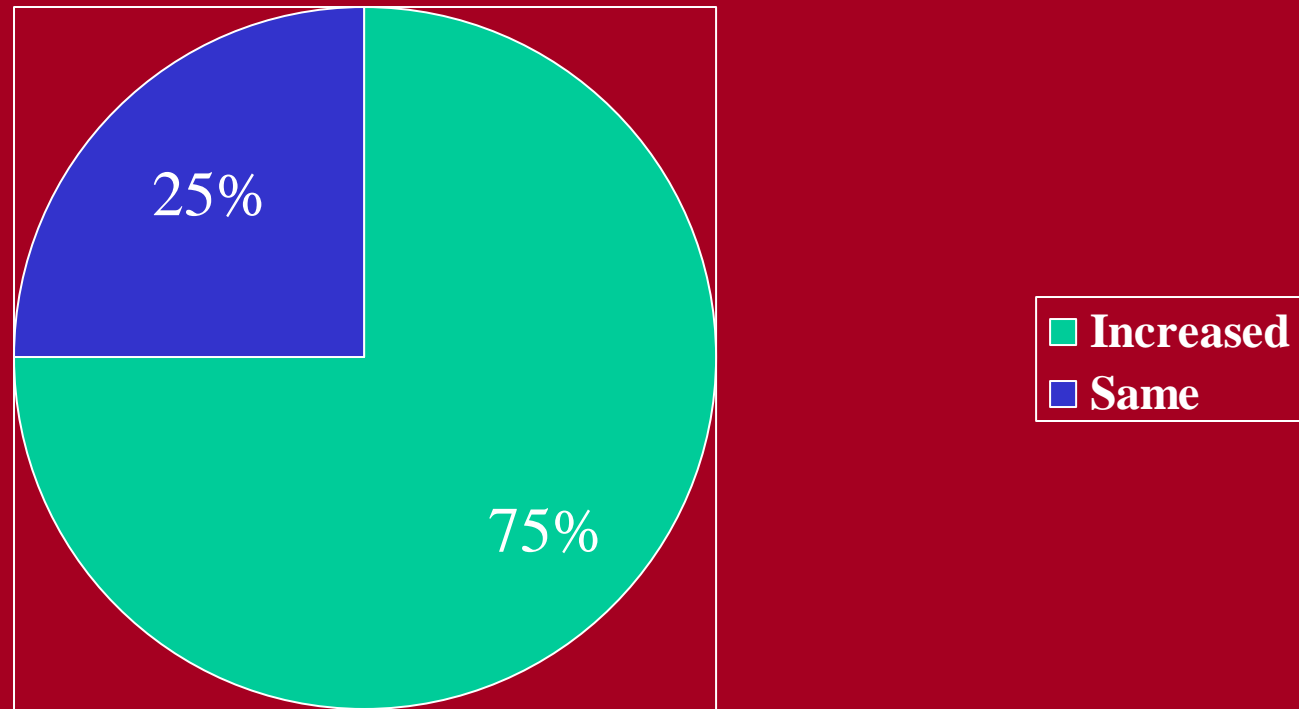
How long until you break even?

First crop in year three,

Break even is usually in year 8

How will you market the grapes you grow?

Has your production increased or decreased in the past 5 years?



Source: NJ Agric.
Statistics Service

What are the regulatory issues?



Consult:


State Dept. of Agriculture

Local Cooperative Extension

Natural Resource Conservation Service

District Conservationist (USDA)

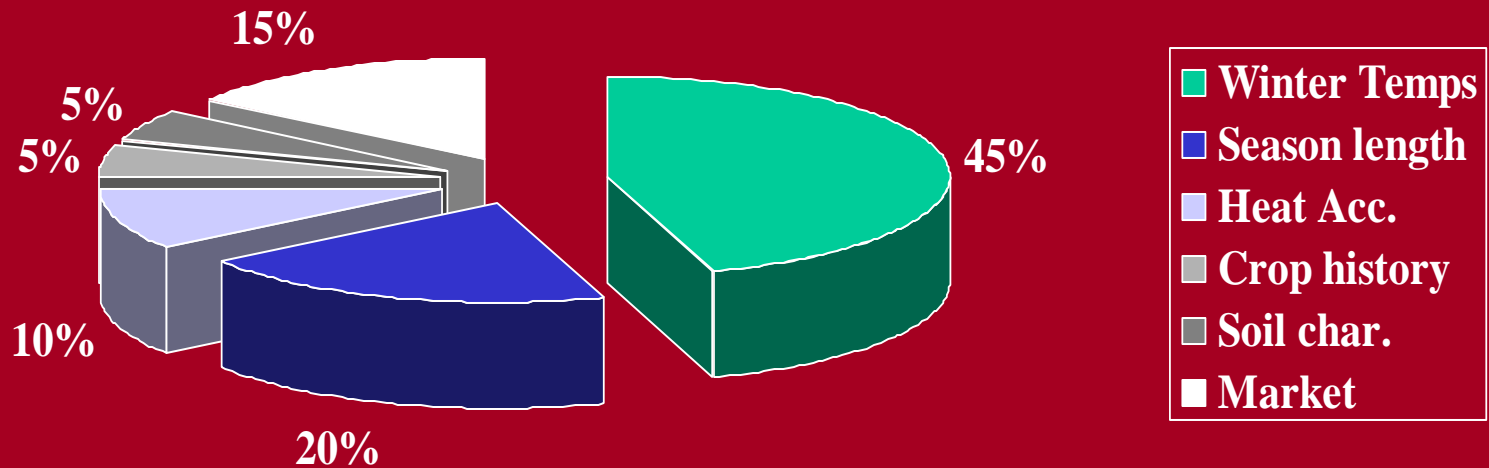
Local Zoning Board



Where will you plant?
What will you plant?

“I have a piece of land and I want to grow Merlot”

Criteria for Site Selection



1,800 to 2,500 GDD = American varieties, French Hybrids

2,500 to 3,500 GDD = *Vitis vinifera*, French Hybrids

What's driving grape planting?

Prices by Category

- Prices (\$) per ton offered by wineries for different categories of grapes in 2017.

• Type	T/A	Avg.	High	Low
• Native grapes	6-8	289	353	216
• Red hybrids	3-6	628	912	457
• White hybrids	3-6	541	850	454
• Red vinifera	3-5	1460	2557	1300
• White vinifera	3-5	1327	1859	1143

Criteria for Selecting The Grape Variety

- Winter Temps
- Season Length
- Disease Resistance
- Soil Characteristics
- Marketability



Hardiness and Fruit Maturity for Various Red Grape Varieties

Variety	Hardiness (7-Hardy)	Fruit Maturity	Variety	Hardiness (7-Hardy)	Fruit Maturity
Concorde	6	Mid-late	L. Millot	5	Early
Baco	3	Early	V. Noir	3	Late
Chamb.	3	Late-mid	P. Noir	2	Mid-late
Chan.	5	Mid	Cab. F.	3	Mid-late
DeChau	5	Mid	Cab. S.	2	Late-mid
Foch	6	V. early	Merlot	1	Mid-late

Critical Soil Tests

- pH
- Soil Type
- OM
- Fertility
- Depth of water table
- Nematodes

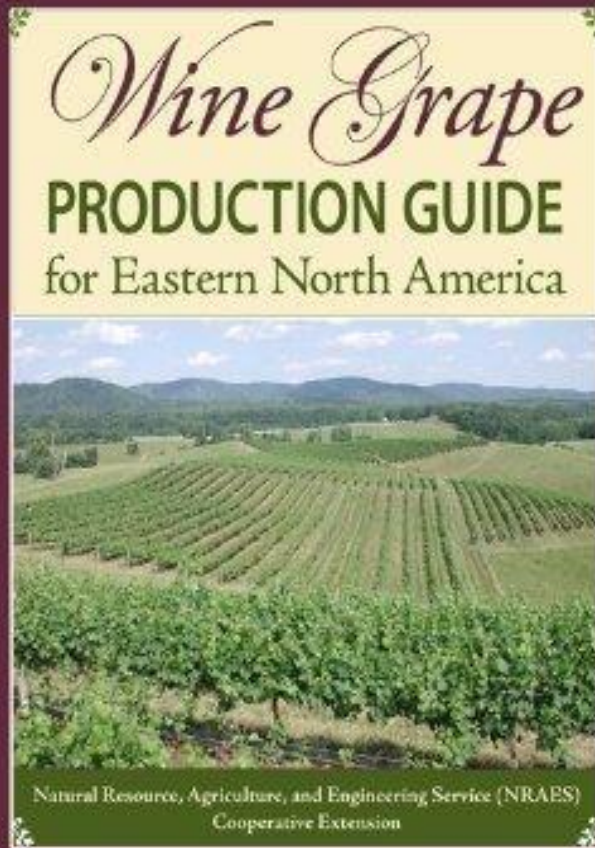




An aerial photograph of a vineyard. The rows of grapevines are arranged in a grid pattern on a hillside. The vines are lush green, and the rows are separated by narrow paths. A single, large, dark green tree stands prominently in the center of the vineyard. The lighting is bright, creating strong shadows between the rows of vines.

How will you plant?

There are many resources



Excellent
Information Resource



There must be Cons



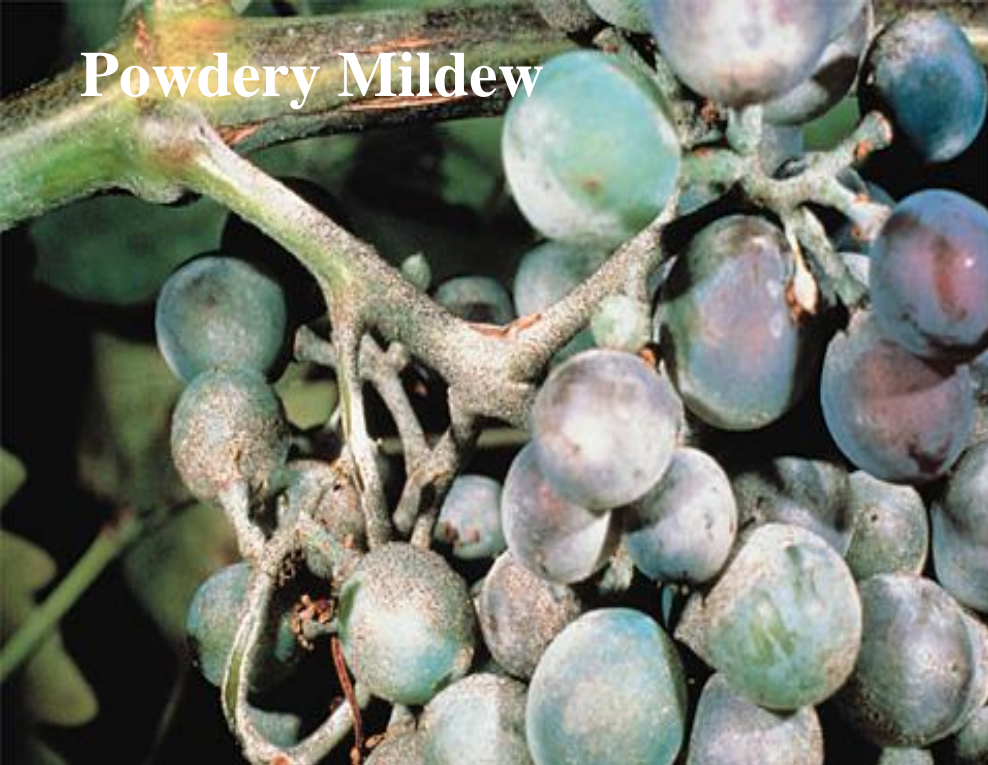
Organic? Probably Not!



Diseases!!!



Powdery Mildew



Downy Mildew



Botrytis



Black Rot



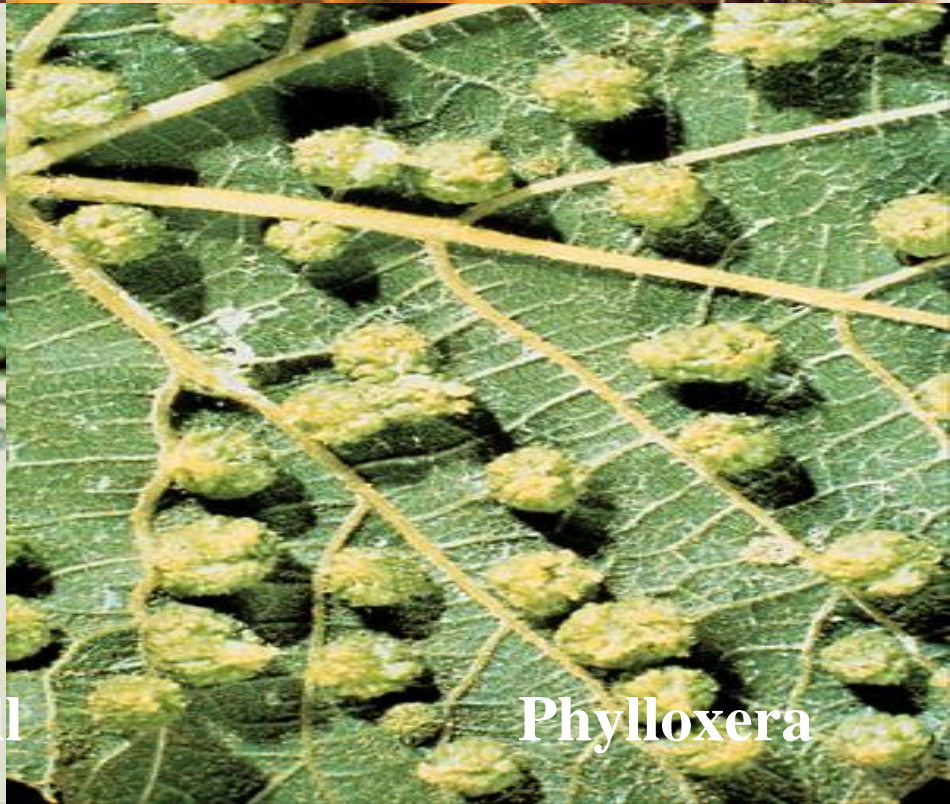
Blue Mold



Ripe Rot



Crown Gall




Phylloxera

**Of course, you have to make wine,
preferably it should be drinkable.**



My Favorite Quotes:

- I'm going to go organic.
- I've got good soil, my garden is great.
- I make wine in my garage.
- My friends say that my wine is better than store bought wine.
- My field is only flooded after it rains.
- Do you know someone that could do the work?

An aerial photograph of a vast vineyard in Michigan during sunrise. The rows of grapevines stretch across the landscape, with the sun low on the horizon, creating a hazy, golden glow over the trees in the background.

Take home message: The wine industry in Michigan is viable and growing but it is still the business of farming and there are pros and cons to be dealt with. Do your homework!

If you are still interested, contact me at:
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Cooperative Extension

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Dan Ward, Specialist in Pomology

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Gary Pavlis, Agricultural and Resource Management Agent, Atlantic County

This document provides guidance and suggests resources to a person thinking of starting a vineyard, so that they may develop a preliminary plan. Good planning is crucial in starting a successful viticulture operation.

What do you need to learn?

Assessing your own level of knowledge and taking steps to educate yourself in areas where you are lacking is a critical activity. If you are experienced in commercial fruit production, you may understand many of the relevant issues, but still need to learn how to manage grapes as a crop, as well as market the fruit. If you have little or no experience in production agriculture you may also need to learn about regulatory issues, labor issues, marketing, and crop management.

Your Rutgers Cooperative Extension professional in the county where your vineyard is to be established may be able to direct you to many resources to assist in the planning of your vineyard, njaes.rutgers.edu/county/.

The New Jersey Department of Agriculture (NJDA), State Agriculture Development Committee (SADC) provides a website, *Resources for New and Aspiring Farmers* (nj.gov/agriculture/sadc/farmlink/resources/newfarmers.html), which has links to information to help those who are new to farming get off to a successful start.

What are your objectives?

Why do you want to grow grapes?

Before you decide to grow grapes, you have to consider why you are planting them. Will you grow for your own personal use? Do you plan to start a vineyard to sell grapes to wineries? Do you want to grow grapes for your own winery? These questions need to be answered before coming up with a business plan for your endeavor.

What are your Farm and Family Goals?

Planting a vineyard is a long-term commitment and setting reasonable goals for yourself and your family is necessary to be a successful grower. Having set goals for yourself helps you, as a grower, to better plan for the future of your vineyard.

Should you plant grapes?

This is one of the most important questions to consider before deciding to start a vineyard. Many factors determine whether planting a vineyard is a good or bad idea for you. For what purpose will you use your grapes? Is there a market for your product? Is the site or sites you are considering acceptable to grow grapes? Is your plan to eventually operate your own winery at your vineyard site to use your grape production? Considering these answers, is planting in your region profitable and economically feasible?





Planning to Start a Vineyard in New Jersey

Fact Sheet FS1206



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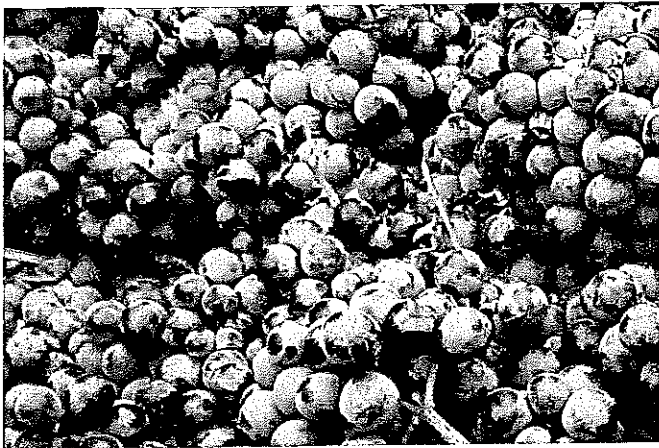
What is your business plan?

Creating a business plan is the first step in starting a successful vineyard. The link below is a helpful guide for preparing your own vineyard business plan.

Vineyard Business Plan Workbook (www.illinois.gov/dceo/SmallBizAssistance/BeginHere/Documents/Winery2008.pdf) – This Illinois-based business plan workbook can be used as an outline for the business plan of any vineyard. It contains references to useful books, publications and information on vineyard supplies.

How much does it cost to start a vineyard?

Before deciding to plant a vineyard, you must think about how much the start up and operating costs will be. The sources below are useful tools in estimating specific vineyard costs; however, establishment generally costs in the range of \$10,000-\$15,000/acre.



Wine Grape Production Guide for Eastern North America (NRAES-145) (palspublishing.cals.cornell.edu/nra_order.taf?function=detail&pr_id=178&UserReference=0E03A) – This production guide is the best single reference for grape growers in the East. Authors from throughout the region contributed to this edited volume. The first chapter, "Costs and Economic Returns of Vineyard Establishment and Operation" should be read carefully and early in their learning by anyone considering starting a vineyard or winery in New Jersey. *Wine Grape Production Guide for Eastern North America* is being sold by Cornell PALS Publishing (formerly NRAES); also, Virginia Vineyards Association, Amazon, and others.

A Penn State fact sheet for new or experienced farmers is the Agricultural Alternative enterprises sheet for grapes, with corresponding budget (extension.psu.edu/wine-grape-production).

How much time and money will it take to break even and make a profit?

Starting a vineyard is a time and money-consuming endeavor. It may take years before it starts yielding a profit so considering how much money you can afford to invest in those beginning years is important in determining if planting a vineyard is right for you.

In addition to the years required for the vines to become profitable, the hours of labor required to achieve this end must be considered. Growing grapes is labor intensive! How the labor requirement for vineyard establishment, maintenance, and management will be met is a huge component of vineyard plan.

How will you market and utilize the grapes?

Identifying markets for your product is one of the most important factors for new growers. Before you grow the grapes, you need to know if you will be able to sell them. Is there a market for your fresh grapes? Is it profitable to sell your grapes in that market? Should you process the grapes and make juice or wine to market? Will customers come to your vineyard to pick grapes? If you are able to make wine, will it sell? Will you need to operate an ancillary agritourism business to help market your fresh grapes or processed product?

What are the regulatory issues that will be important?

There are many regulatory issues to consider when starting a new vineyard. The link, Resources for New and Aspiring Farmers, provided in the first section contains very useful information regarding regulatory issues as well as lists of agricultural contacts that can provide assistance and answers to grower's questions.

Regulatory issues are also covered in many factsheets and bulletins on the Rutgers NJAES website (njaes.rutgers.edu/pubs/category.asp?cat=4).

Pesticide Control Program website (www.state.nj.us/dep/enforcement/pcp) – Provides information regarding pesticide regulations and obtaining the proper licensing.

A vineyard may not be established in wetlands and must be approved in other protected areas (e.g. the Pinelands). Your District Conservationist with the United States Department of Agriculture (USDA)

Natural Resource Conservation Service (NRCS) Conservation District, and your local Rutgers Cooperative Extension professional may be helpful in assisting you with soil surveys, water, soil, irrigation, wetland delineations, and Pineland and Highland issues.

Where will you plant?

Site selection is crucial to grape growing success. There are climatic, soil, land use, and proximity factors to consider in evaluating a potential grape growing site.

New Jersey Center for Wine Grape Research and Education (njvines.rutgers.edu) – This website has links to facts regarding New Jersey winegrape production and interactive grape site suitability maps for the state of New Jersey.

The Basics of Vineyard Site Evaluation and Selection (arcsrver2.iagt.org/vll/learnmore.aspx) – This Cornell and Cayuga Community College website presents a “concise overview of vineyard site selection.”

Web Soil Survey (websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx) – This national web soil survey allows access to interactive maps that provide information about the soil for a selected area of interest.

Most productive vineyards in New Jersey benefit from supplemental moisture via irrigation during establishment years and periods of drought stress. Depending upon the acreage and water use, irrigating grapes may require approval and certification from the state of New Jersey.

What will you plant?

Based on the vineyard site that has been selected, the grower needs to decide which varieties are most suitable for that site based on varietal and rootstock strengths, weaknesses and marketability. The following sources provide information on some of the varieties best suited for the Mid-Atlantic region.

Commercial Grape Varieties of Virginia (www.pubs.ext.vt.edu/463/463-019/463-019_pdf.pdf) – This publication provides a thorough description of many of the commercial grape varieties suitable for Virginia and other Mid-Atlantic states.

Wine and Juice Grape Varieties for Cool Climates (www.hort.cornell.edu/reisch/grapegenetics/bulletin/wine) – This Cornell website describes in detail the many American, hybrid, and European grapes varieties that are suitable for cool climate growing regions.

The market will also determine what varieties you plant. Visit grape marketing operations and wineries to see what they are growing and selling. The Garden State Wine Growers (www.newjerseywines.com) has many New Jersey wineries as members. Talking to local growers and those marketing may give you valuable insight on market trends. The Outer Coastal Plain Vineyard Association (www.outercoastalplain.com) lists the vineyards in the Association all in New Jersey and provides statistics on varieties and acreage.

How will you plant?

Trellis selection and canopy management (ucanr.org/sites/intvit/files/24348.pdf) – This publication is a brief overview of the different trellising styles and the factors that influence the vineyard trellis design.

Iowa State University Extension and Outreach, Viticulture (www.extension.iastate.edu/viticulture)



Organic Certification and Production Guide (www.nj.gov/agriculture/divisions/md/prog/jerseyorganic.html) – Organic production is much more challenging than conventional grape production in New Jersey and has not been successful. The following web site gives potential organic growers all the information needed to certify their farm or vineyard as organic in NJ.

2016 Organic Production and IPM Guide for Grapes (ecommons.cornell.edu/handle/1813/42888)

How will you continue to learn?

After considering these questions and your goals, your next step may be to contact your local Rutgers Cooperative Extension office. They can put you on mail/e-mail lists for educational meetings, events, and newsletters that relate to grape production. Cooperative Extension has developed a national extension web site called *E-viticulture* (www.extension.org/pages/60308/growing-grapes-starting-a-vineyard), that aggregates education information on viticulture from across the United States in one easy to use location.

You can also visit the Rutgers NJAES Wine Grape Resource Center website (njvines.rutgers.edu) for more links and Rutgers publications (also listed above). One of the most important publications links on this site is the *Plant and Pest Advisory – Fruit/Wine grape newsletter* (plant-pest-advisory.rutgers.edu) to which you can subscribe.

The Garden State Wine Growers Association (newjerseywines.com) and the Outer Coastal Plain Vineyard Association (www.outercoastalplain.com) previously mentioned are active in developing the industry and attending their meetings can be very informative.

Subscribe to industry, trade, and Cooperative Extension newsletters.

The following sites contain other relevant information for vineyard beginners in NJ:

Wine Grape Information for Pennsylvania and the Region (www.pawinegrape.com/index.php?page=penn-state-viticulture-email-newsletter) – This newsletter by Mark Chien, Penn State University Viticulture Extension Educator, is an excellent source of current information for grape growers in the Mid-Atlantic - highly recommended.

Maryland Grapes and Fruit Page (extension.umd.edu/smallfruit) – University of Maryland Extension, Grapes and Fruit: Information and Resources for Commercial Grape & Fruit Growers.

Starting A Commercial Wine Grape Vineyard (ag.purdue.edu/hla/fruitveg/Documents/StartCommercialVineyard.pdf) – This fact sheet by Dr. Bruce Bordelon of Purdue University provides a summary of what it takes to start a vineyard from an Indiana viewpoint.

Oregon State University Extension Catalog, *Establishing a Vineyard in Oregon: A Quick-Start Resource Guide*, Revised September 2014 (catalog.extension.oregonstate.edu/em8973).

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