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Starting a Commercial Wine Grape Vineyard

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Are you thinking of starting your own vineyard? If so, you are not alone. Many new entrepreneurs are interested in growing grapes for profit. One reason for this interest is that the wine industry in the Midwest has experienced steady growth over the past eight years. Several new wineries have opened, but grape planting has not kept pace. Grapes are in short supply across the region and demand for high quality, premium wine grapes is strong. In addition to the good market opportunities, some people are attracted to grape growing because they like working outdoors, enjoy working with plants, and enjoy wine. Grapes are a good alternative crop to traditional agronomic crops especially on land that is marginal for cultivation.

What You'll Need

Whatever your reasons for thinking about starting a grape vineyard, there are a number of things you should know and resources you should have or be able to acquire. First, success in grape growing requires expertise in all phases of plant production, pest management, post harvest handling of fruit, and marketing. And, like all farming, growing grapes requires hard work and long hours. And don't forget the "business end." To make a success at grape growing you'll need to be able to handle employee management, financial management, and marketing. Finally, all business ventures - including grape growing - require a large capital investment to cover the cost of land, equipment, planting stock, supplies, and labor. How can you get started in grape growing? If you already have experience and a strong knowledge of plant culture, starting a new vineyard is a logical option. Purchasing an existing vineyard is not feasible at this time because of the lack of vineyards in the state. You'll need to obtain financing and you should consult your banker or lending agent about details. Some low interest loans may be available if you qualify as a first time farmer, small business, etc. If your experience is limited, you can gain valuable experience by working for a reputable grower. Many well-established growers can use seasonal help especially for pruning and harvesting. This experience is invaluable training for establishing your own vineyard. Deciding to start a vineyard is only the first of many decisions facing you. You'll also have to make objective decisions on all the factors affecting your venture. In short, you'll have to develop a business plan or prospectus. An organized business plan is really a road map to business success, a set of guidelines for operating your vineyard business. And your chance of successfully arranging financing from banks or other lending institutions will be greatly enhanced if you have an organized, comprehensive business plan.

Types of Vineyards

Most vineyards in the Midwest produce grapes for use as juice or wine. Wine grapes have the highest profitability and demand at the present time. There is also a limited opportunity for production of seedless table grapes for the fresh market, but the post harvest handling requirements, storage, and marketing are much more difficult than for wine grapes. Most vineyards market grapes directly to wineries as fresh fruit, but there are opportunities for processing the grapes into juice prior to sale.

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Selecting a Site

The key to success in a vineyard operation is consistent production of high quality grapes of a marketable cultivar, and the surest way to accomplish that is to choose the best site available. Site selection is probably the most important decision a grower will make, especially in the Midwest. There are three primary concerns in site selection. Minimum winter temperature, air movement, and soil drainage. Cold, harsh winters can result in severe cold injury, and freeze and frost injury can occur when fluctuating temperatures in late winter lead to deacclimation and early bud break. The hot, humid summers elevate disease pressure. Within this region, however, are many sites with potential to successfully grow grapes and many grape cultivars well adapted to the region. Selecting a good site will greatly increase the chances of successful production and choosing the best cultivars for each site will greatly increase the chance of consistently producing high quality grapes.

Soils

Grapes are adapted to a wide range of soil types, but perform best when they have healthy, well- developed root systems. Soil conditions favorable to root growth include good aeration, loose texture, moderate fertility, good internal and surface drainage, and adequate depth (30 to 40 inches). An ideal soil for grapes is a well-drained sandy loam soil. Soil drainage is the most important soil parameter for successful grape growing. Soils that are consistently wet probably have an impervious subsoil, high water table, or other drainage problem and should be avoided. Root growth is restricted on poorly drained soils, so plant growth and fruit yields are generally low, and vine survival is limited to a few years. Installation of drainage tile can greatly improve most sites for production of grapes and other fruit crop. It can be costly, however, and is not necessarily a substitute for well drained soils. The USDA Natural Resources Conservation Service can provide advice on dealing with drainage problems and has detailed maps of each county that are helpful in determining the suitability of soils for grape production.

Cultivar Selection

Grape cultivars are classified into one of three groups: American (Vitis labrusca), French- American Hybrids, and European (V. vinifera). American types and many French-American Hybrids grapes are suitable for production in the Midwest. The European cultivars generally lack the necessary cold hardiness for successful commercial production in the Midwest except on the very best sites. Some cultivars are capable of performing well on less than optimum sites while others require more demanding site conditions. Site selection is more critical for winter tender cultivars. Properly matching the cultivar to a site is the first step toward producing high quality grapes. There are dozens of cultivars available and the choice of which to grow can be difficult. Cultivar selection should be based on cultivar adaptation and market demand. Several plant characteristics influence cultivar adaptation including cold hardiness, disease resistance, phenology (bud break, harvest date), vigor, and productivity. The minimum temperature expected for an area often dictates cultivar selection. Very hardy cultivars are capable of withstanding -15 °F with little injury, while tender cultivars will suffer significant injury at temperatures slightly below zero. Date of harvest is also an important factor in cultivar selection. Marketability is a necessary characteristic of a cultivar if production is to be profitable. Market demand is determined by industry needs and can be an elusive feature. Knowledge of present and future trends can help determine market potential of specific cultivars. Some French hybrids have become standards for the wine industry in the Midwest and will likely remain in demand. Availability becomes a factor in determining the value of these cultivars. Many cultivars are adapted to the Midwest, but the search continues for the 'best' cultivar for each particular site and wine style. A new grower should give cultivar selection serious consideration during the planning of a vineyard. Good advice would be to find a market before planting any grapes. Find out what cultivar the wineries want and how much of it they can use. Plant based on the current demand and past performance of the cultivar.

Fruit Quality

Fruit quality is extremely important to the winemaker. In order to produce high quality fruit, you must be able to identify and control various grape diseases and insect pests. You must understand the parameters that dictate quality and you must be able to properly manage the crop to produce fruit with desirable quality and schedule harvest when fruit quality is at its highest. It's best to develop a close association with the winemaker and include them in crop management decisions. Bonuses are generally paid for fruit with increased quality.

Economics

Grape growing can be profitable if production is consistent and price and demand remain high. Variable costs (not including land and equipment expense) are about $8,000 over a three-year period to bring an acre of grapes into production. Once in production, an acre of grapes should cost about $1,500-$2,000 per year to manage and should bring gross returns of $2,500 to $5,000 annually. Annual returns depend on yield and price. Yield is related to suitability of the site, the cultivar, and the weather. Price is related to availability, demand, quality, and marketing expertise.

Labor Requirements

The number of employees needed to manage a vineyard will depend on the acreage. One person can handle most of the management for 3 to 5 acres, with help seasonally for pruning and harvest. For larger vineyards, help will be needed for most vineyard management tasks. The vineyard business is inherently a seasonal activity that makes it ideal for seasonal and part- time labor (e.g. migrant workers, students, retirees, etc.).

Where to Go for Help

The best approach to starting in grape growing is to acquire as much knowledge as possible about the grape and wine industry, business management, vineyard management, and marketing. Many resources are available to aid you in this process. Purdue University Extension and the Indiana Wine Grape Council have programs to help. Printed publications, web sites, one-on-one consultations, site visits, workshops, and conferences are all available educational opportunities. Starting a commercial vineyard is an exciting and challenging process. It can also be personally and financially rewarding if you take the time and make the effort to learn the business and develop a sound business plan. In other words, you'll be much more likely to achieve success in the vineyard business when you look before you leap.

Additional Resources

Print and on-line publications are available at the Purdue Fruit and Vegetable Connection website http://www.hort.purdue.edu/fruitveg/ ; the Purdue Wine Grape Action Team website: http://www.foodsci.purdue.edu/research/labs/enology/ and the Indiana Wine Grape Council website at http://www.indianawines.org

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