FLORIDA VITICULTURE PLAN

Viticulture Advisory Council

Biennial Report
November 14, 2023

FLORIDA VITICULTURE PLAN 2023-2024

I. INTRODUCTION:

Florida's natural resources include the climate and availability of suitable land to sustain viticulture operations. As the second largest wine consuming state in the nation, Florida has a distinct advantage in marketing wine. Annual wine tax revenues alone exceed $87 Million. Tourists, as well as new residents, create further market potential for grape products. Among Florida's resources, the processing and marketing capabilities developed to support the citrus industry are available in time sequence to process and market grape juice, preserves, and jelly. Weather, disease, and economic issues, which have adversely impacted citrus in Florida, have further increased the availability of land and processing facilities for use with grapes. Research conducted by Florida's universities has resulted in the development of adapted, disease-resistant grape cultivars, as well as methods to retain and improve the character and quality of Florida grape products.

Florida's rich history contains references to wine made by early settlers from native grapes before 1565. Later, efforts to grow non-native grapes failed for a number of reasons. Most constraints; however, for a successful viticulture industry have been or can reasonably be overcome. Because of the potential of this industry, Florida's legislature enacted the Viticulture Policy Act. This Act, codified in Chapter 599, Florida Statutes, declares that viticulture, the production and utilization of grapes, is an underdeveloped agricultural commodity enterprise in this state.

The Act, created within the Department of Agriculture and Consumer Services, a Viticulture Advisory Council (VAC) to consist of eight members representing all sectors of Florida's viticulture industry including representatives from Florida Agricultural and Mechanical University (FAMU)/Center for Viticulture and Small Fruit Research and the University of Florida(UF)/ Institute of Food and Agricultural Sciences (IFAS). As part of the declaration of public policy, the Act states that the primary responsibilities of the VAC are to submit to the Commissioner of Agriculture, annually, the industry's recommendations for viticultural research, promotion, and education, and biennially, the industry's recommendations for revisions to the State Viticulture Plan. This update reflects those responsibilities and satisfies the statutory requirement for revision and update of the Plan.

II. LEGISLATIVE AUTHORITY

Section 599.002 (3), Florida Statutes, states: The primary responsibilities of the VAC are to submit to the Commissioner of Agriculture, annually, the industry's recommendations for viticultural research, promotion and education and, as necessary, the industry's recommendations for revisions to the State Viticulture Plan.

Section 599.003, Florida Statutes, sets forth the State Viticulture Plan as follows:

(1) The Commissioner of Agriculture, in consultation with the VAC, shall develop and coordinate the implementation of the State Viticulture Plan, which shall identify problems and constraints of the viticultural industry, propose possible solutions to those problems, and develop planning mechanisms for the orderly growth of the industry, including:

(a) Criteria for viticultural research, service, and management priorities.
(b) Additional proposed legislation that may be required.
(c) Plans and goals to improve research and service capabilities at FAMU and the UF in their efforts to address current and future needs of the industry.
(d) The potential for viticulture products in terms of market and needs for development.
(e) Evaluation of wine policy alternatives, including, but not limited to, continued improvement in wine quality, blending considerations, promotion and advertising, labeling and vineyard designations, and development of production and marketing strategies.
(f) Evaluation of production and fresh fruit policy alternatives, including, but not limited to, setting minimum grades and standards, promotion and advertising, development of production and marketing strategies, and setting minimum standards on types and quality of nursery plants.
(g) Evaluation of policy alternatives for non-wine processed products, including, but not limited to setting minimum quality standards and development of production and marketing strategies.
(h) Research and service priorities for further development of the viticulture industry.
(i) The identification of state agencies and public and private institutions concerned with research, education, extension, services, planning, promotion, and marketing functions related to viticultural development and the delineation of contributions and responsibilities.
(j) Business planning, investment potential, financial risks, and economics of production and utilization.

(2) A revision and update of the State Viticulture Plan shall be submitted biennially to the President of the Senate, the Speaker of the House of Representatives, and the chairs of appropriate committees of the Senate and House of Representatives, and a progress report and budget request shall be submitted annually.

III. ORGANIZATION OF THE PLAN

A. Needs Assessment

This section identifies problems affecting viticulture and the need to address them. It describes the problems and why they have occurred, recognizing conditions unique to

Florida as well as existing capacities. This process leads to formulating goals, objectives, and methods for addressing the identified needs.

B. Goals and Objectives

Purpose, goals, and objectives as used in the State Viticulture Plan are all statements of outcomes to be achieved, not activities or services to be conducted. Goals and objectives flow logically from the needs assessment and lead logically to proposed services or activities to be conducted.

C. Methodology

This section describes how the goals and objectives will be achieved. It describes the types of activities that will be required to achieve the desired outcomes.

IV. NEEDS ASSESSMENT

Florida's history is replete with efforts to develop a viticulture industry beginning as early as the 1500's. The efforts have included highly motivated and dedicated individuals, including private and government interests, university researchers, and legislators.

During 2010, the Stonebridge Research Group, LLC conducted the first economic impact study entitled, The Economic Impact of the Wine & Grape Industries in Florida. This study determined that Florida's wine and grape and related activities contribute nearly $895 million in total economic value to the State of Florida. The study provides baseline data against which future growth can be measured.

The current status and identified needs of the industry follow. The commercial demand for Florida grapes remains steady. To grow the industry there is a need to increase the demand, market share, and sales of Florida's fresh grapes, wines, jellies, and juices. Education and promotion can fuel increased consumer demand for juice and wine from established wineries and increase the number of new wineries. While Florida wine producers have reported solid increases in sales volume, fresh fruit through small-scale and u-pick operations have diminished. The need for more promotion and market assistance to expand the industry in Florida remains. The Increased Acreage Program, an incentive program recommended by the VAC and supported by financial assistance through the Viticulture Trust Fund, resulted in the planting of about 190 bearing acres of grapes between its initiation in 1999 and its conclusion in 2010.

Vineyard expansion has been significant for the winery sector, but has reached a saturation point until market share increases.

Production and sales of processed grape products take place primarily through two venues: large wineries or small-scale vineyards. Juices, jellies, jams, pie fillings, sauces, syrups, leathers, etc., serve to augment the principle product offered by grape/wine

agribusiness, or they are the focus of small specialty product producers. U-pick vineyards often use jelly to supplement fresh fruit sales. There is continuing interest in the nutraceutical value of muscadines and in developing products in this regard. Muscadine pomace is being purchased from large processors for use in nutraceutical products.

Wineries use grape juice as an auxiliary product to wine. Some 112,000 gallons of muscadine juice, bulk and custom crushed, was produced and sold commercially by wine producers.

There are currently twenty established Certified Florida Farm Wineries. These wineries lead the industry and are staged for continued significant future growth. Some wineries continue to supplement their production with out-of-state fruit or bulk wine because they seek varieties not grown in Florida. With the maturing of approximately 190 bearing acres of grapes planted through the Increased Acreage Program, there is an adequate supply of grapes for the current market demand. Carefully planned vineyard expansion is necessary to be in balance with future market demand. Promotion and advertising assistance through the Viticulture Trust Fund has been instrumental in attracting new customers and increasing sales. And, wineries continue to improve their promotion and marketing of Florida wines. Direct shipping of wine has been a great asset to the Florida's grape industry in spite of the fact that the large distributors of wine and spirits continue to push regulatory issues to halt all mail order shipping of wine in the State.

FAMU and UF continue to build long-term productive programs focused on the development of new southern grape cultivars with improved quality traits via traditional and molecular breeding. The leading research areas are new cultivars and product development, fruit quality, health value addition, wine quality and stability, and the development of sustainable cultural practices for vineyards and wineries.

The universities provide technical support to enhance grape products, demonstrate health benefits, protect vineyards from pests and diseases, and address other issues important to the successful expansion of the grape growing industry. There remain; however great needs, including:

- Research on sustainable and organic practices supporting vine productivity, water conservation and soil microbiology
- Vineyard best management practices
- Expanded university grape extension programs, and
- Academic programs facilitating industry workforce development

Expansion, growth, and continued success in the winery sector have resulted in growth of Viticulture Trust Fund deposits each year. The approval of an annual budget request by the Commissioner of Agriculture funds promotion and research projects aimed at assisting the industry with technical, economic, marketing, horticultural and developmental challenges. Sound programs, dynamic leadership, synergistic partnerships and clearly demonstrated successes in all sectors of the industry are working well to advance the solid growth of the industry.

The needs section of this viticulture plan update is organized by the value-added categories common to any food system. They include marketing, processing and utilization, harvesting and servicing, cultural practices, cultivar development and economic factors. This breakdown permits a clear delineation of functions necessary to plan for a viticulture agribusiness. It provides a means to begin the process of data collection and analysis, which in turn aids in establishing priorities for activities required to satisfy needs and to evaluate progress being made. Each category depends on the other to validate how well it is performing, what improvements are indicated, and to identify limiting factors in addition to reducing the element of risk.

A. Marketing

Marketing is the essential link between the consumer and the product. The scope of this category covers market strategy and identification, packaging, labeling, surveys, test markets, advertising media, promotional techniques, educational devices and techniques, seminars, workshops, pilot programs, academic curriculum, data collection, interpretation, presentation feedback, and evaluation.

The industry needs:

a. A program to raise general awareness and to promote the quality image of Florida grapes as table grapes, juices, jellies, wines, etc., for their unique character and health benefits and to increase sales of existing products.
b. Documentary films for promotional and educational purposes.
c. An advertising campaign to promote Florida viticulture products.
d. A program to extend the successful promotional efforts of the other Florida agribusiness, such as citrus, to viticulture as a mutually supporting effort.
e. A program to promote the use of the Florida Grape Logo.
f. A continuing series of seminars/workshops on commercial marketing of Florida grapes and grape products.
g. A program to promote Florida wineries, e.g., billboards, wine trails, radio, website, and print advertising.

B. Processing & Utilization

Processing and utilization are concerned with the manufacture, preservation, and distribution of all Florida grape products. It includes the management and development of the processes, plant or methodology resulting in an end product (i.e., fresh fruit or processed products) of the grape harvest.

The industry needs:

a. A pilot program for the purpose of maintaining a continuous developmental effort toward creating new grape end products (such as nutraceuticals, juices, jellies, syrups, vinegars, raisins, etc.).

b. Identification and sources of processing equipment suitable for commercial operations including labeling, storage, and packaging.
c. To establish quality standards for viticulture products.
d. Research to develop new products and improve the quality of Florida grape products.
e. To highlight the advantages of agriculture cooperative associations to share costs, management marketing advantages, and management.

C. Harvesting and Servicing

Harvesting and servicing is concerned with operations once the grape reaches the harvest stage. The scope of this category relates to harvesting, sorting, grading, refrigeration, and storage techniques to extend shelf life, and transportation for processing and/or sale of fresh fruit.

The industry needs:

a. Economical and efficient harvest, post-harvest handling, transportation and storage to improve quality of grapes offered for sale and practices to extend shelf life.
b. To establish grading standards for grape end products.
c. Further research to extend the shelf life of fresh grapes.
d. To establish quality standards of fresh and processed grapes.

D. Cultural Practices

Cultural practices as used herein are concerned with all aspects of establishing and bringing a vineyard into fruition. It begins with the factors of site selection, including soils, conservation, water availability, proximity to markets, environmental issues, local zoning laws, availability of land and other factors which should be considered before a vineyard is planted. Consideration of site selection factors in an organized manner is intended to reduce risks. After deciding to establish a vineyard, selection of cultivars, vineyard layout, trellising, and irrigation must be considered. Training and pruning, canopy management, irrigation schedules and techniques, and the equipment related thereto are important factors to review. Best management practices for sustainable production and for reduced use of fertilizers, pesticides, fungicides, and herbicides as well as seasonal cultivation, pruning, and maintenance should be considered. Failure to properly consider cultural practices is sure to increase risks of environmental contamination, degradation of fragile soils, unnecessary input costs, and lead to reduced yield, quality, and profits.

The industry needs:

a. An effective grafting and budding technique to facilitate rapid and economical production of grafted plants in nurseries and in the field.
b. More energy efficient methods for all vineyard management operations both in terms of human labor and fossil and renewal fuels.
c. Established grades and standards for nursery stock.

d. Data on soil requirements for grapes with recommendations for addressing specific soil and plant tissue analyses, drainage, and conservation of resources.
e. Research projects to update the Best Practices Manual for improved production techniques, increasing grape yield and quality with emphasis on sustainability.
f. Site selection criteria with a rating scale to assist in the investment in viticulture.
g. Sustainable practices including Integrated Pest Management and organic production recommendations.

E. Cultivar Development

Cultivar development is concerned with the breeding of new grape cultivars, techniques for expediting methods of evaluating new or improved breeding lines, and the influence of the Florida environment on these activities.

The industry needs:

a. Information regarding performance of existing cultivars in different geographic/climatic areas of the state over a number of representative growing seasons, including the factors which have significantly influenced performance.
b. An even ripening, high yielding, disease resistant cultivar suitable for commercial vineyards considering machine harvesting and processing into a variety of end products.
c. Improved wine grapes with high levels of disease resistance for the production of unique, high-quality wines distinctive to Florida at competitive prices.
d. Seedless and edible skin cultivars with earliness, good size, even ripening quality and disease resistance for Florida fresh fruit or raisin markets.
e. Cultivars suitable for U-pick operations.

F. Economic Factors

Business is concerned with the initial financial arrangement, initial installation costs, operational costs, and investment return for a vineyard, nursery, or processor of viticulture end products. It also includes proximity to markets, transportation, network and tourist flow factors.

The industry needs:

a. A method of obtaining the initial capital to establish and maintain a vineyard in conjunction with local financial communities. Base criteria for financing should include the size of the vineyard. Additional and

progressive financing increments should be based on market demand. Financing should consider the acreage necessary to support all forms of legal entities.
b. To coordinate with state and federal small business agencies to develop financial assistance data for the industry.
c. Business, management, financial investment and business plan seminars.
d. Information on economic and marketing factors that influence profitability.
e. A program to increase the number of wineries. Develop criteria to assist in the financing of new wineries. Develop guidelines for establishing a winery including licensing, taxing, and construction.
f. A program to support grape nurseries. Develop criteria to assist in the financing of new nurseries. Develop guidelines for establishing a nursery including licensing, taxing, and construction.

V. GOALS AND OBJECTIVES

Goal 1: To develop and implement a marketing program for Florida grape products, which promotes their unique character and health benefits, and increases sales of existing products.

Objective 1A: To develop an ongoing series of articles, ideas, and scripts for TV, recipes, books, trade journals, welcome stations, county and state fairs, chambers of commerce, etc.

Objective 1B: To promote the Florida muscadine grape for its unique character and health benefits, including sampling for tourists at welcome stations and public events and ceremonial use.

Objective 1C: To promote the Grape logo for use in advertising Florida grapes and grape products.

Objective 1D: To implement marketing strategies for Florida grapes and grape products to increase sales of existing products.

Objective 1E: To enter into cooperative agreements with other organizations and agencies in state government and the university system to promote grape products.

Objective 1F: To develop an advertising program oriented toward hobbyists and potential commercial growers which also identifies and supports Florida nurseries supplying grape plants.

Goal 2: To develop standards for the management, preservation, processing and distribution of Florida grape products.

Objective 2A: To support a pilot program dedicated to the processing standards, costs, and techniques for processing and preserving Florida grapes including jellies, syrups, wines, frozen concentrates, raisins, fresh juice, grape leaves, and brandies.

Objective 2B: To continue research for improvements in color, flavor, aroma, stability, and aging characteristics of wines.

Objective 2C: To develop a curriculum including continuing education and professional certification for individuals involved in processing Florida grape products.

Objective 2D: To support small farm development for grape growers who have developed beyond the pick-your-own operation.

Objective 2E: To identify sources of equipment that might be available for processing Florida grapes and grape products including Florida Farm Wineries.

Objective 2F: To support research to develop new products from Florida grapes and Florida grape by- products.

Objective 2G: To encourage the use of existing winery equipment and facilities for processing non-wine products as these products emerge.

Goal 3: To identify, evaluate, and develop equipment for harvesting and servicing Florida grapes and grape products.

Objective 3A: To identify and evaluate ways to more efficiently utilize existing harvesting and pruning equipment.

Objective 3B: To develop quality standards and evaluate equipment available for grape sorting and grading.

Objective 3C: To develop storage handling practices that maintain product quality and improve shelf life.

Goal 4: To develop transportation models that permit efficient transportation of grapes and grape products.

Objective 4A: To develop transportation models in geographic format for optimum transportation of grapes and grape products.

Objective 4B: To develop container and packaging models for optimum loading and transportation, and for retail as well as wholesale markets of grapes and grape products to include temperature requirements in transport and storage.

Goal 5: To identify and group cultural practices associated with establishing a sustainable and/or organic vineyard.

Objective 5A: Identify and group all cultural factors associated with establishing a vineyard.

Objective 5B: Establish in sequence, the best management practices required to produce optimum fruit quality and yield.

Objective 5C: Develop the record-keeping format required to manage the agriculture phase of vineyard production.

Objective 5D: Establish grades and standards and certification for nursery stock.

Goal 6: To develop cultivars adapted to Florida and techniques to grow them efficiently.

Objective 6A: To compile data on performance of existing cultivars grown in different geographic areas of Florida.

Objective 6B: Continuing research to develop seedless cultivars adaptable for Florida.

Objective 6C: Continue research to develop cultivars suitable for high quality wines and other grape products.

Goal 7: Criteria for use by lending institutions with which to judge the eligibility and acceptability of investing in viticulture, considering not only direct economic factors, but also environmental impact and alternative agricultural enterprises.

Objective 7A: To coordinate with Federal and State Agencies charged with business development, bonding organizations and agribusiness to compile financial assistance data available for viticulture.

Objective 7B: To provide guidelines concerning the use of bonds issued in the name of governmental organizations to support the initial investment and operational costs of establishing viticulture agribusiness.

Objective 7C: To coordinate with the appropriate Florida State organizations to facilitate forming viticulture agribusiness and tax relief incentives.

Objective 7D: To develop funding support mechanisms to support viticulture research and development including private, governmental grants, marketing orders, appropriated funds, and innovative funding.

Objective 7E: To conduct Business Management and financial investment seminars and instructional workshops relating to viticulture.

Objective 7F: To provide information regarding economic factors that influence vineyard profitability and grape processing operations.

Objective 7G: To develop standards, guidelines and regulations for a purchase of "grape conservation easement program" in cooperation with such organizations as the American Farmlands Trust and local Soil and Water Conservation Districts of the Natural Resource Conservation Service.

Objective 7H: To provide support for small farm development geared toward prospective vineyards of less than five acres.

Objective 7I: To develop a guidebook for establishing a winery, describing: 1) the federal, state, and local licensing, taxing, and code requirements; 2) construction options and alternatives; 3) business plan guidelines; and 4) financing criteria for lenders or investors; and 5) basic cultural practices including organic certification standards and highlighting sustainability and conservation of soil and water resources.

Goal 8: To integrate and develop other commercially available Florida agriculture produce and products into the wine industry of Florida.

VI. DISCUSSION AND METHODOLOGY

This part of the update provides a brief discussion of the needs identified in previous sections and the general methodology required to achieve the goals and objectives. Specific activities are not included in the absence of year-to-year funding availability.

A. Marketing

A successful viticulture industry in the southeast region of the United States requires a "demand" for grape products. To accomplish this, promotional activities must be generated to acquaint the annual 137.6 million tourists and 22.2 million residents of Florida with the unique flavors of muscadine grapes, bunch grapes, and Florida grape products.

B. Processing and Utilization

Encourage the use of existing processing facilities of the citrus and wine industry for processing non-wine products.

C. Harvesting and Servicing

Field temperature at harvest time affects the storage life of the grape. A process is required which would economically draw down the heat of the grapes prior to storage and/or shipment. A simple, inexpensive means of cleaning, cooling, sorting and containerization of the grape harvest is required. In addition to reviewing the container aspects of storage, standards are required for shipping.

Vineyard layouts designed for mechanical harvesting are required. This activity would encompass past studies and other grape operations allied to the bunch versus cluster limitations. Information on vineyard layout for mechanical harvesting/pruning should be made available to prospective commercial growers.

Muscadine grapes are susceptible to damage during harvesting and have a limited shelf life. Methods of maintaining optimal post-harvest freshness of muscadine fruit should be researched, developed, and published.

D. Cultural Practices

The development of sound viticultural practices is to a large extent dependent on the Florida University system to develop the necessary technology. The ultimate beneficiary of technology, which helps the farmer, is the consumer. The cultural practices section is based on the application of technology, especially low-input, sustainable methods.

Assuming public acceptance and demand for Florida grape products, the university system plays an essential role not only for research, but also to train and educate professionals in agriculture business, horticulture, viticulture, farm technicians and mechanics, and agricultural support personnel. This should include a curriculum, model job descriptions and data on the need of the viticulture industry for trained business entrepreneurs, nurserymen, vintners, and other professionals. In addition, the resources of the university agricultural extension systems should be considered in meeting viticulture needs in Florida through special courses, continuing education, field days and other activities. In effect, Florida's viticulture agribusiness should be accorded the attention of any other respected profession and receive academic programming through the university system.

E. Cultivar Development

World-renowned viticulturist, Dr. Richard Smart, described the muscadine grape as "God's gift to viticulture." Dr. Smart stated that development of muscadines and muscadine crosses were ideal for any grape use. They are disease resistant, easy to grow, care for and harvest, and have high yields. Because there are a number of vineyards producing high quality grapes, a good deal of data is currently available on which to base recommendations and selections. It is important that research continues to develop the cultivars best suited to Florida, with emphasis on seedless cultivars and those suitable for wine production. Descriptions of muscadine and bunch grape cultivars suitable for

production in Florida should be made available with recommendations based on farmer-selected criteria, i.e. best wine making varieties, best varieties for mechanical harvesting, best varieties for a U-Pick operation, best variety for low-input and organic management, etc.

F. Economic Factors

The ability of an experienced farmer to obtain capital in a cash crop operation is understood by a number of local financial communities. This type of operation has known risk factors. The harvest turn-around is on a yearly basis (i.e., fresh vegetables). Other fruit crops are better established because of their known markets. The performance of commercial viticulture enterprise in Florida has been poor. Therefore, initially it may be necessary for the state to support or assist in obtaining financing in order to provide incentives. It is recommended that a study be conducted which considers alternative methods of financing, considering all aspects of the viticulture food chain. Considering development pressures on agriculture lands and the interest of farmers in retaining their capital investments, a purchase of conservation easement program to plant vineyards provides the means to keep land in agriculture production, and to provide jobs. The Growth Management Act found in Chapter 603 of the Florida Statutes, recognizes the importance of agriculture in land planning.

A study is required to provide investment information (i.e., the financial layout of costs and operational expenses) for developing vineyards for fresh grape operations. This information would provide potential growers with data upon which to make decisions. The study would cover the requirements from design through planting considering all value-added phases. The design of the vineyard or the fresh grape facility should consider the aspects of mechanization of the operation wherever possible. Although the size of the vineyard or fresh grape operation is to be the minimum for a sole proprietorship's only source of income, the small farm vineyard must also be considered. The design of the vineyard and the basic equipment of mechanization can be estimated from comparable equipment used in other states. A wealth of information is already available to assist from such sources as the USDA Soil Conservation Service, Bureau of Census, Forestry Service, the Natural Resource Conservation Service, and the State University System. This effort must apply advances in technology in communications and computers including a management information system and a geographic information system. The State or the Universities should be prepared to establish a multipurpose database for this purpose networking with county extension facilities or individuals as appropriate. The role of the small farm vineyard is often overlooked. Considering the yield potential of parcels less than three acres in the aggregate, they can make a substantial contribution to the viticulture industry.