301-14-038

VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

JUNE 30, 2015

COST AND PROFITABILITY ANALYSIS OF VIRGINIA VINEYARDS AND WINERIES

PRESENTED BY THE VIRGINIA WINE BOARD

PREPARED BY: HANTZMON WIEBEL LLP
CERTIFIED PUBLIC ACCOUNTANTS
CHARLOTTESVILLE, VIRGINIA

AUTHORS:
DEAN A. MARTINELLI, CPA/ABV, DIRECTOR OF CONSULTING SERVICES
KENDRA L. STRIBLING, CPA, AGRICULTURE & FARMING SPECIALIST
CHRISTOPHER C. BRUBAKER, CPA, MASTER OF TAX (UNIVERSITY OF VIRGINIA)

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INTRODUCTION

The primary purpose of this "Cost and Profitability Analysis of Virginia Vineyards and Wineries" is to educate potential new owners as to the organizational and compliance issues and economic realities they will face related to the start-up of new vineyards and wineries in Virginia. For existing vineyards and wineries, our goal is to demonstrate and discuss the critical factors that could determine the future financial success of these businesses, and to provide some benchmarks to assist owners in trying to reach their goals.

The costs, timelines, and hypothetical financial projections included in this report are based on 25 years of working closely with more than 20 vineyard and winery businesses in various areas of Virginia, and from various research sources and economic reports prepared by universities and consultants in and outside of Virginia, as noted in the references located in the Appendix. No actual client data is included in this report. The focus of the presentations in the Exhibits of this report is on the broad economics of the vineyard and winery business, and does not involve agricultural methods or practices (we are not farmers), winery production methods (we are not wine makers), and does not focus on specific expense line item budget matters, including specific wage or labor pay to employees. Consequently, the costs and financial projections presented are labelled as "hypothetical," "estimated," "expected," or "average costs," and should not be interpreted as the actual costs or expenditures you will incur, and are not intended or guaranteed to be the costs, expenses, or related revenues you will experience. They are presented to provide the reader with an understanding of the capital costs one could expect to invest in these businesses, and the normal economic results of operations of both vineyard and winery businesses (if separate) and if operated as a combined vineyard and winery. Sample ranges of costs encountered in our experience and observed in our research have been provided in the text and exhibits of this report.

One thing is for certain. Every vineyard and winery business in Virginia is different. Each business has its own history, style, and story, and each is as unique as its owner. Each year brings new vineyard and winery businesses into Virginia. The future growth and sustainability of Virginia vineyards and wineries is dependent on a clear understanding of the initial capital costs, expected operating costs, working capital needed to reach hypothetical "break-even" operating profitability, and the various models for attaining "break-even" and/or profitability to increase the probability of the success for the business. This report was written for that reason.

EXECUTIVE SUMMARY

The vineyard and winery business is extremely capital intensive, requiring large initial capital outlays and at least five years (but sometimes up to eight or more years) of funding working capital and inventory, before break-even profitability can be achieved. It is not suggested for start-up businesses to finance any capital costs, as expected cash flow from operations will not be sufficient to curtail debt. At levels of operations of at least 30 - 40 acres planted, with quality grapes yielding 3.0 tons per acre, and selling the wine at mostly retail prices, economic profitability and sustainability can be achieved, over the long term. Some wineries with lower yields and less expensive costs and products can achieve break-even operations and sustainability due to ideal locations or venues that hold events (weddings, etc.) that continue to attract customers every year. The combination of finding the optimal size for your operations with the attractiveness of your venue or the special events that continually draw customers can make your vineyard and/or winery a financial success.

In order to provide the readers of this report with information that should be meaningful and comparative with their business, we have segregated this report into distinct sections:

- Start-Up, Tax, and Compliance Issues
- Vineyard (only) Start-Up Businesses
- Winery (only) Start-Up Businesses
- Combined Vineyard and Winery Start-Up Businesses
- Profitability Issues for Consideration

An Executive Summary of each of these different sections is as follows:

START-UP, TAX, AND COMPLIANCE ISSUES

We suggest new entities be formed as S corporations or Limited Liability Companys (LLCs) for the best income tax structure. New owners should be aware of their responsibilities concerning payroll taxes, sales and use tax, ABC licenses, Federal reporting and TTB taxes, and Virginia business license and property taxes, as well as income taxes.

FOR VINEYARD (ONLY) START-UP BUSINESSES

Most vineyard (only) operations are in the 10 - 40 acres planted range. Capital costs are expected to range from $500,000 - $1,500,000, with diverse costs experienced for land, building, farm equipment, and vineyard establishment among the various vineyards. Costs to establish an acre of vineyard range from $7,000 - $25,000 with $15,000 per acre being the average. Grape yields (beginning with full production in year three) in Virginia average 2.5 tons/acre, which is lower than in some states. Average prices received range from $1,000/ton - $2,000/ton based on varietal and quality. At the average yield of 2.5 tons/acre and an average price of $1,200/ton, it is not normally possible to make a profit. At above average yields of 3.0 - 4.5 tons per acre, break-even operations can be achieved at $1,800 and $1,200, (respectively) price per ton levels (at 20 acres planted) in the first year of a full harvest (year 3) assuming no debt and no owner compensation. Only at high levels of operations (30 or more acres), high yields (3.0 - 4.5 tons/acre), and high price points ($1,800/ton and above) do hypothetical projections show a return on investment to the owner.

FOR WINERY (ONLY) START-UP BUSINESSES

If you do not have enough funds available to plant, or are just not interested in farming, buying grapes and operating a winery (only) facility is an option. Capital costs typically range from $750,000 - $3,500,000, depending on location and size. Average costs include $1,500,000 for capital expenditures, $500,000 for operating working capital, and $500,000 for inventory. A start-up winery (only) business can still expect an 18 - 36 month lag in sales, in order to build the facility (year one), make wine (year two), sell white wine (end of year two or beginning year three) and red wine (year three). Marketing can be more of an issue with no vineyard, so an events facility should be considered. Owners selling premium wines (at an average price of $15/bottle retail) and an average gross profit of 50%, should expect break-even operations no earlier than year five (and it could take up to eight years), assuming no debt service or owner compensation. Unless sales of close to $2 million/year can be achieved, selling all wine at wholesale prices will usually not be profitable. If you have excess manufacturing and storage facilities, consider "custom crushing" operations for vineyards who can not produce their own wine. Wineries (only) are having an increasingly difficult time buying quality grapes in Virginia, and are purchasing more grapes or juice out of state.

FOR COMBINED VINEYARD AND WINERY START-UP BUSINESSES

Combined vineyards and wineries with expected projected sales of $500,000 - $5,000,000 (based on size and location) can expect capital costs from $1,000,000 - $4,000,000, respectively, with an average between $2 - $2.5 million, plus operating working capital needed of at least $500,000. Assuming planting premium grapes on 20 acres, and selling all wine at retail prices with an assumed gross profit of 51.5%, break-even operations are not expected to be achieved until year six (and often not until year eight), assuming no debt and no owner compensation. Planting an additional 10 - 20 acres of vineyards is highly recommended (year two and successive years) if a reasonable return on investment is to be obtained. Events and/or a restaurant or other facilities may be required to obtain this level of sales, and marketing costs will need to be increased. When these levels of sales are achieved, it will be necessary to have alternative supplies of high quality grapes available should vineyard yields drop in case of any bad weather, loss from animal intruders, or crop disease years. The comparative operating results of average established Virginia vineyards and wineries is consistent with three (3) sources of national industry averages (Troy, RMA, and First Research) with gross profit being just over 50%, operating profit plus events around 10% of sales, and average net income after depreciation and interest expense less than 1% of revenue, but specific well established vineyards and wineries in Virginia perform better than these averages.

PROFITABILITY ISSUES FOR CONSIDERATION

Sales and marketing are important to your financial success, and most wineries spend 2 - 5% of revenue on advertising. Events have become a significant part of the profits made by Virginia vineyards and wineries, and Virginia has become a "wedding destination" state as a result. Other profit centers are food and retail shops.

Wine should be at or around retail pricing averages to obtain profitability, as only large wholesale operations can achieve profitability. Our comparison of an average Virginia winery to national averages show that Virginia wineries compare favorably to national averages. Establishing internal controls is essential to protect your business assets and to maintain profitability.

CONCLUSION

We hope that the facts and hypothetical models in this report assist you in achieving financial success for your Virginia vineyard and/or winery.

I. VINEYARD AND WINERY BUSINESS START-UP

A. Form of Business

1) Organization

Vineyard and winery owners have several alternatives to choose from in structuring their businesses. Because this choice will significantly affect the legal and tax consequences of the business, new owners should consider their options carefully. While we recommend that you consult your legal and tax advisors to tailor a structure to fit your needs, we will describe the most popular forms of business that vineyard and winery operators use.

2) Need for Separate Entities for Real Estate and Operations

A principal reason that owners hold their vineyard and winery businesses in separate entities is to protect their personal assets from the businesses' creditors. Corporations and Limited Liability Companies (LLC) are legal entities created under state law. When a business is operated through a corporation or an LLC, the business's creditors have access only to the business's assets (and not the owner's personal assets) to satisfy the business's debts. In practice, vineyard and winery owners are typically required to guarantee their business's loans. Such a guarantee does not make the owner liable for other debts (such as those arising from lawsuits) that the owner has not guaranteed. Because most owners are best served by entities that provide legal protection from liabilities, we focus our analysis on corporations and LLCs and not on entities that provide little or no liability protection, such as sole proprietorships and partnerships.

Liability protection is especially important when the owner also owns the real property on which the vineyard or winery operates. Owners should usually hold their real estate in one legal entity and their vineyard and winery operations in another entity. The operating entity should enter into a formal lease agreement with the real estate entity and pay rent at a market rate. If the real estate was held in the same entity as the operations, the vineyard's or winery's creditors could take the real estate to satisfy the vineyard's or winery's obligations. The two-entity structure protects the real estate from the vineyard's or winery's creditors.

Several other factors in addition to liability protection are important for owners to consider in structuring their vineyard and winery operations. As with any business, income taxes are an important consideration. Tax matters affected by the owner's choice of entity include who is liable for tax payments, whether distributions from the entity are subject to tax, how results of business operations are allocated, and what will be the entity's fiscal year. Among other non-tax considerations is the relative administrative burden of operating a corporation or an LLC.

3) Corporations

A corporation's owners are called shareholders because they own shares of stock in the corporation. A corporation may issue different classes of stock that entitle the stock's owner to certain rights. For example, owners of one class of stock may be entitled to receive distributions from the corporation before owners of other classes. Likewise, the right to vote on corporate matters may vary among classes of stock. A corporation must file articles of incorporation and bylaws with the state and must hold meetings of the board of directors each year. Corporations distribute cash from operations to their shareholders through dividends. While different classes of stock may have preferences in distributions, all shareholders of the same class must receive distributions equally.

I. VINEYARD AND WINERY BUSINESS START-UP--(Cont'd)

A. Form of Business--(Cont'd)

3) Corporations--(Cont'd)

A corporation is subject to tax on its income. Unless a corporation elects to be taxed as a Subchapter S Corporation (S Corporation, discussed below), its shareholders are also taxed on corporate dividends. Because corporate income is taxed at two levels - first when the corporation earns income and again when it distributes dividends to shareholders - the corporate form generally results in double-taxation. Corporations pay tax at graduated rates ranging from 15% to 34% (39% from $100,000 to $335,000) and all income is subject to the upper tax rate when their taxable income reaches $335,000. Shareholders typically pay tax on dividends at a rate ranging from 15% to 23.8%, though the rate can vary significantly depending on the owner's other income and deductions. A corporation must file an annual tax return using Federal Form 1120. Virginia imposes a 6% corporate income tax. Corporations operating in Virginia should file Virginia Form 500 annually.

A significant disadvantage of the corporate form is that it is difficult to remove assets from a corporation without incurring a tax liability at both the corporate and shareholder level. Another disadvantage of operating as a corporation arises when an owner decides to sell the business. Because it is a separate legal entity, a corporation's liabilities continue even when it is sold to new owners. For that reason, buyers are often reluctant to purchase corporate stock without a discount in the sales price.

Shareholders may work as employees for a corporation and so receive a salary and be eligible for employee benefit programs, such as health insurance. Any person or entity can own a corporation, though if you will have foreign owners you should consult your tax advisor about potential reporting requirements. A corporation can typically use a fiscal year ending on the last day of any month regardless of its owners' fiscal years.

4) S Corporations

An S corporation is strictly a creation of income tax law. For liability and other legal purposes, there is no difference between an S corporation and any other corporation. The difference between an S corporation and a regular corporation is that, rather than paying tax on its income, an S corporation allocates that income to its shareholders, who pay tax on their share of the income personally. Also, to the extent of their investment in the corporation and their share of corporate income, S corporation shareholders may take cash distributions from the corporations free of tax. These provisions alleviate the problem of double-taxation that typically results from corporations. An S corporation must file an annual tax return using Form 1120S. Virginia follows federal rules regarding corporations. An S corporation operating in Virginia should file Virginia Form 502 annually.

Several other significant income tax advantages of an S corporation include the ability of shareholders to deduct their share of losses on their personal income tax returns (if they have sufficient tax basis), and if the Company has income, that income is not currently subject to self-employment taxes (FICA and Medicare) or the recent Net Investment Income tax (3.8% additional Medicare on passive income in excess of certain income thresholds).

I. VINEYARD AND WINERY BUSINESS START-UP--(Cont'd)

A. Form of Business--(Cont'd)

4) S Corporations--(Cont'd)

A corporation's shareholders may elect to be treated as an S corporation by timely filing the Form 2553 with the IRS. Because an S corporation's income creates a tax liability for its shareholders, *all* of a corporation's shareholders must agree to the election. There are several restrictions on who may be an S corporation shareholder and on what corporations may be S corporations. Only individuals, estates, and certain trusts may be S corporation shareholders. Other corporations and limited liability companies may not own S corporation stock. All shareholders must also be U. S. citizens or residents. Likewise, an S corporation must be organized under the laws of a U. S. state or territory.

An S corporation may only have one class of stock. While different voting rights among stock are permitted, all shares must carry equal rights to distributions. An S corporation is intended to be relatively small, so it is only permitted to have up to 100 shareholders. The law provides for certain family-owned stock to be combined in counting shareholders, so in some cases a corporation with more than 100 individual shareholders may qualify as an S corporation. Generally, an S corporation must use a calendar year as its fiscal year, although there are methods to use a different year-end in some circumstances.

Some S corporation shareholders may work for the corporation as employees and receive a salary. However, income tax rules prevent shareholders who own more than 2% of an S corporation from receiving many of the tax-free benefits available to other employees. While a shareholder's S corporation wages will be subject to Social Security and Medicare taxes, the shareholder's allocated income from the corporation is currently not subject to these self-employment taxes.

Importantly, the special S corporation treatment is only relevant to the allocation of income to owners and to *cash* distributions. Distributions of property other than cash result in the same disadvantageous treatment as distributions from regular corporations. Likewise, because there is no distinction between regular and S corporations for liability purposes, the same issues with sales and liquidations that apply to regular corporations also apply to S corporations.

5) Limited Liability Companies

Owners of an LLC are called Members. While an LLC must register with the state, annual administrative requirements for an LLC are not as burdensome as those for a corporation. Members of an LLC enter into an operating agreement, which controls such important matters as how members may vote on LLC issues, how profits and losses will be allocated among members, and how the LLC will make distributions to members. Members have a great deal of flexibility in structuring an LLC, which allows LLCs to fit with a wide range of economic arrangements. If you consider holding your vineyard or winery operations in an LLC, it's best to work closely with your legal and tax advisors to be sure that the entity that you set up meets your goals.

For income taxes, the default rule is for limited liability companies to be treated as partnerships. A partnership does not pay income tax, but rather allocates its income among its owners in a manner similar to an S corporation. There are several important differences between a limited liability company and an S corporation, however, including:

- There is no limit on the number of members an LLC may have, and the limitations on who may be an owner (U. S. individuals, estates, and certain trusts) of an S corporation do not apply to LLCs.

- Within limits prescribed by tax regulations, an LLC may allocate its income and losses in any way that its members agree to.

- LLCs may generally distribute both cash and non-cash property to members without incurring an income tax liability, to the extent of the members' investment in the LLC.

- LLC members may not be treated as employees of the LLC and so are denied many of the tax-free benefits available to employees. Members who work for the LLC are paid guaranteed payments rather than wages and are responsible for paying income, Social Security, and Medicare taxes personally rather than through company withholding.

- Unlike S corporation allocations, an LLC member's allocation of income from the LLC may be subject to Self-employment tax if the member actively participates in the LLC's operations.

- An LLC files its annual tax return using Federal Form 1065. Like an S corporation, an LLC operating in Virginia reports its income on Virginia Form 502.

An LLC may elect to be taxed as a corporation (including as an S corporation). The corporate tax issues discussed above apply equally to an electing LLC. An LLC that makes that election will be considered a corporation for income tax purposes only. For legal and administrative purposes, the election to be taxed as a corporation has no effect.

B. Taxes and Compliance

Taxation and government regulation are important factors for any new business owner to consider. Businesses that hire employees will bear payroll tax and withholding responsibilities. Businesses that sell products may have to comply with sales tax rules, and all businesses will have some income tax filing obligation. The wine industry is relatively highly-regulated. Consequently, new vineyard and winery owners must also comply with several state and national rules. We will summarize several important tax and regulatory rules that vineyard and winery owners should be aware of, but, similar to the decisions about how to organize your business, these matters are complex and you should consult experienced legal and tax advisors to be sure that you meet your responsibilities.

B. **Taxes and Compliance**--(Cont'd)

1) **Payroll Tax**--(Cont'd)

As an employer, you are required to pay Social Security and Medicare (collectively, FICA), federal unemployment (FUTA), and state unemployment (SUTA) taxes. You must also withhold federal and state income taxes and FICA tax from your employees' wages and remit them to the governments. FICA and unemployment taxes are based on your employees' wages using statutory rates. Information your employees provide to you will determine the amount of income taxes that you must withhold.

The first step in preparing for your payroll obligations is to register for a federal Employer Identification Number (EIN). You may apply online for an EIN (www.irs.gov) or file Form SS-4 with the IRS. To register for Virginia income tax withholding and SUTA tax, you may register online at https://www.business.tax.virginia.gov or file Form R-1 with the Virginia Department of Taxation and Form VEC-FC-27 with the Virginia Employment Commission. When you hire employees, you should have them complete Forms W-4, VA-4, and I-9, which you will use to determine the amount of income tax to withhold from the employee's wages.

Throughout the year, you will have several payment and filing requirements. How often you are required to make tax payments depends on the amount of wages and the amount of tax you pay. You must make both federal and Virginia payments electronically. For federal payments, you can enroll in the Electronic Federal Tax Payment System (EFTPS) at www.eftps.gov. You may make Virginia payments at https://www.business.tax.virginia.gov.

You must file tax returns either quarterly or annually:

For Quarters Ending:	File Your Returns and Payments by:
March 31	April 30
June 30	July 31
September 30	October 31
December 31	January 31

- Quarterly forms to be filed:
  - Form 941 (federal withholding and FICA)
  - Form VA-5Q or Form VA-16 (Virginia withholding)
  - Forms VEC-FC-20 and VEC-FC-21 (Virginia SUTA state unemployment)
  - While there is no quarterly filing requirement, you may have to deposit FUTA (federal unemployment), depending on the amount of your liability
- Annual forms to be filed::
  - Form VA-6 (Virginia withholding) due January 31 (eff. 2015)
  - Form 940 (FUTA) due January 31
  - Forms W-2 and W-3 (federal withholding and FICA) due by February 28. You must also distribute Form W-2 to each employee by January 31
  - Form 943 (agricultural employees) by January 31

All of these forms may be filed electronically.

2) Sales and Use Tax

In general, all sales, leases, or rentals of tangible personal property or the use or consumption of tangible personal property in Virginia, as well as taxable services, is subject to the Virginia Sales and use tax, unless an exemption or exception applies.

A Seller is subjected to the sales tax imposed on gross receipts from retail sales. The tax may also apply to the furnishing of transient accommodations and the lease and rental of personal property. Code of Virginia Sec. 58.1-603.

The Seller is responsible for collecting the tax and remitting it to the State of Virginia by the 20th of each month after the sales occurred (unless you are a quarterly filer). Businesses must file sales tax returns (ST-9) and pay taxes due electronically. A sales tax return must be filed for each period, even if there are no sales to report.

The use tax applies to the use, consumption, or storage of tangible personal property in Virginia when sales or use tax was not paid at the time of purchase. The use tax is computed on the cost price of the property, which is the total amount for which the property was purchased, including any services that are a part of the purchase and includes any amount for which credit is given the purchaser or lessee by the seller. Exemptions may apply to the agricultural and manufacturing supplies used in the production of both grapes and wine (see below).

Use Tax is reported on Form ST-7 and Form ST-6B, if applicable, and is due by the 20th day of the following month after the close of the reporting period. Use Tax returns are not required to be filed for periods in which no use tax is due.

Retail sales in Virginia are subject to a tax of 5.3% (4.3% state tax and 1% local tax). Beginning in July 2013, the rate is 6.0% in the Northern Virginia and Hampton Roads regions. As with Virginia payroll withholding, you may register for sales and use tax using Form R-1 or online at https://www.business.tax.virginia.gov.

In order to obtain an exemption from Sales tax, an Exemption Certificate must be obtained from the buyer. Generally, the sales-for-resale exemption (Form ST-10) prevents tax from being charged multiple times on the same item. The sales tax is intended to be applied to the final sale to the consumer at retail; therefore, this exemption prevents the tax being applied on goods as they are distributed before being sold at retail. A dealer who makes a sale without charging applicable Sales Tax must retain a copy of the exemption certificate on file to substantiate the sale was indeed tax exempt under the law.

If you are a farmer purchasing tangible property for use in the production of agricultural products for market and you meet all the requirements for exemption from sales tax, you would need to provide the Form ST-18 to the Seller. These exemption forms and others are available on Virginia's Department of Taxation's website.

Due to the complexities of the Virginia Sales and Use Tax regulations and specific exemptions for certain activities and transactions, it is not possible to explain in detail how these rules may effect your business, as the exact nature of your business (whether farming, manufacturing, selling retail, or selling wholesale) will ultimately determine the sales and use tax requirements for these transactions.

B. Taxes and Compliance--(Cont'd)

2) Sales and Use Tax--(Cont'd)

For those vineyards or wineries looking to host events, there have been several rulings where rentals of indoor or outdoor space with tables, chairs, food and beverages, or kitchen facilities provided to caterers are subject to Virginia sales tax. While the rulings did not specifically address winery events, it appears that the Virginia Department of Taxation might apply similar logic to vineyards and wineries.

Generally internet sales are not exempt from sales tax. If you are selling wine and other products over the internet and shipping in-state to Virginia customers, the sales would be subject to sales tax. If you are shipping out-of-state to other locations, you may not have to collect and remit sales tax to Virginia or any other state if you do not have nexus with the other state. Nexus for sales tax is generally a bright line test. If you have employees working in a state or property located in a state you would have nexus and then be subject to sales tax liability. You will need to review the different state requirements if you plan to operate or do internet business with multiple states.

Businesses should closely review the requirements for charging sales tax or paying use tax, and the exemptions available, to ensure they are in compliance, and consult with professionals knowledgeable about sales and use tax when starting a vineyard or winery or beginning any new activities.

3) Virginia Department of Alcoholic Beverage Control

Virginia wineries must apply for a license with the Virginia Department of Alcoholic Beverage Control (ABC). In addition to a standard winery or farm winery license, a winery may also apply for a wine shipper's license, an internet retail license, and a delivery permit, depending on the winery's operations. Annual license fees range from $190 to $3,725. Wineries must also obtain approval of labels from ABC. Wineries must file a monthly report with ABC and pay an excise tax of 40 cents per liter sold.

4) Federal Alcohol and Tobacco Tax and Trade Bureau

The U. S. Department of the Treasury's Alcohol and Tobacco Tax and Trade Bureau (TTB) is the main federal body that regulates wineries. Wineries must apply with the TTB for a permit to establish and operate wine premises. The TTB issues several classes of permit to meet the wide variety of winery operations. Costs and regulatory rules vary depending on the type of operation that a winery engages in. In addition, a winery must seek TTB approval for its label.

In order to ensure that wineries pay the taxes due on their products, the TTB requires each winery to place money into a bond. The term "bonded" in the wine industry refers to this TTB requirement. The amount of a winery's bond is based on its potential tax liability, which depends on its capacity and the alcohol content of its wines. Wineries may place the actual money for taxes in a bond account or use a bonding agency (surety) to satisfy its requirements. Treasury Circular 570 contains a list of TTB-approved corporate sureties.

4. Federal Alcohol and Tobacco Tax and Trade Bureau--(Cont'd)

A winery must file Form TTB F 5120.17, Report of Wine Premises Operations, either semi-monthly or quarterly, depending on volume. That form reports the volume of wine (in gallons) that a winery had on its premises at the beginning and end of the reporting period and provides a relatively high level of detail about the wine. The report classifies wine into six categories: alcohol by volume not over 14%, over 14% to 21%, over 21%, artificially carbonated wine, sparkling wine, and hard cider. A winery must account for the changes in wine volume resulting from a wide variety of operations, including production, sales, breakage, removal for personal use, and use for tasting, among several others.

A winery is liable for a federal excise tax based on the gallons of wine removed from bond that are reported on the Wine Premises Report. The tax is due quarterly for wineries whose tax is normally $50,000 or less and semi-monthly for wineries with higher volume. Different tax rates apply to the six categories of wine listed on the Wine Premises Report, ranging from $1.07 per gallon for wines with 14% or less alcohol to $3.40 for naturally sparkling wine. There is a small winery credit available of $.90 cents on each gallon of wine, which reduces the tax from $1.07 to $.17 cents for many wineries in Virginia. Wineries use Form TTB F 5000.24 to report and pay the excise tax.

5. Business Personal Property, Business License, and Other Taxes

Property tax rules and forms vary between each locality; however, most counties require every taxpayer who owns or rents tangible personal property or machinery or tools used in a business or professional occupation to file a Business Personal Property Tax Return.

An itemized listing of equipment owned or rented is generally provided to the localities with the year acquired, description, and purchase price. Typically all fixed assets acquired and used by the business within Virginia are reported. Land and Land Improvements are generally not taxable. Equipment used in agricultural production is also generally exempt; however, computers and office furniture and equipment are generally taxable to farms.

Business Licenses are required to be filed with most localities annually if you are operating a business. The amount of the business license fee is normally based on calendar year gross receipts, but some activities are occasionally taxed at a flat rate. In the initial year of business, an estimate of gross receipts would be reported and then an amended return would be filed based on actual receipts once that is determined at year end.

In addition to Business Personal Property and Business Licenses, your business may be liable for other miscellaneous taxes with Virginia such as Litter Tax and Meals Tax. Please contact the cities or counties you will be conducting business in to get a complete list of all the filing requirements for your vineyard or winery.

I. VINEYARD AND WINERY BUSINESS START-UP--(Cont'd)

B. Taxes and Compliance--(Cont'd)

6) Income Tax

We discussed income tax filing requirements for various forms of business in the Organization section, but there are several other income tax factors that a vineyard or winery owner should consider.

- Generally, businesses that have inventory are required to calculate their taxable income using the accrual method. While there are exceptions to that rule based on the level of the business's sales, because wineries will have to track inventory for other reporting purposes, it is usually best to use the accrual method for tax reporting.

- Vineyard costs, including the cost of vines, are eligible for accelerated depreciation under federal tax law. As such, new vineyard costs may be expensed under Internal Revenue Code §179, once placed in service subject to income and cost limitations. It takes a period of two - three years from the time of planting for vines to produce a harvestable crop, such that the vines and related capitalized costs are considered "placed in service." Currently, the §179 deduction is limited to the lesser of $25,000 or the taxpayer's taxable income. Recently, though, the §179 limitation has been as high as $500,000. If Congress enacts a higher §179 limit in the future, vineyard and winery owners may gain significant tax benefits.

- Virginia provides a credit for vineyards and wineries based on the assets purchased for vineyard and winery operations. The maximum credit is 25% of eligible expenditures, but the credit is capped at a state-wide limit of $250,000. That means that if the total amount of credit applications exceeds $250,000, each applicant's actual credit will be reduced pro rata. Virginia publishes an all-inclusive list of items that are eligible for the credit. Form FWV should be completed and submitted by April 1 each year and tax returns should be extended past due date and filed after credit has been approved by Virginia. See Tax Credits on Virginia's website (www.tax.virginia.gov) for more information.

II. ECONOMIC (HYPOTHETICAL) MODELS OF VIRGINIA VINEYARD AND WINERY (ONLY) BUSINESS START-UP

A. Expected Costs and Timeline for New Vineyard Business Start-Up

1) Assumptions for Vineyard Start-up Financial Projections

Starting a vineyard is a huge commitment of not only resources, but of time. It's a capital intensive business, requiring significant investments up front for fixed assets and capitalized costs, along with the additional operating working capital as the crop is established and grows to production stage. Our hypothetical analysis is based on the following assumptions and timeline:

Year 1 - Property totaling 40 acres has been acquired. A full 20 acres are planted in the first year.

Year 2 - Grape vines are continuing to get established in the second year and can occasionally provide a partial yield; however, this is ignored for our analysis. Only administrative and maintenance costs are factored in, since timing would affect whether there would be a beneficial crop in year two.

Year 3 - Expecting full yield and sales to begin in the third year. Full administrative, maintenance, and harvest costs would be expected.

Year 4 - Continuing sales of grapes and general operating expenses incurred. We have applied a factor of 2% for annual inflation in our analyses.

Years 1 - 22 - Cumulative income/costs for the initial first two years of no harvest, then 20 years of harvest operations have been assumed for each hypothetical projection scenario.

Depreciation - As the lives of assets will depend on the actual costs incurred for each class of property, we have used 10 years for farm equipment and 20 years (vineyard amortization and farm buildings) only for this sample analysis.

2) Land, Buildings, and Farm Equipment Costs

a. Land

Depending upon the locality you choose to call home to your vineyards, the cost per acre can vary widely. You usually want to choose a site that has good potential for direct sales and attracting customers, but also a site that has good potential for growing high-quality grapes.

In Virginia, the average cost per acre is $4,500 (USDA Land Value Report August 2013). From our review of vineyard clients, the range is from $1,000 to $8,000 an acre depending on where the property is located. For the initial purchase, a prospective vineyard owner will have to use current funds or acquire loans from financing institutions to buy the property. An alternative to purchasing property is to enter into a long-term lease with an owner of the property and incur monthly expenses to grow grapes.

We believe a vineyard typically needs a minimum of 20 acres of vineyards to achieve break-even but will need to plant more to become profitable enough to provide any significant returns to the owners. Consequently, we have suggested purchasing 40 acres, in order to expand operations enough to provide some future returns on your investment.

II. ECONOMIC (HYPOTHETICAL) MODELS OF VIRGINIA VINEYARD AND WINERY (ONLY) BUSINESS START-UP--(Cont'd)

A. Expected Costs and Timeline for New Vineyard Business Start-Up--(Cont'd)

2) Land, Buildings, and Farm Equipment Costs--(Cont'd)

b. Buildings

The size and style of your vineyard/winery will affect the costs and need for buildings.

Generally you will need some farm buildings - sheds/barns to store and protect equipment, and a warehouse to store grapes (or juice), if not immediately sold.

As with any business, you may need office space dedicated for the accounting and vineyard employees, or just for paying bills and record keeping.

Many vineyards have chosen to also offer events on their property in an effort to increase profitability. In Virginia, beautiful vineyards make attractive wedding venues and are great for other dinner receptions and outdoor activities. Some places choose not to have special facilities and have open space areas and set up tents to host the functions. Others have chosen to build or improve existing spaces to host these dinners, weddings, and other special events.

For analysis purposes, we are assuming average building costs for operating a vineyard to be $400,000; however, the range upon our observation of existing vineyards is between $50,000 and $1,200,000. There are several vineyard (only) operations with only a small barn and/or equipment shed, which cost usually runs $50,000 - $60,000. The office/warehouse/space for tasting room building is optional for the small vineyard with no future plans for expansion.

c. Equipment

Obviously to start-up a farming operation and maintain the land and crops, significant investments in equipment is necessary. Some of the basic items you will need to acquire are tractors, sprayers, trucks, forklifts, and a variety of other miscellaneous tools for planting the vines, maintaining the property, and harvesting the grapes. You will also need to acquire office furniture, equipment, and software to keep up with the records necessary for the daily operations of business.

For our hypothetical sample vineyard, we will use $120,000 as the farm equipment costs, with the observed range being around $70,000 for used equipment and a high of $175,000 for new equipment, depending on the number of tractors, vehicles, and equipment you decide you need to operate efficiently.

See Exhibit 1 for a sample breakdown of land, buildings, farm equipment, and vineyard-related capital expenditures.

3) Vineyard Planting and Development

Vineyard planting and development costs can also vary widely. General costs included are: Land clearing, wells, above ground storage (ponds), irrigation systems, vines, posts, trellising, fencing, and labor. Obviously, the maturity of the vines and where they are purchased from contributes to the cost, as well as your design for the spacing of vines and heights and material used for the trellises and fencing.

Vineyard costs per acre from our observation range between $7,000 and $25,000. For our hypothetical vineyard, we will use $15,000 as the estimated cost per acre to plant and establish a vineyard.

Field costs, such as irrigating, fertilizing, spraying, and pruning that are incurred after the harvest of a crop or yield but before the crop or yield is sold are not preproductive period costs because they do not benefit the harvested crop or yield. Such field costs generally can be deducted currently and are not capitalized.

4) Vineyard (Farm) Related Operating Costs

Some research (Cornell University "Grapes 101 Conversion Factor: From Vineyard to Bottle") states an acre of vines can yield anywhere from 1 to 30 tons of grapes per acre. However, from our data and the surveys and information we have observed, the yield in Virginia averages 2.5 tons per acre (see below) and is anywhere from 2 tons an acre up to 5 tons an acre. Generally, grape growers indicate the higher the yield, the lower the quality of grapes and their demand may be less and the price received for the lower quality grapes much less.

According to the **Virginia Commercial Grape Report** produced by the Virginia Wine Board, the average yield for 2011 to 2013 is 2.5 tons per acre. We have produced several hypothetical scenarios in our cost analysis and have used 2.5, 3.0, and 4.5 tons an acre to observe profitability. Obviously, to increase the probability of financial success, a vineyard owner will want to provide the highest yield (possible) of quality grapes. Visit the Virginia Tech website for several excellent articles in developing and improving your vineyard.

Market prices for grapes will vary depending on demand as well as for the different varietals of grapes (red or white, vinifera, or hybrid). According to the Virginia Commercial Grape Report:

- Vinifera (premium grapes) tend to bring the higher prices in Virginia and have recently (2013) ranged in price from $900 to $8,700 a ton, with the average being $2,014 a ton.
- Hybrid grapes have ranged from $524 to $2,100 a ton, with an average of $1,180/ton. Hybrid grapes tend to bring a lower price, but have a higher yield and lower farming costs.
- American grapes have ranged from $1,000 to $2,100 a ton, with an average of $1,472/ton.
- The weighted average for all varietals was $1,839 per ton.

For our hypothetical analysis, we will consider an average low price of $1,200 and the average high price of $1,800 expected to be received for a ton of grapes.

Vineyard operating costs can vary greatly depending on size of the vineyard and whether the owner participates in the operations or hires a farm manager and laborers.

Vineyard operating costs are comprised of the following:

- Fixed Administrative Costs - Salaries and payroll, rent, taxes and licenses, interest, advertising, bank fees, registrations, insurance, professional fees, utilities, office expenses, and other overhead costs

- Vine Maintenance - Replacement vines, labor costs, repairs and maintenance, fuel, vehicle and equipment costs, supplies, and other vineyard expenses

- Harvest Costs - Labor and supplies

From the sources we observed, the range of total costs per acre appears to be between $4,000 and $6,200 for the total annual reported costs per acre. Our hypothetical financial projections use average annual expenses of vineyards, (excluding owner's compensation and other depreciation,) of $5,400/acre, for a total of $108,000 a year for a 20-acre vineyard. See Exhibit 2 for a detailed analysis of hypothetical annual vineyard costs.

Depreciation is a gradual write-off of your investment in business assets and is claimed as an expense over the life of the property. Generally, you can depreciate most tangible personal property and real property owned and placed in service in your farming business (except land), and their recovery periods under the Internal Revenue Service (IRS) General Depreciation System are as follows:

Agricultural structures (single-purpose)	10 years
Trucks..	5 years
Farm Buildings...	20 years
Farm Machinery and Equipment.....................................	7 years
Fences..	7 years
Office Furniture and Fixtures..	7 years
Trees or Vines Bearing Fruit...	10/20 years
Water Wells..	15 years

A. Expected Costs and Timeline for New Vineyard Business Start-Up--(Cont'd)

5) Hypothetical Financial Projections

***Exhibit 3 - Price $1,200 @ 2.5 Tons Yield Per Acre*:**

Total cumulative income (through Year 22) on 50 tons of grapes at $1,200/ton would be $1,517,842. Total Cumulative Operating expenses are estimated to be $2,848,116. Assuming 20 years of depreciation on the initial fixed asset acquisitions of $480,000, total expenses would be $3,228,116, for a cumulative net loss of $1,810,274, assuming no owner compensation and no interest on debt.

There would be no break-even point or return on capital under this scenario. Over the 22-year time frame, the total costs incurred to set up and operate the vineyard would be $1,990,274 greater than revenue expected from the sale of grapes, assuming 20 acres planted at average yields of 2.5 tons/acre and an average selling price of $1,200 per ton of grapes.

Exhibit 4 - Price $1,200 @ 4.5 Tons Yield Per Acre:

Total cumulative income (through Year 22) on 90 tons of grapes at $1,200/ton would be $2,732,116. Total Cumulative Operating expenses are estimated to be $2,848,116. Factoring in the depreciation allowed on the total initial fixed asset acquisitions of $480,000, total expenses would be $3,228,116, for a cumulative net loss of $596,000.

The break-even point in annual operating cash flow only is achieved by Year 3 at this price and yield. However, this projection assumes no owner compensation and no interest on debt.

There would be no Investment return on capital under this scenario as total costs to set up and operate the vineyard would be $776,000 greater than revenue projected from the sale of grapes.

Exhibit 5 - Price $1,800 @ 3.0 Tons Yield Per Acre:

Total cumulative income (through Year 22) on 60 tons of grapes at $1,800/ton would be $2,732,116. Total Cumulative Operating expenses are estimated to be $2,848,116. Factoring in the depreciation allowed on the total initial fixed asset acquisitions of $480,000, total expenses would be $3,228,116, for a cumulative net loss of $596,000.

The break-even point in annual operating cash flow only is achieved by Year 3 at this price and yield. However, this projection assumes no owner compensation and no interest on debt.

There would be no return on capital under this scenario as total costs to set up and operate the vineyard would be $776,000 greater than revenue projected from the sale of grapes.

Exhibit 6 - Conversion of Existing Farm to 40-Acre Planted Vineyard

In this scenario, an existing farm has been converted to a vineyard, such that the only capital costs are planting 40 acres of vineyard. Otherwise, the facts are similar to Exhibit 5 (3.0 tons/acre yield, and $1,800/ton average selling price), except that the revenue and variable costs are doubled.

At this price and yield, the owner will surpass break-even annual operating cash flow in Year 3 by $40,000 before depreciation. In this scenario, there is a return on capital and the cumulative revenue is greater than total capital and operating costs (before consideration of income tax) by $239,895 ($839,895 before depreciation). However, cash flow is still not sufficient to pay any significant owner salary or be able to service any significant debt.

6) Vineyard Return per Acre Analysis - Virginia vs. Other States

In order to attempt to assess the voracity of our hypothetical financial projections, we compared our sample projected costs and break-even sales (at 20 acres planted yielding 3.0/tons per acre at a sales price of $1,800 per ton) to the in-state and out-of-state vineyard economic analysis as shown on Exhibit 7, which includes the following studies (see references in the Appendix to this report):

Tony Wolf, Virginia Tech 2013
Jim Benefiel, in Cooperation with Virginia Tech 2013
Oregon State University 2008
Cornell University, New York 2011
Colorado St. University 2010
Texas Tech University 2010
University of California, Sonoma 2010

Several factors stand out in comparison with our hypothetical projection:

- Virginia Tech believes that the Virginia average yield results of 2.5/tons per acre can be better, and project 3.6 tons per acre, at an average selling price of $2,000/ton, according to a Virginia Wine Board member familiar with their recent studies.

- Both yields and selling prices are significantly higher in California.

- At either the higher prices ($2,300 for California and Oregon) or higher yields (Virginia Tech, Texas, and California) it is possible to make a profit at only 20 acres planted.

- Projected to 40 acres, assuming fixed costs can handle at least 40 acres production, break-even or profits are shown for most yield and price examples.

II. ECONOMIC (HYPOTHETICAL) MODELS OF VIRGINIA VINEYARD AND WINERY (ONLY) BUSINESS START-UP--(Cont'd)

A. Expected Costs and Timeline for New Vineyard Business Start-Up--(Cont'd)

7) Summary of Key Factors to Increase Chances of Profitability for Vineyard Operations

- Increase average yield in Virginia vineyards from 2.5 tons/acre to 3.0 - 4.5 tons/acre, without sacrificing quality.

- Plant premium grapes and continue to increase selling prices, as practicable.

- Plant as many acres as fixed overhead can support and handle, given capital funding restrictions.

- If there is no winery planned in the near future, keep building costs to minimum.

- Consider events even if you do not make wine. Someone can custom-crush for you if you want to sell wine at these events.

B. Expected Costs and Timeline for New Winery (Only) Business Start-Up

1) Assumptions for Winery (Only) Start-Up Financial Projections

In the past ten years, there has been a trend towards business persons in Virginia entering the winery business without first either purchasing a vineyard or buying land and planting a vineyard. Some of this trend is due to the difficulties and uncertainties involved with farming, the increase in capital needed to plant enough acres to support the winery business, and the two to three year wait until the new vineyard is producing. However, with the continued success of Virginia wines and increases in wine sales each year, along with the opportunity to obtain gross profits at 50% or above for retail sales of wine, business owners are seeing an opportunity to get started quickly in the Virginia wine production business. Also, with Virginia having evolved into a "wedding destination" state, there is a growing trend to get into the "event" business immediately as a profitable adjunct to being a Virginia winery, and consequently, spending more capital on event buildings and settings rather than on vineyards. For these reasons, we chose to present the economics of a winery (only) business, but without benefit of events income and costs, as that is beyond the scope of this report. Accordingly, the assumptions related to the expected costs and timeline for a hypothetical new Winery (only) business start-up are as follows:

- Purchase approximately five (5) acres of land for the buildings, parking, and potential event building on site.

- Build a winery production facility and warehouse and another building for the tasting room and office space.

- Purchase new production equipment, sales and office furniture, and computers.

II. ECONOMIC (HYPOTHETICAL) MODELS OF VIRGINIA VINEYARD AND WINERY (ONLY) BUSINESS START-UP--(Cont'd)

B. Expected Costs and Timeline for New Winery (Only) Business Start-Up--(Cont'd)

1) Assumptions for Winery (Only) Start-Up Financial Projections--(Cont'd)

- Make purchases with cash and no debt is assumed.
- Purchase 60 tons of grapes each year and yield 9,000 gallons of wine (average 150 gallons per ton of grapes).
- Fund first five years operating costs with cash and no debt assumed.
- In a full year of production, make 45,900 750 milliliter (ml) bottles of wine (average 5.10 750 ml bottles per gallon) at assumed low-end and high-end costs.
- Sell wine at $15.00/bottle retail and $10.00/bottle (wholesale and low-end production scenarios).
- Assume 50% gross profit margin sales.
- Timeline assumptions:

Year 1: Purchase land, build plant, and purchase and install production equipment. Enter into purchase contracts to buy grapes.
Year 2: Buy grapes and manufacture wine.
Year 3: Sell all white wine, but only some reds (all reds not yet mature), ramp up marketing and advertising.
Year 4: Sell both whites and reds, full marketing, but only sell 2/3 of one year's production.
Year 5: Sell 100% of one full year of production.

2) Buying Grapes vs. Planting Cost Analysis

At some point during the start-up of your winery (only) business, you may want to know whether it is economically better to buy your grapes on the market or plant your own. If you can purchase the types of grapes at the quality you desire on the market, it just comes down to a "lease vs. buy" type of economic analysis. We have attempted this type of analysis on Exhibit 8: "Buying Grapes vs. Planting Cost Analysis."

The top section of Exhibit 8 summarizes the Virginia Wine Board Marketing Offices "Virginia Commercial Grape Reports" for 2011, 2012, and 2013, and averages the three years. This provides a benchmark for the average tons per acre you could expect from planting and growing your grapes, and the average price per ton you can expect to purchase the different categories of grapes. Please refer to those reports on the Virginia Wine Board's website for ton and price data of specific varietals.

The actual analysis on the bottom section of Exhibit 8 compares four (4) different scenarios, which mirror the Hypothetical Vineyard Financial Projection assumption scenarios we have detailed in Exhibits 3 - 6 in this report. The assumption is that you would only purchase the same amount of grapes that you could grow and sell under each of those yield and price scenarios.

The assumed cost to buy grapes for 20 years is compared to the total cost of planting and production for 20 years. Only production and harvest costs are included (administrative fixed costs are not included, as they are theoretically the same whether buying or planting), along with the land held for vineyard, cost of planting, and the cost of farm equipment and buildings (only $60,000 for the small barn or equipment shed is included).

The results are as follows:

Scenario 1: If you expect to be an average farmer in Virginia, averaging 2.5 tons/acre yield, and do not intend to grow (or buy) premium grapes (or make premium wine), then buy your grapes and do not farm.

Scenario 2: If you expect to be an above average farmer, and can yield (on average) 3.0 tons/acre of premium grapes, it is a "toss-up" economically to farm, so if you can buy the types, quality, and amounts of grapes on the market, continue to purchase grapes. If the market gets more expensive, or grapes are not available, consider farming.

Scenario 3: If you expect to be an exceptional farmer and can yield 4.5 tons/acre (80% more yield than average in Virginia) of lower priced grapes, it is the same "toss-up" economically between buying vs. planting. However, since this scenario assumes not using premium grapes, buying makes more sense, as you should be able to find similar sources of grapes on the market.

Scenario 4: If you expect to be an above average farmer at 3.0 tons/acre of 40 acres of premium grapes, it would be a significant economic benefit to plant your own vineyard of premium varietals rather than attempt to purchase that amount and quality of grapes on the market.

3) Land, Building, and Production Equipment Costs

A. Land: Purchase five (5) acres at $4,500 per acre (average per USDA Land Value Report, August 2013, for Virginia).

B. Buildings: Build a winery production and warehouse for $600,000 (range of winery production buildings we have observed is $350,000 - $1,500,000) and a wine tasting and retail shop with office space for $340,000 (range of wine tasting/office buildings we have observed is $300,000 - $550,000).

C. Production and Other Equipment: Our hypothetical Winery (only) company purchases \$500,000 of winery production equipment and \$37,500 of tasting room furniture and office furniture and computers. The range of costs in these categories we have observed is from \$200,000 - \$2,000,000.

See Exhibit 9 for a summary of expected capital costs for a winery (only) business.

4) <u>Winery (Only) Operating Costs</u>

Operating costs for our sample hypothetical winery (only) company consist of variable production costs (associated with the direct costs of manufacturing the wine), fixed administrative costs (general business costs not directly related to either producing or selling the wine) and selling costs (direct and indirect costs related to marketing, advertising, and selling the wine). In the actual accounting records of these types of companies, these costs are seldom found in these categories, but are "lumped" together. For instance: production labor, office wages, and selling labor and commissions (if applicable) are usually recorded in one account called "Salaries and Wages" on the books of these companies. We have separated them between these categories to (hopefully) provide for a clearer understanding of the accounting and economics of what should go into wine inventory costs (capitalized on the Balance Sheet until the wine is sold) and other costs, which would be expensed.

Actual Operating Costs between winery (only) companies differ dramatically, mostly due to either the size of the business or the owners' inclination (including numerous family members in many closely-held businesses) to be "hands-on" in the business rather than just be the owner/investor of the business. The range of Cost of Goods Sold (COGS) we observed in 2013 was from \$75,000 to \$1,400,000, and the range of Operating Expenses was from \$120,000 to \$1,400,000. For our hypothetical company expected Operating Cost analysis, we used both a "Low End" and "High End" cost range, based on a hypothetical winery producing 45,900 750 ml bottles (3,825 cases) of wine. Our hypothetical winery (only) operating costs were as follows (see Exhibit 10.1 (Low End) and Exhibit 10.2 (High End):

	LOW END	HIGH END
Purchase Grapes	\$ 72,000	\$108,000
Variable Production Costs	108,000	186,300
Fixed Administrative Costs	100,000	150,000
Selling Costs	135,000	200,000
Depreciation	81,000	81,000
Total Hypothetical Cost Scenarios	\$496,000	\$725,300

II. ECONOMIC (HYPOTHETICAL) MODELS OF VIRGINIA VINEYARD AND WINERY (ONLY) BUSINESS START-UP--(Cont'd)

B. Expected Costs and Timeline for New Winery (Only) Business Start-Up--(Cont'd)

4) Winery (Only) Operating Costs--(Cont'd)

You might be wondering how there could be a difference in "Fixed" Costs between the low and high end sample companies, or even why there would be a difference in selling costs if sales volume between the two sample companies is the same. The answer to this question goes back to whether the owners (and family) work the business without salary, and the differences in discretionary expenses like employee benefits and outside advertising expense, as examples.

5) Winery (Only) Production (Inventory) Costing

Our "Hypothetical Winery (only) Inventory Costs" (see Exhibit 11) uses an annual average costing methodology and does not provide cost variations between white and red (red requires longer maturation process in oak barrels) wine nor between varietals. These costs include only direct and indirect production costs, using low ($1,200/ton) and high ($1,800/ton) grape costs, low-end (Exhibit 10.1) and high-end (Exhibit 10.2) Variable Production Costs, and similar depreciation of production equipment using estimated actual (book) lives. These inventory costs do not include overhead costs as required by the Internal Revenue Service (IRC Section 263A) or interest costs to carry the inventory (as a "no debt" assumption was made). It has been assumed that all production has been bottled each year out of bulk, which in practice seldom occurs.

Very few wineries actually cost their own wine inventory, so either their tax accountants do it when the income tax returns are prepared, or they use the "retail" method (usually ½ of sales price), which is not acceptable by the IRS. Most wineries do not track inventory counts or costs on a perpetual basis. Instead, they count the inventory at each date the Wine Premises Report is due to go to the TTB (Federal Government), which is measured in gallons. Consequently, we normally cost the bulk and bottled wine by the gallon, making sure the gallons tie back to the year-end TTB report filed. It is important to keep track of the inventory cost for each year of bulk wine and bottling cost per gallon, so as wine is sold, the cost is properly matched with the year it was produced. The cost per gallon between years can be significantly different because of large variances in the number of bulk gallons produced and the number of bulk gallons bottled in any given year.

Our sample hypothetical low-end cost per gallon was $25.56/gallon, or $5.00 per 750ml bottle; split between bulk costs of $17.89/gallon or $3.50/bottle, and bottling costs of $7.67/gallon or $1.50/bottle. The hypothetical high-end wine was $38.26/gallon or $7.50/bottle; split between bulk costs of $25.50/gallon or $5.00/bottle and bottling costs of $12.76/gallon or $2.50/bottle. The range of average costs of bottled wine we observed is a low of $20.40/gallon or $4.00/bottle to a high of $51.00/gallon or $10.00/bottle, with the average cost observed being $6.00 - $7.00 per 750 ml bottle.

6) Winery (Only) Hypothetical Financial Projections

Based on the Assumptions, expected costs, and inventory production and costs, we have prepared three (3) hypothetical Winery (only) Projected Income Statements as follows:

Exhibit 12.1	Low End Cost - Projection at average selling price of $10.00/bottle
Exhibit 12.2	High End Cost - Projection at average retail price of $15.00/bottle
Exhibit 13	High End Cost - Projection at average wholesale price of $10.00/bottle

The results of Exhibits 12.1 and 12.2 show a break-even operations in year five assuming sales reach a full year's production by year five, at an average price per bottle of $10 (low-end product) and $15 (high-end product) obtained through mostly retail sales, which is difficult in such a short time span. Usually retail sales at these levels can not be obtained without drawing customers to the winery through events or by establishing a well attended restaurant or social/historical meeting place. This will be especially difficult for the low end product hypothetical winery, since these types of wine usually sell better in a wholesale pricing environment. At high-end costs, the wholesale projection (Exhibit 13) is unlikely to be profitable, where it would take sales of close to $1.5 million (150,000 bottles or 12,500 cases) to break even and close to $2.0 million to make a profit at such low margins.

Several issues are important in evaluating the actual economic realities of these Winery (only) hypothetical projections:

- These projections assume no outside debt taken on to finance the capital outlays and working capital needed to start-up these operations and reach break-even operations. If debt of 70% of the total capital outlay needed to fund these businesses was taken on at 5% interest only for five years, interest of approximately $350,000, $400,000, and $450,000 would be added to the costs in each scenario, making break-even unattainable in all three cases.

- These projections indicate total cash funds needed through year five to be approximately $2.1 million, $2.5 million, and $2.7 million, respectively, with no significant return on capital to the owner.

- These projections do not include any significant salaries paid to owners.

- No income taxes or income tax benefits have been included.

- No events income or costs have been included.

II. ECONOMIC (HYPOTHETICAL) MODELS OF VIRGINIA VINEYARD AND WINERY (ONLY) BUSINESS START-UP--(Cont'd)

B. Expected Costs and Timeline for New Winery (Only) Business Start-Up--(Cont'd)

7) Discussion of Key Factors to Obtain Hypothetical Financial Break-Even Winery (Only) Business Operations

Since we have already discussed the detailed sample hypothetical financial projections for Winery (only) operations, here is a summary of the key bullet points to obtain financial break-even:

- You should be able to purchase capital expenditures (land, building, and equipment) with cash and not take on debt, or it will be extremely difficult to break even because of significant interest expense and debt principal curtailment.

- Plan on having enough funds available to fund a minimum five (5) years of operations, and another two to three or more years if break-even sales levels are not reached or gross margins shrink because of wholesale sales.

- Make quality wine or business continuation is unlikely for the long haul, unless you have an exceptional location or a special venue that continually attracts customers.

- Unless you perform general manager, wine-maker, and/or sales functions, it is unlikely you will receive any substantial owner compensation from operations over the initial 1 - 8 years of operations.

- The key to achieving break-even is selling quality wine at retail prices. You may need creative marketing, events, or a restaurant or special social/historical meeting place to accomplish selling most of your wine products at retail prices on a consistent basis.

III. ECONOMIC (HYPOTHETICAL) MODEL AND PROFITABILITY DISCUSSIONS OF COMBINED VINEYARD AND WINERY BUSINESSES IN VIRGINIA

A. Expected Costs and Timeline for Combined Vineyard and Winery Business Start-Up

1) Assumptions for Combined Vineyard and Winery Financial Projections

The assumptions for our hypothetical combined vineyard and winery are similar to the sample separate vineyard (see II.A.(1)) and winery only (see II.B.(1)) assumptions. Essentially, a vineyard with 20 acres planted yielding 60 tons of grapes and winery producing 9,000 gallons of wine (45,900 bottles or 3,825 cases), with a gross profit approximately 52% (slightly higher than winery only) and assuming two different scenarios at both the low-end and high-end cost spectrums, with capital costs assumed to be identical for both the low-and high-end scenarios, with expected prices of $10.50/bottle and $15.00/bottle, respectively. In addition, we have projected out a 40-acre operation at the high-end scenario, which we believe is an "optional" size for profit maximization. The timeline for the Combined Vineyard and Winery operations in this hypothetical operation is as follows:

Timeline for Combined Vineyard and Winery Start-Up

- Year 1: Purchase land and construct buildings, purchase farming equipment and plant 20-acre vineyard, and purchase wine production equipment and all office and other furniture and equipment (see Exhibit 14). This is an aggressive timeline, and may actually take 12 - 24 months.

- Year 2 Maintain vineyard and prepare production facility for future winemaking, but no production as vines are not yet mature. Plant additional 20 acres for "optimal" operations, contingent upon your cash available for investment and ability to sell at these increased levels.

- Year 3: Assume full yield of grapes and full harvest and variable wine production costs, but no sales.

- Year 4 Begin marketing costs (less than 100% of expected marketing and advertising costs) and assume sales of about 1/3 of one year's wine production.

- Year 5: Full production and selling costs, but sales of only 2/3 of one year's wine production (see Exhibits 15.1 (Low End) and 15.2 (High End) Vineyard and Winery Operating Costs) and Exhibit 16 for bulk and bottled wine costing analysis.

- Year 6: Assumes sales of 100% of one year's wine production at retail prices (an aggressive sales projection timeline, which could take 2 - 3 years longer). Break-even operations are achieved under both the low and high end cost scenarios in year 6 under these assumptions.

- Years 7 - 9 Assumes sales increase by 5% and costs increase by a 2% inflation factor, with net income break-even in years eight or nine.

III. ECONOMIC (HYPOTHETICAL) MODEL AND PROFITABILITY DISCUSSIONS OF COMBINED VINEYARD AND WINERY BUSINESSES IN VIRGINIA--(Cont'd)

A. Expected Costs and Timeline for Combined Vineyard and Winery Business Start-Up (Cont'd)

1) Assumptions for Combined Vineyard and Winery Financial Projections--(Cont'd)

Timeline for Combined Vineyard and Winery Start-Up--(Cont'd)

These sample Combined Vineyard and Winery Financial Projections assume no debt service (interest expense) and no significant owner compensation being paid. See Exhibits 17.1 (Low-End) and 17.2 (High-End) for the year 1-9 projected break-even financial projections under these assumptions, and Exhibit 17.3 for the potential results of a 40-acre planted operation being able to sell all inventory at an average of $15.00/bottle, but with only minimal increases in operating fixed costs.

2) Discussion of Retail vs. Wholesale Business Models

As we have already demonstrated the economic results of selling at wholesale (see discussion at II.B(6) and Exhibit 13) of the Winery (only) wholesale hypothetical financial projections), we have not presented a stand alone combined vineyard and winery wholesale projection again here. The results of a high-end cost scenario at wholesale prices will produce similar results as Exhibit 13, but with a small decrease in the expected loss due to a slight increase in gross profit. Low-end product made at low-end production costs of $4 - $5.00/bottle can not usually be sold at a 50% gross profit margin at wholesale (it is usually closer to a 20% - 30% gross profit), making it difficult to obtain break-even operating results even in lower cost operations.

3) Land, Building, Equipment, and Vineyard Capital Costs

See discussions at II.A.(2), II.A.(3), and II.B.(2) and Exhibits 1 and 9. The Combined Expected Costs for (Combined) Vineyard and winery Operations can be found in Exhibit 14.

4) Vineyard and Winery Operating Costs

See discussions at II.A.(4) and II.B.(4) and Exhibits 2 and 10.1 (Low-End) and 10.2 (High-End). The details of our sample companies Hypothetical Vineyard and Winery Operating Costs can be found in Exhibits 15.1 (Low-End) and 15.2 (High End)

5) Bulk and Bottled Wine Costing Analysis

a) Average Costing by Vintage Year

A detailed discussion of a sample Average Costing of a winery (only) operation can be found at II.B.(5) and Exhibit 11. The only differences between the average costing of inventory for a combined vineyard and winery operation (Exhibit 16) compared to a winery (only) operations are as follows:

III. Economic (Hypothetical) Model and Profitability Discussions of Combined Vineyard and Winery Businesses in Virginia--(Cont'd)

A. Expected Costs and Timeline for Combined Vineyard and Winery Business Start-Up--(Cont'd)

5) Bulk and Bottled Wine Costing Analysis--(Cont'd)

a) Average Costing by Vintage Year--(Cont'd)

	Exhibit 11 Winery (only)	Exhibit 16 Vineyard and Winery
Grape costs (bulk)	Purchased costs	Vineyard and harvest costs
Grape costs (bulk)	-	Depreciation of vineyard and farm equipment
Bottling costs	Same	Same

The results of our sample company wine inventory costing (Exhibit 16) is that the Low-End average inventory cost per bottle of $5.25 is greater than the Winery (only) of $5.00/bottle since the vineyard costs are slightly more than purchasing grapes, but the High-End cost per bottle of $7.22 is less than the Winery (only) of $7.50, since we have assumed the same capital costs in both the low and high end cost scenarios.

b) Volumetric Conversion Factors

It is important to understand the expected estimated volume conversation factors to understand the economics of the wine business and calculation of either vineyard yields and/or wine production and costing. The important volumetric conversion factors and range estimates are as follows:

	Low	Average	High
Gross yield in tons per acre...............	2.0	2.5	3.0
Gallons per tons of grapes.................	120	150	180
750 ml bottles per gallon....................	5.00	5.10	5.10

c) Discussion of Specific Wine Costing Issues by Product and Varietal

The volumetrics above can change dramatically between vineyards (and wineries) based on planting methods and varietals planted. Virginia Tech and Universities in other states have performed some detailed agricultural (viticultural) studies, which deal with these specific issues. Please search for and read these articles and studies, as they will assist you in determining the actual expected yields and resulting gallons per ton from the varietals you decide to plant and the planting methods and spacing you decide to use in your vineyard. An economic analysis and discussion of these specific varietals is beyond the scope of this project and our expertise in these areas.

As discussed under the Winery (only) operations (section II.B.(5), there is usually a significant timing difference in producing white and red wines, with many red varietals requiring long periods of aging in oak barrels (some whites require this as well). However, most vineyard and winery operations in Virginia (even the larger ones) do not have (or are willing to spend) the time it takes to properly account and segregate the costs associated with each type of wine they produce. Some wineries have attempted to do this, but have found after several years it is not cost effective to spend the hours it takes to perform these detailed cost studies and maintain them on a consistent basis.

At a minimum, average costs to produce bulk wine and the costs to bottle should be calculated and costed each year, and inventory counts at each year end should be segregated by year produced, so as to be able to calculate an accurate year-end inventory at cost and then be able to make a proper accounting of each year's gross profit and income or loss as these wines are sold.

6) <u>Hypothetical Financial Projections of Combined Vineyard and Winery Operations Selling at Retail</u>

The hypothetical financial projections of the two 20 acres planted combined vineyard and winery start-up businesses can be found at Exhibit 17.1 (low-end costs) and 17.2 (high-end costs) are similar to the winery (only) exhibits, except for these assumptions:

- Both Exhibit 17.1 and 17.2 include similar capital expenditures, except for the additional land, farm equipment, and vineyard planting costs not in the winery (only) projections.

- There is an additional year of delay in sales due to the time lag in getting a full harvest of grapes (many start-ups will buy grapes on the market in year two to get production started earlier).

- The cost of producing the wine is slightly different due to the difference in planting vs. buying, and the selling price for the low-end scenario (Exhibit 17.1) has been increased, from $10.00/bottle to $10.50/bottle to maintain expected profit margins at 50%.

Other than the additional capital costs and year (to two years in some actual companies) time lag in production and sales, the results are comparable to the winery (only) projections. Using the stated assumptions, including the aggressive assumption that sales of 100% of one year's production can be achieved in year 6, break-even operations can be achieved in year 6 at these assumptions. Failure to reach that level of sales at retail prices will not achieve break-even operating results under these assumptions.

III. <u>ECONOMIC (HYPOTHETICAL) MODEL AND PROFITABILITY DISCUSSIONS OF COMBINED VINEYARD AND WINERY BUSINESSES IN VIRGINIA</u>--(Cont'd)

A. <u>Expected Costs and Timeline for Combined Vineyard and Winery Business Start-Up</u>--(Cont'd)

6) <u>Hypothetical Financial Projections of Combined Vineyard and Winery Operations Selling at Retail</u>--(Cont'd)

Remember that these hypothetic projections include no debt service or interest expense, and no significant owner's compensation. Just adding interest expense at 5% on debt equal to 70% of the capital needed to fund initial start-up of business makes achieving break-even (under these assumptions) impossible.

A key issue is the total capital required to establish the vineyard and winery businesses at these assumed levels, which is $2.77 million under the low-end hypothetical scenario and $3.14 million under the high-end hypothetical scenario. As can be seen by the results of year 7 - 9 in each scenario, assuming a 5% increase in sales after reaching break even, and annual 2% increases in costs due to inflation, operating profit does not increase sufficiently for any significant "return on investment" to occur.

7) <u>Projected "Optimal" Vineyard and Winery</u>

Our projection of what we believe can be an "optimally efficient" vineyard and winery operation at 40 acres planted, assuming only small increases in fixed costs and average selling prices at $15.00/bottle retail can be found in Exhibit 17.3. We have included the annual projected cash flows at the bottom of the Exhibit. While these results are difficult to obtain (being able to sell this level of inventory at retail prices), we have observed such results in several Virginia combined vineyard and winery operations, but these results can not be guaranteed.

8) <u>Key Factors to Obtain Hypothetical Financial Break-Even and Profitability for Combined Vineyard and Winery Businesses</u>

As discussed in some details under winery (only) operations (see IIB.(7)), these key factors to obtain break even or become profitable are the same for both combined operations or winery (only) operations.

- Fund capital expenditures with cash, and do not take on debt. If you take on debt, there will not be sufficient cash produced from operations to pay the interest and/or curtail the debt.
- Anticipate the working capital (cash flow needs of operations), which could span as much as 5 - 8 years or more before break-even is achieved.
- Realize that there will be little or no compensation to owners (except for performing workers' duties) until break-even is achieved.
- Understand that break-even operations in <u>start-up vineyard/winery companies</u> are nearly impossible with sales only at wholesale prices. Focus on retail sales efforts, although some wholesale marketing and sales may be necessary to "brand" your product.

In addition, the vineyard operations should focus on these key points:

- In planting the vineyard, consider planting between 20 - 40 acres over 3 - 4 years of select varietals with above average yields and quality with the focus on making premium wine, which can be sold at higher retail prices.

B. Profitability Issues for Discussion and Conclusion

1) Marketing and Sales

Industry averages indicate wineries spend from 2.0% - 5.0% of sales on advertising and marketing. With the current trend towards internet marketing and sales, investment in your Company's webpage and other social media may be a key to your future success. Currently, wineries are soliciting internet sales, but these sales have been sporadic and there is not enough data to discuss the economics of internet sales compared to retail sales at your wine tasting facility. Our initial thought is that internet sales may compare to wholesale sales with increasing volume but decreasing profits, but we will have to wait a few more years to confirm these facts. For now, getting potential customers to your venue and enticing them to buy your wine at retail prices is essential to becoming a profitable winery.

Award winning wines help to attract attention to your winery and provide evidence to consumers that you have a product worthy of consideration. However, without adequate numbers of customers (visitors) you will not be able to sell enough wine to reach break-even operations. Internet, television, radio, magazines, newspapers, and word of mouth continue to be among the best ways to get word out to the public about your business and your wines.

With the increasing popularity of wineries in Virginia, there are increasing numbers of wineries, such that sales of Virginia wines must continue to increase at a high rate to support the new number of wineries. This level of competition is becoming an economic issue for some wineries. Consequently, even with the increasing popularity of Virginia wines, marketing and advertising is becoming more important due to this increased competition for wine customers.

Sales pricing is also becoming an issue for some wineries and their customers. The Virginia ABC stores now carry a long list of Virginia wines, and publish prices on their internet site, as do several large wine wholesale brokerage businesses. The Virginia ABC range of prices for most white wines is $7.00 - $15.00 (bottle) and for most reds is $11.00 - $19.00/bottle. Average prices are around $12.00 - $13.00 for white and $14.00 - $15.00 for red wine on the Virginia ABC website. These prices appear to be about $1.00 - $2.00 below known retail prices at some of the wineries retail tasting rooms. Our observation and experience at retail tasting rooms is that customers are willing to spend a couple of dollars more for the "experience" and entertainment perceived at local vineyards and wineries. However, there is a trend for some of the consumers to taste at the wineries, then buy bottles or cases of these wines on-line at cheaper prices from brokers.

Many start-up wineries focus their marketing on attending (often paying a fee for space) at community wine-tasting social events. Others have several opening events and advertise special weekday or weekend wine tasting introductions, sometimes by invitation. Some host a special event or hold weekend music events. Fall is the best time to attract visitors and most wineries report that the fall season is their critical time for retail sales and customer visitation. Start-up wineries will need to spend much more than 3 - 5% of sales during their first three (3) years of wine production to market and attract customers. It is not enough just to make a good wine and expect customers to show up. Focused efforts on advertising and marketing are keys to establishing a sustainable vineyard and winery business.

2) Events

First, make sure your location is zoned for events and that you understand the local government rules on noise ordinance, density restrictions, and other local laws. Expect (possibly significant) license fees to be charged by localities for permits.

Hosting events, especially weddings, has become a normal weekend occurrence at many vineyards and wineries. With Virginia becoming an established wedding destination state, this is an excellent way to attract visitors, sell wine, and market your business. The range of wedding event fees is usually $5,000 - $25,000, with a 50% non-refundable down payment required. As more vineyards and wineries enter the wedding event business, fees are becoming more competitive, but the more established venues are getting event fees in the $10,000 - $20,000 fee range, and are "booked up" for one to two years with weddings.

It is important that your event venue have enough indoor space that weddings can be performed indoors when weather does not cooperate. Some start-up wedding event businesses suggest their customers rent a large tent if they do not have enough indoor space to accommodate large weddings. Building a facility with this amount of space and a dance floor is very expensive. Wineries without food facilities (most wineries) have relationships with catering services they suggest to potential customers. Sometimes large fixed fees are charged for wine and food catering services. The economics of the event businesses are beyond the scope of this report, but should be considered by start-up companies as part of their overall business plan.

3) Other Potential Profit Centers

a) Food: Wine is best served with some type of food, and proper pairing of food with certain wines is an important part of the wine drinking experience. Most wine-tasting customers will want food available if they are drinking, and it can be a health issue for some patrons if food is not accessible. However, the economics of food service is that it is difficult to be profitable selling food because it is usually a low margin revenue item, which is labor intensive if you prepare it, and can be unprofitable if you experience a lot of waste. Consequently, most start-up wineries serve primarily non-perishable snack foods.

   Some wineries have attempted restaurants with limited food service times, usually Friday - Saturday dinners and lunch or brunch on certain weekdays or Sunday. If you have no prior restaurant experience, out-sourcing restaurant operations is an option, but then you cannot control quality and service. The economics of operating a restaurant are beyond the scope of this report.

b) Retail Gift Shops: Most wine tasting facilities have a small gift shop selling wine related items (glasses, bottle openers, etc.) and some winery specific marketing items (T-shirts and/or other memorabilia). There is a cost to establish the gift shop inventory, and sales and inventory turnover are usually slow, but profitability normally is around 50%; assuming retail prices are marked up 100% over cost.

B. Profitability Issues for Discussion and Conclusion--(Cont'd)

3) Other Potential Profit Centers--(Cont'd)

c) Sales or Services to Competitors: Some start-up vineyards sell grapes to other Virginia wineries and try to produce only enough wine they could expect to sell. Winery only businesses that have modern production facilities and tank capacity are getting into the "custom crush" business where they make wine for vineyards who do not have wine making equipment or lack capacity to make, store, and bottle all of their wine.

4) Discussion of Retail vs. Wholesale Business Models

We have already discussed the economics of start-up retail vs. wholesale pricing and hypothetical break even operations for small (20 acre/60 tons) vineyard and winery operations (see II.B.(6) and III.A.(2)). Given the costs of establishing shelf space at grocery stores or at wine shops, and the pricing at wholesale and commissions to distributors, it takes a very large volume of wholesale sales to achieve profitability.

However, in order to properly market your product and establish brand recognition, some wholesale operations is required. Unless it is your goal to become a very large wholesale wine operation, accept the low profitability of direct sales to restaurants, wine shops, ABC stores, wholesale distributors, and over the internet as a "cost" of marketing.

5) Gross Profit and Cost Analysis of Virginia Wineries vs. National Averages

We have compared the average of 20 established Virginia wineries we have observed to the 2013 national industry averages published by Troy, RMA, and First Research, which are shown on Exhibit 18. The sample Virginia average gross profit of 51.8% compares favorably to the Troy (44.5% - 54.5%) First Research (48.5%) and RMA wineries with $3 - $5 million of annual sales (49%), but is less than the RMA for wineries in the under $1 million sales category (22 samples showing 61.5% gross profit) and in the $1 - $3 million category (40 samples at 54.0% gross profit).

Including event income, the average Virginia wineries Operating Income plus event income is 9.6% of sales, compared with Troy (8.7%), RMA (7.5% - 9.8%), and First Research at 5.9%. The average Virginia wineries experienced a virtual break-even after depreciation and interest expense for 2013, while the various National Industry studies reported overall average net income from 0.8% - 5.0% of sales.

Officers compensation as reported was 2.3% of sales by First Research, 4.5% of sales by RMA, and 1.2% - 8.2% by Troy. Virginia wineries average officer's compensation was 3.7% of sales. Advertising expense was an average of 3.5% of sales for the Virginia wineries compared to 2.0% (First Research) and from 3.5% - 5.3% (Troy) with RMA not reporting advertising expense as a separate line item.

These averages should only be used as bench marks for your start-up business, and will not be your actual results, and can not be guaranteed.

6) Return on Investment Discussion Issues

At the levels of capital it takes to start up a vineyard and/or winery business capable of achieving break-even sales and operations, and the levels of net profits indicated by Virginia operations and National industry average bench marks, your return on capital invested is expected to be minimal or none over the expected start-up period of one to eight years. Our observation of successful vineyards and wineries is that excess profits are re-invested in growing the business or re-invested to maintain the property or business operations so as to sustain current levels of sales and service. Normally, only at a magnitude of significant size of retail operations or with regional or national wholesale sales distribution could a substantial return on investment be achieved and sustained.

7) Internal Controls

Establishing an adequate system of internal controls is essential to the profitability and sustainability of a vineyard and winery business. Without an adequate system of internal controls, the business is vulnerable to both internal (employees) and external (customers, vendors, and others) theft, and is more likely to have inefficient operations. Accordingly, we will describe some basic internal controls, which should be considered for most vineyard and winery businesses.

Security Controls:

- Have locks on all access doors and change locks periodically, or when employee turnover occurs, and do not give keys to all employees.
- Install appropriate lighting and security cameras near inventory, testing areas, accounting staff, and sales registers, and place sales registers near front door.
- Hold as little cash as possible and make daily deposits of cash and checks.
- Perform background checks on potential employees, and obtain employee theft and dishonesty insurance coverage.
- Post safety policies and emergency numbers, and train employees for crisis situations.

Accounting Controls:

There is no perfect system of internal controls that will guarantee the business will not experience a significant fraud or loss of assets, however, the assignment of duties relating to cash and inventory control is essential in protecting the business from such losses.

Potential s**uggested segregation of duties to consider for two (2) person office are as follows:**

Bookkeeper/Office Manager

Records cash receipts and disbursements and reconciles accounting records
Writes checks and disburses petty cash
Processes payroll
Reconciles bank statements
Produces monthly financial statements

Owner/Manager or President

Signs checks (no signature stamp)
Completes deposit slips and deposit to bank
Performs any inter-bank transfers
Approves invoices and payroll for payment
Approves new hires and wage increases
Reviews bank statements unopened (if paper) or reviews bank reconciliation and on-line statement activity and petty cash reconciliation
Reviews monthly financial statements
Annually reviews payroll reports and compare to W-2s

Potential segregation of duties to consider for three (3) person office:

Bookkeeper

Same as Bookkeeper/Office Manager above, except for petty cash

Office Manager

Approves new vendors and vendor invoices for payment
Receives cash and makes out deposit slip
Disburses petty cash
Reviews bank reconciliation
Approves payroll and new hires
Reviews monthly financial reports

Owner/President

Signs checks (no signature stamp)
Takes deposit to bank
Performs inter bank transfer
Reviews unopened bank statements or transactions on line
Reviews monthly financial reports

Employee Theft Opportunities

Below is a list of common characteristics of businesses that create opportunities for employee theft or fraud:

- Improper "tone at the top"
- Failure to inform employees of expectations
- Turnover of key employees
- Inadequate screening of new hires
- Absence of written employee policies, or failure to consistently follow policies
- Absence of mandatory vacations for employees handling cash or accounting records
- Consistently operating under 'crisis' conditions
- Management not paying attention to employee behavior or attention to details
- Poor employee morale
- Lack of adequate security of assets
- Employee knowledge of no video surveillance
- Inadequate or no inventory counting, spot checks, or perpetual inventory controls
- Lack of budgets for expenses and/or inventory purchases
- Inadequate segregation of accounting duties
- No timely financial reports or lack of management review of financial information

Some Ways to Reduce Employee Theft

- Keep bottled wine in secured (locked) areas
- Limit the number of employees handling cash
- Use only pre-approved vendors
- Use password controls so only designated persons can change accounting records and or prices, inventory items, or vendors
- Conduct surprise cash counts and inventory counts, including a count on retail inventory at end of each day
- Review register transactions daily and inquire of unusual voids or a pattern of voids
- Post wine prices and allow only managers to give customer discounts. Owners should review average sales per customer and discounts given daily
- Write and maintain an employee manual that spells out the policies and procedures relating to:
    - Employee benefits
    - A zero tolerance theft policy

7) Internal Controls--(Cont'd)

Some Ways to Reduce Employee Theft--(Cont'd)

- Improve Employee Morale by:
  - Properly compensating employees
  - Provide incentives for promoting new ideas or increasing profits
  - Perform regular performance reviews
  - Implement listening to employees and a grievance policy
- Develop and maintain a company internal control policy and procedure manual

Before establishing a system of internal controls (including security measures), evaluate each control to assess the cost/benefit it is expected to provide the business. At a minimum, we strongly suggest every small business consider the following dozen ideas to help prevent fraud in their business:

1. **Bank Statement Review** by owner, who either receives an unopened bank statement or reviews on-line transactions monthly, looking for unusual payees or disbursement amounts, wire transfers, and makes sure deposits agree with cash receipt transactions.

2. **Vendors** added to accounts payable should require owner approval and owner should randomly request a listing of vendor reports to be viewed on-line or printed in their presence, looking for fictitious or fraudulent vendors.

3. **Cash and Check Deposits** should be handled by someone separate from the person recording transactions into the accounting records. If possible, the owner should receive the deposit and take to the bank daily. Keep copies of all customer checks.

4. **Signature authority** for checks should ideally only be done by the owner, and no signature stamp should be used.

5. **Payroll** is usually done by direct deposit for most businesses, so owners will need to periodically request to view weekly and/or monthly payroll reports by employee, looking for fictitious employees or improper wage rates and/or amounts. Owners should review the annual W-2 forms and also IRS form 1099s for contract payments.

6. **Credit Memos** and Sales Discounts should be appropriately approved and all accounts receivable write-offs or adjustments should be reviewed monthly.

7. **QuickBooks** (and other software packages) can produce "audit trail" reports, which list changes or overrides made to checks or a transaction in the accounting records. Owner should review such reports, as well as all journal entries made, monthly, which could identify fraudulent transactions.

8. **<u>Credit Cards and Expense Reports</u>** should be supported by documentation of the expenses and reviewed by the owner before payment is made.

9. **<u>Monthly Financial Statements</u>** should be produced in a timely manner, with prior year comparative numbers and current year budgeted expenses, and should be carefully reviewed. Details of large expense accounts should be scanned monthly for inappropriate vendor or employee payments or amounts.

10. **<u>Vacations</u>** should be required for all persons (employees) performing accounting duties, with another employee handling their duties while they are out, reporting any issues directly to the owner that came up while the person is on vacation.

11. **<u>Reference Checks</u>** on each new hire and **<u>Employee Dishonesty Insurance</u>** coverage for all employees should be considered as both a preventive and protective, respectively, measure relating to employee theft.

12. **<u>"Tone at the Top"</u>** is the key to establishing good internal controls and an efficient and professional operating business environment. The owner(s) and management of the business should at all times set the highest example of integrity in their business. Employees can easily rationalize breaking the rules if they see or perceive that the owner or manager does not consistently abide by the rules.

Vineyards and wineries are mostly a cash sales type of business, selling a consumable and desirable product, and are highly susceptible to theft and fraud. Please consider developing and implementing adequate internal controls to help prevent theft and frauds at your business.

9) <u>Conclusion</u>

It is vitally important that start-up vineyards and wineries understand the economics of this type of business venture, which includes significant levels of initial capital expenditures for land, buildings, vineyards, and production equipment, then substantial working capital needed to fund at least 5 - 8 years of operations until break-even operating cash flow is achieved. The keys to achieving profitability are planting enough acres with good yields of quality grapes that can be sold at premium prices and/or producing enough quality wine that can all be sold at retail prices in order to achieve financial success over the long term, while keeping debt to a minimum. We hope that the economic analysis and hypothetical models of business start-ups discussed in this report help you understand these critical issues for the financial sustainability of your new vineyard or winery business in Virginia.

EXHIBIT 1

Virginia Wine Board Presentation
Land, Building, Farm Equipment, and Vineyard (Only) Capital Costs
Hypothetical Capital Costs for Vineyard Operations

	Acres	Estimated Costs	Hypothetical Estimated Costs
Land			
Assumed acres purchased	40	$ 4,500	$ 180,000
Buildings			
Small barn or equipment, shed, and garage		60,000	
Hypothetical cost of buildings		60,000	60,000
Farm Equipment			
Pick-up truck (four wheel drive)		30,000	
Farm tractor with attachments		50,000	
Sprayers		15,000	
Mower with attachments		5,000	
Leaf remover, hedger, and spreader		15,000	
Other farm and shop equipment		5,000	
Hypothetical farm equipment costs		120,000	120,000
Vineyard Average Planting Costs Per Acre			
Land clearing costs		4,300	
Seedlings and plant vines		3,200	
Trellis, posts, wire, and supplies		1,250	
Labor		4,000	
Deer and animal fencing		1,500	
Fertilizer, weed control, etc.		750	
Hypothetical average cost to plant vineyard	20	15,000	300,000
Total Land, Building, Equipment, and Vineyard			**$ 660,000**

EXHIBIT 2

Virginia Wine Board Presentation
Hypothetical Vineyards (Only) Operating Costs
(Assuming 20 Acres Planted and No Debt Financing)

	Vineyard Maintenance	Fixed Admin. Cost	Harvest Costs	Estimated Annual Expenses
Salaries and labor	$ 22,000	$ 20,000	$ 8,000	$ 50,000
Supplies, equipment, and hauling	22,000	600	3,400	26,000
Repairs and maintenance	4,000	500	-	4,500
Vineyard expenses	3,000	-	-	3,000
Vehicle, equipment, and fuel costs	3,200	800	-	4,000
Taxes and licenses	1,800	2,400	600	4,800
Insurance	-	2,400	-	2,400
Bank and credit card fees	-	1,200	-	1,200
Professional fees	-	3,500	-	3,500
Office expenses	-	3,600	-	3,600
Utilities	-	3,200	-	3,200
Other expenses	-	1,800	-	1,800
Hypothetical operating costs	**$ 56,000**	**$ 40,000**	**$ 12,000**	**$ 108,000**

These hypothetical operating costs are derived from the actual average costs of various vineyards operating in Virginia, with a range of 10 - 40 planted acres in 2013. Your actual costs will be different from these hypothetical vineyard operations (see Report).

EXHIBIT 3

Virginia Wine Board Presentation
Hypothetical Vineyard (Only) Financial Projections Yrs. 1 - 22
Assumptions: 20 Planted Acres Yielding 2.5 Tons Per Acre @ $1,200 Per Ton*

	Year 1	Year 2	Year 3	Year 4	Total Years 1 - 22
Revenues					
Bulk grape sales	$ -	$ -	$ 60,000	$ 61,200	$ 1,517,842
Total Revenues	-	-	60,000	61,200	1,517,842
Operating Expenses					
Administrative and overhead costs (fixed)	20,000	40,000	40,000	40,800	1,071,895
Vineyard maintenance, supplies, and labor	-	56,000	56,000	57,120	1,472,653
Harvesting costs	-	-	12,000	12,240	303,568
Total Expenses	20,000	96,000	108,000	110,160	2,848,116
Cash Basis Income (Loss)	(20,000)	(96,000)	(48,000)	(48,960)	(1,330,274)
Depreciation	-	-	(30,000)	(30,000)	(480,000)
Net Income (Loss) Before Owner Compensation	$ (20,000)	$ (96,000)	$ (78,000)	$ (78,960)	$ (1,810,274)

Capital Costs		Life	Depreciation
Land (40 acres @ $4,500 /acre)	$ 180,000	N/A	-
Farm buildings	60,000	20	$ 3,000
Farm equipment	120,000	10	12,000
Vineyard establishment (@ $15,000/ acre)	300,000	20	15,000
Total Capital Costs	$ 660,000		$ 30,000

Return of Capital Analysis

Return of capital analysis	YR 22
Total capital costs	$ 660,000
Total operating costs (above)	2,848,116
Total cost to recover	3,508,116
Less total revenue (above)	1,517,842
Costs greater than revenue	$ 1,990,274

***Assumptions:**	
Acres planted	20
Crop yield @ 2.5 tons per acre	50
Sales price of grapes per ton	$1,200
Annual inflation rate	2%
Year starting inflation modifier	4
Assumes no debt financing	

EXHIBIT 4

Virginia Wine Board Presentation
Hypothetical Vineyard (Only) Break-Even Financial Projections Yrs. 1 - 22
Assumptions: 20 Planted Acres Yielding 4.5 Tons Per Acre @ $1,200 Per Ton*

	Year 1	Year 2	Year 3	Year 4	Total Years 1 - 22
Revenues					
Bulk grape sales	$ -	$ -	$ 108,000	$ 110,160	$ 2,732,116
Total Revenues	-	-	108,000	110,160	2,732,116
Operating Expenses					
Administrative and overhead costs (fixed)	20,000	40,000	40,000	40,800	1,071,895
Vineyard maintenance, supplies, and labor	-	56,000	56,000	57,120	1,472,653
Harvesting costs	-	-	12,000	12,240	303,568
Total Expenses	20,000	96,000	108,000	110,160	2,848,116
Cash Basis Income (Loss)	(20,000)	(96,000)	-	-	(116,000)
Depreciation	-	-	(30,000)	(30,000)	(480,000)
Net Income (Loss) Before Owner Compensation	$ (20,000)	$ (96,000)	$ (30,000)	$ (30,000)	$ (596,000)

Capital Costs		Life	Depreciation
Land (40 acres @ $4,500 /acre)	$ 180,000	N/A	
Farm buildings	60,000	20	$ 3,000
Farm equipment	120,000	10	12,000
Vineyard establishment (@ $15,000/acre)	300,000	20	15,000
Total Capital Costs	$ 660,000		$ 30,000

Return of Capital Analysis

	YR 22
Total capital costs	$ 660,000
Total operating costs	2,848,116
Total cost to recover	3,508,116
Total revenue	2,732,116
Costs greater than revenue	$ 776,000

***Assumptions:**	
Acres planted	20
Crop yield @ 4.5 tons per acre	90
Sales price of grapes per ton	$1,200
Annual inflation rate	2%
Year starting inflation modifier	4
Assumes no debt financing	

EXHIBIT 5

Virginia Wine Board Presentation
Hypothetical Vineyard (Only) Break-Even Financial Projections Yrs. 1 - 22
Assumptions: 20 Planted Acres Yielding 3 Tons Per Acre @ $1,800 Per Ton*

	Year 1	Year 2	Year 3	Year 4	Total Years 1 - 22
Revenues					
Bulk grape sales	$ -	$ -	$ 108,000	$ 110,160	$ 2,732,116
Total Revenues	-	-	108,000	110,160	2,732,116
Operating Expenses					
Administrative and overhead costs (fixed)	20,000	40,000	40,000	40,800	1,071,895
Vineyard maintenance, supplies, and labor	-	56,000	56,000	57,120	1,472,653
Harvesting costs	-	-	12,000	12,240	303,568
Total Expenses	20,000	96,000	108,000	110,160	2,848,116
Cash Basis Income (Loss)	(20,000)	(96,000)	-	-	(116,000)
Depreciation	-	-	(30,000)	(30,000)	(480,000)
Net Income (Loss) Before Owner Compensation	$ (20,000)	$ (96,000)	$ (30,000)	$ (30,000)	$ (596,000)

Capital Costs		Life	Depreciation
Land (40 acres@ $ 4,500 /acre)	$ 180,000	N/A	
Farm buildings	60,000	20	$ 3,000
Farm equipment	120,000	10	12,000
Vineyard establishment (@ $15,000/ acre)	300,000	20	15,000
Total Capital Costs	$ 660,000		$ 30,000

Return of Capital Analysis

	YR 22
Total capital costs	$ 660,000
Total operating costs	2,848,116
Total cost to recover	3,508,116
Total revenue	2,732,116
Costs greater than revenue	$ 776,000

*Assumptions:	
Acres planted	20
Crop yield @ 3.0 tons per acre	60
Sales price of grapes per ton	$1,800
Annual inflation rate	2%
Year starting inflation modifier	4
Assumes no debt financing	

EXHIBIT 6

Virginia Wine Board Presentation
Conversion of Existing Farm to Vineyard Financial Projections Yrs 1-22
Assumptions: 40 Planted Acres Yielding 3.0 Tons Per Acre @ $1,800 Per Ton*

	Year 1	Year 2	Year 3	Year 4	Total Years 1 - 22
Revenues					
Bulk grape sales	$ -	$ -	$ 216,000	$ 220,320	$ 5,464,232
Total Revenues	-	-	216,000	220,320	5,464,232
Operating Expenses					
Administrative and overhead costs (fixed)	20,000	40,000	40,000	40,800	1,071,895
Vineyard maintenance, supplies, and labor	-	112,000	112,000	114,240	2,945,305
Harvesting costs	-	-	24,000	24,480	607,137
Total Expenses	20,000	152,000	176,000	179,520	4,624,337
Cash Basis Income (Loss)	(20,000)	(152,000)	40,000	40,800	839,895
Depreciation	-	-	(30,000)	(30,000)	(600,000)
Net Income (Loss) Before Owner Compensation	$ (20,000)	$ (152,000)	$ 10,000	$ 10,800	$ 239,895

Capital Costs		Life	Depreciation
Vineyard establishment (@ $15,000/ acre)	600,000	20	30,000
Total Capital Costs	$ 600,000		$ 30,000

Return of Capital Analysis

	YR 22
Total capital costs	$ 600,000
Total operating costs	4,624,337
Total cost to recover	5,224,337
Total revenue	5,464,232
Revenue greater than costs	$ 239,895

*Assumptions:	
Acres planted	40
Crop yield @ 3.0 tons per acre	120
Sales price of grapes per ton	$1,800
Annual inflation rate	2%
Year starting inflation modifier	4
Assumes no debt financing	

EXHIBIT 7

Virgina Wine Board Presentation
Vineyard Return Analysis: Virginia vs. Other States
Studies Adjusted to 2013 Using 2% Inflation

Year:	**2013**	**2013**	**2013**	**2008**	**2011**	**2010**	**2010**	**2010**	
Source:	**Hantzmon Wiebel LLP**	**Tony Wolf**	**Jim Benefiel**	**Oregon St.**	**Cornell**	**Colorado St.**	**Texas Tech**	**U California**	
State:	**Virginia**	**Va. Tech**	**Virginia**	**Oregon**	**New York**	**Colorado**	**Texas**	**CA**	**Average**
Vineyard establishment cost	$ 15,000	$ 14,500	$ 15,000	$ 12,840	$ 14,100	$ 14,420	$ 12,125	$ 23,950	$ 15,242
Range of yield in tons per acre	(2.5-4.5)		(3.2-3.8)	(2.5-3.0)	(2.6-3.0)	(2.5-4.0)	(2.5-5.0)	(2.0-8.0)	-
Assumed yield - tons per acre	3.0	3.6	3.2	3.0	3.0	3.0	3.0	3.0	3.1
Assumed acres planted	20	20	20	20	20	20	20	20	20
Assumed grape yield in tons	60	72	64	60	60	60	60	60	62
Projected price per ton	1,800	2,000	1,700	2,300	1,700	1,450	1,700	2,300	1,869
Gross dollars for yield crop (20 acres)	108,000	144,000	108,800	138,000	102,000	87,000	102,000	138,000	115,975
Variable cost per acre	3,400	3,073	3,900	4,162	4,309	3,882	3,706	3,723	3,769
Fixed cost per acre	2,000	1,250	1,500	1,454	1,575	2,318	2,338	2,112	1,818
Annual cost per acre projected for 20 acres	5,400	4,323	5,400	5,616	5,884	6,200	6,044	5,835	5,588
Variable cost for 20 acres	68,000	61,460	78,000	83,240	86,180	77,640	74,120	74,460	75,388
Fixed cost for 20 acres	40,000	25,000	30,000	29,080	31,500	46,360	46,760	42,240	36,368
Total annual expenses	108,000	86,460	108,000	112,320	117,680	124,000	120,880	116,700	111,755
Studies projected return (loss) on 20 acres	$ -	57,540	800	25,680	(15,680)	(37,000)	(18,880)	21,300	4,220
Annual return for 20 acres	**$ -**	**$ 57,540**	**$ -**	**$ 25,680**	**$ (15,680)**	**$ (37,000)**	**$ (18,880)**	**$ 21,300**	**$ 5,493**
Return per acre (20 acres planted)	**$ -**	**$ 2,877**	**$ -**	**$ 1,284**	**$ (784)**	**$ (1,850)**	**$ (944)**	**$ 1,065**	**$ 275**
Projected numbers for 40 acres planted									
Gross dollars for yield crop assume 40 acres	$ 216,000	$ 288,000	$ 217,600	$ 276,000	$ 204,000	$ 174,000	$ 204,000	$ 276,000	$ 231,725
Variable cost for 40 acres	136,000	122,920	156,000	166,480	172,360	155,280	148,240	148,920	150,775
Fixed cost (up to 40 acres)	40,000	25,000	30,000	29,080	31,500	46,360	46,760	42,240	36,368
Total annual expenses	176,000	147,920	186,000	195,560	203,860	201,640	195,000	191,160	187,143
Annual return for 40 acres	$ 40,000	$ 140,080	$ 31,600	$ 80,440	$ 140	$ (27,640)	$ 9,000	$ 84,840	$ 44,582
Return per acre (40 acres planted)	**$ 1,000**	**$ 3,502**	**$ 790**	**$ 2,011**	**$ 4**	**$ (691)**	**$ 225**	**$ 2,121**	**$ 1,115**

(Interest expense not included in Costs)

EXHIBIT 8

Virginia Wine Board Presentation
Buying Grapes vs. Planting Cost Analysis

Virginia Wine Board Marketing Office Virginia Commercial Grape Reports

	2011	2012	2013	Average
Tons produced	7,749	7,532	6,862	7,381
Bearing acres	2,784	2,974	3,088	2,949
Average tons per bearing acre yield	2.78	2.53	2.22	**2.50**
Weighted average price per ton				
Vinifera (premium grapes)	$ 1,790	$ 1,817	$ 2,014	$ 1,874
Hybrid grapes	$ 1,062	$ 1,142	$ 1,180	$ 1,128
American grapes	$ 1,354	$ 1,455	$ 1,472	$ 1,427
Grape weighted average price all varietals	$ 1,625	$ 1,669	$ 1,839	$ 1,711

Buying Grapes vs. Planting Cost Analysis

Economic Scenarios	1	2	3	4
Hypotheticaled crop yield	Avg.	Above Avg.	High	Above Avg.
Hypotheticaled price for crop	Low Avg.	High Avg.	Low Avg.	High Avg.
Average tons per bearing acre	2.5	3.0	4.5	3.0
Number of acres planted and producing	20	20	20	40
Hypotheticaled tons assumed used per year	50	60	90	120
Weighted average price per ton	1,200	1,800	1,200	1,800
Annual cost of grapes if purchased	60,000	108,000	108,000	216,000
Assumed number of years vines will produce	20	20	20	20
Assumed cost to buy grapes for 20 Years	**$ 1,200,000**	**$ 2,160,000**	**$ 2,160,000**	**$ 4,320,000**
Production & harvest costs 20 years	1,360,000	1,360,000	1,360,000	2,720,000
Cost of 35 acres not needed for Winery	157,500	157,500	157,500	157,500
Cost of planting vineyard @ $15,000/acre	300,000	300,000	300,000	600,000
Cost of farm equipment	120,000	120,000	120,000	120,000
Cost of farm buildings	60,000	60,000	60,000	60,000
Total cost of planting/production 20 years	**1,997,500**	**1,997,500**	**1,997,500**	**3,657,500**
Benefit (cost) of planting over buying	**$ (797,500)**	**$ 162,500**	**$ 162,500**	**$ 662,500**

(These numbers have not been adjusted for inflation)

EXHIBIT 9

Virginia Wine Board Presentation
Land, Building, and Equipment Capital Costs Winery (Only)
Hypothetical Capital Costs for Winery (Only)

	Acres	Estimated Costs	Hypothetical Estimated Costs
Land	5	$ 4,500	$ 22,500
Buildings			
Winery production and warehouse		600,000	
Tasting room and office space		340,000	
Hypothetical cost of buildings		940,000	940,000
Production Equipment			
Pick-up truck (four wheel drive)		30,000	
Forklift		20,000	
Crusher, press, bins, pumps, conveyer		100,000	
Tanks, bins, washer, refrigeration		125,000	
Barrels and racks		50,000	
Bottling equipment		150,000	
Other production equipment		25,000	
Hypothetical cost of equipment		500,000	500,000
Sales, Office Furniture, and Equipment			
Tasting room equipment, furniture, and décor		22,500	
Computers, office furniture, and equipment		15,000	
Hypothetical cost of furniture, etc.		37,500	37,500
Total Land, Building, Equipment, and Furniture			**$ 1,500,000**

EXHIBIT 10.1

Virginia Wine Board Presentation
Hypothetical Winery (Only) Operating Costs
(Low-End Winery Estimated Costs)

	A Variable Production Costs	B Fixed Admin. Cost	C Selling Costs	(B+C) Fixed and Selling Estimated Annual Expenses
Salaries and labor	$ 60,000	$ 50,000	$ 50,000	$ 100,000
Repairs and maintenance	3,000	6,000	4,000	10,000
Taxes and licenses	6,000	4,000	30,000	34,000
Employee benefits	-	5,000	-	5,000
Advertising	-		17,000	17,000
Insurance	6,000	6,000	6,000	12,000
Truck expense	2,000	2,000	2,000	4,000
Bank and credit card fees	-	1,000	11,000	12,000
Supplies	26,000	5,000	5,000	10,000
Office expense	-	6,000	-	6,000
Utilities and telephone	5,000	10,000	10,000	20,000
Professional fees	-	3,500	-	3,500
Other expenses	-	1,500	-	1,500
Hypothetical operating costs	**$ 108,000**	**$ 100,000**	**$ 135,000**	**$ 235,000**

These hypothetical operating costs are derived from the actual average costs of various wineries operating in Virginia, who buy grapes and operate as a stand alone winery. Your actual costs will be different from these hypothetical winery (only) operations (see Report).

EXHIBIT 10.2

Virginia Wine Board Presentation
Hypothetical Winery (Only) Operating Costs
(High-End Winery Estimated Costs)

	A	B	C	(B+C)
	Variable Production Costs	Fixed Admin. Cost	Selling Costs	Fixed and Selling Estimated Annual Expenses
Salaries and labor	$ 80,000	$ 80,000	$ 90,000	$ 170,000
Repairs and maintenance	4,000	6,000	4,000	10,000
Taxes and licenses	8,000	15,000	30,000	45,000
Employee benefits	8,000	8,000	9,000	17,000
Advertising	-	-	27,000	27,000
Insurance	6,000	12,000	12,000	24,000
Truck expense	2,000	2,000	2,000	4,000
Bank and credit card fees	-	1,000	11,000	12,000
Supplies	70,000	5,000	5,000	10,000
Office expense	-	6,000	-	6,000
Utilities and telephone	5,000	10,000	10,000	20,000
Professional fees	-	3,500	-	3,500
Other expenses	3,300	1,500	-	1,500
Average estimated operating costs	**$ 186,300**	**$ 150,000**	**$ 200,000**	**$ 350,000**

These hypothetical operating costs are derived from the actual average costs of various wineries operating in Virginia, who buy grapes and operate as a stand alone winery. Your actual costs will be different from these hypothetical winery (only) operations (see Report).

EXHIBIT 11

Virginia Wine Board Presentation
Hypothetical Winery (Only) Inventory Costs

	(Low End) Annual Costs	Per Bottle	(High End) Annual Costs	Per Bottle
Bulk Inventory Costs				
Cost of grapes (60 tons @ $1,200/$1,800)	$ 72,000		$ 108,000	
Labor	40,000		60,000	
Payroll taxes	4,000		6,000	
Employee benefits	-		6,000	
Insurance	4,000		4,000	
Truck expense	2,000		2,000	
Supplies	3,000		5,000	
Utilities	4,000		4,000	
Repairs and maintenance	2,000		3,000	
Other costs	-		1,500	
Depreciation of bulk related equipment	30,000		30,000	
Total bulk inventory costs	161,000		229,500	
Total gallons produced	9,000		9,000	
Bulk cost per Gallon	$ 17.89	$ 3.50	$ 25.50	$ 5.00
Bottling Inventory Costs				
Labor	$ 20,000		$ 20,000	
Payroll taxes	2,000		2,000	
Employee benefits	-		2,000	
Insurance	2,000		2,000	
Labels, bottles, and corks	20,000		45,000	
Packaging supplies	3,000		20,000	
Utilities	1,000		1,000	
Repairs and maintenance	1,000		1,000	
Other costs	-		1,800	
Depreciation of bottling equipment	20,000		20,000	
Total bottling inventory costs	69,000		114,800	
Total gallons produced	9,000		9,000	
Bottling cost per gallon	$ 7.67	$ 1.50	$ 12.76	$ 2.50
Total cost per gallon bottled	$ 25.56		$ 38.26	
Estimated cost per bottle	$ 5.00	$ 5.00	$ 7.50	$ 7.50

EXHIBIT 12.1

Virginia Wine Board Presentation
Hypothetical Winery (Only) Financial Projection
Low End Cost Retail Operations @ Selling Price of $10.00 Per Bottle*

	Year 1	Year 2	Year 3	Year 4	Break-Even Operating Year 5	Year 6	Year 7	Year 8
Revenues								
Retail wine sales by the bottle	$ -	$ -	$ 153,000	$ 307,530	$ 459,000	$ 481,950	$ 506,048	$ 531,350
Other income (food snacks net of costs)	-	-	2,000	4,000	5,500	5,610	5,722	5,837
Total Revenues	-	-	155,000	311,530	464,500	487,560	511,770	537,187
Cost of goods sold	-	-	76,500	153,765	229,500	240,975	253,024	265,675
Gross Profit	-	-	78,500	157,765	235,000	246,585	258,746	271,512
Operating Expenses								
Cost of grapes	-	72,000	72,000	72,000	72,000	73,440	74,909	76,407
Variable production costs	-	108,000	108,000	108,000	108,000	110,160	112,363	114,610
Depreciation production equipment	-	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Fixed overhead costs	20,000	100,000	100,000	100,000	100,000	102,000	104,040	106,121
Selling costs	-	-	67,500	135,000	135,000	137,700	140,454	143,263
Less production costs to inventory	-	(230,000)	(230,000)	(230,000)	(230,000)	(233,600)	(237,272)	(241,017)
Total Expenses	20,000	100,000	167,500	235,000	235,000	239,700	244,494	249,384
Operating Income (Loss)	(20,000)	(100,000)	(89,000)	(77,235)	-	6,885	14,252	22,128
Depreciation (not in COGS)	-	(31,000)	(31,000)	(31,000)	(31,000)	(31,000)	(23,500)	(23,500)
Net Income (Loss) Before Owner Compensation	$ (20,000)	$ (131,000)	$ (120,000)	$ (108,235)	$ (31,000)	$ (24,115)	$ (9,248)	$ (1,372)

Capital Costs:		Life	Depreciation
Land (5 acres@ $4,500 /acre)	$ 22,500	N/A	
Winery buildings	940,000	40	$ 23,500
Winery production equipment	500,000	10	50,000
Tasting room office furniture and equipment	37,500	5	7,500
Total Capital Costs	$ 1,500,000		$ 81,000

Capital Requirement Analysis:

	YR 22
Total capital costs	$ 1,500,000
Working capital needed to achieve operating break even	595,970
Total cost to recover	$ 2,095,970

***Assumptions:**	
Average yield of gallons per ton	150
Purchase tons of grapes each year	60
Gallons produced each year	9000
Bottles produced each year	45900
Sales price of bottles @ average price	$10.00
Annual growth rate sales after break even	5%
Annual cost inflation rate assumed	2%
Year starting growth and inflation modifiers	6
Assumes low end costs & no debt financing	

EXHIBIT 12.2

Virginia Wine Board Presentation
Hypothetical Winery (Only) Financial Projection
High-End Cost Retail Operations @ Selling Price of $15.00 Per Bottle*

	Year 1	Year 2	Year 3	Year 4	Break-Even Operating Year 5	Year 6	Year 7	Year 8
Revenues								
Retail wine Sales by the bottle	$ -	$ -	$ 229,500	$ 461,295	$ 688,500	$ 722,925	$ 759,071	$ 797,025
Other income (food snacks net of costs)	-	-	2,000	4,000	5,750	5,865	5,982	6,102
Total Revenues	-	-	231,500	465,295	694,250	728,790	765,054	803,127
Cost of Goods Sold	-	-	114,750	230,648	344,250	361,463	379,536	398,512
Gross Profit	-	-	116,750	234,648	350,000	367,328	385,518	404,614
Operating Expenses								
Cost of grapes	-	108,000	108,000	108,000	108,000	110,160	112,363	114,610
Variable production costs	-	186,000	186,000	186,000	186,000	189,720	193,514	197,385
Depreciation production equipment	-	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Fixed overhead costs	20,000	150,000	150,000	150,000	150,000	153,000	156,060	159,181
Selling costs	-	-	120,000	200,000	200,000	204,000	208,080	212,242
Less production costs to inventory	-	(344,000)	(344,000)	(344,000)	(344,000)	(349,880)	(355,878)	(361,995)
Total Expenses	20,000	150,000	270,000	350,000	350,000	357,000	364,140	371,423
Operating Income (Loss)	(20,000)	(150,000)	(153,250)	(115,353)	-	10,328	21,378	33,192
Depreciation (not in COGS)	-	(31,000)	(31,000)	(31,000)	(31,000)	(31,000)	(23,500)	(23,500)
Net Income (Loss) Before Owner Compensation	$ (20,000)	$ (181,000)	$ (184,250)	$ (146,353)	$ (31,000)	$ (20,673)	$ (2,122)	$ 9,692

Capital Costs		Life	Depreciation
Land (5 acres@ $ 4,500 /acre)	$ 22,500	N/A	
Winery buildings	940,000	40	$ 23,500
Winery production equipment	500,000	10	50,000
Tasting room office furniture and equipment	37,500	5	7,500
Total Capital Costs	$ 1,500,000		$ 81,000

Capital Requirement Analysis	YR 22
Total capital costs	$ 1,500,000
Working capital needed to achieve operating break even	975,205
Total cost to recover	$ 2,475,205

***Assumptions**	
Average yield of gallons per ton	150
Purchase tons of grapes each year	60
Gallons produced each year	9000
Bottles produced each year	45900
Sales price of bottles @ average retail	$15.00
Annual growth rate sales after break even	5%
Annual cost inflation rate assumed	2%
Year starting growth and inflation modifiers	6
Assumes high end costs and no debt financing	

EXHIBIT 13

Virginia Wine Board Presentation

Hypothetical Winery (Only) Financial Projection

High-End Cost Wholesale Operation @ Selling Price of $10.00 Per Bottle*

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Revenues								
Wholesale wine sales by the bottle	$ -	$ -	$ 153,000	$ 307,530	$ 459,000	$ 481,950	$ 506,048	$ 531,350
Other income (food snacks net of costs)	-	-	2,000	4,000	5,750	5,865	5,982	6,102
Total Revenues	-	-	155,000	311,530	464,750	487,815	512,030	537,452
Cost of Goods Sold	-	-	114,750	230,648	344,250	361,463	379,536	398,512
Gross Profit	-	-	40,250	80,883	120,500	126,353	132,494	138,939
Operating Expenses								
Cost of grapes	-	108,000	108,000	108,000	108,000	110,160	112,363	114,610
Variable production costs	-	186,000	186,000	186,000	186,000	189,720	193,514	197,385
Depreciation production equipment	-	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Fixed overhead costs	20,000	150,000	150,000	150,000	150,000	153,000	156,060	159,181
Selling costs	-	-	120,000	200,000	200,000	204,000	208,080	212,242
Less production costs to inventory	-	(344,000)	(344,000)	(344,000)	(344,000)	(349,880)	(355,878)	(361,995)
Total Expenses	20,000	150,000	270,000	350,000	350,000	357,000	364,140	371,423
Operating Income (Loss)	(20,000)	(150,000)	(229,750)	(269,118)	(229,500)	(230,648)	(231,646)	(232,483)
Depreciation (not in COGS)	-	(31,000)	(31,000)	(31,000)	(31,000)	(31,000)	(23,500)	(23,500)
Net Income (Loss) Before Owner Compensation	$ (20,000)	$ (181,000)	$ (260,750)	$ (300,118)	$ (260,500)	$ (261,648)	$ (255,146)	$ (255,983)

Capital Costs:		Life	Depreciation
Land (5 acres@ $4,500 /acre)	$ 22,500	N/A	
Winery buildings	940,000	40	$ 23,500
Winery production equipment	500,000	10	50,000
Tasting room office furniture and equipment	37,500	5	7,500
Total Capital costs	$ 1,500,000		$ 81,000

Capital Requirement Analysis:	YR 22
Total Capital Costs	$ 1,500,000
Working capital needed by year five (5)	1,205,470
Total Cost to year 5	$ 2,705,470

(Additional capital will be required each year since break-even never achieved)

***Assumptions:**	
Average yield of gallons per ton	150
Purchase tons of grapes each year	60
Gallons produced each year	9000
Bottles produced each year	45900
Sales price of bottles @ average wholesale	$10
Annual growth rate sales after year five	5%
Annual cost inflation rate assumed	2%
Year starting growth and inflation modifiers	6
Assumes high end costs and no debt financing	

EXHIBIT 14

Virginia Wine Board Presentation
Land, Building, Equipment, and Vineyard (Combined) Operations
Hypothetical Costs for Winery and Vineyard Operations

	Acres	Estimated Costs	Hypothetical Estimated Costs
Land			
Assumed acres purchased	40	$ 4,500	$ 180,000
(20 acres planted, 15 acres for expansion, and 5 acres for winery, parking, etc.)			
Buildings			
Winery production and warehouse		600,000	
Tasting room and office space		340,000	
Small barn or equipment shed and garage		60,000	
Hypothetical cost of buildings		1,000,000	1,000,000
Farm Equipment			
See farm equipment schedule - Exhibit 1			120,000
Production Equipment			
See winery production equipment schedule - Exhibit 9			500,000
Vineyard Costs for 20 acres planted			
See vineyard operations schedule - Exhibit 1			300,000
Sales, Office Furniture, and Equipment			
See winery only sales and office equipment - Exhibit 9			37,500
Total Land, Building, Equipment, and Vineyard			$ 2,137,500

EXHIBIT 15.1

Virginia Wine Board Presentation
Hypothetical Vineyard and Winery (Combined) Operating Costs
(Low-End Vineyard + Winery Operating Costs)

	A	B	C	D	(C+D)
	Vineyard Maint/Harvest Costs	Winery Variable Production Costs	Fixed Admin. Cost	Selling Costs	Fixed and Selling Estimated Annual Expenses
Salaries and labor	$ 22,000	$ 60,000	$ 50,000	$ 50,000	$ 100,000
Repairs and maintenance	4,000	3,000	6,000	4,000	10,000
Taxes and licenses	1,800	6,000	4,000	30,000	34,000
Employee benefits	-	-	5,000	-	5,000
Advertising	-	-	-	17,000	17,000
Insurance	-	6,000	6,000	6,000	12,000
Truck expense	3,200	2,000	2,000	2,000	4,000
Bank and credit card fees	-	-	1,000	11,000	12,000
Supplies	22,000	26,000	5,000	5,000	10,000
Office expense	-	-	6,000	-	6,000
Utilities and telephone	-	5,000	10,000	10,000	20,000
Professional fees	-	-	3,500	-	3,500
Other expenses	3,000	-	1,500	-	1,500
Hypothetical operating costs	$ 56,000	$ 108,000	$ 100,000	$ 135,000	$ 235,000

These hypothetical operating costs are derived from the actual average costs of various wineries and vineyards operating in Virginia, who buy grapes and operate as both a vineyard and winery. Your actual costs will be different from the hypothetical vineyard and winery operating costs (see Report).

EXHIBIT 15.2

Virginia Wine Board Presentation
Hypothetical Vineyard and Winery (Combined) Operating Costs
(High-End Vineyard + Winery Operating Costs)

	A	B	C	D	(C+D)
	Vineyard Maint/Harvest Costs	Winery Variable Production Costs	Fixed Admin. Cost	Selling Costs	Fixed and Selling Estimated Annual Expenses
Salaries and labor	$ 30,000	$ 80,000	$ 80,000	$ 90,000	$ 170,000
Repairs and maintenance	4,000	4,000	6,000	4,000	10,000
Taxes and licenses	2,400	8,000	15,000	30,000	45,000
Employee benefits	3,000	8,000	8,000	9,000	17,000
Advertising	-	-	-	27,000	27,000
Insurance	-	6,000	12,000	12,000	24,000
Truck expense	3,200	2,000	2,000	2,000	4,000
Bank and credit card fees	-	-	1,000	11,000	12,000
Supplies	25,400	70,000	5,000	5,000	10,000
Office expense	-	-	6,000	-	6,000
Utilities and telephone	-	5,000	10,000	10,000	20,000
Professional fees	-	-	3,500	-	3,500
Other expenses	-	3,300	1,500	-	1,500
Hypothetical operating costs	$ 68,000	$ 186,300	$ 150,000	$ 200,000	$ 350,000

These hypothetical operating costs are derived from the actual average costs of various wineries and vineyards operating in Virginia, who buy grapes and operate as both a vineyard and winery. Your actual costs will be different from the hypothetical vineyard and winery operating costs (see Report).

EXHIBIT 16

Virginia Wine Board Presentation
Hypothetical Vineyard and Winery Inventory Costs

	(Low End) Annual Costs	Per Bottle	(High End) Annual Costs	Per Bottle
Bulk Inventory Costs:				
Vineyard costs and harvest	$ 56,000		$ 68,000	
Labor	40,000		60,000	
Payroll taxes	4,000		6,000	
Employee benefits	-		6,000	
Insurance	4,000		4,000	
Truck expense	2,000		2,000	
Supplies	3,000		5,000	
Utilities	4,000		4,000	
Repairs and maintenance	2,000		3,000	
Other costs	-		1,500	
Amortization of vineyard (20 years)	15,000		15,000	
Depreciation of farm equipment	12,000		12,000	
Depreciation of bulk production equipment	30,000		30,000	
Total bulk inventory costs	172,000		216,500	
Total gallons produced	9,000		9,000	
Bulk cost per gallon	$ 19.11	$ 3.75	$ 24.06	$ 4.72
Bottling Inventory Costs				
Labor	20,000		20,000	
Payroll taxes	2,000		2,000	
Employee benefits	-		2,000	
Insurance	2,000		2,000	
Labels, bottles, and corks	20,000		45,000	
Packaging supplies	3,000		20,000	
Utilities	1,000		1,000	
Repairs and maintenance	1,000		1,000	
Other costs	-		1,800	
Depreciation of bottling equipment	20,000		20,000	
Total bottling inventory costs	69,000		114,800	
Total gallons produced	9,000		9,000	
Bottling cost per gallon	$ 7.67	$ 1.50	$ 12.76	$ 2.50
Total cost per gallon bottled	$ 26.78		$ 36.81	
Estimated cost per bottle	$ 5.25	$ 5.25	$ 7.22	$ 7.22

EXHIBIT 17.1

Virginia Wine Board Presentation
Winery with 20 Acres Planted Vineyard Financial Projections Yrs. 1 - 9
Wine Production (Low-Cost) Assumption @ 60 Tons Grapes and Average Selling Price @ $10.50 Per Bottle*

	Year 1	Year 2	Year 3	Year 4	Year 5	Break-Even Operations Year 6	Year 7	Year 8	Year 9
Revenues									
Retail wine sales by the bottle	$ -	$ -	$ -	$ 160,650	$ 321,461	$ 481,950	$ 506,048	$ 531,350	$ 557,917
Other income (food snacks net of costs)	-	-	-	2,000	4,000	5,500	5,750	5,865	5,982
Total Revenues	-	-	-	162,650	325,461	487,450	511,798	537,215	563,900
Cost of Goods Sold	-	-	-	80,325	160,730	240,975	253,024	265,675	278,959
Gross Profit	-	-	-	82,325	164,730	246,475	258,774	271,540	284,941
Operating Expenses									
Vineyard maintenance and cost	-	56,000	56,000	56,000	56,000	56,000	57,120	58,262	59,428
Variable production costs	-	-	108,000	108,000	108,000	108,000	110,160	112,363	114,610
Depreciation farm, vineyard, equipment	-	15,000	77,000	77,000	77,000	77,000	77,000	77,000	77,000
Fixed overhead costs	20,000	50,000	100,000	100,000	100,000	100,000	102,000	104,040	106,121
Selling costs	-	-	-	67,500	135,000	135,000	137,700	140,454	143,263
Less production costs to inventory	-	-	(241,000)	(241,000)	(241,000)	(241,000)	(241,000)	(247,626)	(251,038)
Total Expenses	20,000	121,000	100,000	167,500	235,000	235,000	242,980	244,494	249,384
Operating Income (Loss)	(20,000)	(121,000)	(100,000)	(85,175)	(70,270)	11,475	15,794	27,046	35,557
Depreciation (not in COGS)	-	(34,000)	(34,000)	(34,000)	(34,000)	(34,000)	(26,500)	(26,500)	(26,500)
Net Income (Loss)	$ (20,000)	$ (155,000)	$ (134,000)	$ (119,175)	$ (104,270)	$ (22,525)	$ (10,706)	$ 546	$ 9,057

Capital Costs:		Life	Depreciation
Land	$ 180,000	N/A	
Winery buildings	940,000	40	$ 23,500
Farm buildings	60,000	20	3,000
Farm equipment	120,000	10	12,000
Winery production equipment	500,000	10	50,000
Vineyard establishment (20 acres)	300,000	20	15,000
Tasting room furniture and equipment	37,500	5	7,500
Total Capital Costs	$ 2,137,500		$ 111,000

Capital Requirement Analysis	YR 22
Total capital costs	$ 2,137,500
Working capital needed to achieve operating break even	632,389
Total cost to recover	$ 2,769,889

***Assumptions:**	
Average yield of gallons per ton	150
Grape yield in tons	60
Gallons produced each year	9000
Bottles produced each year	45900
Sales price of bottles @ average retail	$10.50
Annual growth rate sales after break even	5%
Annual cost inflation rate assumed	2%
Year starting growth & inflation modifiers	7
Assumes low end costs & no debt financing	

EXHIBIT 17.2

Virginia Wine Board Presentation

Winery with 20 Acres Planted Vineyard Projected Financial Projection Yrs 1 - 9

Wine Production (High-Cost) Assumption @ 60 Tons Grapes and Average Selling Price (Retail) @ $15 Per Bottle*

	Year 1	Year 2	Year 3	Year 4	Year 5	Break-Even Operations Year 6	Year 7	Year 8	Year 9
Revenues									
Retail wine sales by the bottle	$ -	$ -	$ -	$ 229,500	$ 459,230	$ 688,500	$ 722,925	$ 759,071	$ 797,025
Other income (food snacks net of costs)	-	-	-	2,000	4,000	5,750	5,750	5,865	5,982
Total Revenues	-	-	-	231,500	463,230	694,250	728,675	764,936	803,007
Cost of Goods Sold	-	-	-	111,308	222,726	333,923	361,463	379,536	398,512
Gross Profit	-	-	-	120,192	240,503	360,328	367,213	385,401	404,495
Operating Expenses									
Vineyard maintenance and cost	-	68,000	68,000	68,000	68,000	68,000	69,360	70,747	72,162
Variable production costs	-	-	186,000	186,000	186,000	186,000	189,720	193,514	197,385
Depreciation farm, vineyard, equipment	-	15,000	77,000	77,000	77,000	77,000	77,000	77,000	77,000
Fixed overhead costs	20,000	75,000	150,000	150,000	150,000	150,000	153,000	156,060	159,181
Selling costs	-	-	-	120,000	200,000	200,000	204,000	208,080	212,242
Less production costs to inventory	-	-	(331,000)	(331,000)	(331,000)	(331,000)	(331,000)	(341,262)	(346,547)
Total Expenses	20,000	158,000	150,000	270,000	350,000	350,000	362,080	364,140	371,423
Operating Income (Loss)	(20,000)	(158,000)	(150,000)	(149,808)	(109,497)	10,328	5,133	21,261	33,072
Depreciation (not in COGS)	-	(34,000)	(34,000)	(34,000)	(34,000)	(34,000)	(26,500)	(26,500)	(26,500)
Net Income (Loss)	$ (20,000)	$ (192,000)	$ (184,000)	$ (183,808)	$ (143,497)	$ (23,673)	$ (21,368)	$ (5,239)	$ 6,572

Capital Costs:		Life	Depreciation
Land	$ 180,000	N/A	
Winery buildings	940,000	40	$ 23,500
Farm buildings	60,000	20	3,000
Farm Equipment	120,000	10	12,000
Winery production equipment	500,000	10	50,000
Vineyard establishment (20 acres)	300,000	20	15,000
Tasting room furniture and equipment	37,500	5	7,500
Total Capital Costs	$ 2,137,500		$ 111,000

Capital Requirement Analysis	YR 22
Total capital costs	$ 2,137,500
Working capital needed to achieve operating break even	1,000,271
Total cost to recover	$ 3,137,771

***Assumptions:**	
Average yield of gallons per ton	150
Grape yield in tons	60
Gallons produced each year	9000
Bottles produced each year	45900
Sales price of bottles @ average retail	$15.00
Annual growth rate sales after break even	5%
Annual cost inflation rate assumed	2%
Year starting growth and inflation modifiers	7
Assumes high end costs and no debt financing	

EXHIBIT 17.3

Virginia Wine Board Presentation

Winery with 40 Acres Planted Vineyard Projected Financial Projection Yrs 1 - 10

Wine Production Assumption @ 120 Tons Grapes and Average Selling Price (Retail) @ $15 Per Bottle*

	Year 1 & 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenues									
Retail wine sales by the bottle	$ -	$ -	$ 459,000	$ 918,459	$ 1,377,000	$ 1,445,850	$ 1,518,143	$ 1,594,050	$ 1,673,753
Other income (food snacks net of costs)	-	-	2,000	4,000	5,750	5,750	5,865	$ 5,982	$ 6,102
Total Revenues	-	-	461,000	922,459	1,382,750	1,451,600	1,524,008	$ 1,600,032	$ 1,679,855
Cost of Goods Sold	-	-	222,615	445,453	628,000	638,720	649,654	$ 660,807	$ 672,184
Gross Profit	-	-	238,385	477,006	754,750	812,880	874,354	$ 939,225	$ 1,007,671
Operating Expenses									
Vineyard maintenance and cost	68,000	136,000	136,000	136,000	136,000	138,720	141,494	144,324	147,210
Variable production costs	-	372,000	372,000	380,000	400,000	408,000	416,160	424,483	432,973
Depreciation farm, vineyard, equipment	-	92,000	92,000	92,000	92,000	92,000	92,000	93,840	95,717
Fixed overhead costs	95,000	150,000	150,000	150,000	150,000	153,000	156,060	159,181	162,365
Selling costs	-	-	120,000	240,000	300,000	306,000	312,120	318,362	324,729
Less production costs to inventory	-	(600,000)	(600,000)	(608,000)	(628,000)	(638,720)	(649,654)	(662,647)	(675,900)
Total Expenses	163,000	150,000	270,000	390,000	450,000	459,000	468,180	477,543	487,094
Operating Income (Loss)	(163,000)	(150,000)	(31,615)	87,006	304,750	353,880	406,174	461,682	520,577
Depreciation (not in COGS)	(34,000)	(34,000)	(34,000)	(34,000)	(34,000)	(26,500)	(26,500)	(26,500)	(26,500)
Net Income (Loss) before owner compensation	$ (197,000)	$ (184,000)	$ (65,615)	$ 53,006	$ 270,750	$ 327,380	$ 379,674	$ 435,182	$ 494,077

Capital Costs:		Life	Depreciation
Land	$ 180,000	N/A	
Winery buildings	940,000	40	$ 23,500
Farm buildings	60,000	20	3,000
Farm Equipment	120,000	10	12,000
Winery production equipment	500,000	10	50,000
Vineyard establishment (40 acres)	600,000	20	30,000
Tasting room furniture and equipment	37,500	5	7,500
Total Capital Costs	$ 2,437,500		$ 126,000

Return pf Capital Analysis:	YR 10
Cash Flow first 10 years	$ 2,531,011
Total capital costs	2,437,500
Return on investment after return of capital	$ 93,511

	Year 1 & 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Cash Flow from Operations	(163,000)	(58,000)	60,385	179,006	396,750	445,880	498,174	555,522	616,294

***Assumptions:**	
Average yield of gallons per ton	150
Grape yield in tons	120
Gallons produced each year	18000
Bottles produced each year	91800
Sales price of bottles @ average retail	$15.00
Annual growth rate sales after break even	5%
Annual cost inflation rate assumed	2%
Year starting growth and inflation modifiers	7
Assumes high end costs and no debt financing	

EXHIBIT 18

Virginia Wine Board Presentation
Comparison of Virginia Winery Operations vs. National Industry Average Gross Profit and Cost Analysis

	Virginia Wineries		(A) Troy Wineries	(A) Troy Wineries	(B) RMA Wineries	(B) RMA Wineries	(B) RMA Wineries	First Research Wineries
Sample size	20		1782	249	22	40	28	956
	Average	% Sales	ALL	($ 1-5 mil assets)	(0-1 MM)	(1-3 MM)	(3-5 MM)	(Under $ 5 mil)
Gross revenue	$ 940,000	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of goods sold	453,000	48.2%	55.5%	45.5%	38.5%	45.2%	51.0%	51.5%
Gross profit	487,000	51.8%	44.5%	54.5%	61.5%	54.8%	49.0%	48.5%
Salaries and labor	165,000	17.6%	6.6%	10.9%	UND	UND	UND	UND
Officers compensation	35,000	3.7%	1.2%	8.2%	UND	4.5%	UND	2.3%
Repairs and maintenance	20,000	2.1%	0.0%	0.0%	UND	UND	UND	UND
Taxes and Licenses	48,000	5.1%	10.3%	3.3%	UND	UND	UND	UND
Employee benefits	13,000	1.4%	1.3%	2.3%	UND	UND	UND	UND
Advertising	33,000	3.5%	5.3%	0.8%	UND	UND	UND	2.0%
Other expenses	140,000	14.9%	11.1%	23.7%	UND	UND	UND	38.3%
Average operating costs	454,000	48.3%	35.8%	49.2%	51.8%	45.3%	41.5%	42.6%
Operating income (loss)	33,000	3.6%	8.7%	5.4%	9.8%	9.5%	7.5%	5.9%
Other income - events (expenses)	56,000	6.0%	-0.3%	-0.1%	2.6%	4.1%	4.6%	0.0%
Depreciation not in COGS	(62,000)	-6.6%	-3.3%	-3.9%	-6.7%	-5.9%	-5.8%	-5.0%
Interest expense	(28,000)	-3.0%	-5.1%	-1.4%	-2.0%	-2.7%	-2.2%	0.0%
Net income (loss)	$ (1,000)	0.0%	0.0%	0.0%	3.7%	5.0%	4.1%	0.9%

The Virginia Wineries column is the average estimated revenue and costs of 20 vineyards and wineries in Virginia.
UND - Undetermined - information not provided

VIRGINIA WINE BOARD PRESENTATION

APPENDIX

REFERENCES

Benefiel, Jim, "*Grower Perspective on Economics of Commercial Grape Production*," in conjunction with Tony K. Wolf of Virginia Tech, 2013; and Benefiel: Costs associated with Vineyard Establishment worksheets, 2013.

Colorado State University, "*The Cost of Growing Wine Grapes in Western Colorado*" by Sharp and Caspari; November 2010.

Cornell University (2011), http://grapesandwine.cals.cornell.edu/newsletters/appellation-cornell/2011-newsletters/issue-8/conversion-factors-vineyard-bottle

Cornell University, Department of Applied Economics and Management, "*A Timeline and Strategies for Investment in a Winery*," by Jerry White, 2002.

Cornell University, Ithaca, New York, "*Writing a Business Plan: An Example for a Small Premium Winery*," by Pisoni & White; June 2002.

Cost of establishment and production of vinifera grapes in the Finger lakes region of New York, 2001. White and Pisoni, Cornell University (2002), http://dspace.library.cornell.edu/handle/1813/424.

Dillard, Alan: "*Cost Estimate for Establishment of a Five Thousand Gallon Winery*," distributed at the Iowa Grape Growers Association Annual Conference, Des Moines, Iowa; January 31, 2004.

First Research, PKF North America, "*Industry Profile on Wineries*;" July 21, 2014: www.pkfnan.lstreseach.com.

Internal Revenue Service, "*The Wine Industry Audit Techniques Guide*," www.irs.gov.; March 2011.

Lenhart Pettit, Attorneys at Law: Winery Establishment Outline, July 18, 2014 by Brian A. Craddock and John W. Flora.

Oregon State University Extension Service, "*Vineyard Economics: Establishing and Producing Pinot Noir Wine Grapes in Western Oregon*," by Julian, Seavert, Skinks, VanBuskirk, and Castagoroli; August 2008.

PPC's Guide to Internal Control Communications, Eight Edition (July 2014) Thomson Reuters.

RMA Annual Statement Studies, Financial Ratio Benchmarks 2013 - 2014, by the Risk Management Association, 1801 Market Street, Suite 300, Philadelphia, PA 19103, page 305.

Texas Tech University, College of Agricultural Sciences and Natural Resources, Technical report T-1-602, "*Texas Vineyard Budgets*" by Pate, Hellman, and Johnson; 2010.

Troy, Leo, 2014 Almanac of Business and Industrial Financial Ratios, 45th Edition, page 55, Wolters Kluwer, CCH 2013.

VIRGINIA WINE BOARD PRESENTATION

APPENDIX

REFERENCES--(Cont'd)

University of Arkansas, "*Considerations for Starting a Winery*," by Justin Morris, Division of Agriculture, January 2008.

University of California, Cooperative Extension, "*Sample Costs to Establish a Vineyard and Produce Winegrapes*," by Smith, Klarsky and DeMonna, Sonoma County, CA., 2010.

USDA, National Agricultural Statistics Service, Land Values 2013 Summary (August 2013).

Virginia 2011 Commercial Grape Report, Virginia Wine Board; www.virginiawine.org.

Virginia 2012 Commercial Grape Report, Virginia Wine Board; www.virginiawine.org.

Virginia 2013 Commercial Grape Report, Virginia Wine Board; www.virginiawine.org.

Virginia Department of Alcohol Beverage Control (ABC) @ www.abc.virginia.gov/pricelist.

Virginia Tech, Tony K. Wolf, Professor of Viticulture, "*Economics of Commercial Grape Production*," 2013; http://vmdev.dgit.vt.edu/vineyards/.

Washington State University Extension, "*Small Winery Investment and Operating Costs*" by Fickle, Folwell, Ball, & Clary; 2005.

Washington State University, Pullman; Washington; "*Bulk Winery Investment and Operating Costs*", 2004.

FIRM QUALIFICATIONS

Hantzmon Wiebel LLP from its Charlottesville, Virginia office constitutes one of the largest public accounting practice groups in Virginia. With a current partner group of 15 and a total staff of over 80 people, the Firm has been listed by Virginia Business magazine as the 5th largest Virginia based accounting practice in the Commonwealth.

Our Firm has a long history of providing accounting, tax, business tax planning and consulting to closely-held business clients, as well as tax planning for families or family businesses. Examples of such services:

- Agreed-Upon Procedures
- Accounting Records Maintenance
- Audits, Reviews, and Compilation of Financial Statements
- Business Acquisition and Disposition
- Business Planning
- Business Succession Issues
- Compensation and Incentive Plan Design
- Software Consulting
- Design and Implementation of Retirement, Cafeteria, ESOP, and 401(k) Plans
- Develop Internal Control Policies and Procedures
- Financial Forensics (Fraud Audits)
- Financial Projection and Forecasting
- Information System Improvements
- International Tax Issues
- Management Advisory Services
- Multistate Tax Issues
- Representation in Tax Examinations
- Tax Planning and Compliance
- Conservation Easement Credits
- Historic Rehabilitation Credits
- Estate and Trust Administration
- Gift, Trust, and Estate Planning

With respect to vineyards and winery businesses, we have a 40-year history of advising and working with clients who have pioneered wine production in Virginia. We currently serve as professionals for over 20 clients in the industry and are looking for new opportunities to serve clients in this interesting and rewarding line of business.

Phillip W. Shiflett, CPA, CEO
Hantzmon Wiebel LLP

AUTHOR QUALIFICATIONS

DEAN A. MARTINELLI, CPA/ABV

POSITION
Partner

EDUCATION
B.S. Cum Laude, Old Dominion University

AREAS OF PROFESSIONAL SERVICE
Business Valuation, Accounting, General Business Consulting (Management Advisory Services), and Income Taxes for Individuals and Businesses

MAJOR CLIENTS SERVED
Construction Contractors, Oil and Gas Producers, Vineyards and Wineries, Investment Companies, Hotels, and Automobile Dealerships

WORK EXPERIENCE
Hantzmon Wiebel: 1989 - present
Partner, local accounting firm in Tidewater, Virginia: 1983 - 1988

PROFESSIONAL ACTIVITIES
American Institute of Certified Public Accountants (AICPA)
Virginia Society of Certified Public Accountants (VSCPA)
Accredited in Business Valuation by AICPA since 1997

PROFESSIONAL RECOGNITION
2001, 2002, 2003, 2004, 2005, 2007, 2008, 2009, 2010, 2012, 2013 *Virginia Business* "Super CPA"

E-MAIL
dmartinelli@hantzmonwiebel.com

KENDRA L. STRIBLING, CPA

POSITION
Partner, Tax Department

EDUCATION
B.S. in Commerce, University of Virginia
A.S., Piedmont Virginia Community College

AREAS OF PROFESSIONAL SERVICE
Multistate Taxation, Corporate and Individual Taxation

MAJOR CLIENTS SERVED
Individuals, Investment and Real Estate Entities, Agribusiness

WORK EXPERIENCE
Hantzmon Wiebel: 1998 - present

PROFESSIONAL ACTIVITIES
American Institute of Certified Public Accountants (AICPA)
Virginia Society of Certified Public Accountants (VSCPA)

PROFESSIONAL RECOGNITION
2006, 2007, 2008, 2009, 2010, 2011, 2012 *Virginia Business* "Super CPA"

PERSONAL AND CIVIC ACTIVITIES
Leadership Charlottesville, 2006/2007
Piedmont Virginia Community College Educational Foundation, Board Member
Effort Baptist Church, Member and Youth Group Assistant

E-MAIL
kstribling@hantzmonwiebel.com

CHRISTOPHER C. BRUBAKER, CPA

POSITION
Manager, Tax Department

EDUCATION
M.S. in Accounting, McIntire School of Commerce, University of Virginia
B.S. in Commerce, McIntire School of Commerce, University of Virginia

AREAS OF PROFESSIONAL SERVICE
Individual and Business Taxation, Tax-Exempt Organizations

MAJOR CLIENTS SERVED
Individuals and Businesses

WORK EXPERIENCE
Hantzmon Wiebel: 2008 - present
Local firm: 1996 - 2008

PROFESSIONAL ACTIVITIES
American Institute of Certified Public Accountants (AICPA)
Virginia Society of Certified Public Accountants (VSCPA)

E-MAIL
cbrubaker@hantzmonwiebel.com