

# ECONOMIC IMPACTS OF THE APPLE HILL GROWERS ASSOCIATION'S MEMBERS

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*Prepared for*

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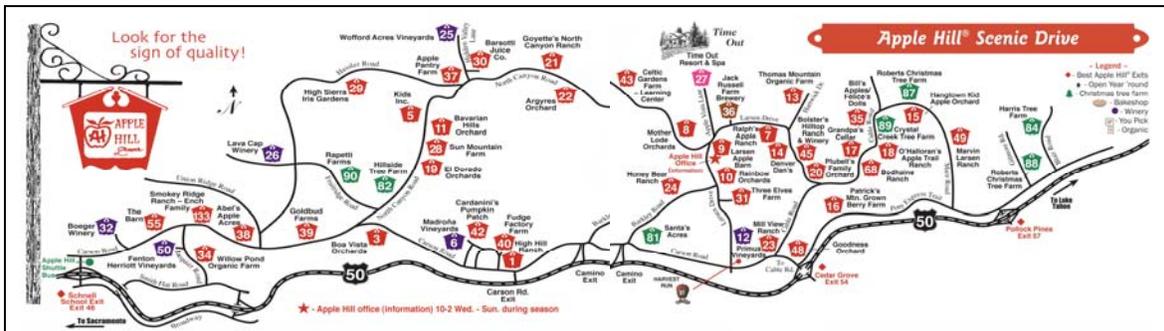
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## Introduction

The Apple Hill Growers Association (AHGA) is an agricultural producer’s trade organization located in Camino, California in El Dorado County, one hour east from Sacramento and one hour west from South Lake Tahoe. The organization was established over 40 years ago with just 16 ranches, but has grown to a membership of over 50 ranches including fruit, vegetable, and Christmas tree farms, wineries, a micro brewery, and a spa. Figure 1 shows a map of the AHGA member ranches along the Highway 50 corridor.

FIGURE 1  
MAP OF APPLE HILL



Sacramento Regional Research Institute, January 2008  
Source: Apple Hill Growers Association

Members rely on visitors that go to the area for its various activities and to purchase crops, baked goods, wine, and other items. Many ranches also depend on business from wholesaling crops and products. High season for visitors at most AHGA member ranches typically runs from September through November; however, tree farms experience their high season in end-November through the Christmas holiday, while other ranches (i.e. wineries, micro brewery, and spa) are open year-round and have a more even dispersal of visitors throughout the year with an increase in the autumn months. Depending on the size and focus of the ranch, the number of visitors range from just a couple hundred to tens and hundreds of thousands during high season. AHGA member ranches also attract visitors from outside the local area—based on input from member ranches of varying types, a median of about 70 percent of visitors come from outside El Dorado County, while 10 percent come from outside California (primarily Nevada).

Spending from these visitors and the ranches’ other business activities make a notable contribution to the local economy and the area’s quality of life. In order to gain a better understanding of the wide range of benefits, AHGA engaged the Sacramento Regional Research Institute (SRRI) to study the economic impacts generated in El Dorado County by the activities of the organization’s member ranches.

## INTRODUCTION

This report is presented in two main sections. The first section presents an analysis of the full range of impacts currently created by the economic activities of AHGA's member ranches and other benefits the ranches contribute to El Dorado County. The second section includes recommendations to assist AHGA effectively account for its member ranches' economic contributions on an ongoing basis. In addition, Appendix A includes further details of the economic impact and data collection methodology, including the effects and variables measured.

## Member Ranches' Economic Impacts

### Direct Contributions

Most AHGA member ranches' economic activities and the contributions they make to El Dorado County's economy relate to four main areas:

1. Crops—Members sell crops directly to consumers and to intermediate firms that arrange the purchase or sale of the crops.
2. Value-Added Products—Ranches create and sell food and drink products from the crops they grow as well as other secondary goods. Examples include wine, apple pie, cider, and wreaths.
3. Retail—Members resell food and drink products and other merchandise. For instance, some ranches operate concession or snack stands and others resell items such as giftware, t-shirts, crafts, and boxed food items.
4. Rental—Crafters rent space from ranches to directly sell their goods to take advantage of the ranches' visitor draw.

In addition to these areas, a few other members offer amusement activities, personal care services, and sell other ranch-made products (not from crops).

These activities generate a direct economic benefit to El Dorado County. According to 2006 sales data from member ranches and estimates from AHGA, over 200 jobs<sup>1</sup> and more than \$20 million in output are supported in El Dorado County's economy from these direct activities.<sup>2</sup>

### Total Impacts

The economic impacts do not end with these direct effects—AHGA member ranches also produce a ripple effect in the El Dorado County economy as a result of linkages that occur between its activities, suppliers of goods and services (indirect effect), and employee spending (induced effect). Overall, as shown in Figure 2, based on 2006 season numbers, AHGA member ranches contributed a total of 285 jobs and slightly over \$28 million in output to El Dorado County on an annual basis including direct, indirect, and induced benefits. This accounts for approximately 0.3 percent of the County's total employment and 0.4 percent of its total output. To put these total impacts in perspective, AHGA member ranches account for approximately 30 percent of employment and total output in El Dorado County's Agriculture, Forestry, Fish & Hunting sector and generates output similar in size as the Educational Services sector which includes establishments such as private junior colleges and trade schools.

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<sup>1</sup> Employment is measured in "job-years," a concept similar to full-time equivalency.

<sup>2</sup> Sales data provided from AHGA member ranches via survey forms and estimates from AHGA were aggregated to determine total AHGA member sales and related economic measures.

*Direct—AHGA ranches; Indirect—linked suppliers of goods and services; Induced—direct and indirect employee consumption*

## AHGA MEMBER RANCHES' IMPACTS

**FIGURE 2**  
**TOTAL ECONOMIC IMPACTS OF AHGA MEMBER RANCHES**

<i>Impact</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>
Employment	206	48	31	285
Output	\$20,444,942	\$4,676,185	\$2,971,401	\$28,092,528
Value Added	\$6,119,746	\$2,637,548	\$1,844,327	\$10,601,619
Employee Compensation	\$2,798,638	\$1,072,916	\$698,508	\$4,570,060

Sacramento Regional Research Institute, January 2008

Data Sources: AHGA member ranches' 2006 sales data; AHGA estimates; and IMPLAN 2004 Coefficients

Note: Employment is measured in "job-years," a concept similar to full-time equivalency.

These total impacts are a result of the following: the AHGA member ranches provide about 200 jobs and over \$20 million in output to the County's economy, but due to the indirect and induced benefits, El Dorado County gains an additional 80 jobs and \$8 million in output. On average, as shown by the multiplier effect, for every employee or every dollar of output directly generated by the ranches' activities, El Dorado County benefits from an additional 0.4 jobs or 40 cents, respectively. For example, if output from the AHGA member ranches increases \$1 million, the County could see its total output increase by about \$400,000.

Additionally, the AHGA member ranches generate around \$11 million in total added value through direct, indirect, and induced impacts. This measure reflects the amount of output produced over and above the cost of inputs. The member ranches also produce nearly \$5 million in employee compensation (including salary and benefits), which equates to roughly \$16,000 per employee and indirectly affects spending, investment, and savings patterns.

### **Detailed Impacts**

Figures 3 and 4 on the following two pages break down the AHGA member ranches' employment and output impacts by sector. Figure 3 shows that El Dorado County's Agriculture, Forestry, Fishing & Hunting; Manufacturing; and Retail Trade sectors benefit the most from the total employment impacts generated by the activities of the AHGA member ranches. These three sectors combined account for 75 percent of AHGA's employment impacts. The sectors with the greatest indirect jobs gains are Agriculture, Forestry, Fishing & Hunting; Wholesale Trade; and Professional, Scientific & Technical Services due to their role as linked and service-providing sectors to the member ranches. The largest job gains through the induced impacts caused by the direct and indirect employees' consumption activities are within the Health & Social Services; Accommodation & Food Services; and Retail Trade sectors.

*Direct—AHGA ranches; Indirect—linked suppliers of goods and services; Induced—direct and indirect employee consumption*

**AHGA MEMBER RANCHES' IMPACTS**

**FIGURE 3**  
**MAJOR SECTOR EMPLOYMENT IMPACTS OF AHGA MEMBER RANCHES**

<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>	<i>% Total</i>
Agriculture, Forestry, Fishing & Hunting	113.6	17.1	0.2	130.9	46.0%
Manufacturing	57.0	2.5	0.3	59.8	21.0%
Retail Trade	19.7	1.6	4.7	26.0	9.1%
Other Services	11.0	2.5	4.2	17.7	6.2%
Accommodation & Food Services	2.5	2.0	5.3	9.8	3.4%
Health & Social Services	0.0	0.0	6.1	6.1	2.1%
Wholesale Trade	0.0	4.9	0.7	5.6	2.0%
Administrative & Waste Services	0.0	3.5	1.5	5.0	1.8%
Professional, Scientific & Technical Services	0.0	3.7	1.1	4.8	1.7%
Real Estate & Rental	0.9	2.3	1.3	4.5	1.6%
Finance & Insurance	0.0	2.1	1.8	3.9	1.4%
Arts, Entertainment & Recreation	1.1	0.4	1.5	3.0	1.1%
Transportation & Warehousing	0.0	1.8	0.3	2.1	0.7%
Management of Companies	0.0	1.5	0.1	1.6	0.6%
Information	0.0	1.0	0.3	1.3	0.5%
Educational Services	0.0	0.0	1.0	1.0	0.4%
Construction	0.0	0.5	0.2	0.7	0.2%
Government	0.0	0.3	0.3	0.6	0.2%
Utilities	0.0	0.1	0.1	0.2	0.1%
Mining	0.0	0.1	0.0	0.1	0.0%
<b>Total</b>	<b>205.8</b>	<b>47.9</b>	<b>31.0</b>	<b>284.7</b>	<b>-</b>

Sacramento Regional Research Institute, January 2008

Data Sources: AHGA member ranches' 2006 sales data; AHGA estimates; and IMPLAN 2004 Coefficients

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## AHGA MEMBER RANCHES' IMPACTS

Around 77 percent of AHGA member ranches' total output impacts fall within the Manufacturing; Agriculture, Forest, Fishing & Hunting; and Retail Trade sectors. The sectors with the largest indirect job gains due to their linkages with the member ranches' activities are the Agriculture, Forest, Fishing & Hunting; Wholesale Trade; and Manufacturing sectors, while the Government, Health & Social Services; and Retail Trade sectors incur the greatest induced output benefits—attributable to the demand for goods and services from these sectors that are generated by spending activity from the direct and indirect sector employees.

**FIGURE 4**  
**MAJOR SECTOR OUTPUT IMPACTS OF AHGA MEMBER RANCHES**

<i>Industry</i>	<i>Direct</i>	<i>Indirect</i>	<i>Induced</i>	<i>Total</i>	<i>% Total</i>
Manufacturing	\$14,032,205	\$644,251	\$56,989	\$14,733,445	52.4%
Agriculture, Forestry, Fishing & Hunting	\$4,803,770	\$771,749	\$12,010	\$5,587,529	19.9%
Retail Trade	\$780,467	\$114,392	\$349,340	\$1,244,199	4.4%
Other Services	\$500,000	\$185,148	\$206,799	\$891,947	3.2%
Real Estate & Rental	\$152,000	\$533,102	\$194,329	\$879,431	3.1%
Wholesale Trade	\$0	\$693,634	\$96,662	\$790,296	2.8%
Government	\$0	\$73,935	\$630,751	\$704,686	2.5%
Finance & Insurance	\$0	\$287,394	\$268,298	\$555,692	2.0%
Professional, Scientific & Technical Services	\$0	\$425,932	\$93,171	\$519,103	1.8%
Health & Social Services	\$0	\$44	\$473,679	\$473,723	1.7%
Accommodation & Food Services	\$115,000	\$99,305	\$252,193	\$466,498	1.7%
Information	\$0	\$180,081	\$77,198	\$257,279	0.9%
Administrative & Waste Services	\$0	\$165,343	\$71,792	\$237,135	0.8%
Transportation & Warehousing	\$0	\$175,496	\$30,515	\$206,011	0.7%
Management of Companies	\$0	\$179,293	\$11,385	\$190,678	0.7%
Arts, Entertainment & Recreation	\$61,500	\$15,570	\$64,673	\$141,743	0.5%
Construction	\$0	\$59,652	\$23,246	\$82,898	0.3%
Utilities	\$0	\$52,196	\$25,434	\$77,630	0.3%
Mining	\$0	\$18,892	\$9,170	\$28,062	0.1%
Educational Services	\$0	\$776	\$23,767	\$24,543	0.1%
<b>Total</b>	<b>\$20,444,942</b>	<b>\$4,676,185</b>	<b>\$2,971,401</b>	<b>\$28,092,528</b>	<b>-</b>

Sacramento Regional Research Institute, January 2008

Data Sources: AHGA member ranches' 2006 sales data; AHGA estimates; and IMPLAN 2004 Coefficients

### Other Benefits

There are other economic activities that, although are not a direct result of the member ranches' production and activities, contribute to El Dorado County's economy. AHGA member ranches attract visitors, a large proportion of which reside outside El Dorado County, to their farms. Approximately 220 crafters take advantage of Apple Hill's draw to visitors and rent space from AHGA member ranches. Rental income is captured in the impacts presented above. The crafters' sales are not included in these impacts as the crafters are not AHGA members; however, portions of these sales, which take place at Apple Hill farms, eventually go back into the County's economy.

*Direct—AHGA ranches; Indirect—linked suppliers of goods and services; Induced—direct and indirect employee consumption*

Additionally, the visitors attracted to Apple Hill patronize dining, gas, and shopping facilities in surrounding areas, such as Placerville and Pollock Pines. Most of these visitors are non-residents and come from outside El Dorado County or even California. A significant portion of these visitor expenditures would not even occur should the activities within AHGA member ranches not exist. Collecting and estimating visitor expenditures is difficult and requires substantial efforts devoted to primary research throughout the study area. In order to account for the range of expenditures from Apple Hill visitors besides purchases made on the ranch, it would be necessary to survey the visitors to determine where else and how much they spend in surrounding areas. Nevertheless, AHGA member ranches do affect additional spending by visitors in Placerville and other neighboring areas within the County.

Moreover, ranch activities and visitor expenditures generate revenue for El Dorado County through sales, transient occupancy, and other related taxes. While not within the scope of this study to measure, these elements are an important component of the impacts of AHGA.

AHGA member ranches also present many social benefits to El Dorado County that contribute to the overall quality of life and sense of community in the area. Preservation of agricultural land is an important element in El Dorado County's General Plan because, as stated within the document, these lands are "fundamental components of the County's rural character and way of life." AHGA ranches help to bring a sense of pride in the local agricultural economy and their agri-tourism operations enhance the demand for and appreciation of the uniqueness of local products and crops. Amenities, such as pick-your-own farms, value-added products from crops, tours, and public access to exploring the farms, also enable an awareness of the importance of agriculture. Overall, AHGA ranches are a dominant force in boosting agricultural and tourism activities throughout El Dorado County, specifically demonstrated through the increase of ranch marketing and popularity of the area's wineries.

## Recommendations for Measuring Contributions

As AHGA member ranch operations grow and more visitors come to Apple Hill, they will increasingly benefit El Dorado County's economy. The following recommendations are provided to AHGA in order to quantifiably account for these benefits at this time and on an ongoing basis:

### **Share the results of the level of impacts created by AHGA member farms**

In order to make AHGA member ranches' contribution to the El Dorado County economy known, it is recommended that the results of this study are shared with AHGA's relationships (i.e. media and government contacts) and appropriate parties. The study's findings can be used to support public information activities, act as a resource for El Dorado County planners and economic development professionals, and inform the County Ranch Marketing ordinance revision processes.

### **Conduct visitor surveys**

Gain support and cooperation of all member ranches in gathering visitor data—As mentioned in the preceding section, Apple Hill visitors also make purchases in neighboring areas within El Dorado County. To estimate these visitor purchases that indirectly occur due to Apple Hill patrons, it is essential that AHGA member ranches understand the importance of gathering feedback from visitors on their farms and, therefore, support such activities.

Develop a survey form to track visitor information—Once support and cooperation from AHGA ranches is obtained, a survey form to track visitor information should be developed. Such a form should include information like expenditure categories (i.e. gas, dining, etc.), location of where these purchases were made, and visitor's residence.

Conduct visitor surveys on an annual basis during high season—As the majority of visitors come to Apple Hill during October through December, it is recommended that a visitor survey should be conducted during this time period on an annual basis. Ranchers may choose to conduct the survey themselves or AHGA members can choose an outside party, such as a marketing firm and/or student volunteers, to request visitors to complete the survey. Only visitors located on AHGA member ranches should be solicited for the survey so that the additional spending of only Apple Hill visitors can be tracked.

**Enhance support and involvement from member ranches**

Increased contact and awareness of AHGA's overall goals and accomplishments may bring better participation and support from member ranches when needed. Some recommended steps to increase awareness include maintaining regular communication and public relations efforts with members to keep them abreast of activities within the AHGA community and providing them an annual report that can give them a better understanding of their return on investment in participating in the Association.

**Keep in close contact with members and understand their business operations**

A thorough understanding of members' business operations will enable AHGA to make informed estimates when necessary.

**Conduct economic impact studies on a regular basis to track contributions to El Dorado County**

To gain an understanding of the group's direct contributions to the local economy over time, it is recommended that AHGA initiates a sales survey every two years (or other determined time period). As was evident within this study, there is member sensitivity concerning sales data, therefore it is advised that AHGA contracts with an outside consulting firm to conduct the confidential survey. Direct sales should be aggregated on a regular basis so that a trend of AHGA member's direct contributions can be tracked. Through the economic impact analysis, additional benefits (i.e. indirect and induced) can then be determined for each study year. Visitor expenditure data gathered from the annual visitor surveys recommended above can then be analyzed and included in these regular economic impact analyses to create a more comprehensive measure.

## Appendix A—Economic Impact Analysis Methodology

SRRI quantified AHGA member ranches' direct economic contributions using 2006 sales data broken down by activity for each ranch. The data was provided via a data request form sent to each member ranch. Of the 50 AHGA member ranches included in this study, 21 replied with detailed sales data. Sales estimates for the remaining farms were determined by AHGA based on crop type, crop acreage, and other activities within that farm. The sales data for all member ranches were then aggregated into categories such as fruit farming, retail sales, and bakery product manufacturing to use as inputs in measuring the ranches' total economic impacts with an input-output model called IMPLAN.

IMPLAN was developed at the University of Minnesota specifically for use in regional analysis and currently distributed and supported by the Minnesota IMPLAN Group, Inc. This model is widely used in California for economic and fiscal analysis to quantify the full range of economic impacts. Input-output models, including IMPLAN, evaluate the effects of industries on each other based on the premise that industries use the outputs of other industries as inputs. Most typical measures of economic activity examine only the total output or employment of an industry, or the amount of final consumption demand provided by a given industry. The input-output model provides a much more comprehensive view of the inter-related economic impacts. Specifically, the AHGA member ranches' economic activities directly create employment and purchases of goods and services within El Dorado County; however, economic benefits directly associated with the ranches do not end with these general activities—they also generate economic impacts in linked industries throughout the County.

The full range of economic impacts that result from the AHGA member ranches includes direct, indirect, and induced benefits:

- *Direct Benefits* consist of economic activity related exclusively to the ranches' operations. This includes total sales of AHGA member ranches.
- *Indirect Benefits* define the creation of additional economic activity that results from AHGA member ranches' linked firms, suppliers of goods and services, and provision of operating inputs.
- *Induced Benefits* measure the consumption expenditures of direct and indirect sector employees. Examples of induced benefits include employees' expenditures on items such as retail purchases, housing, medical services, banking, and insurance.

In this analysis, the total direct, indirect, and induced benefits will be presented in four ways:

- *Employment* demonstrates the number of jobs generated on an annual basis. Employment is measured in job-years, a concept similar to full-time equivalency, but accounts for approximately 2,080 hours of work per year rather than the approximate full-time equivalency total of 2,000 hours per year. For example, one

job-year could equal 1 person employed for 12 months or 2 people working for 6 months.

- *Output* accounts for total revenues including all sources of income or the value of production generated by the AHGA member ranches for a given time period. This is the best overall measure of business and economic activity because it is the measure most firms use to determine current activity levels.
- *Value Added* reflects the new value created by the AHGA member ranches, net of costs of inputs, and is approximately the wages, profits, and return to capital. Value Added consists of four components—employee compensation, proprietor income, other property income, and indirect business tax.
- *Employee Compensation* is a sub-set of Value Added and includes wages, salaries, benefits, and all other employer contributions. This measure shows how the employment levels convert to financial and fiscal potential.

Additionally, the input-output model is used to quantify the multiplier effect that occurs when new employment or output is added in El Dorado County. This numerical value illustrates the effect generated when new employment or output is added in one sector, but creates additional jobs or output in other sectors which supply goods and services (indirect impact) and consumer services to employees (induced impact).