

A faded, semi-transparent image of a wine bottle and a glass filled with red wine, positioned behind the main title text.

**THE COLORADO WINE
INDUSTRY'S IMPACT
ON MESA COUNTY**



This report is part of a major research project undertaken in Fall of 2005 to identify the impact the Colorado Wine Industry has on the economy of Colorado. The project was funded by the Colorado Wine Industry Development Board and the Grand Junction Visitor and Convention Bureau. Project leaders were Dr. George Kress, representing the CSU College of Business, and Dr. Dawn Thilmany from CSU's Department of Agricultural Economics. Most of the data analysis (IMPLAN) was performed by Phil Watson of the Department of Agricultural Economics.

This report describes the various ways in which the Colorado wine industry affects the economy of Mesa County. These findings are part of a larger study undertaken by Colorado State University to identify the “Colorado Grape and Wine Industry’s Impact on the Economy of Colorado.” Mesa County is given special attention because it plays such an important role in this industry.

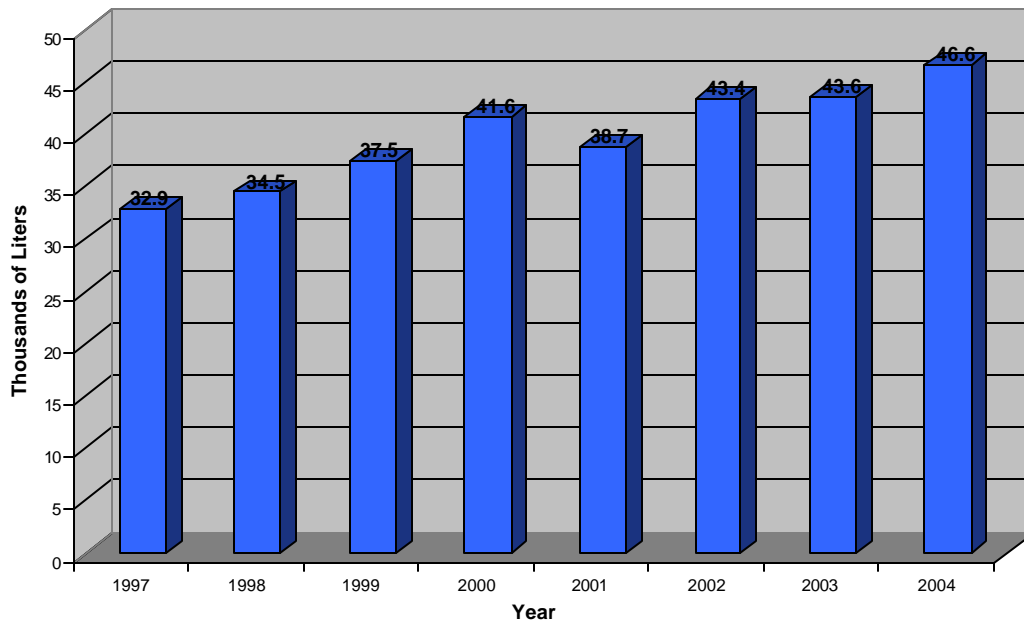
Prior to identifying Mesa County’s specific role in this industry, an overview of the size and scope of Colorado’s wine industry is presented.

WINE CONSUMPTION IN COLORADO

The starting point in our depiction of the Colorado Wine Industry is assessing the wine consumption among its residents. Most of the information in this section was obtained from the book: “Wine Handbook--2005” published by the Adams Beverage Group.

Although Colorado’s population of 4.6 million is only 1.56% of the total U.S. population, our state accounts for 1.86% of U.S. wine sales. In 2004 Colorado ranked 16th among all 50 states in terms of total wine consumption. The per capita consumption of wine among Colorado adults in 2004 was 3.66 gallons, almost 20% greater than the 3.06 gallons per capita consumption among all U.S. adults. In 2004, 46.6 million liters of wine were sold in Colorado (Figure 1).

Figure 1: Total Sales of All Wines in Colorado
Source: Colorado Wine Industry Development Board



Another difference between Coloradans and the average U.S. wine consumer is in the nature of our consumption. We consume a much higher proportion of domestic wines than imported wines. Whereas 75.4% of the wine consumed in the U.S. is “Domestic”, 86.9% of the wine consumed in Colorado is “Domestic”.

Table I shows that Coloradans also differ from the U.S. average in the types of wines consumed. Over 94% of wine consumed in Colorado is table wines compared to the U.S. rate of 90.6%.

TABLE I
Types of Wine Consumed, U.S. vs. Colorado
Source: Adams Wine Handbook, 2005

Type of Wine	Colorado (%)	U.S. (%)
Table Wine	94.2	90.6
Wine Coolers	0.4	0.2
Champagne/Sparkling	3.5	4.8
Dessert/Fortified	1.6	3.7
Vermouth/Aperitif	0.3	0.7
TOTAL	100.0	100.0

The wine industry uses a Category Development Index (CDI) to compare each state’s per capita consumption of various categories of wines. This index is normalized at 100. Thus if a state receives a CDI of 120, that means its per capita consumption is 20% higher than the U.S. average. A CDI of 85 indicates that state’s per capita consumption is 15% lower than the U.S. average. Table II identifies Colorado’s consumption indexes in five key wine categories. Those data illustrate our high consumption of table wines along with a surprisingly high consumption of wine coolers.

TABLE II
Colorado’s CDI of Major Wine Categories
Source: Adams Wine Handbook, 2005

Wine Category	CDI
Table Wine	124
Wine Coolers	200
Champagne/Sparkling	87
Dessert/Fortified	51
Vermouth/Aperitif	52

A recent national study of 1300 U.S. adults, sponsored by the Wine Market Council, found that “Core” wine drinkers (people who drink wine at least once a week) account for almost 87% of the wine consumed in the U.S. Although the size of this group has increased by 38% since 2000, it still comprises less than 14% of the total U.S. adult population. “Marginal” wine drinkers (people who consume wine at least every three months) comprise another 18.9% of the adult population (Table III).

TABLE III
 Alcohol Consumption Patterns of U.S. Adults
 Source: 2005 Study Sponsored by Wine Market Council

<u>Category</u>	<u>% Of U.S. Adults</u>
"Core" Wine Drinkers	13.7
Marginal Wine Drinkers	18.9
Beer/Spirits Only	24.7
Non-Drinkers	42.7
TOTAL	100

SOURCES OF DATA ON COLORADO WINE INDUSTRY

Most of the data contained in the remaining sections of this report were obtained from these sources: (1) survey of winegrape growers by Dr. Horst Caspari; (2) mail surveys conducted among Colorado winegrape growers and wineries; and (3) personal interviews among the visitors to the Grand Junction Winefest and selected wineries.

WINE PRODUCTION IN COLORADO

Although wine is produced in all 50 states, this production is dominated by three states: California (90%), New York (5%), and Washington (3%). Thus less than 3% of U.S. wine is produced in the other 47 states, and based on 2004 national data, Colorado’s wine production ranked 22nd.

Grapes are the highest value fruit crop grown in the U.S. and winegrapes comprise almost two-thirds of the total grape crop. Over the past six years, Dr. Horst Caspari State Viticulturist at the Western Colorado Research Center has annually surveyed Colorado winegrape growers to identify their planting patterns and intentions. Based on their responses he estimates that, while there are close to 160 winegrape growers in Colorado, only about 130 of these growers are continuously in production. They devote close to 650 acres to winegrapes.

The typical active Colorado vineyard has 6.2 acres, with an average yield of between 1.9 to 2.5 tons of grapes per acre. In 2004 they produced about 1,230 tons of grapes, but not all of these grapes were sold. The average price received for a ton of grapes was around \$1,300. Assuming that an estimated 85% of all these grapes were sold, the growers' total gross revenues from grapes would be around \$1.3 million (\$1300 x 1046 tons).

In 2004, the three primary varieties grown in Colorado were Merlot (21% of the acres), Cabernet Sauvignon (18%), and Chardonnay (16%).

Currently there are more than 3,700 wineries in the U.S., with 1,689 (45%) located in California (Table IV). It is estimated that total U.S. wine production in 2004 was around 640 million gallons. Information obtained from various lists of wineries indicate there are anywhere between 52 to 63 wineries operating in Colorado. The reason for this imprecise figure is that some of these wineries are fairly small and are not in business every year. Based on fairly solid records, it can be assumed that 54 Colorado wineries are continually active.

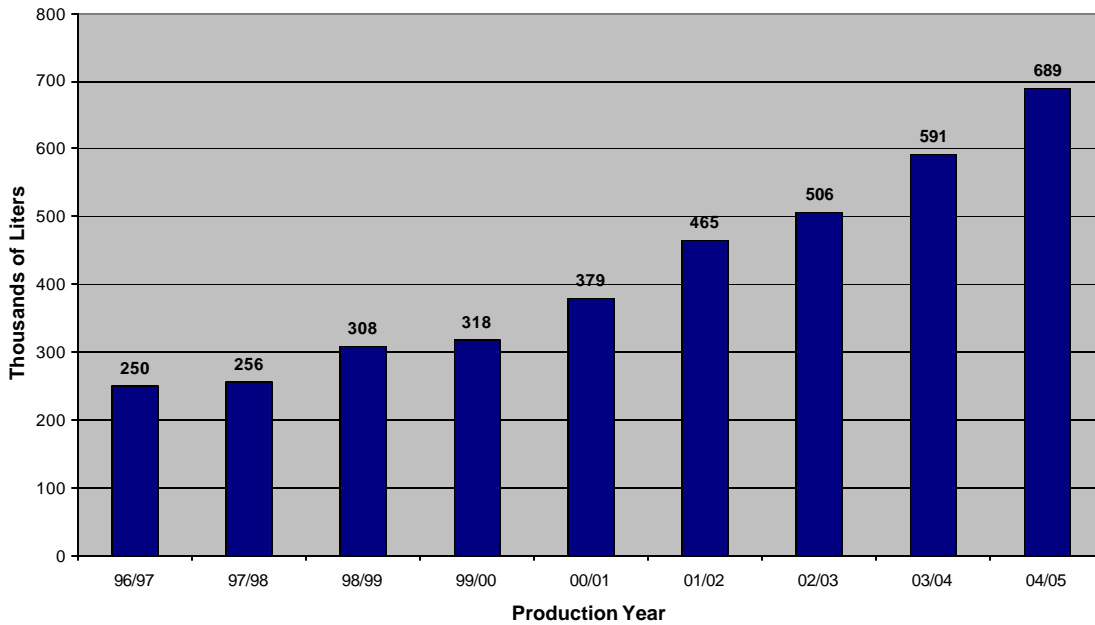
TABLE IV
 Number of Wineries in the U.S. and Colorado
 Source: Alcohol and Tobacco Tax and Trade Bureau

Year	Number of U.S. Wineries	Number of Colorado Wineries
1975	579	2
1985	1367	3
1995	1817	13
2000	2188	30
2005	3726	54

In fiscal year 2004/05, Colorado wineries produced 689,000 liters of wine or approximately 76,550 cases (1 case contains 12 bottles with 750 milliliters per bottle). This was approximately 1.5% of all the wine sold in Colorado. If a retail value of \$10 per bottle is assumed (Colorado wine tends to be higher priced than the U.S. average of \$6.14 per 750 ml), the retail value of Colorado wine was around \$9.2 million.

The amount of wine produced in Colorado over the last decade has been increasing at a fairly rapid rate as more vineyards and wineries enter the business. In fiscal year 1994/95, around 113,600 liters of Colorado wine were produced. By the 2004/05 season that number had increased five-fold to almost 689,000 liters. Over the last five years the production and sale of Colorado wine has doubled (Figure 2).

Figure 2: Amount of Colorado Wine Produced
Source: Colorado Wine Industry Development Board



It is important to recognize that wineries also attract many tourists/visitors. Based on data obtained from surveys of Colorado wineries, it is estimated that in 2005 over 120,000 people visited our wineries, and another 37,000 participated in their various education and wine tasting programs. (The average winery had 2,250 visitors and 698 participants in various wine related programs during the past year.)

IMPACT ON MESA COUNTY

Mesa County's temperate summers and its high elevation lend themselves to growing winegrapes. A corollary activity is the production of wine from these grapes, leading to the establishment of numerous wineries throughout the Grand Valley area. A third element of the wine industry's impact on Mesa County is the number of people attracted to the area to purchase wine and participate in wine related activities such as wine festivals.

WINEGRAPE PRODUCTION IN MESA COUNTY

Based on data he collects annually from Colorado vineyards, Dr. Horst Caspari estimates Mesa County has 70 vineyards and over 500 acres devoted to winegrapes. In 2004, these growers produced around 750 tons of grapes with a total sales value of \$980,000. This means that of the total acreage devoted to wine grapes in Colorado, 67% of those acres

are located in Mesa County and provide 75% of the dollar value of Colorado's winegrapes.

Tax data available in the Mesa County Assessor's Office indicated that in 2005 the average vineyard paid around \$650 in property taxes. Multiplying that figure times the number of vineyards (70) indicates that these vineyards contributed close to \$46,000 in county property taxes.

Because of the seasonal aspect related to the growing of winegrapes and because many of the vineyards are fairly small, it is difficult to quantify the number of full time equivalent employees working in these vineyards. In addition, a number of the growers own multiple vineyards. It is estimated there are around 35 full-time equivalent employees working in Mesa County vineyards. Data from other studies indicate that the average cost per acre for labor was around \$1,500. This means the vineyards in Mesa County paid out around \$750,000 in wages (500 acres x \$1,500).

IMPACT OF MESA COUNTY WINERIES

Fourteen wineries are located in Mesa County. Although this is only 25% of the state's wineries, Mesa County wineries account for almost 60% of the wine produced in Colorado. Of the 689,000 wine liters produced in Colorado in 2005, almost 411,500 were produced in Mesa County. In 2005, these 14 wineries paid around \$61,600 in total property taxes to the County.

Since most wineries are only open for retail business a limited number of hours per week, many of their employees work only part-time. Based on survey data collected from 34 Colorado wineries, it is estimated that the average winery's annual labor costs are between \$23,000 to \$28,000. Using the higher figure because Mesa County wineries tend to be larger; it is estimated that these wineries paid out around \$392,000 in wages in 2005.

Because Mesa County wineries are among the largest in the state, they are a prime attraction for tourists seeking Colorado-produced wine. Mesa County wineries attracted over 70,000 visitors to their facilities and had contact with an additional 22,000 adults via their education and wine-tasting programs (source: winery surveys).

IMPACT OF TOURISM

Tourism is Colorado's second largest industry for bringing new dollars into the state's economy (manufacturing is number one). Because the Grand Valley's economy is especially dependent upon tourism, a major study was undertaken in 2004 by the Adams Group in Colorado Springs in an attempt to quantify its impact. That research was sponsored by the Grand Junction Visitor and Convention Bureau.

Over 700 adults were surveyed in five Mesa County locations with 230 of these people given in-depth interviews providing a variety of data on their expenditures while in the area.

Tourism generated more than \$407 million in taxable sales and provided (directly and indirectly) around 7,600 jobs and \$160 million in wages and salaries. Thus, in 2003, tourism provided almost 15% of the jobs in Mesa County and 35% of the sales taxes collected.

IMPACT OF WINEFEST

Although the Adams study provided valuable information, it dealt with tourism in general in Mesa County. Additional research was needed to identify the specific impact the wine industry has on Mesa County’s tourism. Surveys were conducted among visitors to the annual Colorado Mountain Winefest held September 15-18, 2005 in Palisade, Colorado. The paid attendance at the 2005 Winefest was 5,200.

Two types of interviews were undertaken among these attendees. Representatives from the Grand Junction Visitor and Convention Bureau (GJVCB) interviewed 178 visitors to the event over the three day period. A second project involved researchers from Colorado State University. They conducted more extensive interviews among 495 Winefest visitors, seeking information about their expenditures while in the area. The purpose of this second survey was to acquire data that could be used to quantify the economic impact of this Festival.

Key Findings From GJVCB Surveys (n=178)

Almost 90% of the interviewees were from Colorado, with 21% living in Mesa County (Table V). Of those attendees who came from outside the Grand Valley area, the vast majority (75%) spent at least two nights for the event. Of those people staying overnight in the area, most (63%) stayed in local facilities (motels/hotels/B and B’s) an average of 2.5 nights.

TABLE V
Origin of Winefest Visitors

Origin of Winefest Visitors	Percent of Total Visitors
Mesa County Resident	21%
Live Within 100 Miles/Not Mesa County	18%
Live 100 to 500 Miles Away	53%
Live 500 to 1000 Miles Away	4%
Live More Than 1000 Miles Away	3%

Fifty percent of the interviewees were attending the Winefest for the first time and the drawing power of this event was evidenced by the finding that 80% of those surveyed stated they came to Mesa County specifically to attend the Winefest.

The success of the event was also demonstrated by the finding that most of the respondents (91%) indicated they were “very satisfied” (67%) or “satisfied” (24%) with their experiences at the Winefest. All (100%) of the out-of-state respondents indicated they were “very satisfied” with the event.

Key Findings From CSU Winefest Surveys (n=495)

The second group of surveys at the Winefest was conducted by faculty and grad students from CSU’s Department of Agricultural Economics. The primary goal of those surveys was to obtain data that could identify the overall economic impact of the Winefest.

Over a two day period, 495 adults were asked to complete a written survey on the premises of the Winefest. In addition, those interviewees who traveled over 100 miles to reach the Winefest (61% of the interviewees) were asked additional questions about all of their expenditures associated with the Winefest (Table V).

Following are summaries of the survey’s key findings:

Demographics of Attendees

- Majority (69%) were female
- Average age--49.2 years
- 72% of Colorado residents had lived in the state more than ten years
- Over 63% were employed full-time; 11% were retired
- 23% were in households with annual incomes of less than \$50,000, 15.6% had household incomes over \$100,000 (Table VI)
- Interviewees were accompanied to the Winefest by an average of 3.35 people

TABLE VI
Average Annual Household Income of Winefest Visitors

<u>Annual Income</u>	<u>Percent of Total Visitors</u>
Less than \$30,000	7.6%
\$30,000 to \$50,000	15.7%
\$50,000 to \$75,000	25.0%
\$75,000 to \$100,000	17.2%
\$100,000 to \$150,000	25.5%
More than \$150,000	9.0%

Wine Consumption Patterns

- 51% drank wine at least three times a week; 35.8% drank wine 2-3 times per week (Table VII)
- Over the past three months they had purchased 12.6 bottles of wine
- 29% of their wine purchases were Colorado wines (Table VIII)
- They tended to buy higher priced wine (Table IX)
- Their two most important influences when choosing wines were “Price/value” and “Availability/easy to find” (Figure 3)
- Their least important influence when choosing wines was its “Organic ingredients”
- Spent an average of \$59.07 per month on wine, about 30% of which (\$13.25) was on Colorado wine
- Almost 58% of their wine was purchased at liquor/wine stores
- Over half of their purchases (51%) were “Red” wines, 35% were “White” wines

TABLE VII
Wine Consumption Patterns of Winefest Visitors

Wine Consumption Pattern	Percent of Total Visitors
Drink Wine Daily	17.4%
2-3 Times Per Week	33.5%
Weekly	14.1%
2-3 Times Per Month	16.7%
Once a Month or Less	13.3%

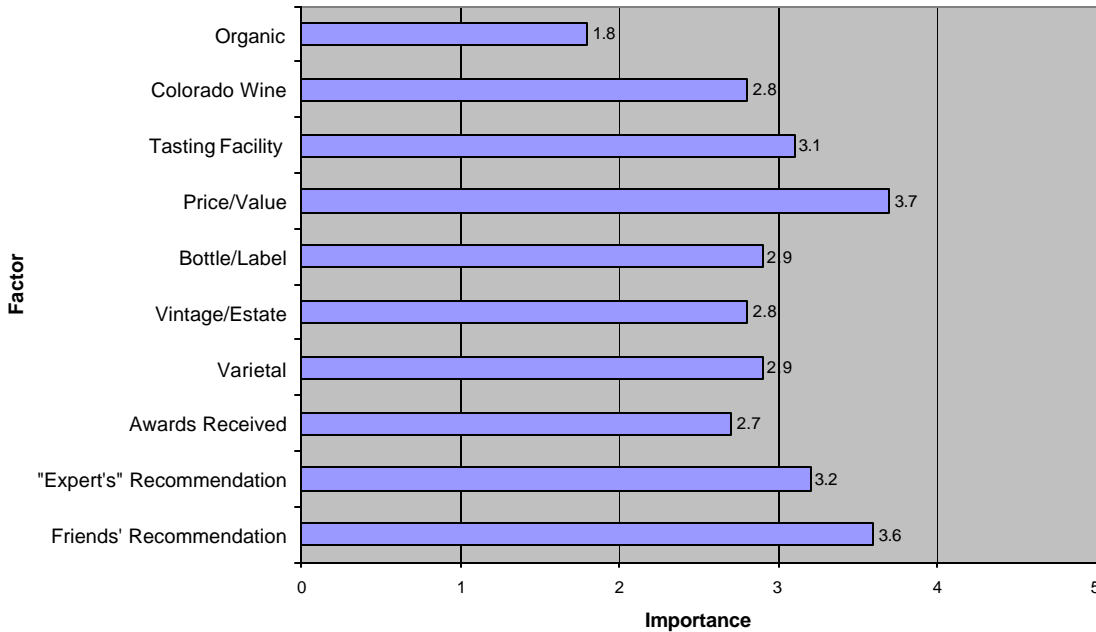
TABLE VIII
Typical Wine Purchases of Winefest Visitors

Origin of Wine	Percent of Sales
Colorado Wines	29.2%
Other U.S. Wines	47.9%
International	22.9%

TABLE IX
 Typical Wine Purchases in Various Price Ranges by Winefest Visitors

Bottle Price	Colorado Wines	Non-Colorado Wines
Less than \$10	17.2%	29.8%
\$10-15	48.9%	41.4%
\$16-25	25.5%	21.1%
Above \$25	8.4%	7.7%

**Figure 3. Importance of Various Factors to Winefest Visitors
 When Choosing Wines (Scale 1-5)**



Wine Knowledge/Attitudes

On a scale of 1 to 10 (highest), respondents assigned themselves the following ratings:

- Their level of wine expertise--5.05
- Their familiarity/ knowledge of Colorado wines--4.7
- Their assessment of the quality of Colorado wine--6.5

In summary, an unusually large percentage of the Winefest attendees (51%) are “Core” wine drinkers. As previously identified, this group comprises only 14% of the U.S. population, but consumes almost 87% of the wine. The attendees also tend to be more mature (49 years of age) and well above average in their households’ annual income.

Overall Economic Contribution Of Winefest To Mesa County

Using the information provided from the 495 people who completed the survey at Winefest, and assuming there were around 5,600 people at the Winefest (including visitors, staff, workers, performers, etc.) over the three day period; the total direct contribution of the 2005 Winefest to Mesa County was around \$1.3 million.

IMPACT OF “WINE” TRAIN

Another source of wine related revenues for Mesa County is the “Wine” Train. AAA Travel in conjunction with the Grand Junction Visitors Bureau, sponsor a weekend Amtrak “Wine” train traveling from Denver to Grand Junction (and back). A special rail car holding 52-54 people makes this trip four times a year (twice in the Fall and twice in the Spring). These travelers spend two nights in the area and tour a selected number of the area’s wineries and according to one of the organizers: “They buy and take back an awful lot of wine to Denver.”

It is estimated that the travelers on each of these “Wine” Trains add at least \$13,000 into Mesa County through their expenditures for lodging, food, wine purchases, shopping, entertainment, etc. (Table X). Thus the four trips account for an additional \$54,000 in wine-related revenues for the area. These were just direct revenues and do not include the secondary or indirect impacts. (The majority of these travelers are couples which lowers their average expenditures.)

TABLE X
Estimated Income to Mesa County From A Wine Train
(n = 54 people)
Source: Estimates From Train Sponsors

<u>Type of Expenditure</u>	<u>Amount Spent (\$)</u>
Overnight Accommodations	\$6,480
Wine Purchases (1/2 case per person)	3,240
Other Shopping	1,620
Entertainment	1,350
Miscellaneous	810
TOTAL PER TRAIN	\$13,500
FOUR TRAINS	\$54,000

TOTAL IMPACT OF WINE INDUSTRY ON MESA COUNTY

This final section pulls together some of the key data previously cited in an attempt to identify the Wine Industry's overall impact on Mesa County.

The 14 wineries and 70 vineyards located in the county paid over \$107,000 in property taxes. The vineyards paid wages to their employees of around \$1,142,000, and this does not include the money the owners derived from these businesses.

The wineries produced around 412,000 liters of wine. Of that amount, 52% were sold at the winery and 42% were wholesaled to liquor stores/restaurants throughout the state (Table XI). The wineries paid out an estimated \$390,000 in wages to employees. (This does not include the money the owners derived from the businesses.) The wineries also attracted over 90,000 visitors/customers to their facilities and off premise programs.

TABLE XI
Percent of Colorado Wine Sold Through Various Outlets
Source: 2005 Survey of Colorado Wineries

Types of Outlets	Percent of Case Sales
Sold at Winery	52.4
Sold at Festivals	3.4
Shipped to Customer	2.1
Wholesale Sales	42.1
TOTAL	100

The Winefest drew 5,200 paid attendees, not including accompanying friends/family. An additional 300-500 people were present at the festival as workers, performers, and displayers. Survey data from a sample of the attendees indicate that the vast majority (80%) came from outside Mesa County specifically to attend the Winefest. Financial data obtained in these surveys indicate that the 2005 Winefest added almost \$1.3 million to the economy of Mesa County.

The four "Wine Trains" brought \$54,000 in direct expenditures to the county.

Because some figures overlap (ex. total wine sales of the wineries also include wine sales at the Winefest and to the Wine Trains), the various figures presented can not be added together to provide a "total" dollar impact figure. Nevertheless, these various dollar figures demonstrate that the wine industry has a substantial economic impact on Mesa County.

Another approach in identifying the wine industry's impact is to relate it to the data obtained in the 2004 Adams study. In the previously cited 2004 Tourism study sponsored by the Grand Junction Visitor and Convention Bureau, it was estimated that in 2003,

tourism generated more than \$407 million in taxable sales and \$160 million in wages and salaries for Mesa County. If it can be assumed that wine related activities account for 12% to 15% of that total (a conservative estimate provided by the Visitor and Convention Bureau), then at the time of that study, the Wine Industry attracted between \$49million to \$61 million in taxable sales to Mesa County.

Although a precise dollar figure of the Wine Industry's impact on Mesa County can not be ascertained, based on the various data provided in this report it is quite evident that the various components of the industry (vineyards, wineries, festivals, etc.) play a major financial role in the county's economy.