

# Investigating the Relationship between Wine Tourism and Proactive Environmental Management at Wineries

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- *Purpose: The importance of environmental attractiveness to the wine tourism product coupled with evidence of growing consumer demand for sustainably produced wines are reasons to believe that tourism may be influencing proactive environmental management practices at wineries. This exploratory study investigates whether there is a relationship between wine tourism and proactive environmental management at wineries, an area that is understudied in the literature.*
  - *Design: This research is based on semi-structured in-depth interviews with decision makers at wineries in Napa and Sonoma Counties in California that have adopted environmental sustainability practices and have a tourism aspect to their operations. Interviews were audio-recorded, transcribed verbatim, coded, and categorized for analysis.*
  - *Findings: This study discovered that while tourism was not a stated driver in the decision to engage in proactive environmental management, respondents indicated that communicating their environmental sustainability practices to visitors enhanced the visitor experience and helped to build brand equity. Respondents also felt that tourism is useful in advancing proactive environmental management within the wine industry and is an effective method of increasing consumer awareness of environmental issues related to wine production.*
  - *Practical implications: Winery owners can benefit from emphasizing their environmental sustainability practices when designing visitor experiences. A coordinated effort between wineries, environmental certifications bodies, and regional tourism organizations to generate trip-planning resources with information on sustainable wineries would fill the information gap that makes it difficult for visitors to select wineries based on these criteria.*

Keywords: Proactive Environmental Management, Environmental Sustainability, Wine Tourism, Brand Equity, Visitor Experience

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## **1. INTRODUCTION**

Heavily polluting industries, such as chemical manufacturing and mineral extraction, have historically been subject to intense scrutiny of their environmental impacts. As environmental awareness grows, greater attention is being paid to the environmental effects of seemingly more benign sectors. As the wine industry continues to grow and rural lands are increasingly converted to wine production purposes, far greater attention is being paid to the wine industry's environmental performance (Gabzdylova, Raffensperger, & Castka, 2009; Marshall, Cordano, & Silverman, 2005; Warner, 2007; Zucca, Smith, & Mitry, 2009). The industry has responded by developing voluntary proactive environmental initiatives that advance the environmental sustainability of wine production (Berghoef & Dodds, 2011; Moulton & Zwane, 2005; Silverman, Marshall, & Cordano, 2005; Warner, 2007; Zucca et al., 2009).

Numerous studies have examined the relevance and relative importance of the drivers of proactive environmental management for the wine industry. Recent studies have determined that improved product quality, increased competitiveness, managerial environmental values, reduced costs, and improved image are the key drivers influencing the adoption of sustainability at wineries (Gabzdylova et al., 2009; Marshall et al., 2005). This study attempts to determine if there is a relationship between wine tourism and improved environmental performance by wineries. Wine tourism is seen as an increasingly important way for wineries to improve their financial performance. However, tourism adds development pressures and increases the visibility of the environmental issues faced by the wine industry (Grimstad, 2011; Alvarez Gil, Burgos Jimenez, & Cespedes Lorente, 2001). The role of winery visitors in driving proactive environmental management at wineries is understudied at the present time. Yet the importance of environmental attractiveness to the wine tourism product coupled with evidence of consumer demand for sustainably produced wines suggest that tourism may be influential in the decision to adopt proactive environmental management practices.

This study explores the relationship between wine tourism and proactive environmental management at wineries. Semi-structured in-depth interviews were conducted with decision makers at wineries that follow sustainable practices and have a tourism aspect to their operations. This exploratory study involved qualitative analysis of their responses to identify important ideas, concepts, and hypotheses for more thorough examination by future research into the relationship between wine tourism and environmental sustainability at wineries.

This study furthers the discussion on the motivations to adopt a proactive approach to managing environmental impacts at the winery level and examines the role of winery visitors in advancing environmental sustainability for the wine industry. A broader understanding of these topics can influence the success of developing and promoting proactive environmental management programs, help wine producers and regions to fully benefit from wine tourism, and encourage superior environmental performance in the wine industry.

## **2. PROACTIVE ENVIRONMENTAL MANAGEMENT IN THE WINE INDUSTRY**

Environmental values are becoming an integral part of corporate cultures and management processes (Bansal & Roth, 2000; Berry & Rondinelli, 1998). These environmental values are manifest in the approach a firm takes towards the environmental impacts of their operations. Sustainability involves implementing business practices that are sensitive to the environment, responsive to the needs of society, and economically feasible to implement and maintain (Zucca et al., 2009). While respondents in this study did discuss the social and

economic aspects of their sustainability programs, the greatest emphasis was placed on the environmental aspects of their sustainability initiatives. Therefore, this study focuses on the environmental component of sustainability, which has commonalities with proactive environmental management. Proactive environmental management involves evaluating the environmental impacts of the operation, taking measures to reduce waste and pollution in advance of regulation, and developing new business opportunities around more sustainable forms of production (Berry & Rondinelli, 1998). The terms environmental sustainability and proactive environmental management are used interchangeably throughout this document to convey the idea of managing environmental impacts beyond regulatory requirements as an integral part of business operations.

There is growing awareness of the negative environmental impacts of the wine industry (such as use of toxic pesticides, synthetic fertilizers, habitat destruction, solid waste and wastewater generation) as well as the need for sustainable vineyard and winery practices (Cordano, Marshall, & Silverman, 2010; Fountain & Tompkins, 2011; Zucca et al., 2009). In the United States, as in many wine producing countries, the wine industry is advancing proactive environmental management through the use of voluntary self-assessment instruments (Berghoef & Dodds, 2011; Silverman et al., 2005; Warner, 2007; Zucca et al., 2009). Voluntary initiatives are a method of managing environmental risks that tend to exceed regulatory requirements. In the California experience, these voluntary programs were initially developed at the local level and then expanded to the regional and national levels and serve to disseminate best practices in sustainability for growers and winemakers (Marshall et al., 2005). Typically, the marketing of wine emphasizes the quality of the natural conditions under which grapes and wine are produced (Bruwer & Alant, 2009; Cordano et al., 2010; Dawson, Fountain, & Cohen, 2011; Moulton & Zwane, 2005). These images may be enhanced by the positive social and environmental activities of producers. Such actions help position operators as environmentally friendly, which may increase their brand equity and create the potential to gain price premiums and/or other market advantages (Moulton & Zwane, 2005; Nowak & Washburn, 2002).

## **2.1 Drivers of Proactive Environmental Management in the Wine Industry**

Researchers in many fields have attempted to understand what motivates or drives firms to engage in proactive environmental management. Recent studies have identified environmental values and the personal preferences of managers as the primary drivers of engaging in sustainability for wineries (Gabzdylova et al., 2009; Marshall et al., 2005). Additional drivers such as, improved product quality, increased competitiveness, opening of new markets, reduced costs, and improved image were also influential in the wine industry (Gabzdylova et al., 2009; Marshall et al., 2005). Few studies have considered the relationship between wine tourism and environmental sustainability practices at wineries. Wine tourism is a growing consumer market that can have positive effects on the financial performance of wineries. For many small and medium sized wineries the retail sales generated from wine tourism are essential to their financial success (Dawson et al., 2011; Fountain, Fish, & Charters, 2008; Grimstad; 2011). The importance of environmental attractiveness to the wine tourism product coupled with evidence of increasing consumer demand for sustainably produced wine are reasons to believe that tourism may be influencing proactive environmental management practices in the wine industry.

## **2.2. Consumer Demand for Sustainably Produced Wine**

Consumer concern over conventional production practices has led to an increased demand for products that have been made by processes that consider environmental issues, such as organic or sustainable practices (Forbes, Cohen, Cullen, Wratten, & Fountain, 2009; Forbes, Cullen, Cohen, Wratten, & Fountain, 2011; Stisser, 1994; Vermeir & Verbeke, 2006). The increase in environmental consciousness has had a profound effect on consumer behaviour, with the “green” product market expanding at a remarkable rate (Barber, Taylor, & Strick, 2009; Gleim, Smith, Andrews, & Cronin Jr., 2013). An increasing number of consumers are exhibiting interest in purchasing foods that reflect their environmental values (Forbes et al., 2011; Warner, 2007). There is also a growing body of evidence demonstrating demand for sustainably produced wine (Barber et al., 2009; Berghoef & Dodds, 2011; Forbes et al., 2009; Mueller & Remaud, 2010; Zucca et al., 2009). Wine producers are interested in using sustainable production as a source of competitive advantage (Fearne, Soosay, Stringer, Umberger, & Dent, 2009). Wine consumers are known to place value on the intangible dimensions of wine production, such as environmental friendliness (Dawson et al., 2011; Fountain & Tompkins, 2011). As consumers become more interested, concerned, and enthusiastic about environmental issues, their increased environmental involvement results in stronger environmental attitudes that can positively influence environmentally motivated purchase decisions (Barber et al., 2009; Vermeir & Verbeke, 2006). These attitudes extend to influence consumers choices when selecting tourism destinations (Barber, Taylor, & Deale, 2010; Mair & Jago, 2010).

### **2.3. Wine Tourism and Environmental Programs**

Wine tourism regions are areas that attract tourists who are interested in an idyllic rural landscape where they can consume and purchase the regional agricultural produce (Grimstad, 2011). The direct-to-consumer sales generated from wine tourism are important to wineries because of the high profit margin and the potential for repeat business (Fountain et al., 2008). The experience of winery visitation also provides an opportunity to create an advocate for the brand. These advocates are satisfied guests who subsequently influence, directly or indirectly, potential new customers (Dawson et al., 2011; Fountain & Tompkins, 2011). Winery visitation plays an important role in positive brand development and visitors have reported that enjoying the natural landscape and learning about environmentally friendly vineyard practices impacted positively on their overall winery experience (Bruwer & Alant, 2009; Fountain & Tompkins, 2011). Additionally, the adoption of environmentally friendly business practices by a winery increases consumer trust in that wine brand and builds brand equity (Nowak & Washburn, 2002).

Environmental attractiveness is regarded as an important component of the business of wine tourism, perhaps equally as important as the experience inside the winery (Bruwer & Alant, 2009). Studies of wine tourism motivations show that enjoyment of the landscape and natural scenery are of significant importance to both first-time and repeat visitors (Bruwer & Alant, 2009; Charters & Ali-Knight, 2000; Dawson et al., 2011; Fountain & Tompkins, 2011). Tourists are drawn to a particular region because of superior environmental attributes compared to other destinations. Polluted natural settings, ugly buildings, overcrowding, eroded landscapes, and intrusive noise detract from the quality of visitor experiences (Hu & Wall, 2005). Some wine tourists have been identified as being willing to pay an environmental fee to taste wine or tour a wine region for the purpose of ensuring the protection of the natural and cultural environment (Barber et al., 2010). Environmental management programs preserve and enhance these important environmental assets and consequently increase the tourism competitiveness of the destination.

### **3. OBJECTIVES AND METHODS**

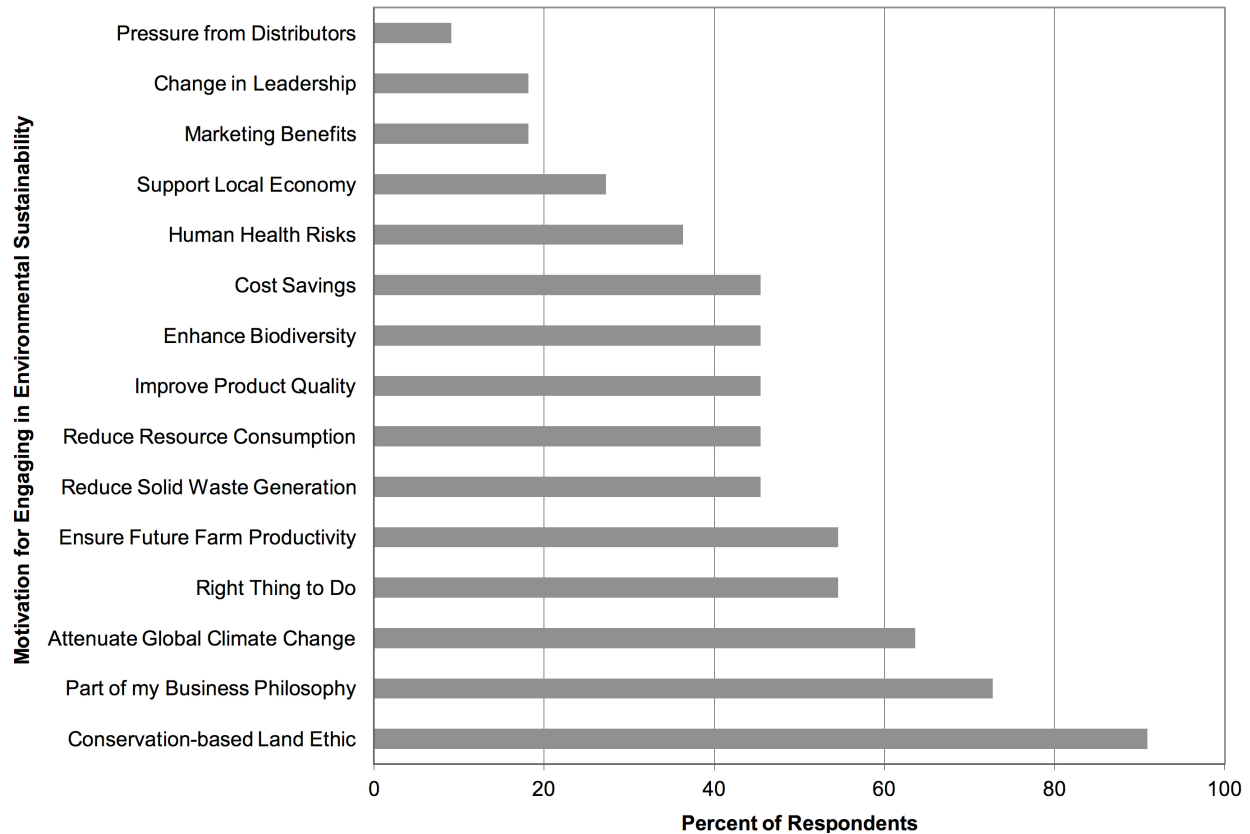
Since there were few earlier studies to draw upon when developing this research project, an exploratory approach was used. In the summer of 2012, primary data were gathered from 11 semi-structured in-depth interviews with decision makers at tourism destination wineries in Napa and Sonoma Counties in California that have implemented environmental sustainability and choose to market their operations and product as sustainable. Study participants were purposively selected on the basis that their background with both environmental sustainability and tourism provided the level of expertise necessary to evaluate the existence of a relationship between wine tourism and proactive environmental management at wineries. While this sample cannot claim to be representative of California wineries, the respondents in this study provided a useful basis for suggesting the direction of future research on the role of wine tourism in proactive environmental management at wineries.

Respondents were asked a series of questions regarding their motivations for pursuing sustainability as well as their opinions and observations on the role of visitor markets in influencing environmental sustainability at wineries. The interview questions were intentionally broad in scope to facilitate the gathering of a wide range of ideas and concepts related to these topics. Open-ended questions allowed themes that are of importance and have relevance to the respondents to emerge during the interview. The interviews were audio recorded and transcribed verbatim. Interview data were categorized into the major themes found during the iterative process of reading and annotating the interview transcripts. Analysis of the interview data revealed a set of concepts that were populated with target keywords and phrases from the interviews.

### **4. RESULTS**

#### **4.1. Motivations for Engaging in Environmental Sustainability**

Respondents were asked to express their motivations for engaging in environmental sustainability at the time when their programs were conceived. The main motivations cited by respondents in this study are shown in Figure 1. Consistent with the findings in the literature, the most common motivators to engage in proactive environmental management reflect a personal commitment to environmental values by the decision maker. This personal commitment to environmental values is present in the motivations “Conservation-based Land Ethic” (10 of 11 respondents), “Part of my Business Philosophy” (10 of 11 respondents), and “Right Thing to Do” (6 of 11 respondents). The notion of a conservation-based land ethic was developed from participant responses that reflect a conscientious desire to manage the environmental concerns related to the utilization of the land. None of the respondents discussed wine tourism as a driver for engaging in environmental sustainability. In fact, all consumer-based motivations were the most infrequently stated. The ability to gain “Marketing Benefits” was important to two respondents and consumer demand, indirectly expressed through “Pressure from Distributors”, influenced only one respondent.



**Figure 1. Motivations for Engaging in Environmental Sustainability (n=11)**

#### **4.2. Perception of Tourist Demand for Sustainably Produced Wine**

Respondents were asked questions to gauge their perception of demand for sustainably produced wines by tourists in their region. Only two respondents believed that visitors had selected their operation because of their commitment to environmental sustainability. Although the majority of respondents (9 of 11) did not believe that visitors were seeking out sustainably produced wines, six respondents qualified this negative response by stating that a small percentage of visitors do select their operations based upon their environmental sustainability efforts. As stated by one respondent, “there is a consumer that that [sustainability] is very important to ... I would say less than probably a tenth, a very small amount of our business is coming from that segment”. In addition, when discussing tourist demand for sustainably produced wine, four respondents stated that they had been selected by tour operators organizing specialized tours of wineries with an environmental sustainability focus. Combining these three responses we find that nine of eleven of respondents believed that tourist demand for sustainably produced wine existed to some degree. The distribution of these responses is displayed in Table 1.

**Table 1. Responses Indicating a Demand for Sustainably Produced Wine**

Response Indicating Demand	Respondent Stating										Total	
A small percentage of visitors are selecting sustainable wineries		X	X			X	X		X	X		6
My winery was selected by a tour operator organizing tours of sustainable wineries	X	X				X	X					4
Visitors are selecting sustainable wineries								X			X	2

Note: n=11

Some respondents spontaneously contributed their opinions about the relatively low demand from tourists for sustainably produced wine. A majority of respondents (7 of 11) felt that consumers and tourists have limited knowledge of sustainability in wine production, which results in an undervaluation of these product attributes. In a statement representative of this idea, one respondent said that the “average consumer probably doesn’t understand what an organic wine is or why they would choose one over another because with so many wineries, you know, it’s that confusion”. Others believed that visitors do not have easy access to information on sustainably produced wines when planning their visit (3 of 11 respondents) remarking that “people don’t come to visit us personally because of that [sustainability], it’s not as easy for them to find it out beforehand”. One respondent felt that consumers and tourists assume wine production carries no environmental impact. This respondent, from a small facility, noted that when visitors see the scale of their operations “the assumption is that it is pretty natural”.

### 4.3. Perception of Interest in Environmental Sustainability by Visitors

In order to assess the role tourism might play in proactive environmental management at wineries it was necessary to establish the level of knowledge a visitor would have of the environmental sustainability work at these wineries. Most respondents (7 of 11) stated that they actively communicate their environmental sustainability to visitors. Some respondents (3 of 11) stated that although they do not actively communicate their environmental sustainability, if visitors ask they will discuss it. One respondent stated that they do not communicate their environmental sustainability and visitors have never asked them about it.

Respondents were asked if, in their opinion, visitors are interested in their environmental sustainability practices and ten of eleven respondents believed that visitors are interested. As stated by one respondent: “we find that in the process of educating them [visitors] about the vineyard that they become fascinated by it and think it’s great but that isn’t why they come to see us”. Respondents frequently related observations of this nature with ten of eleven respondents believing that even the visitors who had no prior knowledge of their environmental sustainability practices became very interested in this aspect of the operation after learning about it during their visit.

Of the wineries that participated in this study, ten of eleven stated that retail sales at the winery are an important source of revenue and nine of the eleven respondents stated that attracting visitors is a priority for their business. The sentiment that wine tourism is an important source of revenue for wineries and attracting visitors is a priority in their business is reflected in the following participant response:

Everybody knows it, clear as can be, everybody is focusing their marketing efforts on getting people to the winery ... and making those connections to try to retain those retail sales.

When discussing the importance of tourism to their winery, nine of eleven respondents felt that visitors to the winery can become loyal customers and continue to be a revenue stream post-visit. As stated by one respondent, when “someone comes to your tasting room they are much more likely to identify with your wines and talk about your wines, purchase your wines and tell people about your wines”. Respondents also discussed their methods for creating loyal customers from winery visitors. The most commonly stated strategies include connecting with visitors through their “Environmental Story” (8 of 11 respondents), “Creating a Unique Visitor Experience” (7 of 11 respondents) and “Personal Engagement” (6 of 11 respondents). One respondent felt that the positive environmental story behind the wine can help create loyal customers but “you have to deliver that message by hand, in a personal manner, through a personal connection”. Respondents felt that the customer connection to their brand attributable to their environmental sustainability programs was increasing post-visit direct wine purchases (6 of 11 respondents) and repeat visits to the winery (4 of 11 respondents).

#### **4.5. Environmental Sustainability and Brand Equity**

In order to understand how tourism might influence changes in proactive environmental management it was necessary to examine the effects these wineries felt as a result of sharing information about their environmental sustainability with visitors. Participants were asked to discuss any unanticipated benefits or detriments to the tourism aspect of their business resulting from engaging in proactive environmental management. Similar to the results for creating loyal customers, eight of eleven respondents felt that the environmental story behind their operations was effective in creating good relationships with their visitors and positive affiliations with their brand, otherwise known as brand equity. As stated by one respondent, engaging visitors with environmental sustainability creates:

a positive perception towards sensitive practices and so you are creating a bond with the consumer one-on-one which is almost impossible to achieve on a website or through advertising

Brand equity is the value that a brand accrues over time as customers begin to associate the brand with attributes such as value, quality, status, and, in this case, environmental sustainability. Brand equity is a powerful method of gaining competitive advantage over firms with products of comparable price and quality (Nowak & Washburn, 2002).

Brand equity has tangible aspects, such as price premiums, yet none of the respondents felt that customers are willing to pay more for a sustainably produced wine and only three respondents felt that their environmental sustainability was influencing purchase decisions at the winery. Brand equity also has intangible aspects, such as customer affinity for a brand. Responses indicate that proactive environmental management is having a larger impact on these intangible aspects of brand equity. As stated by one respondent: “I do believe it [sustainability] creates brand equity, you know, people feel good about the brand”. The different aspects of brand equity that respondents felt resulted from communicating environmental sustainability to visitors are shown in Table 2. The aspects of brand equity expressed by these respondents are creating or enhancing brand awareness (8 of 11 respondents), creating a preference for the brand (8 of 11 respondents), turning visitors into brand ambassadors who informally market the brand



within their social networks (6 of 11 respondents), and driving business to the winery through personal recommendations from previous visitors (5 of 11 respondents). One respondent, in discussing how engaging visitors with her environmental sustainability efforts was increasing the number of visitors she receives through referrals, stated that “we do get high marks for that [sustainability], people do tend to follow us for that [sustainability], ... increasingly a lot of our people that come are referred here by their, its like a personal recommendation, and that’s how it grows”.

**Table 2. Aspects of Brand Equity Resulting from Communicating Environmental Sustainability with Visitors**

Aspect of Brand Equity	Respondent Stating										Total	
Creating/enhancing brand awareness	X	X		X	X		X	X	X		X	8
Creation of brand ambassador	X			X	X		X	X			X	6
Personal recommendations	X				X		X	X			X	5
Preference for the brand	X	X		X	X		X	X	X		X	8

Note: n=11

## 5. DISCUSSION AND CONCLUSIONS

Interpretation of the results revealed several areas where tourism exhibits the potential to influence proactive environmental management at wineries. Since this study was a preliminary examination of the relationship between wine tourism and environmental sustainability at wineries, these findings serve solely to identify linkages between wine tourism and environmental sustainability that warrant further investigation.

An examination of the motivations for engaging in environmental sustainability revealed that tourism was not directly influencing the decision to engage in proactive environmental management for these respondents. Respondents did feel that tourism is having positive effects on advancing the adoption of proactive environmental management within the wine industry. The ability of tourism to showcase the environmental sustainability of an operation increases consumer awareness and encourages other, less personally committed, operators to adopt these practices. As stated by one respondent, “I feel like it [tourism] does have an impact on some other people who maybe don’t have the interest or passion in the environment as part of their core business tenets”. In industries dominated by small and medium-sized enterprises, such as the wine industry, the perception of norms regarding environmental stewardship is influential in the decision to pursue environmental sustainability (Cordano et al., 2010). In the view of some respondents, this is creating a sense of intra-industry peer pressure that is motivating wineries to adopt proactive environmental management. This is best reflected in the words of one respondent who said that “wine tourism is just going to keep fuelling sustainability industry-wide faster and faster ... it’s going to be an accelerant for sure”.

The majority of respondents in this study perceived a degree of visitor demand for sustainably produced wines. They also believed that this level of demand is moderated by the fact that consumers and tourists have limited knowledge of sustainability in the wine industry. This is reflected in participant statements such as “the average consumer walking through our doors ... they are not really tuned into any of that [sustainability]” or “I think there’s still a good majority of the consumer out there that doesn’t even know that this [sustainability] exists”. This

knowledge barrier has been documented in the literature as a lack of information or understanding about the processes involved in conventional or sustainable wine making and the difficulty in communicating these often complicated practices to individuals outside of the industry (Forbes et al., 2011; Fountain & Tompkins, 2011; Vermeir & Verbeke, 2006; Warner, 2007; Zucca et al., 2009). Prior research has found that consumers who are more knowledgeable about the environment possess stronger environmental attitudes and are more likely to be motivated towards environmentally sustainable purchase decisions (Barber et al., 2009; Barber et al., 2010; Frick, Kaiser, & Wilson, 2004; Gleim et al., 2013; Vermeir & Verbeke, 2006). Wine tourism provides a prime opportunity to increase environmental knowledge because a visitor can experience first-hand the environmental systems related to vineyard and winery operations (Fountain & Tompkins, 2011). When the environmental benefits of sustainable production are well communicated consumers are more likely to base purchase decisions on environmental criteria (Gleim, et al., 2013; Peattie, 2001; Vermeir & Verbeke, 2006). Wine tourism allows producers to communicate information on the environmental aspects of wine production in a way that reduces its complexity and clearly demonstrates the environmental benefits that result from supporting sustainable viticulture.

This study discovered that operators that actively communicate their environmental sustainability to visitors believe it enhances the visitor experience and builds brand equity. In Napa and Sonoma Counties there are a large number of wineries open to visitors, which makes it difficult for individual wineries to make an impression. As stated by one respondent:

their [tourists] recollection if they go to 3-5 wineries in a day, they can't remember where they have been and it isn't just alcohol, it's that they [wineries] all start to blend together

Numerous respondents made reference to this homogeneity of the visitor experience. A majority of respondents noted that engaging wine tourists with the environmental story behind their operations resulted in visitors making a memorable connection to their winery. Prior research has found that memorable connections to a winery are the direct result of the quality of the visitor experience (Bruwer & Alant, 2009; Dawson et al., 2011; Fountain, et al., 2008; Fountain & Tompkins, 2011). Wineries that are effective in making these connections can create brand loyal consumers from winery visitors (Dawson et al., 2011; Fountain et al., 2008). Discussing environmental sustainability conveys to visitors that these operators are passionate about their winery and provides a story through which the visitor can make a personal connection with the place. It has been shown that engaging winery visitors with stories about the people, processes, and environment that cultivate the wines provides a high quality experience that produces an attachment to the brand (Bruwer & Alant, 2009; Dawson et al., 2011; Fountain et al., 2008; Fountain & Tompkins, 2011). These studies show that enhancing the visitor experience can have tremendous value to wineries. This study is one of a very limited number of studies that examined the influence of learning about environmental sustainability on the visitor experience at wineries. Fountain and Tompkins (2011) found that visitors reported a better experience and a deeper connection to the wineries where they learned about environmentally friendly vineyard practices during their visit.

### **5.1. Managerial Implications**

The majority of respondents in this study believed that engaging visitors through their environmental sustainability message was effective in creating memorable experiences, strong connections to their brand, and brand equity. While all of the participants in this study were

engaged in proactive environmental management, not all respondents were actively communicating their environmental sustainability to visitors. Winery owners can realize the benefits of creating memorable connections by emphasizing their environmental sustainability efforts when designing visitor experiences. As stated by one respondent, “the tasting room staff love to hear about sustainability because they feel it really engages the consumers”. Findings from this study indicate that visitors are interested in environmental sustainability, learning about environmental sustainability creates a connection to the winery, and communicating environmental sustainability creates brand equity. These findings are consistent with the findings from the Fountain and Tompkins (2011) study on winery visitors in the Waipara Valley of New Zealand. If further research confirms these findings, proactive environmental management programs and/or regional tourism boards could use this information to advise their members on the benefits of communicating environmental sustainability to winery visitors.

Consistent with the findings in the literature, this study found that the most common motivator for wineries to engage in proactive environmental management stems from a personal commitment to environmental values by managers. Organizations that lack an internal advocate to advance proactive environmental management require additional incentives to move beyond regulatory compliance (Silverman et al., 2005). Our findings indicate that engaging winery visitors with environmental sustainability practices has the potential to enhance the visitor experience, create memorable connections, and build brand equity which can create brand loyal consumers and brand ambassadors. The potential for gaining these benefits could be a way to convince winery managers that lack a personal commitment to environmental values to adopt environmental sustainability. Proactive environmental management programs and certification bodies could use these tourism-related benefits in their efforts to increase adoption rates in their regions. Cordano et al. (2010) discovered that the expectation of benefits correlated with winery managers’ decision to implement sustainability practices. While this research found evidence of previously identified benefits, more research needs to be done in order to definitively state the benefits from wine tourism related to environmental sustainability.

The fact that respondents felt that the majority of visitors connect with their brand after learning about their environmental sustainability practices indicates that environmental sustainability is an area of interest for winery visitors. Many respondents cited a lack of knowledge as the main reason that tourists were not seeking out sustainable wineries when visiting their region. These findings are consistent with the findings in Fountain and Tompkins (2011) where sustainability practices were not a factor in the decision to visit a winery because visitors were not aware of them prior to visitation, but after learning about it visitors felt more connected to the winery and reported a better overall experience. Respondents in this study felt that the number of visitors using sustainability as selection criteria would increase if the visiting public could readily identify sustainable operators. According to one respondent:

If there was a place where tourists could find out who farms sustainably, which wineries are sustainable, I think it would be something that would impact tourism in a positive way. I think people would seek those out.

Trip planning resources that highlight sustainable wineries would help visitors identify who is operating in a sustainable fashion and make it easier for them to select wineries to visit based upon this attribute. One respondent remarked “there’s no good central resource at this time ... you have to know what those certifications are in order to go looking for them”. A coordinated effort between wineries, environmental certification bodies, and regional tourism boards or

appellation boards to generate maps, informational brochures, and/or online visitor guides on sustainable wineries would help to fill this information gap. Creating promotional materials that draw attention to the environmentally sustainable practices implemented by wineries supports the recommendation made by Taylor, Barber, and Deale (2010) in their study of environmental disposition in consumers and intention to visit wine tourism destinations.

## **5.2. Conclusions**

There is a growing awareness of the negative environmental impacts of wine production and the wine industry and many consumers acknowledge the need for environmentally sustainable vineyard and winery practices. Previous studies have determined that the transformation to proactive environmental management through voluntary programs in the wine industry has been driven by improved product quality, increased competitiveness, personal values of managers, reduced costs, and improved image. The purpose of this study was to determine if wine tourism is playing a part in this transformation.

Although this research did not find a direct link between tourism and the decision to engage in proactive environmental management, it did find that tourism does have a role in advancing environmental sustainability for the wine industry. Wineries are seeing positive effects from communicating environmental sustainability with visitors in terms of building brand equity and creating memorable visitor experiences. These positive effects may encourage other wineries to adopt proactive environmental management, especially those that lack an environmentally committed management. Also, using wine tourism to educate visitors on the importance of environmental sustainability can help build demand for sustainably produced wines. The benefits of wine tourism related to environmental sustainability observed by respondents in this study include the creation of brand loyal consumers and brand ambassadors, which can result in increased direct-to-consumer sales and increased visitation levels. These preliminary results are encouraging and the potential benefits to producers and regions warrant further investigation.

The main limitation of this study is the small and non-representative sample. While this limits the ability to generalize these findings, the exploratory nature of this research gives them relevance. Further research from the visitor and operator perspectives is needed to test the strength of the relationships and the utility of the recommendations found in this study so that wine producers and regions can fully realize the ways in which environmental sustainability and wine tourism can be mutually beneficial.

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