



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

# Fostering Agricultural Sustainability Through Agritourism

**Shermain Hardesty**

University of California, Davis  
Department of Agricultural & Resource Economics  
Davis, California, USAaa  
[shermain@primal.ucdavis.edu](mailto:shermain@primal.ucdavis.edu)



**Paper prepared for presentation for the 166<sup>th</sup> EAAE Seminar**  
*Sustainability in the Agri-Food Sector*

August 30-31, 2018  
National University of Ireland, Galway  
Galway, Ireland

This project was partially funded by a U.S. Department of Agriculture-National Institute for Food and Agriculture grant, Project #2014-68006-21842.

I am grateful for the research assistance provided by Penny Leff.

*Copyright 2018 by Shermain Hardesty. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.*

## **Fostering Agricultural Sustainability Through Agritourism**

Shermain Hardesty, University of California, Agricultural & Resource Economics,  
Davis, California, USA

### **Abstract**

Smaller-scale farms in the US are in a tenuous position as they face rising production costs and costs to comply with regulations. Farmland conversion is threatening the vitality of many rural communities. However, over two-thirds of the agritourism operations in California that participated in this study are sustainability motivated; they are seeking economic, social and environmental benefits by operating agritourism enterprises. These sustainability motivated agritourism farms are demographically different and operate differently when compared to other agritourism farms in California. Unlike the European Union, there are few government programs or regulations in the United States that strengthen agritourism opportunities. However, government support for agritourism appears to be growing in California as public interest in local food and sustainable agriculture increases. Collaboration through coordinated promotional efforts and networking is very beneficial to agritourism farms in California.

**Keywords: Agritourism; agricultural sustainability; California**

### **1. Introduction**

Urbanization pressures and shrinking profits have smaller-scale farms in California and across the United States (US) searching for alternative strategies to increase their revenues. As public interest in local food and sustainable farming practices increases demand for on-farm activities, a growing number of farms are diversifying with agritourism operations to spread risk and add value to their existing farms. Some are also recognizing agritourism as having the potential to generate social and environmental benefits; they consider it an opportunity to educate visitors about sustainable agriculture, ensure a farm legacy for their heirs, protect their community's social fabric, keep working land in agriculture and/or sustain their community's economy.

Most agritourism research in the US has focused on its economic benefits. Nickerson, Black and McCool (2001) examined 11 reasons for agricultural diversification and determined that 61% of family farms in Montana diversified for economic reasons. McGehee and Kim (2004) found that motivations differed depending on acreage owned, dependence on the farming operation, household income and pick-your-own operations; overall, social reasons were secondary to economic reasons. Lucha et al. (2016) determined that operators motivated by additional income are more likely to be profitable with their agritourism operations than those with other motives.

Agricultural policy has significantly influenced agritourism in the European Union (EU). In the mid-1980s, the United Kingdom began shifting from commodity price supports that caused overproduction and environmental degradation to a redeployment of farm resources into farm diversification; its regionalized and integrated policy involved direct payments for specific cultural, economic, or environmental purposes (Ilbery, 1991; Barlas et al., 2001). The OECD formally recognized the multifunctionality in agriculture. Its 2001 report described how agriculture can produce both commodities and non-commodity outputs that generate environmental benefits

and strengthen socio-economic viability in rural areas. It stated that inputs can be used to “...provide commercial services, such as farm tourism; or they can be used to supply non-commodity outputs with a public good character, such as certain ecological improvements or the preservation of farm structures with a cultural heritage value.” (OECD, 2001, p.38).

Renting and Ploeg (2001) analyzed the emergence of environmental cooperatives in the Netherlands as a movement that reunited the social, environmental and economic aspects of farming. Many of these cooperatives included agritourism as part of their new rural development paradigm. Ploeg and Roup (2003) concluded that cooperation between farmers, as well as with other rural entrepreneurs and residents, was a critical element of the broadening and deepening of agriculture-related activities. More recently, Meraner et al. (2015) examined the characteristics influencing the adoption of various forms of diversification by farms in the Netherlands. They determined that the farmer’s age, farm size, and operating a pasture-based, horticultural, grain or mixed cropping and livestock operation all had negative effects on a farm’s probability of having an agritourism enterprise, while population density had a positive effect.

Using data from a survey of 198 rural tourism operations in Western Australia, Carlsen et al. (2001) determined that about half of them had implemented a range of sustainable management practices, such as water conservation, waste recycling and energy conservation. Two-thirds fully agreed that their primary motivation was ‘to live in the right environment’. Forty-two percent indicated that they were motivated ‘by an interest in nature or heritage conservation’. Fifty-one percent reported that they educated their guests regarding conservation matters.

During the past 10 years, Barbieri has conducted agritourism research in the US exploring all three dimensions of agricultural sustainability. Tew and Barbieri (2012) examined the importance of agritourism to farms in Missouri accomplishing goals in two economic benefit categories--farm profitability and market opportunities, along with two social benefit categories--family connections and personal pursuits. The farms rated agritourism as most important in achieving ‘market driven’ goals, with two such goals—‘capture new customers’ and ‘educate the public about agriculture’ rated the highest. They indicated agritourism was the least important for achieving ‘farm profitability’ goals. In addition to increasing profits, Tew and Barbieri concluded that agritourism can also be a useful marketing tool because it enables farms to obtain new customers and educate the public about agriculture.

Using data from 873 US farms with diversified enterprises, Barbieri (2013) determined that agritourism farms were more committed to sustainability than their counterparts, by producing multiple environmental, sociocultural and economic benefits for their farms, households and even society. However, the agritourism farms’ environmental motivations were not necessarily fulfilled; while they were significantly more likely than their counterparts to practice integrated pest management, they were less likely to practice farm waste management and protection of native plants. Based on a survey of 592 farms in Missouri, La Pan and Barbieri (2014) determined that agritourism farms are preserving tangible heritage – mostly historic buildings and antique. However, many of them were not enhancing their economic benefits by charging visitors or actively promoting their operation to potential visitors.

Xu et al. (2016) compared the importance of 15 benefits that agritourism provides to farmers and visitors in North Carolina, with very similar results for the two groups. Both groups ranked ‘generating additional income for farmers and landowners’ as the most important economic benefit. ‘Preserving farms and farmland’ was rated as the most important environmental benefit by both groups. For social-cultural benefits, ‘educate visitors and the public about agriculture’ was

the most important to both groups, along with two other benefits for the farmers—‘share agricultural heritage and rural life-styles with visitors’ and ‘preserve rural heritage and traditions’.

Despite these studies, very little is known about how agritourism operations with sustainability motivations differ from other agritourism operations; thus, this is the objective of this study. The information is important to know because it can guide future agriculture-related policy and Extension education efforts related to increasing the sustainability of smaller-scale farms.

## **2. Theoretical Framework**

Farmers continually face risk from changes in production, marketing, financial and regulatory conditions. From a farmer’s perspective, the diversification decision is traditionally considered to be a risk management strategy. Diversification is the core concept in the multi-national EU project, ‘Alternative Farm Enterprises’; the Greek experience is analyzed by Barlas, et. al., (2001). Ilbery (1991) identified two types of diversification. Agricultural diversification is oriented toward farming. He included agritourism as a form of structural diversification.

Flanigan et al. (2015) examined motivations associated with both the supply and demand of five different types of agritourism using semi-structured interviews with farmers and visitor surveys in Scotland. They identified two niche types of agritourism that have the potential to generate significant public, as well as private, benefits. The ‘Working Farm Indirect Interaction’ model (such as farm accommodations) can be expanded to include direct sales of processed and unprocessed farm products, and generate increased public awareness of local foods and farming. The ‘Working Farm Direct Authentic Interaction’ model generates opportunities for farmers to implement biodiversity and ecological restoration while attracting volunteer visitors motivated by environmental conservation (such as WOOFERS-Willing Workers on Organic Farms).

Howley et al. (2014) compared the attitudes of Irish farmers and the general public related to agriculture’s multifunctionality. Both groups rated high quality water in rivers and lakes, grazing animals and open grassy fields as the three most desirable countryside landscape attributes. However, there were significant differences in the attitudes of Irish farmers relative to those of the general public regarding certain environmental issues; farmers ranked maintaining wildlife and habitats as the least important of nine potential functions of Irish agriculture while the general public ranked this sixth.

## **3. Methodology**

The University of California Small Farm Program compiled a list with mailing information for 3,018 agritourism operations. It included 877 family-operated wineries with onsite vineyards. From this list, paper copies were mailed in February 2015 to 500 wineries and 750 other agritourism operations that were randomly selected. They were given the option to complete the paper form or respond online. A second mailing was sent to the same 1250 agritourism operations as a follow-up one month later. The survey covered their motivations for operating an agritourism business, activities and revenues, operating practices, marketing practices and community resources, visitor counts, challenges and demographics.

Many definitions and activities related to agritourism have been included in previous studies. The following definition of agritourism was included on page 1 of the survey form: “.... an agritourism enterprise is any revenue-generating business conducted by a farmer or rancher on their working farm or ranch or agricultural facility that provides education and/or enjoyment to visitors. Agritourism includes on-farm sales and services of any kind to consumers. It does **NOT** include off-farm farmers’ market or CSA sales.” The activities included five broad categories: on farm direct sales; accommodations/lodging; entertainment/special events; outdoor recreation and

educational activities. Of the two hundred and forty three farms responses received, 231 were complete, and 198 were currently operating an agritourism operation. However, only 164 met our criteria of having generated at least \$1,000 in agritourism revenues in 2014.

The 164 respondents were classified into two categories, based on whether or not their motivations for operating an agritourism business included all three types of sustainability benefits—economic, social and environmental. Since our primary objective was to identify differences between the two groups, we used ANOVA to test for differences in the means for continuous variables of the “sustainability motivated agritourism farms” (SMAFs) and “not sustainability motivated agritourism farms” (NSMAFs). Chi-squared analysis was used to test for differences in the observed frequency distributions for categorical variables. Logistic regression was used to analyze the relationship between the farms’ sustainability motivation status and various combinations of demographic, personality, operational and other variables. None of these regressions had estimated coefficients that were statistically significant at the 10% level; thus, they are not reported below.

#### 4. Results

##### *Motivations of Agritourism Operations and Sustainability*

We asked farmers to identify the reason(s) why they operate an agritourism business, from a list of ten specific reasons. These reasons are categorized in Table 1 into the three types of motivation reflecting the dimensions of sustainability. Reasons related to generating financial benefits off the operator’s farm were categorized as social, rather than economic. Some reasons fit into both the social and environmental dimensions.

**Table 1. Reasons for Operating Agritourism Business by Motivation Type and Incidence**

Reasons for operating agritourism business	Motivation Type			Have this motivation
	Economic	Social	Environ-mental	
Improve family financial situation	X			63.1%
Create a different lifestyle for my family		X		38.8%
Provide jobs for family members		X		28.7%
Create sales venue for farm’s products	X			76.9%
Better connect my farm/ranch with customers		X	X	65.0%
Ensure a farm/ranch legacy for my heirs		X		36.1%
Diversify my farm/ranch operation	X			42.5%
Keep working land in agriculture			X	36.9%
Provide education on agriculture for others		X	X	57.5%
Develop farm as more integral part of my community’s economy		X		42.5%

The three most frequent cited motivations for having an agritourism operation are ‘create sales venue’ (77%), ‘better connect with customers’ (65%) and ‘improve family financial situation’ (63%); they are all economic. Seven percent of the respondents reported only one reason for being involved in agritourism, and 14% had only one type of motivation for being involved in agritourism. Ninety-one percent of the farms had economic motivations, 86% had social motivations, and 79% had environmental motivations. A farm was classified as having sustainability motivations only if it had all three types of motivation; 71% of the respondents fit these SMAF criteria.

*Demographics and Personality*

SMAFs are demographically different than NSMAFs (Table 2). SMAFs tend to have newer agritourism operations, averaging 17 years compared to NSMAFs' 23 years. Fifty-eight percent of the SMAFs have agritourism businesses that were less than 15 years old, compared to 40% of the NSMAFs. The farmers making the agritourism-related decisions at the SMAF farms are also younger, with an average age of 56 compared to 61 for the NSMAFs. Twenty percent of SMAF decisionmakers are under 45 years old, compared to only 11% among the NSMAFs. Agritourism farm decisionmakers tend to be well educated; over 70% have at least some college education and 29% have a graduate degree. There were no statistically significant differences between the education distributions of the two groups.

**Table 2. Demographics of Agritourism Farms by Sustainability Motivation Status**

	Sustainability Motivated			Test value
	Agritourism Farms	Other Farms	All Farms	
Age of agritourism enterprise	17.0	23.1	18.7	F=4.16**
Age of agriotourism operator	56.1	60.6	57.4	F=4.41**
Highest level of education:				$\chi^2=.76$
High school/some college	28.3%	24.4%	27.2%	
AA or BA degree	42.5%	48.9%	44.4%	
Graduate degree	29.2%	26.7%	28.5%	
Gross Farm Revenue:				$\chi^2=.57$
<\$25,000	27.4%	19.0%	25.2%	
\$25,000-\$249,999	36.3%	47.6%	39.4%	
\$250,000-\$999,999	22.1%	19.0%	21.3%	
\$1,000,000+	14.2%	14.3%	14.2%	
Agritourism Revenue				$\chi^2=.61$
<\$25,000	42.5%	34.0%	40.0%	
\$25,000-\$249,999	34.5%	40.4%	36.3%	
\$250,000+	23.0%	25.5%	23.8%	

\*\*Significant at the 5% level

Overall, one-fourth of the farms have gross farm revenues in 2014 below \$25,000 (Table 2). Almost two-thirds (65%) can be classified as a ‘small farm’, which the USDA defines as one with gross farm revenues under \$250,000. Forty percent of all of the farms have agritourism revenues below \$25,000, and a quarter have agritourism revenues of \$250,000 or more.

There are no statistically significant differences between the gross farm and agritourism revenue distributions of the SMAFs and NSMAFs. However, additional ANOVA testing indicates agritourism revenues increase with years operating an agritourism enterprise. Farms with agritourism revenues under \$25,000 averaged 13 years in agritourism, rising to 21 years for farms with \$25,000 to \$249,999, and 24 years for operations with at least \$250,000 in agritourism revenues; the F-test statistic (6.37) is statistically significant at the 1% level.

The farms indicated their level of agreement with eight statements regarding their personality using a 5-point Likert scale (with 1=strongly disagree and 5=strongly agree). SMAFs were more likely than NSMAFs to describe themselves as creative and innovative, willing to take reasonable

risks, and seek new opportunities than NSMAFs (Table 3). They also indicated their level of agreement regarding six possible outcomes of having an agritourism enterprise. SMAFs appear to have succeeded--at least partially--in fulfilling their sustainability motivations. They are more likely than NSAFs to agree that they have a more positive economic outlook for their farming future. They are also more likely to agree that their social motivation of supporting their local businesses has been fulfilled (4.0 average compared to 3.8).

**Table 3. Agritourism Operators' Personality and Outcomes Statements by Sustainability Motivation Status** (using 1-5 Likert scale; 1=Strongly disagree, 5=Strongly agree)

Statement	Sustainability Motivated			F-test value
	Agritourism Farms	Other Farms	All Farms	
Always optimistic about my future	3.9	3.9	3.9	.01
Not afraid of failure	3.7	3.6	3.7	.45
Am creative and innovative	4.2	4.0	4.2	4.83**
Always confident about my decisions	3.6	3.7	3.6	.25
Enjoying working with people	4.2	4.1	4.1	.52
When planning, I usually consider both negative & positive outcomes	4.2	4.1	4.2	.47
Willing to take reasonable risks	4.2	4.0	4.2	6.64***
Always seek new opportunities	4.1	3.8	4.0	5.70***
Overall profitability of farm has improved	4.0	3.8	3.9	1.40
Family's quality of life has improved	3.7	3.6	3.7	.27
Satisfied with current agricultural operations	3.5	3.4	3.5	.08
More positive outlook for future as a farmer	3.7	3.4	3.6	3.89**
Feel integrated into community	3.9	3.7	3.9	1.67
Able to support & with other local businesses	3.9	3.8	3.9	3.04*

\*Significant at the 10% level \*\*Significant at the 5% level \*\*\*Significant at the 1% level

#### *Operational Characteristics*

SMAFs differed significantly from the other farms regarding several characteristics, including the activities in which they engaged (Table 4). 'Direct sales' is the activity that generates the most revenues for agritourism farms. SMAFs generate less of their agritourism revenues from direct sales of products than NSMAFs (61% vs 74%). Conversely, SMAFs generate higher percentages of their agritourism revenues than NSMAFs from educational activities (17% vs 9%) and entertainment/events (12% vs 5%).

Some farms create agritourism operations to provide jobs for family members or promote community economic development. Overall, the number of paid workers during the year ranges from 0 to 200 with a seasonal average of 4.3, with 19% having no paid workers. The two groups do not differ significantly regarding their seasonal average paid workers count. Overall, the farms vary widely regarding the number of days they were open during 2014, ranging from 3 to 365, with an average of 178. Total visitor counts ranged from 20 to 150,000 with an average of 7,047 visitors. Although SMAFs average a higher numbers of days that they are open, they have a lower average visitor count than NSMAFs; these differences are not statistically significant.



**Table 4. Operating Characteristics by Sustainability Motivation Status**

	Sustainability Motivated			F-test value
	Agritourism Farms	Other Farms	All Farms	
Agritourism income from:				
Direct sales	61.4%	74.2%	65.2%	3.61*
Accommodations	6.9%	5.7%	6.5%	.11
Entertainment/events	11.8%	5.2%	9.9%	3.98**
Outdoor recreation	3.0%	6.2%	3.9%	1.12
Educational activities	16.9%	8.8%	14.5%	2.88*
Average number of paid workers per season	4.6	3.5	4.3	.42
Days open	186.6	158.9	178.2	1.36
Total number of visitors	6560.7	8166.5	7047.3	.19

\*Significant at the 10% level \*\*Significant at the 5% level

**Table 5. Effectiveness of Marketing Tools by Sustainability Motivation Status**

(using 1-5 Likert scale, 5=very effective)

	Sustainability Motivated			F-test value
	Agritourism Farms	Other Farms	All Farms	
Highway signage	3.8	3.9	3.8	.01
Paid advertising	3.6	3.2	3.5	1.81
Web site	4.4	4.2	4.3	2.89*
Facebook, Twitter, Instagram, Pinterest, boosted posts	4.1	3.6	4.0	10.36***
TripAdvisor, Yelp reviews	3.8	3.1	3.6	8.32***
Feature story	4.2	4.0	4.1	.97
Regional/state tourism guide	3.6	3.6	3.6	.00
Chamber of commerce/Visitor bureau	3.4	3.2	3.3	1.10
Direct mail or email to visitors	4.1	3.9	4.0	.84
Print brochures, fliers, posters	3.8	3.5	3.7	4.48**
Word of mouth	4.7	4.6	4.6	1.25
Referrals from other businesses	4.1	4.1	4.1	.00

\*Significant at the 10% level \*\*Significant at the 5% level \*\*\*Significant at the 1% level

#### *Marketing Tools and Community Resources*

We asked agritourism operators to indicate which of 14 listed tools they used to market their operations and to assess their effectiveness on a 5-point Likert scale (with 5 being most effective). SMAFs are more likely than NSMAFs to use traditional marketing methods (Table 5), including feature stories (91% vs 68%) and paid advertising (77% vs 62%). Compared to NSMAFs, SMAFs also have higher usage rates for Facebook, Twitter, Instagram, Pinterest, boosted posts (89% vs 74%). Overall, the highest rated marketing tools are ‘word of mouth’, web site, feature stories and

‘referrals from other businesses’. SMAFs also rate the effectiveness of the following marketing tools higher than their NSMAF counterparts: print brochures, fliers and posters; web site; Facebook, Twitter, Instagram, Pinterest, boosted posts; Trip Advisor/Yelp reviews; and print brochures, fliers and posters.

Agritourism operators identified which community resources they used and rated their helpfulness on a 5-point Likert scale. There are no statistically significant differences in usage between the two groups (Table 6). Overall, the most helpful community resource is ‘farm or wine trail/agritourism association’, followed by ‘other local tourism and retail businesses’, ‘neighboring farms’ and ‘local dining businesses’. Between the two groups, the only difference that is statistically significant is the SMAFs’ higher rating for ‘local dining businesses’.

**Table 6. Usefulness of Community Resources by Sustainability Motivation Status**  
(using 1-5 Likert scale, 5=very effective)

	Sustainability			F-test value
	Motivated Agritourism Farms	Other Farms	All Farms	
Tourism bureau, Chamber	3.4	3.3	3.3	.18
Farm/wine trail, agritourism associations	3.7	3.4	3.6	1.44
Small Business Center, University Cooperative				
Extension, other educators	3.0	2.8	2.9	.48
Neighboring farms	3.3	3.2	3.3	.30
City/county planning & zoning	2.1	2.0	2.1	.67
Local dining businesses	3.4	3.0	3.3	2.87*
Other local tourism & retail sites	3.4	3.2	3.4	.36

\*Significant at the 10% level

**Table 7. Agritourism Challenges by Sustainability Motivation Status**  
(using 1-5 Likert scale; 1=not at all challenging, 5=very challenging)

	Sustainability			F-test value
	Motivated Agritourism Farms	Other Farms	All Farms	
Family or business labor	3.4	3.2	3.3	.65
Management time/expertise	3.3	3.0	3.3	2.63
Availability of operating/investment capital	3.5	3.1	3.4	4.74**
Insurance cost/availability	3.5	3.0	3.4	6.56***
Ensuring visitor safety & accessibility	3.0	3.0	3.0	.06
Developing & implementing business plan	3.0	2.7	2.9	3.43*
City/county permitting & zoning	3.7	3.6	3.7	.17
Other local/state regulations	3.7	3.7	3.7	.53
Local & state taxes	3.5	3.4	3.4	.64
Competition from other recreational options	2.7	2.8	2.7	.21
Marketing	3.3	3.1	3.3	1.29

\*Significant at the 10% level \*\*Significant at the 5% level \*\*\*Significant at the 1% level

### *Challenges*

We asked agritourism operators to assess how challenging 11 issues were in operating their agritourism business (again using a 5-point Likert scale). Overall, the most challenging (based on average ratings) are: ‘city/county permitting and zoning’ (3.7), ‘other state and local regulations’ (3.7), and local and state taxes, ‘availability of operating or investment capital’ and ‘insurance cost/availability’ (all with average ratings of 3.4) (Table 7). While the differences in the averages between SMAFs and NSMAFs are not statistically significant for ‘city/county permitting and zoning’ and ‘other local/state regulations’, the differences for the ‘availability of operating/ investment capital’ (3.5 vs 3.1), ‘cost/ availability of insurance (3.5 vs 3.0) and ‘developing and implementing a business plan (3.3 vs. 3.0) are all statistically significant.

### **5. Discussion**

While establishing an agritourism operation can spread risk and produce additional revenues to the farm, it is clear that agritourism can also increase overall agricultural sustainability. The survey results indicate that farmers with agritourism operations, particularly those with sustainability motivations, can create social benefits by educating visitors about sustainable agriculture, making the farm a more integral part of the community’s economy, changing the farm family’s lifestyle, ensuring a farm legacy for the heirs, and providing jobs to family members. These operations can also generate environmental benefits by keeping working land in agriculture, educating visitors about sustainable agriculture, and strengthening the farm’s connection with its customers.

SMAFs are more likely than NSMAFs to agree that their agritourism business has given them a more positive economic outlook for their farming future, which then creates the environmental benefit of keeping working land in agriculture. SMAFs are also more likely than NSMAFs to agree that their social motivations to become a more integral part of the community and support their local businesses are being fulfilled.

The fact that 20% of SMAF operators are under 45 years old, compared to only 5% of all principal farm operators in California, is promising (USDA, 2014). Twenty percent of the respondents in Tew and Barbieri’s study were also under 45 years old. They noted that this “...suggests either the incorporation of new skills within a younger generation of farmers or the use of farm diversification to facilitate succession of the business among family members.” (p. 222). Their conclusion about agritourism being an important marketing tool because it enables farms to obtain new customers and educate the public about agriculture fits well into the California context where many consumers are interested in local food and sustainable farming practices. Such consumers are eager to go a farm and pick fruits and vegetables, or enjoy an onfarm dinner. The fact that SMAFs generate a higher percentage than NSMAFs of their agritourism revenues from educational activities is evidence of their commitment to their social motivation to educate the public about agriculture. Since 72% of the SMAF operators have at least a 2- or 4-year college degree, they should be well prepared to educate visitors about farming practices.

Since over a quarter of the SMAFs have less than \$25,000 with gross farm revenues, it is not surprising that 42% of the SMAFs earned less than \$25,000 in agritourism revenues. However, these low revenues levels may also reflect opportunities for substantial agritourism revenue growth, since the average age of SMAF agritourism enterprises was 17.0 years compared to 23.1 years for the NSMAFs with higher agritourism revenues. Additionally, the SMAF operators are more entrepreneurial; they described themselves as more creative and innovative, and more willing to take reasonable risks than the NSMAFs. As SMAFs’ experience with agritourism increases, so does their potential for higher agritourism revenues.

SMAFs' potential for higher revenues is bolstered by the fact that they are more engaged in marketing their operations than NSMAFs. While they find traditional marketing tools to be effective, they are also more likely than NSMAFs to have an effective website and use social media. Among community resources, they are also more likely than NSMAFs to collaborate with farm/wine trails and/or agritourism associations and local dining businesses. Agritourism operations in Michigan have also collaborated to successfully strengthen their businesses (Che et al., 2005). They provide referrals to each other, use a regional approach to promote agritourism destinations, and share operations-related information regarding suppliers and marketing.

There are several issues that SMAFs (and NSMAFs to a lesser degree) consider to be substantial challenges in operating their agritourism businesses. State and local government regulations, including those related to permitting and zoning were also the biggest challenges in a similar survey of California agritourism operations conducted in 2009 (George et al., 2011).

A 1998 law amended California's Health and Safety Code to permit "agricultural homestay" establishments. This law allows any working farm to host a limited number of overnight visitors and serve home-cooked meals to visitors without having to comply with the more stringent requirements applied to commercial restaurants (University of California Small Farm Program). In 2009, California implemented a new farm stand law to enable farm stands to sell locally processed agricultural products (not necessarily produced by the farmer with the farm stand), such as jams, pickles, cured olives and other "value-added" products made with ingredients produced on or near the farm, in addition to fresh produce and eggs produced on the farm. The processed farm products must be shelf-stable. These products add to the farm's direct sales revenues.

In California, county governments bear the responsibility on regulating agritourism operations. There are wide variations in the degree of enforcement of agritourism regulations across counties. Recognizing that agriculture is multifunctional and that agritourism can play an important role in strengthening the viability of rural communities, several counties have revised their General Plans and relaxed some regulations related to agritourism. Sacramento County adopted ordinances that allow many agritourism activities and events "by right" on land with agricultural zoning and also permit many agritourism operations to host an unlimited number of "community events" with a simplified permitting process. Yolo County adopted new ordinances for agricultural zoning, allowing farm stays, farm dinners and other agritourism activities "by right" in the Capay Valley.

In 2010, Butte County created a Unique Agriculture (UA) Overlay Zone "...to support and enhance Butte County's family farms, unique crops, or historic ways of farming by maintaining viable small-scale/historic agricultural operations and their essential rural setting in unique Rural Residential, Foothill Residential and Agricultural areas of the county. The UA overlay zone accommodates a variety of uses...It encourages residents and visitors to learn more about agriculture in the county by allowing educational and tourism uses on working farms..." (Butte County, Division 7, §24-45). Permitted uses include bed and breakfasts, farm tours, farmstays, and special events. This planning effort demonstrates Butte County's strong commitment to facilitating agritourism operations' abilities to educate visitors about agriculture as well as generate additional revenues for farms.

Other significant challenges reported by SMAFs include access to operating and investment capital, the cost and availability of insurance, and developing and implementing a business plan. The regulatory requirements discussed above are likely to be interconnected with these challenges. Compliance with regulations generally increases an agritourism operation's construction and operating costs, and it also complicates (and lengthens) the enterprise's development process. These issues need to be addressed in a business plan, which is then reviewed by a lender if the

farm needs a loan. It is likely that the insurance challenge is related to the fact that many general farm insurance carriers do not also provide liability insurance coverage for agritourism activities.

## **6. Conclusions**

Many smaller-scale farms in the US are in a tenuous position as they face rising production costs. At the same time, urbanization pressures are increasing farmland values and enticing many retiring farmers to sell their land to developers. Such farmland conversion is threatening the vitality of many rural communities. However, over two-thirds of the agritourism operations in California that participated in this study are sustainability motivated; they are seeking to generate economic, social and environmental benefits by operating agritourism enterprises. These SMAFs are demographically different and operate differently when compared to other agritourism farms in California.

Unlike in the EU, there are few government programs or regulations in the US that bolster agritourism opportunities. However, government support for agritourism appears to be growing as public interest in local food and sustainable agriculture increases. The state of California has passed three laws over the past 20 years to enhance agritourism opportunities. Several counties in California have revised their zoning policies to increase agritourism revenues, educate the public about farming and support rural development. Nevertheless, agritourism operations in California still have to overcome significant regulatory hurdles to start and operate their agritourism enterprises.

Consistent with research findings in the EU, coordinated promotional efforts are very beneficial for agritourism operations in California. Entering the agritourism industry requires that farmers learn new skills and develop new partnerships. Agritourism operations have a higher chance of success when they are part of a supportive community that includes tourism professionals, county regulators, agricultural educators and a network of other agritourism operators. Regional farm trail organizations and other agricultural marketing groups are organizing and providing promotional coverage for coordinated events. Such efforts can foster networking among farms.

Agritourism not only provides additional opportunities for farmers to generate revenue; it also has the potential to create social and environmental benefits. The multifunctionality in agriculture can provide a framework for governments in the US to develop regional or statewide policies that support agritourism operations and address their challenges related to regulations, and access to insurance and financial capital. These findings are also useful to Extension faculty and agritourism organizations for developing their educational programs—particularly to help current and aspiring agritourism operators develop and implement business plans. Further research is needed to examine the environmental and social practices of US agritourism operations with sustainability motivations. It is important for policymakers, educators and marketing professionals to understand what motivates agritourism operators, as well as what effects the operators' values and goals might have on their agritourism practices and performance.

## **References**

Barbieri, C. 2013. Assessing the sustainability of agritourism in the US: a comparison between agritourism and other farm entrepreneurial venture. *Journal of Sustainable Tourism* (2): 252–270.

Butte County. 2018 Code of Ordinances, Chapter 24-Zoning. [https://library.municode.com/ca/butte\\_county/codes/code\\_of\\_ordinances?nodeId=CH24ZO](https://library.municode.com/ca/butte_county/codes/code_of_ordinances?nodeId=CH24ZO)

Carlsen, J., Getz, D. and Ali-Knight, J. (2001) The Environmental Attitudes and Practices of Family Businesses in the Rural Tourism and Hospitality Sectors, *Journal of Sustainable Tourism*, 9:4, 281-297,

Che, D., Veeck, A. and Veeck, G. (2005). Sustaining production and strengthening the agritourism product: Linkages among Michigan agritourism destinations. *Agriculture and Human Values* 22: 225–234.

Flanigan, S., Blackstock, K. and Hunter, C. (2015). Generating public and private benefits through understanding what drives different types of agritourism. *Journal of Rural Studies*,41(1), 129-141.

George, H., Getz, C., Hardesty, S. and Rilla, E. 2011. “California Agritourism Operations Are Growing.” *California Agriculture*. 65:2, 57-65.

Howley, P., Yadav, L., Hynes, S., Donoghue, C. and Neill, S. (2014). Contrasting the attitudes of farmers and the general public regarding the ‘multifunctional’ role of the agricultural sector. *Land Use Policy*. 38: 248-256.

La Pan, C. and Barbieri, C.. (2014). The role of agritourism in heritage preservation. *Current Issues in Tourism*,17(8): 666–673.

Lucha, C., Ferreira, G., Walker, M. and Groover, G., 2016. Profitability of Virginia’s Agritour-ism Industry: A Regression Analysis. *Agricultural and Resource Economics Review*. 45(1): 173-207.

McGehee, N. and Kim, K. (2004). “Motivation for Agri-Tourism Entrepreneurship.” *Journal of Travel Research*, 43(2): 161–70.

Meraner, M., Heijman, W., Kuhlman, T., and Finger, R., 2015. Determinants of farm diversification in the Netherlands. *Land Use Policy*. 42:767–780.

Nickerson, N., Black, R., McCool, S. (2001) “Agritourism: Motivations behind Farm/Ranch Business Diversification”. *Journal of Travel Research*. 40(1): 19-26.

Organization of Economic Co-operation and Development. 2001. *Multifunctionality: Towards an Analytical Framework*. Paris.

Ploeg, J. and Roep, D. 2003. Multifunctionality and rural development: the actual situation in Europe in G. van Huylenbroeck and G. Durand, eds. *Multifunctional Agriculture; A new paradigm for European Agriculture and Rural Development*. Ashgate, Hampshire, England (pp. 37- 53).

Renting, H., Ploeg, J. (2001) Reconnecting nature, farming and society: environmental cooperatives in the Netherlands as institutional arrangements for creating coherence, *Journal of Environmental Policy & Planning*, 3(2): 85-101.

Tew, C. and Barbieri, C. (2012). The perceived benefits of agritourism: The provider’s perspective. *Tourism Management*, 33(1), 215-224.

United States Department of Agriculture-National Agriculture Statistics Service. (2014). 2012 Census of Agriculture. Summary and State Data, Volume 1.

University of California Small Farm Program. Agricultural zoning codes regulating agritourism. <http://sfp.ucdavis.edu/files/168792.pdf>

Xu, S, Barbieri, C., Rozier-Rich, S., Seekamp, E., and Morais, D. (2014) How Beneficial is Agritourism? North Carolina Farmers and Residents Respond. North Carolina Cooperative Extension Service