



Missouri *Agritourism Survey*



Agritourism in Missouri: A Profile of Farms by Visitor Numbers

Presented to:

**Sarah Gehring
Missouri Department of Agriculture**

Prepared by:

**Carla Barbieri, Ph.D.
Christine Tew, MS candidate**

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**University of Missouri
Department of Parks, Recreation & Tourism**



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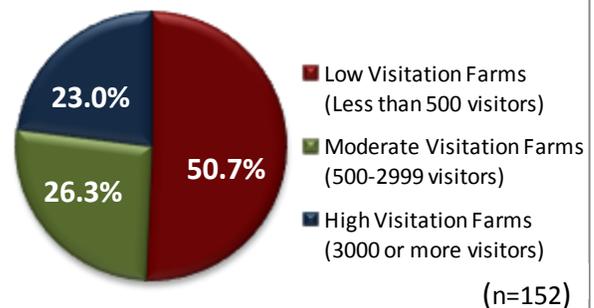
AGRITOURISM IN MISSOURI:

A PROFILE OF FARMS BY VISITOR NUMBERS

This report explores the differences in farm and farmer attributes, marketing and management practices, and economic performance among agritourism farms in Missouri receiving different numbers of visitors¹. This is the second report derived from the Missouri Agritourism Survey, a study conducted in 2009 by the Missouri Department of Agriculture and the University of Missouri Department of Parks, Recreation and Tourism to strengthen the understanding of Agritourism in Missouri. Agritourism is defined in this study as farms currently receiving visitors for recreation, tourism or leisure activities for fifteen days or more per year.

Analysis for this report includes 152 Missouri agritourism farms that participated in the survey. Responding farms were divided into three groups (i.e., segments) based on their number of visitors received between January and December 2008. The first segment was labeled “Low Visitation” farms as they received less than 500 visitors

Figure 1. Study segments



during the year. The second segment, “Moderate Visitation” farms received between 500 and 2,999 visitors, while those in the “High Visitation” farms category reported at least 3,000 visitors during 2008. Chi-square and Analysis of Variance (ANOVA) tests at a ten percent significance level ($\alpha=0.10$) were used to compare the study segments regarding attributes concerning their operator, farmland, agritourism offerings, economic performance, marketing strategies and management indicators.

¹ A complete description of the research procedures for this study and a comprehensive profile of agritourism farms in Missouri can be found at: <http://web.missouri.edu/~barbieric/reports/Agritourism-2009-Overview.pdf>





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Comparing Physical and Human Resources across Farms with Different Numbers of Visitors

Total farm acreage, the number of acres farmed and proximity to an urban area were examined to determine whether farms receiving different numbers of visitors have different physical resources. Results showed small differences in the three physical characteristics across the study segments, and those differences were not statistically significant (Table 2). Non statistical differences are important in this case because they suggest that the three physical indicators examined are not associated with the number of visitors an agritourism operation receives. In other words, farm operators should not discount the opportunity to add agritourism activities based upon their farm size or proximity to highly populated areas, as these physical characteristics appear to be neither an impediment nor an advantage to developing agritourism operations.

Table 2. A comparison of physical farm resources among study segments.

	Low Visitation (n=77)	Moderate Visitation (n=40)	High Visitation (n=35)	Statistical Result ¹
Farm Size (n=144)				
Number of farmland acres	293	248	562	<i>Not different</i>
Number of acres in production	267	183	523	<i>Not different</i>
Distance from an Urban Area (n=150)				
Less than 10 miles	10.5%	17.5%	14.7%	<i>Not different</i>
10-29 miles	18.4%	15.0%	20.6%	
30-59 miles	30.3%	35.0%	29.4%	
60 miles or more	40.8%	32.5%	35.3%	

¹ Critical value $p < .10$.

Agritourism farms with different visitor levels were also examined in terms of three characteristics of their main operators: number of generations in farming, educational background, and whether s/he has retired from a previous job or profession. The generations in farming and educational background of the farm operator were examined as they indicate



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different levels of knowledge of the complexities of managing an agricultural operation. Whether the farmer is retired from a previous job was examined as an indicator of his or her time availability to the farm.

Statistical tests showed that the proportion of operators that are first-generation farmers and the proportion with formal business, agriculture or other educational backgrounds are statistically similar among farms regardless of their number of visitors. As table 3 shows, the proportion of first-generation farmers running agritourism operations was similar in all three segments. Although a larger proportion of “High Visitation” farms had operators with formal education in both agriculture and businesses as compared to the other segments, tests showed that those differences were not statistically significant. These results suggest that agritourism may be an option for both individuals rooted in agricultural production and those new to the industry, as well as for farmers with different educational backgrounds.

Table 3. A comparison of operators’ characteristics among study segments.

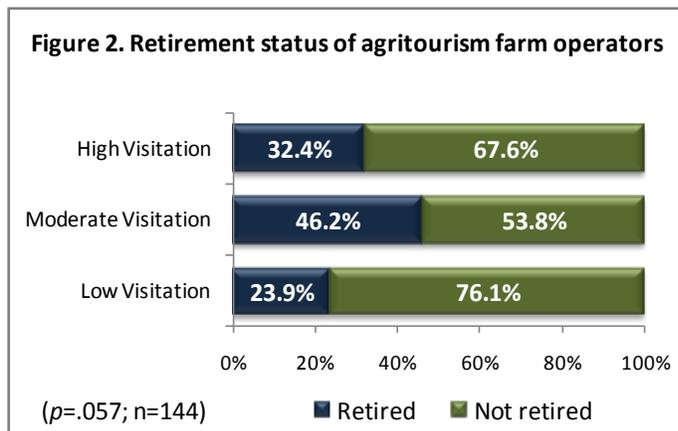
	Low Visitation (n=77)	Moderate Visitation (n=40)	High Visitation (n=35)	Statistical Result ¹
Generations in Farming (n=146)				
First generation farmers	48.6%	51.3%	45.5%	<i>Not different</i>
At least 2 nd generation farmers	51.4%	48.7%	54.5%	
Farmer Educational Background (n=144)				
Agriculture	20.0%	12.8%	14.3%	<i>Not different</i>
Business	17.1%	23.1%	17.1%	
Agriculture and business	18.6%	28.2%	40.0%	
Other educational background	44.3%	35.9%	28.6%	

¹ Critical value $p < .10$.



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Results showed a relatively high proportion of operators retired from another career in all three segments, suggesting that offering agritourism activities may be an option for farm operators throughout their lives, especially as a form of bridge employment or a post-career lifestyle concurrent with personal interests and aspirations (Figure 2). Noticeably, there was a lesser



occurrence of retirees associated with “Low Visitation” farms, although such difference is only statistically significant ($p=.057$) compared to the “Moderate Visitation” farms. These results were expected because higher visitor numbers require greater investment of time, facilities and other resources the

operator may not be able to commit while holding another job.

Agritourism Characterization across Farms with Different Numbers of Visitors

This study also examined the types of visitors farms received and their number of years offering agritourism activities, as those attributes may play a role in the number of visitors to the farm (Table 4). Overall, farms with the lowest numbers of visitors had a significantly more limited scope of visitors in most of the categories examined, including couples without children, seniors and community groups or organizations. These results may be suggesting that “Low Visitation” farms have an overall smaller scale of agritourism development or that they are more specialized in the types of visitors they receive. On average, “Low Visitation” farms received 3.6 types of visitors, which is statistically significantly less than “Moderate Visitation” (average of 4.4 visitor types) and “High Visitation” (average of 5.0 visitor types) farms ($p<.001$).



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Table 4. A comparison of the types of visitors across study segments.

	Low Visitation (n=77)	Moderate Visitation (n=40)	High Visitation (n=35)	Statistical Result ¹
Types of Farm Visitors (n=152)				
Families with young children	67.5%	80.0%	85.7%	<i>Different</i> ^a
Couples without children	64.9%	82.5%	82.9%	<i>Different</i> ^b
Seniors	61.0%	87.5%	91.4%	<i>Different</i> ^b
Families with older children	61.0%	75.0%	71.4%	<i>Not different</i>
Organization groups	46.8%	67.5%	88.6%	<i>Different</i> ^b
School groups	42.9%	40.0%	68.8%	<i>Different</i> ^c
Number of Visitors Types (n=152) ²				
Average number of visitor types	3.6	4.4	5.0	<i>Different</i> ^b

¹ Critical value $p < .10$. At least one pair of statistically significant differences were found.

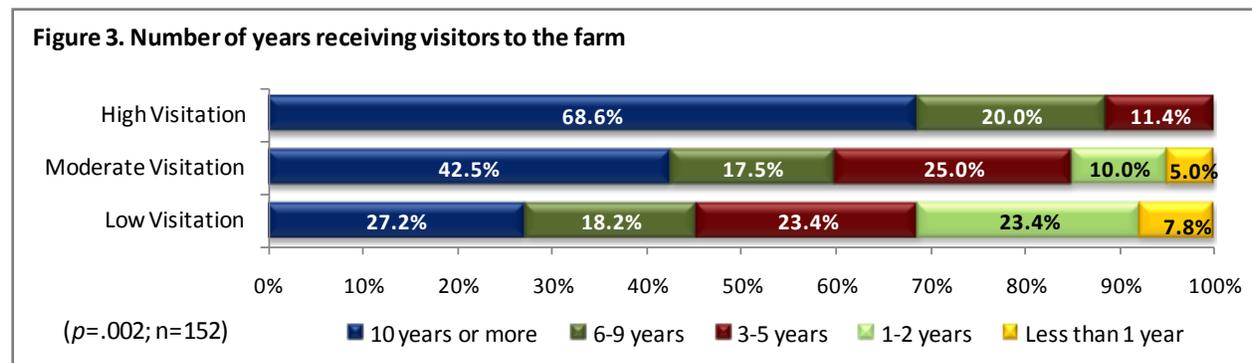
² This includes 7 types of visitors examined in this study, including "other visitors."

^a Significant differences only exist between "Low Visitation" and "High Visitation" farms.

^b "Low visitation" farms are statistically different from the other two farm segments.

^c "High Visitation" farms are significantly different from the other two types of farms.

The longevity of the agritourism operation varied among the three farm segments, with the "High Visitation" farms being significantly different from the other two types of farms ($p = .002$) as shown in figure 3. Those farms were likely to have a greater number of years receiving recreational visitors, suggesting that farm visitation builds momentum over time. These results may also suggest the use of sustainable management practices where operators pace business growth to fit both their markets and resources.





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Recreational Activities Offered by Farms with Different Numbers of Visitors

Recreational activities are an important component of the visitor experience at an agritourism operation. Of the 20 types of recreational activities examined in this study, the most frequently offered (on at least one-fourth of responding farms) were: (1) tours, including those intended for both education and leisure; (2) opportunities for self-harvest or U-pick fruits and vegetables; (3) festivals, events and shows; (4) observation or participation in agricultural processes; (5) classes, seminars and workshops; (6) activities including animal interaction, such as petting zoos; and (7) field or hay rides. Holiday related activities, wineries and pumpkin patches were offered on about twenty percent of participating agritourism farms. The wide spectrum and frequent occurrence of these activities suggests strong ties to agricultural production and tradition in on-farm offerings. Those offerings may be related to either existing farm production, such as including self-harvest as one aspect of an orchard operation, or to the personal interests of the farm operator (e.g., animal husbandry).

Statistical tests revealed significant differences among farms with different numbers of visitors in terms of the following types of recreational activities: U-pick or U-harvest ($p=.004$); festivals, events and shows ($p<.001$); field or hay rides ($p=.006$); holiday events ($p=.059$); wineries ($p=.001$); and pumpkin patches ($p<.001$) as table 5 shows. Overall, “High Visitation” farms are likely to offer a greater variety of recreational activities (average of 5.3 activities), as compared to “Moderate Visitation” (average of 3.8 activities) and “Low Visitation” (average of 3.2 activities) farms. These results are not surprising as those farms receiving higher numbers of visitors need to provide a greater variety to facilitate the rotation of visitors among activities, indirectly encouraging higher satisfaction levels.

From the list of activities significantly different across study segments, it is worth noting that programming festivals, events and shows seems to draw larger numbers of farm visitors. These





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results need to be taken into consideration by those farmers willing to expand their agritourism operations in terms of visitor numbers. It is also interesting to note that there are not significant differences across farms with different numbers of visitors in terms of some lower-investment activities, such as those that can easily parallel the daily farm production activities, including tours, petting zoos and the observation of agricultural processes.

Table 5. Number and types of recreational activities offered by farms with different numbers of visitors.

Agritourism Activities Offered on the Farm (n=152)	Low Visitation (n=77)	Moderate Visitation (n=40)	High Visitation (n=35)	Statistical Result ¹
Total Number of Activities Offered ²				
Average number of activities	3.2	3.8	5.3	<i>Different</i> ^a
Activities Statistically Different				
U-pick or U-harvest	23.4%	47.5%	51.4%	<i>Different</i> ^b
Field or hay rides	19.5%	25.0%	48.6%	<i>Different</i> ^a
Festivals, events and shows	15.6%	32.5%	57.1%	<i>Different</i> ^c
Holiday events	11.7%	25.0%	28.6%	<i>Different</i> ^d
Pumpkin patch	7.8%	17.5%	40.0%	<i>Different</i> ^a
Winery	5.2%	37.5%	22.9%	<i>Different</i> ^b
Activities Not Statistically Different				
Tours (educational or leisure)	62.3%	55.0%	77.1%	<i>Not different</i>
Participation of agricultural processes	36.4%	27.5%	45.7%	<i>Not different</i>
Classes, seminars or workshops	29.2%	27.5%	31.4%	<i>Not different</i>
Petting zoos or animal displays	26.0%	32.5%	40.0%	<i>Not different</i>

¹ Critical value $p < .10$. At least one pair of statistically significant differences were found.

² This includes 18 of the 20 agritourism activities considered during this study, excluding wineries and festivals.

^a "High Visitation" farms are significantly different from the other two types of farms.

^b "Low visitation" farms are statistically different from the other two farm segments.

^c Statistical differences were found across all three farm segments.

^d Significant differences only exist between "Low Visitation" and "High Visitation" farms.



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On-Farm Hospitality Offerings across Farms with Different Numbers of Visitors

The study also examined 16 hospitality services, including lodging and accommodations (e.g., bed & breakfast), food and beverages (e.g., food stands), and event hosting (e.g., programming weddings) offered on the farm. Of those services, the most widely available were: (1) tasting rooms for farm products; (2) cookouts, barbecues and picnics; (3) hosting weddings or private parties; (4) food stands; and (5) catering or customized meals. Statistical analysis revealed significant differences across segments in the offering of all those hospitality activities ($p < 0.05$), as table 6 displays. These results show that agritourism farms with a higher number of visitors provide a greater variety of hospitality services. A smaller proportion of “Low Visitation” farms have tasting rooms, program wedding and private parties or cater customized meals as compared to those with higher numbers of visitors. These results are not surprising as those services often require greater investments and specialized personnel that smaller operations may not be able to afford.

Table 6. Hospitality services offered by farms with different numbers of visitors.

Hospitality Services (n=152)	Low Visitation (n=77)	Moderate Visitation (n=40)	High Visitation (n=35)	Statistical Result ¹
Weddings or private parties	22.1%	50.0%	45.7%	<i>Different</i> ^a
Cookouts, barbecues, picnics	15.6%	20.0%	42.9%	<i>Different</i> ^b
Food stand	14.3%	12.5%	48.6%	<i>Different</i> ^b
Tasting rooms	11.7%	37.5%	37.1%	<i>Different</i> ^a
Catering or customized meals	5.2%	20.0%	34.3%	<i>Different</i> ^a

¹ Critical value $p < .01$. At least one pair of statistically significant differences were found.

^a “Low visitation” farms are statistically different from the other two farm segments.

^b “High Visitation” farms are significantly different from the other two types of farms.

Farm Economic Situation across Study Segments

Agritourism is generally suggested to provide economic benefits to the farm. Hence, this study examined whether farms with different numbers of visitors vary in terms of their annual gross



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sales, their overall economic situation and the proportion of their sales derived from agritourism activities. Results show that farms with a greater number of visitors generally had greater gross farm sales ($p < .001$) as table 7 shows. Furthermore, results suggest that operators of farms receiving more than 3,000 visitors perceived their farm economic situation as significantly higher in terms of profits than operators in the lower segments ($p = .018$).

Table 7. A comparison of the farm economic indicators across study segments.

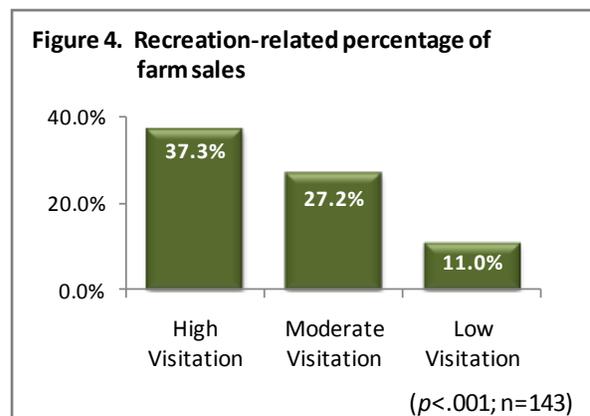
	Low Visitation (n=77)	Moderate Visitation (n=40)	High Visitation (n=35)	Statistical Result ¹
Gross Farm Sales in 2008 (n=143)				
Less than \$49,999	63.2%	65.7%	6.3%	<i>Different ^a</i>
\$50,000 to \$499,999	25.0%	31.4%	59.3%	
\$500,000 or more	11.8%	2.9%	34.4%	
Farm Economic Situation (n=147)				
Profitable business	18.4%	15.8%	33.3%	<i>Different ^b</i>
Generates some profit	25.0%	42.1%	48.5%	
Breaking even	21.1%	15.8%	6.1%	
Operating at a loss	35.5%	26.3%	12.1%	

¹ Critical value $p < .05$. At least one pair of statistically significant differences were found.

^a Statistical differences were found across all three farm segments.

^b "High Visitation" farms are significantly different from the other two types of farms.

Consistently, the proportion of farm sales derived from recreational activities was significantly different across all three study segments ($p < .001$) as figure 4 shows. Operators of "High Visitation" farms reported that over one-third (37.3%) of their gross sales were recreation-related as compared to 27.2% of "Moderate Visitation" farms and 11.0% of "Low Visitation" farms.





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Marketing Methods Used to Attract Farm Visitors across Study Segments

The use of marketing tools, including advertising methods and networking, has been suggested to contribute to the ability of the agritourism operation to attract higher numbers of visitors. Hence, this study examined both marketing indicators across Missouri agritourism farms receiving different numbers of visitors. Impressively, all study segments indicated a high use of marketing methods (Table 8). Notably, the internet (e.g., Web page, blogs) was used by the majority of respondents and showed no significant differences among “Low Visitation” (84.9%), “Moderate Visitation” (90.0%) and “High Visitation” (94.3%) farms. Personal selling strategies were also highly used by all three study segments.

Table 8. The use of marketing among farms with different numbers of visitors.

	Low Visitation (n=77)	Moderate Visitation (n=40)	High Visitation (n=35)	Statistical Result ¹
Types of Marketing Methods (n=148)				
Web page or blogs	84.9%	90.0%	94.3%	Not different
Printed materials	58.9%	70.0%	91.4%	Different ^a
Personal selling	54.8%	62.5%	71.4%	Not different
Ads in media	43.8%	75.0%	85.7%	Different ^b
Specialized directories	37.0%	50.0%	80.0%	Different ^a
Total Number of Marketing Methods Employed (n=148)				
Average number of methods	(3.8)	(4.8)	(6.1)	Different ^a
Involvement with Farm Business-related Associations (n=137)				
Number of memberships	2.1	2.9	3.7	Different ^a

¹ Critical value $p < .10$.

^a Statistical differences were found across all three farm segments.

^b “Low Visitation” farms are statistically different from the other two farm segments.

Without indicating a causal relationship, results showed that the greater the number of visitors the farm received, the more marketing techniques they used. Significant differences were found across all study segments with “High Visitation” farms using on average 6.1 methods,



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“Moderate Visitation” farms using 4.8 and “Low Visitation” farms using 3.8 methods ($p < .001$). However, it is necessary to recognize that the use of some of those methods may be associated with their costs. For example, a smaller proportion (43.8%) of “Low Visitation” farms used paid advertisements in mass media, which often requires a large financial investment, as compared to “Moderate Visitation” (75.0%) and “High Visitation” (85.7%) farms. Significant differences were also found in networking activities among all study segments, as those receiving a greater number of visitors were also more likely to be involved in business and agricultural groups and associations. However, this may also be linked to costs associated with becoming and remaining an active member of those organizations much like the use of paid advertisements in mass media.

Management Indicators of MO Agritourism Operations

On average, the three types of agritourism farms reported receiving visitors slightly more than half of the year (7.4 months), without statistically significant variations among the three segments (Table 9). Results showed that the proportion of farms charging their recreational visitors some type of fee is significantly related to the number of visitors they receive. A smaller proportion of “Low Visitation” farms (45.3%) charged their visitors a fee as compared to “Moderate Visitation” farms (69.2%) and “High Visitation” farms (85.7%). These results are important considering that previous findings suggested that farms with greater numbers of visitors are more likely to have greater gross sales and larger proportions of those sales derived from agritourism. Results showed that farms receiving at least 3,000 visitors per year have a significantly higher number of total farm employees and significantly more employees exclusively dedicated to agritourism than the other farm segments ($p < .001$). Interestingly, no statistical differences were found for either type of employees between “Low Visitation” and “Moderate Visitation” farms.





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Table 9. A comparison of management attributes among farms with different numbers of visitors.

	Low Visitation (n=77)	Moderate Visitation (n=40)	High Visitation (n=35)	Statistical Result ¹
Farm Availability to Visitors (n=149)				
Number of months open	7.0	8.1	7.6	<i>Not different</i>
Charging for Farm Activities (n=149)				
Fees charged at farm	45.3%	69.2%	85.7%	<i>Different</i> ^a
Fees not charged	54.7%	30.8%	14.3%	
Number of Farm Employees (n=131)				
Total farm employees	6.2	6.0	29.1	<i>Different</i> ^b
Employees in agritourism	1.8	5.0	16.8	<i>Different</i> ^b

¹ Critical value $p < .10$.

^a Statistical differences were found across all three farm segments.

^b "High Visitation" farms were significantly different from the other two types of farms.

This study also examined the availability of written business and marketing plans as they have been deemed critical for the healthy development, growth and sustainability of entrepreneurial endeavors. Overall, the majority of farms in each category, "High Visitation" (57.6%), "Moderate Visitation" (61.5%) and "Low Visitation" (61.4%), reported having neither business nor marketing plans in writing, with no statistical differences among study segments (Figure 5). Those results suggest that greater emphasis is needed on the development of those plans.

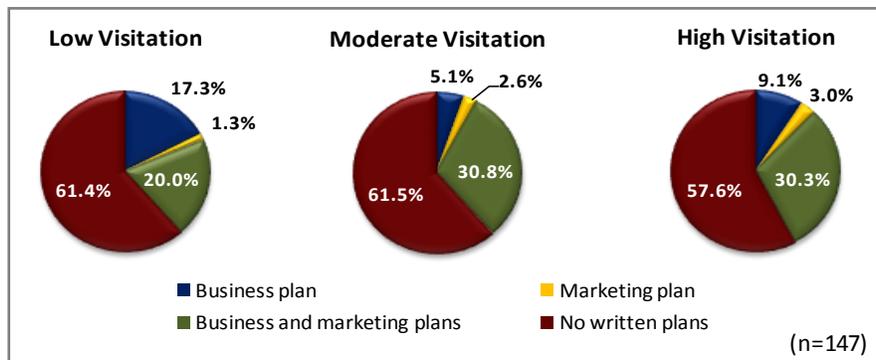


Figure 5. Availability of written business and marketing plans across study segments.



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SUMMARY

As the second report derived from the Missouri Agritourism Survey, this study explored the differences concerning the operator, farmland, agritourism offerings, economic performance, marketing strategies and management indicators among Missouri agritourism farms receiving different numbers of visitors per year. This study compared three types of agritourism operations: “Low Visitation” farms receiving less than 500 visitors, “Moderate Visitation” farms with 500-2,999 visitors; and “High Visitation” farms receiving 3,000 or more visitors per year.

In terms of farmland and operator attributes, responding operations are relatively similar. No statistically significant differences were found among the three segments on total farm acreage, the number of acres in production or the farm’s distance from an urban area. The three types of farms were also similar in terms of the educational background and family history in farming of their operators. These results suggest that farmland and operator attributes should be considered neither an impediment nor advantage for agritourism development. However, “Low Visitation” farms have a statistically smaller proportion of operators retired from a previous job or profession, suggesting that greater number of visitors needs more time investment of the operator devoted to the agritourism offerings.

Greater statistical variations were found among the segments in farm offerings and services. Significant differences appeared in terms of the types of visitors (e.g., school groups, seniors) and the number of activities offered, likely moving in parallel with the farm level of involvement in agritourism, in terms of number of visitors. Furthermore, significant differences were found in “High Visitation” farms in terms of longevity in the business, suggesting that visitor momentum builds over time and as activities grow from low-investment activities (e.g., u-pick produce; tours) to those with greater resource requirements (e.g., tasting rooms, special event





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programming). Hospitality services showed similar results, as farms with greater numbers of visitors were generally providing more services.

Importantly, this study showed significant differences in several farm economic indicators. Without implying causality, this study found that farms with greater visitor numbers generally have higher gross sales and a greater proportion of sales derived from recreation-related activities. In part, this may be associated with a significantly larger proportion of farms with higher numbers of visitors charging at least one fee for the recreational activities offered. Results also show that “High Visitation” farm operators perceived themselves as being significantly more profitable than “Moderate Visitation” and “Low Visitation” operators.

Statistical differences across segments were also found in several marketing and management attributes. While some marketing methods (e.g., Web pages and blogs, personal selling) were widely used, techniques with higher costs (e.g., advertising in mass media) and memberships in business organizations were used significantly more by farms with higher numbers of visitors. Statistical differences were not found among the three levels in terms of the number of months they received visitors for recreational purposes. Results showed that “High Visitation” farms had significantly more employees working on the farm and working exclusively in agritourism activities as compared to the other two study segments. A minority of the study participants had written business and marketing plans regardless of number of visitors they received and despite both documents being considered instrumental for entrepreneurial development.

