



# *Missouri Agritourism Survey*



## **The Economic Benefits of Agritourism in Missouri Farms**

**Presented to:**

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## THE ECONOMIC BENEFITS OF AGRITOURISM IN MISSOURI FARMS

This special report examines the economic situation of agritourism farms in Missouri and their percentage of farm sales derived from recreation-related activities. Specifically, this report explores the influence of various physical, marketing and agritourism resources on the economic performance of the farm. This is the third report derived from the Missouri Agritourism Survey, a research project between the Missouri Department of Agriculture (MDA) and the University of Missouri Department of Parks, Recreation and Tourism (MU-PRT), developed in 2009 to strengthen the understanding of agritourism in Missouri<sup>1</sup>. Agritourism is defined in this study to include farms currently receiving visitors for recreation, tourism or leisure activities for fifteen or more days per year.

Analysis for this report includes 164 Missouri agritourism farms that participated in the survey<sup>2</sup>. Multiple linear regression tests at a five percent significance level ( $\alpha=0.05$ ) were used to examine the extent and direction of associations between farm resources and economic performance. Economic performance was measured using two indicators: (1) the operator's perception of the farm economic situation (i.e., very profitable, operating at a loss); and (2) the percentage of farm sales derived from recreation-related activities. Three types of resources were examined through six farm attributes: (1) Physical resources: farm size in terms of the total acreage and geographic location based on proximity to an urban area; (2) Agritourism resources: operator's off-farm employment

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<sup>1</sup> The first report includes a comprehensive profile of agritourism farms in Missouri while the second report examines and compares agritourism farms with different number of visitors. E-links for both reports are: <http://web.missouri.edu/~barbieric/reports/Agritourism-2009-Overview.pdf>  
<http://web.missouri.edu/~barbieric/reports/Agritourism-2010-Visitors.pdf>

<sup>2</sup> A complete description of the research procedures followed in this study can be found in the "A Preliminary Assessment of Agritourism in Missouri" report, available on-line at: <http://web.missouri.edu/~barbieric/reports/Agritourism-2009-Overview.pdf>



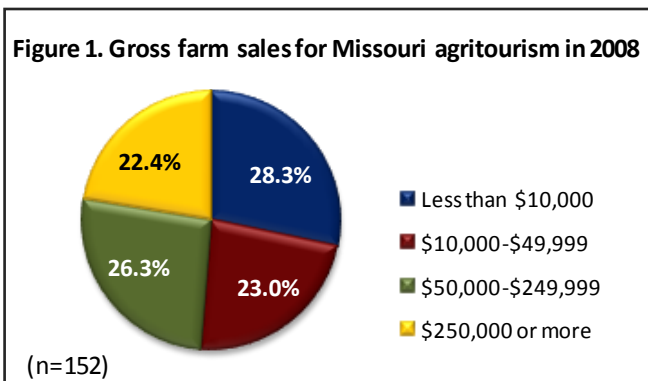
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as an indicator of time availability for the farm business and the number of visitors to the farm in 2008; and (3) Marketing resources: number of marketing methods used to promote farm offerings and the number of memberships to business organizations and associations.

Regression tests produced statistically significant and non-significant results between farm attributes and the economic indicators. Significant results suggest a strong association between the attribute and the indicator, while non-significant results suggest weak or no association. In turn, significant associations may be either positive or negative between an attribute and indicator. Positive associations indicate that two traits change in the same direction, such as the *more* visitors a farm receives, the *more* income the farm gains from recreation. Negative associations indicate situations in which an attribute or indicator declines as another increases. For example, the *more* the operator works off-farm, the *lower* the proportion of farm sales gained from agritourism.

## ***The Economic Benefits of Agritourism on the Farm Business***

Results from the Missouri Agritourism Survey showed that nearly two-thirds (64.4%) of farm operators perceived that their farm profits increased after developing agritourism on their farms. Those perceptions of greater profitability after adding agritourism



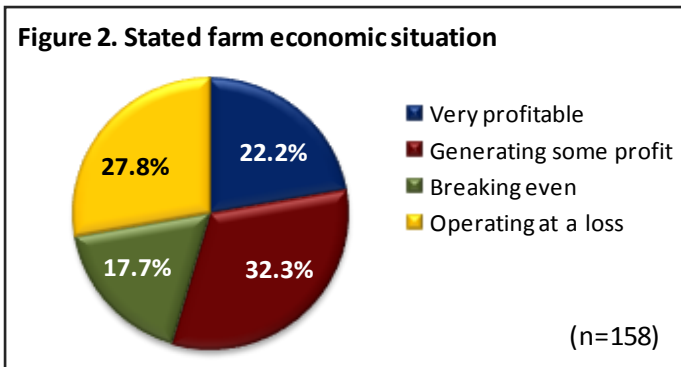
activities are especially interesting as responding farms vary in respect to their gross sales. Nearly evenly divided into quarters, participating farms reported gross sales in the following brackets: less than \$10,000



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(28.3%); \$10,000-\$49,999 (23.0%); \$50,000-\$249,999 (26.3%) and \$250,000 or more (22.4%), as shown in figure 1. These results confirm previous studies in other regions suggesting that Agritourism has the capacity to increase farm revenues and profits (Barbieri, 2009; Ollenburg et al., 2007).

The operator's perception of their farm's profitability was also examined using a four-point scale that inquired whether the farm operates at a loss (1), breaks even (2), makes some profit (3), or is very profitable (4). The majority (54.5%) of respondents perceived that their operations were in a positive economic situation, either being very profitable or generating some profit (Figure 2). Only 27.8% of farm operators indicated that their business was operating at a loss.



### ***Attributes Associated with the Economic Situation of the Farm***

This study also showed that several farm attributes related to physical resources, networking involvement and level of agritourism engagement were associated with the perceived profitability of the farm business ( $R^2=.168$ ,  $p=.001$ ), as shown in table 1. Farm acreages varied greatly, ranging from one to 8,000 acres, and statistical tests showed a positive association between farm size and perceived economic situation ( $p=0.047$ ). That positive association indicates that farms with greater acreage perceive themselves as being more profitable businesses, which is not surprising as greater acreage provides greater opportunities for more agricultural production and increased economies of scale.



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The geographic location of the farm, as measured by the distance from an urban area with a population greater than 50,000 people, was not significantly associated with a perception of the farm’s economic situation as being more or less profitable. The lack of a significant association found in Missouri is revealing. Previous studies in other regions were not settled on this regard, as some indicated that closeness to an urban area is beneficial for the farm business because it enables the capture of a larger clientele, while others indicated the remoteness is positive as it enhances the tourism appeal of the farm (Barbieri et al., 2008; Che et al., 2007; Veeck et al., 2006). The negative association between off-farm employment for the farm operator and the farm economic situation suggests that the investment of time is important to develop and maintain a profitable farm business ( $p=.035$ ). Interestingly, statistical tests showed no association between the number of visitors received and the economic situation of the farm. Those results suggest that agritourism operations may be profitable at varying levels of development.

Table 1. Physical, agritourism and marketing resources associated with the perceived economic situation of the farm.

	Perceived Farm Economic Situation <sup>a</sup>			
	n	Std. $\beta$	p-value	Statistical Result <sup>b</sup>
<b>Physical Resources</b>				
Farm Acreage	155	.182	.047	Positive Association
Distance from an Urban Area	157	.010	.908	Not Associated
<b>Agritourism Resources</b>				
Off-Farm Employment	150	.189	.035	Negative Association
Visitors in 2008	147	-.030	.761	Not Associated
<b>Marketing Resources</b>				
Memberships to Associations	143	.294	.004	Positive Association
Marketing Methods Used	154	-.180	.064	Not Associated

<sup>a</sup> Measured on a Likert Scale where: (1)=operates at a loss; (2)=breaks even; (3) makes some profit; and (4)=is very profitable.



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<sup>b</sup> Overall model:  $R^2=.168$ ,  $p=.001$ .

Respondents were very proactive in their use of marketing strategies to promote their agritourism offerings. They indicated being very involved with agriculture, business and tourism associations, as well as using an average of about five (mean=4.6) marketing methods to promote farm products and services. Farm operators with higher numbers of memberships to agricultural and business organizations, an indicator of greater networking activity, reported greater perceptions of their farm economic situation ( $p=.004$ ). These results may suggest that such networking sources are a good resource to learn about or grow their businesses or to improve their agritourism operation. Interestingly, the use of marketing methods such as websites, printed materials and personal selling, was not significantly associated with perceived farm profitability.

### ***Attributes Associated with the Percentage of Sales Derived from Recreational Activities***

The percentage of farm sales derived from recreation, leisure and tourism activities was examined in this study, as an important indicator of the economic role of agritourism to the farm business. The majority (61.9%) of farm operators who participated in this study reported not having direct sales from their tourism and recreation activities (e.g., tours, u-pick up, events, festivals). A small proportion (14.9%) reported that tourism and recreation activities represent at least 30% of their total sales.

Overall, the combination of physical, agritourism and marketing attributes of the agritourism farms examined in this study was found to be statistically associated with the percentage of recreational farm sales ( $R^2=0.280$ ,  $p<.001$ ) as shown in table 2. Results show that none of the physical attributes of the farm (i.e., farm acreage, distance from an urban area) are associated with the percentage of farm sales derived from agritourism.



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These results are important because they suggest that agritourism development and economic success is neither helped nor hindered by the operation’s sheer size or its closeness to an urban setting. In other words, farm size and location do not appear to be a determinant of the proportion of sales that agritourism can produce for the farm.

Table 2. Physical, agritourism and marketing resources associated with the percentage of farm sales derived from recreational activities.

	Percentage of Farm Sales from Recreation			
	n	Std. $\beta$	p-value	Statistical Result <sup>a</sup>
<b>Physical Resources</b>				
Farm acreage	153	-.149	.110	Not Associated
Distance from an Urban Area	152	.129	.079	Not Associated
<b>Agritourism Resources</b>				
Visitors in 2008	146	.330	.001	Positive Association
Operator’s off-Farm Employment	148	-.171	.040	Negative Association
<b>Marketing Resources</b>				
Marketing Methods Used	152	.237	.009	Positive Association
Memberships to Associations	142	.031	.739	Not Associated

<sup>a</sup> Overall model:  $R^2=.280$ ,  $p<.001$ .

Both agritourism resources examined in this study were found to be associated with the percent of sales derived from agritourism, although in opposing directions. As would be expected, the more visitors the farms receive, the greater the proportion of their farm sales derived from agritourism ( $p=.001$ ). It is also worth mentioning that these visitors, in addition to the revenues they bring from on-farm hospitality services (e.g., lodging, events), can produce revenues from the purchase of other farm products and services, such as processed foods and specialty products. In contrast, the more the time the operator spent on an off-farm job, the lower the percentage of farm sales from recreation ( $p=.040$ ), which is not surprising given that operators holding off-farm employment likely



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have less time available to devote to the farm business, and especially to its agritourism operations. These results suggest that farmers willing to develop agritourism as an important source of revenue should consider the time and effort they would need to invest in this entrepreneurial endeavor.

Finally, results showed that the greater the number of marketing methods used to promote farm activities, the greater the percentage of farm sales derived from recreation-related activities ( $p=.009$ ). The marketing methods considered in this study ranged from those with relatively low input costs, including websites, blogs and personal selling, to those with much higher costs, such as paid advertisements in mass media. These results suggest that it is critical for agritourism farms to communicate their offerings to foster public awareness to capture new clientele while also retaining current agritourists. However, results did not show any association between the extent of memberships in agricultural and business organizations and recreation-related farm sales.

## **Summary**

Results suggest that agritourism provides economic benefits to Missouri farms. In spite of the reduced percentage of sales derived from tourism and recreation activities offered on the farm (e.g., tours, animal displays, petting zoos, classes), respondents perceived that agritourism has a positive impact on the farm profitability. These results suggest that the economic benefits that agritourism provides to the farm extend beyond direct revenues generation (e.g., from entrance fees). In addition, agritourism may produce additional indirect economic gains such as increased sales of other farm products, and other marketing benefits such as branding and product awareness. Both, direct and indirect





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economic benefits need to be taken into consideration when assessing the economic success of agritourism.

Initial exploration into the physical, agritourism and marketing resources of agritourism farms suggested that some attributes are more frequently associated with perceived profitability and higher levels of recreation-related farm sales. Physical farm resources (i.e., farm acreage and distance from an urban area), are not broadly associated with the perceived economic situation of the farm nor with the percentage of farm sales from recreational activities. The only significant positive association found between farm acreage and perceptions of profitability may be linked to overall farm production rather than specifically to agritourism activities. These results suggest that physical attributes should not be considered as an impediment or a competitive advantage for the development or economic success of agritourism enterprises.

Agritourism resources (i.e., number of visitors received, operator's off-farm employment) were overall associated with both economic farm indicators. As expected, the higher the number of visitors received per year, the greater the percentage of farm sales from recreational activities. However, the number of visitors was not found to influence overall farm profitability. Importantly for those farmers willing to develop or expand an agritourism, results show that the proportion of time that the operator can devote to this entrepreneurial endeavor appears to be critical to the overall farm profits and the direct sales derived from agritourism. Marketing proactivity also appears to influence the perceived economic performance of agritourism farms; intensive business networking augments overall farm profitability perceptions, while intensive promotion increases recreational farm sales. These results suggest that while networking is important for the farm, advertising is critical for agritourism and attracting visitors to the farm.



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