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Diversification of Offerings and Visitor Attractions in Agritourism Operations of Maryland, USA

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ABSTRACT

Agritourism operations diversify farms by offering various attractions such as education, recreation, entertainment, active involvement, and direct product sales to visitors with the goal of boosting profitability. Several studies have examined factors attracting visitors to tourism destinations. However, limited evidence is available on agritourism, and it is not clear what operations attract more vs. fewer visitors. Expanding the findings from our previous paper, this paper empirically investigates the influence of diversification of offerings in attracting visitors to agritourism destinations. We used the survey data (n=79) collected from Maryland in 2022. Adjusting for other confounders, the results from the multivariate analysis revealed that the diversity of attractions significantly increased visits to the farm. Evidence suggested that wineries and breweries were less diversified as compared to operations that offered other opportunities such as those that sold produce directly to visitors through farm stores/stands, organized festivals, farm animal display, hayride/maze, and u-pick to visitors. These findings are important to policymakers and Extension educators that support promote agritourism operators to enhance profitability by attracting visitors for the economic viability and sustainability.

INTRODUCTION

Many small and medium-sized U.S. farmers face challenges such as market access, market competition, labor shortage, and price fluctuation, to mention a few (Chase *et al.*, 2021). These farmers are increasingly exploring alternatives to remain competitive in farming. Agritourism, merging conventional agriculture with tourism, is one of the commonly used approach by farmers (Bowen *et al.*, 1991; Chase *et al.*, 2018; Hollas *et al.*, 2021; McGehee *et al.*, 2007). Agritourism operators attract visitors to their farms by offering diversified activities such as education, active involvement on the farm, recreation, and entertainment (Chase *et al.*, 2021; Chase, 2014; Chase *et al.*, 2018). In addition, many urban visitors learn about where the food comes from and experience the 'dirt on the soil' by participating in hands-on educational lessons offered by the farm. Some visitors learn about best agritourism practices, taste local cuisine, and participate in festivals and events, with an added advantage to engage with the local communities. In exchange, agritourism operations benefit from directly selling their products and services to visitors and generate supplemental income for their farms economic viability (Nickerson *et al.*, 2001). Thus, enhancing incomes by attracting visitors to their operations is the major goal of agritourism farm operators (Barbieri, 2009; Barbieri *et al.*, 2008; Brandth & Haugen, 2007, 2011; Nickerson *et al.*, 2001; Tew & Barbieri, 2012; Veeck *et al.*, 2006). Many farm operations diversify farms and offer a variety of activities such as organizing educational farm tours, festivals, hands-on exercises, experiential learning opportunities, u-pick, petting zoo to mention a few to attract visitors of

varied interests.

Several studies examined the attributes of travel destinations that influence tourists' decisions to visit those places (Chen *et al.*, 2015; Dahiya & Batra, 2016; Ortaleza & Mangali, 2021; Vengesai *et al.*, 2009). Some of the important attributes include accommodation, articulated stories, affordability, accessibility, and attribution (Ortaleza & Mangali, 2021). Abello and colleagues, using data from Texas, revealed that travel distance, market promotions, food events, and the age and education of operators were among the significantly associated factors that influenced the frequency of visits to farmers' markets (Abelló *et al.*, 2014). This data was collected from the consumers, but not from the farmers' market. Other scholars revealed the role of the quality and freshness of the product in attracting consumers (Brown, 2003; Wolf *et al.*, 2005). However, this evidence does not come from the agritourism operations. Studies that focus on the characteristics of agritourism operations, including the influence of diversification of offerings on the number of visitors among agritourism operations, are scant.

This paper aims to contribute to this gap in agritourism research by empirically investigating a straightforward question: whether diversification of attractions/offerings plays a role in attracting visitors to the agritourism operations in Maryland? This study further investigates the various types of agritourism activities offered by agritourism operations to the visitors. We hypothesize that a diversified operation provides activities to a varied group of visitors, such as elderly, youths, children, men, and women, and in various seasons by offering a variety of activities on a regular basis depending upon the taste

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and interest of visitors and attract more of them on the farm. This assessment is important because an increased number of visitors to the operation increases the profitability of the operation and enhances its economic viability (Bhandari *et al.*, 2026; Bhandari *et al.*, 2024; Hollas *et al.*, 2021). This paper extends the findings from the previous research (Bhandari *et al.*, 2024; Hollas *et al.*, 2021)). While the previous research examines the factors affecting self-perceived profitability, this paper focuses on the role of diversification of offerings in attracting visitors to agritourism operations.

This study also provides evidence of the types of more vs. less diversified farm activities, and whether these operations should focus on fewer or multiple attractions to attract visitors. This evidence is the direct contribution of this study, which is not readily available in the agritourism literature. This evidence will be important to Extension professionals to promote the role of diversified agritourism activities in the state. More importantly, this understanding will be helpful to agritourism operators in enhancing their economic viability through diversifying their farm activities and supplementing incomes by attracting more visitors to their farms.

Empirical Reviews and the Theoretical Framework

Agritourism itself is a diversification activity many small and medium farmers adopt for their economic viability and sustainability (Quendler *et al.*, 2026; Global Agritourism Network, undated). The agritourism operations diversify their farms by incorporating recreation, education, and leisure activities to visitors (Tew & Barbieri, 2012). Chase and colleagues provide a list of core and peripheral activities, including educational, experiential, and recreational activities, in their conceptual framework (Chase *et al.*, 2018). According to Chase and colleagues, the core agritourism activities that take place on the working farm or ranch are education, direct sales, entertainment, outdoor recreation, and hospitality. The peripheral agritourism activities, that lack direct farm experiences, are agricultural fairs of farm, on-farm outfitter services, on-farm concerts, farmers markets, off-farm agricultural museums, fishing and hunting, and more.

Some farmers invite visitors to their farm or ranch offer only one or two attractions, while others diversify their farms offering a combination of attractions (Bhandari *et al.*, 2024). These attractions may vary from a winery or a brewery to agricultural festivals, u-pick or pick your own, hayrides, corn maze, petting zoos, and fresh produce sales at the farm stand or at a farm store. Others are engaged in subscription farming (e.g., community-supported agriculture) and/or selling fresh and value-added produce at the farmers' market. Such a diversification strategy enhances farmers' economic viability by spreading the sources of income through directly selling products and services to visitors (Tew & Barbieri, 2012; Ejioogu *et al.*, 2023; The National Agricultural Law Center.

Agritourism itself is a diversification strategy adopted by

farmers. Farmers who adopt agritourism, as stated earlier, further diversity activities within the farm incorporating various offerings to attract visitors (Chase *et al.*, 2018). Theoretically, it is expected that a diversified agritourism operation with several offerings or activities such as u-pick, festivals, hayride, direct sales, and active involvement on the farm is expected to attract visitors of wider interest on the farm as compared to those with only one or two foci. For instance, a winery or a brewery could attract visitors of a certain age group with an interest in wineries or breweries. However, if they incorporate other activities such as music and farm tours, they will potentially attract other categories of visitors with different interests. For instance, in rural China, incorporation of activities such as community-led music festivals, and value-added agriproducts (e.g., edible soundscapes") enhanced higher income and tourist engagement (Zheng *et al.*, 2025). On the other hand, an agritourism operation with several activities such as a u-pick, petting zoo, festivals, hayride, or many others could invite a wide range of visitors with a variety of interests. However, limited evidence is available to show the influence of various activities to attract visitors to a farm. A recent (Jęczyk *et al.*, 2021) reported that animals on a farm play a crucial role in offering agritourism experiences creating the farm more attractive to the visitors. According to Jęczyk and colleagues, animals act as magnets to attract more visitors to a farm and enhance their returns from the business.

Various other factors, such as the longevity of an establishment and rural-urban location, other than diversification of offerings, influence the number of visits to the farm. Thus, several potential confounders have been controlled in the analysis. For instance, it is well recognized that the length of establishment is important in attracting visitors (Hollas *et al.*, 2021; Jin *et al.*, 2022; Nickerson *et al.*, 2001). The number of visits would likely increase from experience, reputation (goodwill), and the accumulation of assets for further investment (Barbieri & Mshenga, 2008). These scholars revealed that the farm income significantly increased as the year of operation increased, which is likely due to the increased number of visitors due to the reputation and goodwill of the farm. Previous research also revealed that the addition of various direct sales approaches such as a u-pick and farm stand/store also significantly increased the number of visitors (Bhandari *et al.*, 2026).

Another important factor influencing the number of visits is the seasonality of offerings, products, and services. In several geographic regions, some operations may remain closed during the winter season and offer services seasonally due to weather conditions, while others offer products and services during all seasons. Thus, the number of days the farm is open, or the season of operation, may have an influence on the number of visits.

Human resources are important for adequately managing and effectively delivering various products and services to visitors. The Agritourism and On-Farm Direct Sales



Survey results reported that labor shortage was among the top two challenges facing agritourism operations in the U.S. (Chase *et al.*, 2021). Of the total respondents, 89% of them reported that labor was somewhat or very challenging. Bhandari and colleagues found that the number of staff on the farm significantly increased the profitability of an operation (Bhandari *et al.*, 2024). Barbieri & Mshenga (2008) provide strong evidence that the number of employees on a farm significantly and positively influences a farm's performance. Distance to the farm from the more extensive population base, the source of visitors, is another important factor. A convenient and nearby location for an agritourism operation will attract more visitors. Conversely, a farm located in rural areas may attract fewer visitors due to the longer distance to travel, unlike in urban areas.

MATERIALS AND METHODS

The setting - agritourism in Maryland

The State of Maryland has defined agritourism as “an activity conducted on a farm offered to the general public or guests for education, recreation, or active involvement in farm operations” (Bhandari *et al.*, 2024). Thus far, 13 activities are included as agritourism. These are: (i) farm tours, (ii) hayrides, (iii) corn mazes, (iv) seasonal petting farms, (v) farm museums, (vi) guest farms, (vii) pumpkin patches; (viii) “pick your own” or “cut your own” produce; (ix) camping; (x) incidental outdoor stays; (xi) classes related to agricultural products or skills; (xii) picnic and party facilities offered in conjunction with any agritourism activity; and (xiii) farm stays.

In Maryland, the 2022 Agriculture Census recorded 12,550 farms in Maryland, with an average acreage of 158 acres (National Agricultural Statistics Services, 2022). There are many small and medium farms in the state, with nearly 54% having less than 50 acres of land. In 2017, 12,429 farms were recorded with an average acreage of 160 acres; of those, nearly 55% of the farms had less than 50 acres of land (National Agricultural Statistics Service, 2017).

Agritourism has also grown in the state, according to the Census of Agriculture (National Agricultural Statistics Service, 2017; National Agricultural Statistics Services, 2022). In 2022, the total number of farms with agritourism and recreational services was 354. This number increased by 20 percent in the past five years - from 295 in 2017. Accordingly, the total income from these services rose to \$14,529 thousand in 2022 from \$9,897 thousand, as reported in 2017, and the average income per farm increased to \$41,043 from \$33,550 in 2017. The total number of farms that sold their produce directly to consumers dropped from 1,347 farms in 2017 to 1,290 in 2022. However, the total (\$55,718 in 2022 to \$54,097 in 2017) and average revenue per farm (\$43,192 in 2022 to \$40,161 in 2017) value of sales directly sold to consumers increased. It is unclear, however, the types of agritourism activities included to estimate these numbers.

Sample and Data Collection

The University of Maryland Eastern Shore (UMES) Extension collected survey data from agritourism operators of Maryland in 2022. This paper extensively used this data to generate empirical evidence. Prior to administering the mailed survey, a list of 485 agritourism operators was prepared, including their physical addresses and contact information. The list was prepared through an extensive internet search. In addition, the researchers also used the UMES School of Agricultural and Natural Sciences (SANS) referrals and the US agritourism services directories (Ejiogu, 2022). This was verified with the United States Department of Agriculture (USDA) databases, State government sources, and non-governmental organizations (NGOs).

In 2022, UMES Extension administered a survey to the operators of agritourism enterprises across the state. Indeed, the team sent this survey via mail and e-mails to all the 485 operators listed on our frame. Prior to mailing/ e-mailing this survey, the team received approval from the Institutional Review Board (IRB) at the University of Maryland Eastern Shore in July 2021 (UMES Protocol #07-2021-001). This survey included a wide range of information, such as operators' demography, profitability, the length of operation, number of visits, number of employees, and rural-urban location of the operation, to mention a few. The survey also collected information on the seasonality of operations and the types of attractions or offerings offered to the visitors.

The survey was mailed in March 2022, and 91 operators returned the completed surveys. However, the results are based on the information collected from 79 operators, excluding the remaining 12 operations due to missing data in some variables. Although the response rate is rather low, with implications, we believe this data will provide empirical evidence from the operators.

The data collected in spreadsheet (Excel) was converted to SPSS readable data. The data was cleaned and variables were recoded as appropriate for analysis. Cases with missing items were either removed or imputed using a relevant approach, which is described below.

Variables and their Measurements

The number of visitors to the farm is the dependent variable used in the study. This information was collected by asking, “Approximately how many visitors come to your agritourism business yearly?” The respondents provided a guestimate number of visitors. In 19 cases, the number of visits was missing, and these numbers were imputed using a linear interpolation technique. As the range of the number of visits annually greatly varied, from a minimum of 50 to a maximum of 300,000, this variable was transformed or normalized using a natural log approach.

Diversification of attractions or offerings was used as the primary predictor variable to explain the number of annual visits. The agritourism operations reported several

activities they offered to the visitors. These activities were (i) agricultural-related festivals, (ii) farm animal display/petting zoo, (iii) hayride/maze, (iv) pick your own/pumpkin patch, (v) farm markets, stores and stands, (vi) hunting and fishing, (vii) trails/hiking/biking/ equestrian, (viii) dairy/ cheese processing, (ix) brewery/tap house, (x) on-farm food processing/restaurants/ accommodations, (xi) vineyard/wine tastings, (xii) greenhouse/orchard/ Christmas trees, and (xiii) others. This is a count measure of various attractions or activities offered to the visitors, which was calculated as the number of attractions available at the farm. However, there were only a few cases with five or more operations. The number of activities ranged from a minimum of 1 to 9. For analysis, diversification of offerings was grouped as an operation that offered (1) only one activity, (b) offered a combination of two activities, (c) a combination of three activities, and (d) a combination of four or more activities.

As mentioned earlier, the number of years of the establishment of an operation, the number of staff available at the operation, seasonality, and the facility's rural-urban location, were controlled in the analysis as potential confounders. The length of operation was measured in years that was collected by asking, "How long has your agritourism operation been in business?" The response was collected in months and was converted to the number of years. Another control is the total number of staff (permanent and part-time) employed by a farm in 2020. It is expected that the number of employees on the farm will enhance the efficiency of delivering products and services to visitors by attracting more visitors. This variable was also normalized using the natural log approach due to the skewed nature (a range 0 to 182).

Obviously, the number of visits does vary by season in Maryland. For example, there will be fewer visitors during the winter months, whereas the number will increase during the summer and fall seasons. On the other hand, those operations that operate year-round will, of course, report more visits than those that operate for fewer months. Thus, a dummy variable measuring those farms that open year-round is coded 1 vs. otherwise coded 0. The rural or urban location of the farm is grouped as (a) rural (coded 1) and (b) urban/suburban (coded 0).

Analytical Strategy

The data had some missing cases in a few variables, such as the length of operation, the number of visitors, and the number of employees as stated earlier. A linear interpolation technique was used to replace the missing data (Huang, 2021). The descriptive statistics of the variables used in the analysis are presented in Tables 1 and 2.

Multiple linear regression technique (the ordinary least squares technique) was used to answer the research question of whether the diversification of offerings influences the number of visits, controlling for other variables (Table 3). The equation takes the form:

$$\text{Predicted } Y' = \beta_0 + \beta_1 X_1 + \dots + \beta_n X_n + \epsilon$$

Where, Y' = predicted value of the dependent variable (the number of visitors, logged); β_0 = intercept; $\beta_1 + \dots + \beta_n$ = regression coefficients (beta coefficients); $X_1 + \dots + X_n$ independent (or explanatory) variables; ϵ = error term.

Two regression models were estimated. In model 1, the relationship was assessed between the number of visits and the number of offerings without adjusting for other confounders. Next, in model 2, we examined whether the associations in model 1 hold true or not, adjusting for other confounders.

For a categorical (or a dichotomy) explanatory variable, for a positive regression coefficient, the number of visits increased or was higher and decreased or was lower for a negative regression coefficient by the unit (β coefficient) as compared to the reference category (coded 0), net of other factors. For a continuous explanatory variable, for a positive coefficient, a one-unit increase in the interest variable increases the number of visits by a given unit (β coefficient) or a one-unit increase in the interest variable reduces the number of visits by a given number (β coefficient) for a negative coefficient, net of all other factors.

RESULTS AND DISCUSSION

Descriptive results

This paper aims to empirically investigate whether diversification of attractions/offerings plays a role in attracting visitors to the agritourism operations. Prior to examining this relationship, we investigated the various types of agritourism activities offered by agritourism operations to the visitors. Table 1 provides the results from a descriptive analysis of the variables used in the analysis.

Number of visitors to a farm

Of the 79 agritourism operations, the average number of visits to the agritourism farm annually, the outcome variable of interest, was 28,098 (a minimum 5 to a maximum 300,000, after imputation). Because there is a significantly skewed distribution, this variable was log-transformed (natural log) to normalize the data. The normality test indicated that the distribution of the logged number of visits for each level of the independent variable, diversification, is statistically non-significant (both the Kolmogorov-Smirnov and Shapiro-Wilk tests), suggesting a normal distribution of the dependent variable. The mean of the normalized number of visits is 8.77 (and a standard deviation of 2.17).

Diversification of agritourism activities

Agritourism operations reported a varied level of diversification, the primary explanatory variable. The results revealed that nearly 17 percent had only one activity, approximately 28 percent had two, nearly 22 percent had 3, and slightly over one-third (34.2%) had four or more activities offered to the visitors (Table 1). Slightly over half (54%) of the operations reported a

Table 1: Descriptive statistics of variables used in the analysis (n=79).

Variables	Mean/%	SD
Dependent Variable		
Number of visitors (min 5, max=300,000) (mean/SD)	28,098	47,629
Number of visitors (logged) (mean/SD)	8.77	2.17
Independent Variable		
Diversity of attractions or offerings (%)		
Only one offering	16.5	
Two offerings	27.8	
Three offerings	21.5	
Four or more offerings	34.2	
Controls		
Length of operation (years) (mean/SD)	18.29	14.19
Total number of employees (mean/SD)	22.73	30.53
Season of operation: Spring (yes=1) (%)	77.2	-
Summer (yes=1)	82.3	-
Fall (autumn) (yes=1)	83.5	-
Winter (yes=1)	49.4	-
Opened during all four seasons (yes=1) (%)	48.1	-
Geographic location of the operation (%)		
Urban (only 4.5%) and suburban areas	34.2	-
Rural area	65.8	-

Source: Field survey 2022.

farm market, store, or stand. Agriculture-related festivals (44.3%) followed a farm animal display or a petting zoo (40.5%), and both hayride/maze and pick your own/pumpkin patch, each 31.6% (Table 2). Among the least reported was hunting (2.5%) activity.

The distributions of other controls used in the multivariate analysis is as follows. The average number of years of operation of a farm was slightly over 18 years. The average number of staff was about 23. Most farms operated during the fall season (83.5%), followed by summer (82%) and spring (77.2%) seasons. Slightly less than half of them (48.1%) reported operating year-round. The rural areas hosted about three-fourths of the operations. The reporting farm operations were located in 22 out of 24 counties and equivalents of Maryland.

Diversification of attractions/offerings and the number of visits

In Table 2, we provide the number of visits by diversification of agritourism activities as reported by agritourism operations. The top panel in Table 2 shows the average number of visits to agritourism operations that offered one to four or more attractions or offerings. On average, an agritourism operation reported 28,098 visits to the farm in a year. The results further reveal that the operations that offered one or two attractions reported fewer visits (13,335 and 12,805, respectively) to their farms. The average number of visits increased to 32,729 if they offered three attractions and 44,741 if they offered four or more attractions. The distribution of the

normalized numbers of visits by diversification categories is also provided. These results show that the number of farm visits significantly increased with the increase in the number of attractions to three or more [One-way ANOVA suggests a statistically significant difference among categories (particularly for the normalized or logged number of visits)].

The bottom panel of Table 2 under the types of attractions or offerings, further reveals that farm markets, stores, or stands were the most common attractions reported by 54% of the agritourism operations followed by agriculture-related festivals (44.3%), farm animal displays or a petting zoo (40.4%), both hayride/maze and pick your own/pumpkin patch, each 31.6%. Among the least reported were hunting (2.5%), and trails, hiking or biking, and equestrian 8.9% each, and dairy/cheese processing (10.1%).

Although many attractions combine with other activities (i.e., each distribution is not independent of an operation), whether the average number of visitors varied by type of attraction was also examined. The results show that among the top five attractions that attracted the most visits were on-farm food processing/restaurants/accommodations (69,088), dairy/cheese processing (47,732), agricultural-related festivals (38,278), farm markets, stores/stands (37,602), and greenhouse/orchard/Christmas trees (36,906). Given the size of respondents in each category, these numbers should be considered carefully, however. Notably, most of those who reported only one activity were the vineyards or wine tasting houses (6 out of 13



reporting). Of those who reported two attractions or offerings, most of them were vineyards (9 out of 22), followed by farm markets, farm stands, and stores (8 out of 22), and agricultural-related festivals (6 out of 22). On

Table 2: Number of visits by offerings.

Variables	% (No. of operations)	No. of visits	Number of offers (n=79)			
			Only one (n=13)*	Two (n=22)*	Three (n=17)*	Four or more (n=27)*
Number of visits (min 5; max 300,000)	100.0 (79)	28,098+	13,335	12,805	32,729	44,751
Number of visits (natural log)	100.0 (79)	8.77**	7.55	8.30	8.58	9.85
Types of attractions or offerings						
Farm markets, stores/stands	54.4 (43)	37,602	- (1)	- (8)	- (12)	- (22)
Agricultural-related festivals	44.3 (35)	38,275	- (2)	- (6)	- (10)	- (17)
Farm animal display/petting zoo	40.4 (32)	28,974	- (1)	- (3)	- (4)	- (24)
Hayride/maze	31.6 (25)	30,721	- (0)	- (1)	- (3)	- (21)
Pick your own/pumpkin patch	31.6 (25)	34,150	- (0)	- (1)	- (2)	- (20)
Vineyard/wine tastings	30.4 (24)	21,097	- (6)	- (9)	- (7)	- (2)
Greenhouse/orchard/Christmas trees	21.5 (17)	36,906	- (0)	- (4)	- (3)	- (10)
Brewery/tap house	13.9 (11)	23,109	- (1)	- (3)	- (3)	- (4)
On-farm food processing/restaurants/ accommodations	12.7 (10)	69,088	- (1)	- (3)	- (1)	- (5)
Dairy/cheese processing	10.1 (8)	47,732	- (1)	- (3)	- (0)	- (4)
Trails/hiking/biking/equestrian	8.9 (7)	5,768	- (0)	- (1)	- (3)	- (3)
Hunting/fishing	2.5 (2)	10,100	- (0)	- (0)	- (1)	- (1)

*Figures in parentheses are the number of operations.

Source: Field survey 2022.

the other hand, of the total 24 vineyard/wine tastings, 22 operations offered 3 or fewer attractions. Those who offered three attractions were farm markets, stores, and stands (12 out of 17), agricultural-related festivals (10 out of 17), and vineyards (7 out of 17). Those that provided four or more attractions were farm animal display/petting zoo (24 out of 27), farm markets, stores/stands (22 out of 27) and hayride/maze (21 out of 27), pick-your own or a pumpkin patch (20 out of 27) and agricultural related festivals (17 out of 27).

Results from Table 3 provide the empirical answer to our main research question - whether diversification of attractions/offerings plays a role in attracting visitors to the agritourism operations. The results revealed that the number of visits (logged) increased with the number of attractions offered to the visitors. For example, as compared to only one offering, the number of visits increased to those operations that offered two (unstandardized estimates $\beta=0.745$, $p>0.05$), three (unstandardized estimates $\beta=1.030$, $p<0.01$), or four or more (unstandardized estimates $\beta=2.299$, $p<0.01$) attractions (model 1). However, this result is statistically

significantly different only for those that offered four or more attractions. These results, however, do not adjust to the effects of other potential confounders.

In model 2, the effects of controls such as the length of operation, season of operation, number of supporting staff to manage the operation, and rural-urban location of the farm that potentially influence the number of visits to the farm were adjusted. The adjusted results still hold, although the magnitude of the effect has slightly diminished. For example, operations that offered four or more attractions significantly attracted more visits (1.445 logged visits, unstandardized estimates $\beta=1.445$, $p<0.01$) compared to those that offered only one attraction. This result provides empirical evidence that the diversity of attractions significantly increases the number of visits to the farm.

Although the number of years of operation was statistically significantly not associated with the number of visits, controlling for other factors, the direction of the relationship is as expected. A one-year increase in the experience or the year of operation was positively related to the number of visits. Similarly, those who opened



their operation for the entire year invited more visitors, but the result was statistically not significant. However, the number of employees was statistically significant and positively associated with the number of visits. Moreover, operations located in rural areas invited fewer visitors than those in urban/suburban areas. For example, an agritourism operation located in rural areas received fewer (only 0.890 logged unit) visitors as compared to

those located in urban/suburban settings (unstandardized $\beta = -0.890$, $p < 0.10$). These results provide us with more confidence in our findings.

CONCLUSION

Agritourism is growing in Maryland and in the U.S. and farmers have adopted it as an income diversification strategy (Bowen *et al.*, 1991; Chase *et al.*, 2018; Hollas *et al.*,

Table 3: Unstandardized regression coefficients from the ordinary least squares technique to examine the influence of diversification of offerings on the number of farm visits net of controls (n=79).

Variables	Model 1	Model 2
Diversity of Offerings		
Only one offering (Ref)	-	
Two offerings	0.745	0.770
Three offerings	1.030	0.923
Four or more offerings	2.299***	1.445*
Controls		
Length of operation (years)	-	0.002
Operation opens in all four seasons (yes=1)	-	0.335
Number of employees in the operation	-	0.019*
Location of the operation (Suburban and urban Ref.)	-	-
Rural area	7.554***	-0.890+
Intercept	56.334	7.551***
Regression sums of squares	311.241	110.089
Residual sums of squares	75	257.487
Residual degrees of freedom	4.525**	71
ANOVA F-ratio	0.119	4.337***
Adjusted R-square		0.230

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Source: Field survey 2022.

2021; McGehee & Kim, 2004). Agritourism as a livelihood diversification strategy supports farms by inviting visitors to their farms for education, recreation, entertainment, and active involvement (Barbieri *et al.*, 2008; Nickerson *et al.*, 2001; Tew & Barbieri, 2012).

The empirical findings revealed that while some agritourism operations offered only one attraction, other operations provided a combination of two or more attractions to attract visitors. The conceptual framework discussed earlier expected that an agritourism operation that offers multiple attractions or offerings provides opportunities to capture a large group of visitors with different interests such as elderly, adults, youths, and children. For example, some visitors may be interested in learning about farming activities; other visitors may be interested in buying fresh fruits and vegetables, observing preserved heritage, or having fun through hayrides or mazes. Thus, those who offer more attractions attract more visitors to the farm.

As per expectation, the findings revealed that the

diversification of offerings indeed significantly increased farm visitors – four or more offerings attracted more visitors to the farm than those that offered fewer offerings. Previous study revealed that the number of visitors to a farm enhanced farm's profitability (Bhandari *et al.*, 2026). Specifically, vineyards were the ones that offered fewer attractions or offerings for visitors compared to others. Operations with more attractions provided entertaining opportunities such as farm animal displays or petting zoos; hayrides or corn mazes; pick-your-own or pumpkin patches; organized agriculture-related festivals; and many of them had farm markets, stores, and stands from where visitors could purchase fresh fruits, vegetables, animal products, and value-added products such as honey and meat from the farm-raised animals or chickens.

The number of staff is important to offer quality products and services to the visitors. While finding reliable and skillful workers can be a challenge for many operations, providing them with regular employment can be another problem due to the seasonal nature of



work. This evidence is quite important for small and medium farms, for whom it is difficult to find or hire laborers and to support them longer due to seasonality. Many small and resource-limited farmers have reported that labor is a significant challenge facing them (Dill *et al.*, 2012; Karki & Escobar, 2022). Moreover, using labor-saving technologies such as a tractor or other machinery is not always a feasible option for reasons of economic efficiency for the size of their farms or requirements of labor to manage or perform certain activities, such as engaging in petting zoos or hayrides.

Agriculture, in Maryland overall, in the northeast, is seasonal with virtually no activities on the ground during winter months, starting in the late fall until Spring. Attracting visitors through outdoor activities during these months is at least not feasible. Thus, maintaining a regular flow of visitors to the operations that are open for the entire year can be another challenge and could be the main reason for the lack of significant differences in the number of visits, whether a farm runs for the entire year or a certain period. Thus, agritourism operations should find indoor alternatives during the winter months, such as Christmas activities or organizing activities with lights or indoor wine tastings, which could be important to attract a flow of visitors.

Overall, the diversification of agritourism operations independently influences the number of visitors to an agritourism farm, specifically with four or more attractions. This evidence is of policy relevance for rural economic development, where most farmers are located and farms are less diversified. More importantly, the government needs to find supporting mechanisms for small and medium farmers to diversify their farms, and the Extension professionals will find these results important in promoting agritourism with multiple attractions or offerings.

Despite the significant evidence, consider the findings carefully for several reasons. First, the findings relate to the activities of a small number of agritourism operators from all over Maryland. Second, the number of visits to the farm is guesstimated rather than from the actual records. In addition, results from longitudinal (panel) data could generate more confident results than those based on cross-sectional data used here. The data does not contain the size of the operation, distance to the nearest urban center, information on promotional activities, or fee structure that could be important confounders to attract visitors. Future studies considering these limitations and using the longitudinal (panel data) could generate conclusive evidence.

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