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**Agritourism as an Economic Development Enterprise: An Undergraduate Research Analysis
Exercise**

Jason Moffitt
North Carolina A&T State University
jamoffit@aggies.ncat.edu

Milton Ransome
North Carolina A&T State University
mlransom@aggies.ncat.edu

Anthony K. Yeboah
North Carolina A&T State University
yeboaha@ncat.edu

John Paul Owens
North Carolina A&T State University
owensj@ncat.edu

Jarvetta S. Bynum
North Carolina A&T State University
jsbynum@ncat.edu

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Agritourism Economic Development in North Carolina: An Undergraduate Research Analysis Exercise

By:

Moffitt, J., Ransome, M., Yeboah, A., Owens, J., Bynum, J.
Department of Agribusiness, Applied Economics and Agriscience Education



Abstract

Agritourism is a value added agricultural activity. In North Carolina, it has influenced agriculture since 1940 with about 165 first generation agritourism currently. An analysis of top ten counties that offer Agritourism in North Carolina is carried out to determine the economic contribution of Agritourism among the counties is regressed using Multiple Linear regression. The study showed that out of the 100 registered Agritourism county operations, the top 10 leading counties in North Carolina that offer Agritourism with the largest number of Agritourism recorded operations is located in Mecklenburg County. The study also suggested that farm cash receipts and the number of farms per county are the variables that are found significant concerning Agritourism adoption.

Narrative

Agritourism has been an influencing factor of diversified agriculture that's been around since the 1940s. In North Carolina, the number of farmers practicing agritourism has increased from twenty six in 1940 to 195 in 2005 (Giles, 2005). Out of this number, fifty farms are operating on forty acres of land or less. Agritourism is becoming a significant source of income for small farms within the census count. Income is earned from the fees that these farmers charge the visitors. The fees are charged for various activities that the farms charge an admission fee for, of which the majority percent charge a fee for tourism activities. In order to advertise their operations, many of the farms have used various communication tools. Communication spread the most by word of mouth about the operation of the farms, and it spread the least by the use of TV commercials and advertisement. Many of the farms, and it have reduced the risk of operating an agritourism enterprise through insurance. 284/381 of the farms have responded and claimed that they are covered. 88 are not covered, and the last 9 are yet to respond with any claim (Giles, 2005). In order to determine the density of agritourism in North Carolina Counties, a survey was conducted in August 18, 2005. 850 farmers received the survey by mail, of that number, 739 were usable reports. 381 respondents confirmed they had an agritourism enterprise and were operating it. The survey also showed that the five major leading counties in agritourism operations are Wake, Guilford, Henderson, Randolph, and Johnston. Agritourism by region in North Carolina is thirty one percent in the Western, forty two percent in the Piedmont, and twenty seven in the Coastal (Giles, 2005). A season by season operation percentage where Agritourism is open was also conducted with winter (28%), spring (29%), fall (27%), and summer (20%) (Giles, 2005). Three percent of the farms that participate in Agritourism are open only when there is an occasion, while ten percent are open year round. The two specific objectives of the study are as follows:
1. Examine the different counties within North Carolina that offer Agritourism.
2. Identify descriptive variables within the top 10 highest and lowest counties of North Carolina that offer Agritourism.

Description of Research Methodology

Cross sectional data were used in addressing both objectives.

- Objective 1: The data for this objective consisted of Agritourism operations within each county that are registered with the North Carolina Department of Agriculture. There was a total of 600+ active operations.
- Objective 2: The data with regards to population needed for this objective was driven by the factors deemed to influence the top 10 highest and lowest counties in North Carolina that offer Agritourism. The variables considered were: 1) number of population of counties; 2) median income of the counties; 3) number of farm cash receipts of counties; 4) number of farms per county; and 5) different ethnic operators per county. All data was from the year 2012.

The methods applied per each objective are as follows:

- Objective 1: The method applied in Objective 1 consists of searching the data for an overview of the top 10 highest and lowest counties with regards to population of Agritourism offered in the state of North Carolina, then a descriptive statistical analysis of the Agritourism operation was performed.
- Objective 2: The method consisted of correlation and regression analysis. With the correlation model, a matrix of correlation coefficients was obtained from the variables listed above. This was followed by a multiple regression model with the number of Agritourism operations in a county as the dependent variable and the influencing factors used as explanatory or independent variables.



http://www.wal.com/articles/581000142-0527
487037941/048703794232716506068

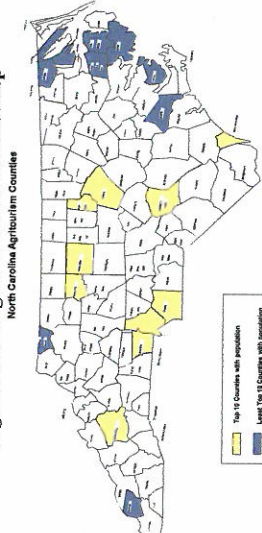
Table 1: Top 10 Highest Counties in NC with Agritourism

County	Population	Median Income	Farm Cash Receipts	Farms per County	Median Income	Average Age of Operators	Average Age of Farmers
Mecklenburg	982,839	\$1,883	\$133,755,496.00	237	14	8	59.5
Wake	945,522	\$3,352	\$73,729,766.00	783	107	31.5	61.8
Guilford	501,761	\$4,793	\$60,695,162.00	962	96	27.5	56.3
Forsyth	357,710	\$4,297	\$21,844,167.00	662	20	15.5	60.1
Catawba	330,260	\$2,454	\$107,324,000.00	389	53	5.5	62.7
Durham	281,443	\$3,130	\$9,923,042.00	732	19	9.5	60.3
Burke	246,319	\$2,125	\$20,807,731.00	1,060	22	18	60.4
New Hanover	238,891	\$3,535	\$4,199,510.00	50	0	0	N/A
Gaston	208,570	\$650	\$27,965,533.00	520	16	7	59
Union	207,775	\$5,322	\$44,017,735.00	1,059	52	8.5	57.5

Table 2: Top 10 Lowest Counties in NC with Agritourism

County	Population	Median Income	Farm Cash Receipts	Farms per County	Median Income	Average Age of Operators	Average Age of Farmers
Yancey	4,148	\$742	\$51,565,692.00	78	8	0	N/A
Blaine	5,746	\$4,520	\$74,527,788.00	138	18	0	62.8
Graham	8,850	\$186	\$2,783,972.00	107	10	2	N/A
Carteret	10,613	\$1,617	\$153,429,369.00	170	13	0	N/A
Jones	10,974	\$1,051	\$46,038,845.00	567	6	10	63.3
Alamogordo	12,121	\$778	\$76,597,097.00	182	16	0	59
Gates	12,809	\$1,129	\$104,171,574.00	156	13	0	N/A
Perquimans	13,170	\$1,052	\$26,087,407.00	90	2	0	N/A
Perquimans	13,682	\$876	\$87,956,856.00	185	22	1	N/A

Figure 1: NC Agritourism Locations Map



Results

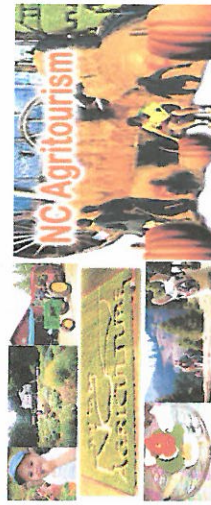
The results from Table 1 indicate that out of the 600+ registered Agritourism county operations, these are the top 10 leading counties in North Carolina that offer Agritourism. The largest number of Agritourism recorded in operation is located in Mecklenburg County, while the smallest number was found in New Hanover, Yancey, Hyde, Jones, Gates, Washington, and Perquimans County (Table 1 & 2). All of these counties except for Mecklenburg are located in the coastal region of the state.

Results Cont'd

In percentage of farms with Agritourism with largest versus smallest only two factors, population and farm cash receipts seemed to have a significant effect (Table 3). Despite the fact that over 40 percent of the relation in the number of Agritourism operations variable can be explained by the independent variables, the fact that the independent variables performed in the analysis fit together but have very little effect individually. The lack of statistical importance is also verified by the lack of any considerable relationship between Agritourism operations and these variables that were tested in the model (Tables 1 & 2). Number of farms and farm cash receipts had the highest relationship.

Table 3: Results of Multiple Regression Data Analysis

ANOVA						
df	SS	MS	F	Sig.	Power F	
Regression	3	1360.88716	453.56	20.920558	1.70938E-10	
Residual	94	2032.94397	21.606			
Total	97	3393.83163				
Coefficients						
	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Upper 95.0%
Intercept	2.18052994	0.6034283	2.3346	0.01269556	0.47405024	3.88682963
Population	0.007196326	0.00386918	5.822	8.941E-07	0.00770073	0.00707073
Median Income	0.00163955	0.00387657	4.271	5.4883E-05	0.00089943	0.00096969
Farm Cash Receipts	-0.000499548	-0.0038118	-1.62	0.10854686	-0.00110825	0.00011278



Summary and Conclusions

By using a multiple regression model, research suggest that the number of farms and farm cash receipts per county are two variables that were found significant concerning Agritourism adoption. This means there is a significant distinction in the adoption rates across the numerous geographic regions of the state based on the population and number of farms per county. The two tables reveal that the number of farms and farm cash receipts had the highest relationship with Agritourism activity. Farmers within these counties are surrounded by other farmers, who should provide educational sponsors and assistance to enable Agritourism adoption to enhance the economy in North Carolina.

Resources

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Selling, B. J. (2014-07). Characteristics of New Jersey Agritourism Farms. Journal of Food Distribution Research.
USDA. (2012). USDA Census of Agriculture. Retrieved from 2012 Census Volume 1, Chapter 1: State Level
Data: http://www.agcensus.usda.gov/Publications/2012/Chapter_1_Report/Volume_1_Chapter_2_County_Level/North_Carolina/437_2_006_006.pdf



Agritourism and Agriscience Education

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The School of Agriculture and Environmental Sciences

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North Carolina
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