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

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***Selected Poster prepared for presentation at the Southern Agricultural Economics
Association's 2016 Annual Meeting, San Antonio, Texas, February 6-9, 2016***

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Abstract

Agriculture is a value added agricultural activity in North Carolina, it has influenced agriculture since 1940 with about 168 farms that practice agriculture currently. An analysis of top ten counties that offer operations in North Carolina is carried out and the factors that effect adoption of Agriculture among the counties using Multiple Linear regression. The study observed that out of the 100 registered Agriculture county operations, 100 leading operations in North Carolina that offer Agriculture with the largest number of Agriculture recorded operations is located in Mecklenburg County while the smallest number was found in New Hanover. York, Wake, Jones, Gates, Washington, and Pamlico County (Tables 1 & 2). The study also suggested that farm cash receipts and the number of farms per county are the variables that had significant contribution towards Agriculture allocation.

Narrative

Agritourism has been an influencing factor of diversified agriculture that's been around since the 1940s. In North Carolina, farmers' revenue from agritourism has increased from twenty six in 1940 to 186 in 2005 (Glas, 2005). Twenty percent of the farms are operating on forty acres or less. Agritourism is a significant source of income for Small farms within the census count. Income is second from the fees that these farmers charge in their agritourism operations. Seventy seven of the farms charge an admission fee out of which twenty percent charge a fee for tourism activities. In order to advertise their operations, farmers resorted to communication tools. Communication spread the word of mouth about the operation of agritourism and it spread the least by the use of T.V. commercials and advertisement. Many of the farmers 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 (Glas, 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 (Glas, 2005). A season by season operation percentage where Agritourism is open (2005) was conducted with the farmers that participate in Agritourism and open only (20%) (Glas, 2005). The results of the survey were as follows:

Two specific objectives of the study were:

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 Agribusiness operations within each county that are registered with the North Carolina Department of Agriculture. There was a total of 600+ active operations.

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 respect to the population of Agriculture obtained in the state of North Carolina, then a descriptive statistical analysis of the Agriculture 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 Agriculture operations in a county as the dependent variable and the influencing factors used as explanatory or independent variables.



<http://www.wvj.com/articles/SB10001424052758703794104575548232716509088>

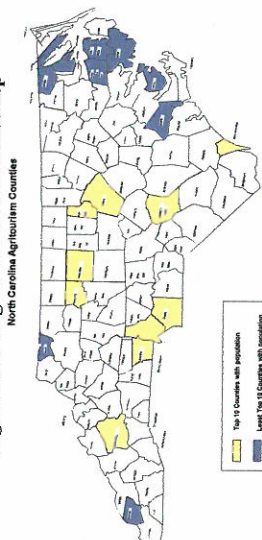
Table 1: Top 10 Highest Counties in NC with Agritourism

Top 10 Counties	Population	Median Income	Family Cms. Receipts	Farms per County	Priority Operations	Average Age of Agriculture
Mississippi	962,839	\$1,983	\$153,755,496.00	237	14	8
Waco	945,522	\$3,252	\$73,729,796.00	793	107	31.5
Galliford	501,767	\$4,843	\$60,894,767.00	962	86	27.5
Lehigh	357,710	\$4,397	\$21,844,767.00	662	20	15.5
Cumbarland	330,460	\$2,654	\$107,324,000.00	389	53	5.5
Durham	281,443	\$1,120	\$9,923,042.00	232	19	9.5
Burtonville	245,315	\$1,215	\$50,807,731.00	1,060	22	18
New Harvace	209,891	\$155	\$4,198,910.00	50	0	N/A
Gotton	208,570	\$650	\$27,965,333.00	520	16	7
Union	207,775	\$5,532	\$464,077,285.00	1,059	57	8.5

Table 2: Top 10 Lowest Counties in NC with Agritourism

Test for 10 Counties	Population	Median Income	Farm Cost Per Acre	Farms per County	Minorities Operating	Agriculture Average	Average Age of Farms
Hyde	4,143	\$742	\$51,156,892.00	78	8	0	N/A
Graham	3,746	\$4520	\$74,623,788.00	158	18	0	62.8
Candler	8,850	\$186	\$2,781,872.00	107	10	2	N/A
Jones	10,015	\$982	\$59,126,137.00	60	15	2.5	N/A
Alpharetta	10,313	\$1817	\$153,429,369.00	370	11	0	N/A
Gates	12,121	\$1061	\$46,048,845.00	567	6	10	63.3
Washington	12,269	\$778	\$76,587,097.00	182	16	0	59
Fairfax	12,809	\$1,129	\$104,471,574.00	156	13	0	N/A
Richmond	13,170	\$1052	\$26,087,407.00	90	2	0	N/A
DeKalb	13,682	\$876	\$97,956,856.00	195	27	1	N/A

Figure 1: NC Agritourism Locations Map



Results

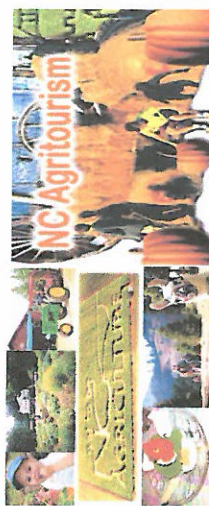
The results from Table 1 indicate that out of the 600+ registered Agritourism county operations, these are the top 10 leading counties in North Carolina that offer Agritourism. The largest number of Agritourism recorded in operation is located in Mecklenburg County, while the smallest number was found in New Hanover, Tyrrell, Hyde, Jones, Gates, Washington, and Pamlico 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 variation in the number of Agritourism operations variable can be explained by the independent variables. Meaning 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 the other 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

<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance</i>	Upper 95%		Lower 95%	
					<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>
Regression	1360.88015	433.56	20.9505588	1.7020E-10	0.472402624	0.388862963	0.01707073	0.013832519
Residual	47.205143937	1.806			0.01707073	0.02382375	0.00086943	0.00246669
Total	94	1368.09554			0.00086943	0.00949669	0.00011728	0.00021668
Adjusted R Squared	92	1359.516263			-0.01110825	-0.00111728	-0.01110825	-0.00111728



http://www.ncagr.gov/markets/agritourism/images/1_en

Summary and Conclusions

By using a multiple regression model, researchers suggest that the number of farms and farm cash receipts per county are two variables that have found significant relationships with farm cash receipts per county. 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 AgriBusiness activity. Farmers within these counties are surrounded by other farmers, who should provide educational sponsors and assistance to enable AgriBusiness adoption to enhance the economy in North Carolina.



<http://info.ncaagr.gov/blog/2009/09/01/get-ready-for-halloween-and-thanking-with-a-trip-to-a-farm/>

Resources

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Schilling, B. J. (2014-07). Characteristics of New Jersey Agritourism Farms. Journal of Food Distribution Research, USDAERS. (2012). USDA Census of Agriculture. Retrieved from 2012 Census Volume 1, Chapter 1, State Level Data (http://www.agcensus.usda.gov/Publications/2012/c1r1_Report/Volume_1,_Chapter_1_State_Level/North_Carolina/s12r_2_006_006.pdf)