

# Lee County Working Lands Protection Plan

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**Prepared by**

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# Table of Contents

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|  |           |
|--|-----------|
| <b>Acknowledgements .....</b>                  | <b>4</b>  |
| <b>Executive Summary .....</b>                 | <b>5</b>  |
| <b>A Need for Action .....</b>                 | <b>8</b>  |
| <b>The State of Agriculture .....</b>          | <b>10</b> |
| <b>Working Lands Protection Programs .....</b> | <b>45</b> |
| <b>Challenges and Opportunities .....</b>      | <b>49</b> |
| <b>Recommendations.....</b>                    | <b>66</b> |
| <b>Appendix A: References .....</b>            | <b>72</b> |
| <b>Appendix B: Opportunities.....</b>          | <b>74</b> |
| <b>Appendix C: Surveys.....</b>                | <b>77</b> |

# Acknowledgements

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The Lee County Working Lands Protection Plan was co-written by Kim Caroselli and Dr. W. Stan Dixon. Kim received a Master of Science in communication from N.C. State University in 2009. Kim worked for several years in marketing with companies in the Raleigh-Durham area. Dr. Dixon received an Ed. D in education from N.C. State University in 2003. He recently retired from N.C. Cooperative Extension as county extension director in Greene County.

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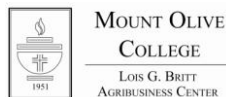
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# Executive Summary

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## Introduction

The goal of the Working Lands Protection Plan (WLPP) is to help county government and citizens appreciate the importance of agriculture to the fabric of life in Lee County and to address the many challenges that are facing farmers and agriculture. The word *agriculture* encompasses farms and forests that provide some income for the producers. Farmland and forest land are irreplaceable natural resources. The farmers and landowners who are stewards of this land are important to the county for their value to the local economy and the quality of life for citizens.

Working lands, which are working farms and forests, play an important role with the military and its operations. Ft. Bragg views working lands as compatible uses around the base and its training sites around the region. Encroachment has been an ongoing issue for the base as the surrounding counties have grown over the past decade. This has affected the training and readiness of Ft. Bragg and has caused the base to embrace various solutions to this issue. The military is a major economic engine for the state and the Ft. Bragg region. The symbiotic relationship between working lands and the military is a crucial piece for each industry's existence.

Agriculture and its associated industries also contribute significantly to the county's economic base. In 2006, total income attributed to agriculture and agribusiness industries in Lee County was \$280,542,301 or 13.4 percent of the county's gross product. Agricultural employment was credited as being 17.1 percent of the county's total employment (Walden, IMPLAN, Mig Inc.)

The convenient location of Lee County between Ft. Bragg and the Research Triangle Park (RTP) has been a boon to the county's population. The county is a 20-minute commute from Fort Bragg and within an hour's drive from RTP. The county's population grew by 20.1 percent from April 1, 2000 to July 1, 2008 (U.S. Census Bureau). According to the Comprehensive Regional Growth Plan for the Fort Bragg Region, Lee County will experience a population increase of 3,124 by 2013 as a result of military expansion. The military population growth, along with natural population expansion, will result in the need for new services such as schools, shops, water and sewer.

The Ft. Bragg Base Realignment and Closure Regional Task Force (BRAC RTF) is cognizant of the growth's impact on working farms and agriculture in general. The BRAC-RTF agriculture and farming initiative, the WLPP, will strengthen the economy by identifying new market potential for farmers, including Fort Bragg, working to preserve family farms and providing links in new technologies that will expand opportunities for the next generation of farmers ([www.bractf.com](http://www.bractf.com), April 2010).

## Findings

Between 1987 and 2007, Lee County experienced a loss of 6,426 or a decrease of 8.5 percent in farmland which was attributed to population increase and concurrent residential and commercial development (Census of Agriculture, 1987, 1997 and 2007). The county has experienced the same population growth pressure that the entire state has experienced and will continue to experience. In December 2008, the U.S. Census named North Carolina the fastest growing state in the country, and North Carolina was third in actual numbers gained. This translates into development, and working lands provide large tracts of land that can be easily converted to residential and commercial development.

Farmers are an aging population in the state and in Lee County. The state's average age is 57 years old, and Lee County's average age is 56.2 years old. This indicates an increased need for farm transition planning education. This can help families determine the best route for their land and potentially keep the land in production. Also, young people are not interested in pursuing careers in agriculture due to the belief that farming is not profitable, is too demanding, and the start-up costs are prohibitive.

Non-farm residents surveyed, believe local government should take steps to help preserve farmland, educate young farmers and encourage farmers to expand. Additionally, residents indicated that farming enhances the scenic beauty and provides ample open space in Lee County. The public sees agriculture as a positive asset to the environment.

While numerous attributes of agriculture are recognized by residents, additional benefits exist that may not be as readily apparent. As the 2006 American Farmland Trust (AFT) Cost of Community Services study defined, farmland provides more in property tax revenues than it requires in public services. Agricultural operations impact the cost of community services at a level similar to commercial/industrial and far reduced from residential development as reported by Renkow for five counties in North Carolina and nationally by AFT (Agricultural Development and Farmland Preservation Trust Fund 2008 Annual Report). The national average reported the cost of community services for every dollar of revenue collected as \$1.15 for residential development, \$0.29 for commercial/industrial development and \$0.37 for farm/forest land. Clearly, agricultural and forest land that remains in production may therefore help control the cost of community services in counties across North Carolina (Mitch Renkow, Department of Agriculture Resource Economics, N.C. State University).

The opinions of Lee County producers and landowners, agribusiness leaders and citizens used in this document were acquired from written surveys and personal interviews conducted by BRAC RTF and Mount Olive College. The overwhelming opinion of all was that farmers need assistance from government to preserve farming as an economic engine in the county. Following are some recommendations that can assist Lee County leaders in the preservation of farms and forests that are so important to the economy and lifestyle of residents.

1. Actively work to engage citizens, local government and organizations in preserving, supporting and promoting farming, forestry and agribusiness in Lee County.
2. Create an awareness campaign that will educate local leaders and citizens on the value of agriculture to the county.
3. Create an enhanced forest management education program to address forest management, taxation and income options.
4. Develop and promote a comprehensive youth and young adult agricultural leadership development program.
5. Make needed leadership, technical and business training readily available for existing and new farmers and forest landowners through a variety of delivery modes that best fit the landowners' schedule and learning style.
6. Increase efforts to educate farmers, landowners and non-farm residents on the available farmland preservation tools.
7. Develop a strategy for the creation and implementation of an Enhanced Voluntary Agricultural District Ordinance for Lee County.
8. County agriculture agencies working with the Lee County VAD Agriculture Advisory Board should pursue programs and policies that encourage the protection of working lands.

# A Need for Action

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Lee County was formed from Moore and Chatham counties in 1907 and was named for Robert E. Lee. Lee County is comprised of 163,168 acres, is located in the central part of North Carolina and is bordered by Chatham, Harnett and Moore counties. The population as of July 2009 was 59,137 (U.S. Census Bureau). Lee is at the southern base of the Research Triangle Park (RTP) and is part of the 13 counties that comprise the research regional area. RTP is ranked as the largest and most successful research park in the world, which has caused the area to be regarded as the best place for technological innovation. Direct impacts from RTP in Lee County are construction, real estate, sales and income tax yields with indirect impacts being spin-off companies and businesses. Pfizer and Caterpillar are two Fortune 500 companies that operate in Lee County.

Lee County is home to a diverse manufacturing sector and to some of the world's most respected industries, which provide more than 40 percent of the jobs in the county. The top manufacturers in Lee County include Pilgrim's Pride poultry processing; Pfizer, the county's largest employer (Pfizer bought out Wyeth in the fall of 2008); Coty Inc.; Static Control Components; Pentair Water Pool & Spa; Tyson Foods; Moen Inc.; Frontier Spinning and Arden (Sanford Chamber of Commerce). Several of these manufacturers – Tyson, Pilgrim's Pride and Caterpillar – are agribusinesses and contribute to the county's agriculture/agribusiness income.

In 2006, agriculture and agribusinesses in Lee County contributed \$280,542,301 or 13.4 percent to the gross county product and 17.1 percent of the county's total employment (Walden, IMPLAN, Mig. Inc.). These numbers are expected to show an even greater impact in 2008 when an updated report is issued later in 2010. In comparison, in 2008 education, health and social services made up 17.7 percent of the total county economy, and retail trade comprised 11 percent (Sanford Chamber of Commerce).

Even with a strong manufacturing base in the county, agriculture is a major player in the county's economy. In 2007, the total value of agricultural products sold in Lee County was \$31,450,000 (2007 Census of Agriculture). Cropland accounted for 36,210 acres in 2007, a 21 percent decrease from 2002. This decrease can be tied to the increase in population and shifts in commodity subsidies. Forest land accounted for 107,600 acres in the county, with the vast majority (102,500 acres) privately owned (N.C. Division of Forest Resources Lee County).

There are two incorporated towns in Lee County, Sanford and Broadway. Sanford, the largest community with 29,284 residents, is the county seat. The town has experienced a 26.1 percent increase in population since 2000. Broadway, located in the southeastern section of the county, has a population of 1,154, an increase of 13.7 percent in nine years (City\_Data.com, 2008; <http://www.city-data.com/city/Sanford-North-Carolina.html>). The county is divided into seven townships – Greenwood, Jonesboro, Cape Fear, Deep River, East Sanford, West Sanford and Pocket.



Sanford is home to an increasingly vibrant arts scene that includes a professional theatre, art galleries featuring the work of talented local artists and the renowned Sanford Pottery Festival. It is also home to the Old Gilliam Mill, which was once one of the largest grist and cotton mills in Central North Carolina. Currently the mill is a historic park that is open to the public for a view into Lee County's past agricultural production. The Railroad House, downtown Sanford's oldest building, was built in 1872 as a home for the first depot agent of the Raleigh and Augusta Airline Railroad. It later served as the home of Sanford's first mayor and as a schoolhouse. The house stands as a symbol of the influence of rail on the growth of both Sanford and Lee County.

Central Carolina Community College, located in Sanford, serves more than 3,800 students and offers a wide array of two-year academic degrees, certificates, individual courses and continuing education programs. N.C. Cooperative Extension Lee County plays a critical role in educating local leaders and citizens about the role of agriculture in the county and key issues impacting the industry.

All of these attributes contribute to the continued growth expected in Lee County. Without proper planning and the continued recognition of agriculture's importance to the county, there will be significant land-use conflict. Lee County is experiencing the loss of farmland at a rate that is expected to continue and may increase as population pressures continue to occur.

Agriculture faces a unique set of stresses. With collaborative planning and education, Lee County leaders can fortify the agricultural economy while continuing to promote residential and commercial growth and development. Agriculture and agribusiness are exceptionally important to the economic and rural heritage of the county. An effort to increase awareness of the impact of agriculture will allow leaders to continue to foster and plan for compatible land use, encouraging and supporting the agricultural economy of the county.

# The State of Agriculture

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The agricultural basis in Lee County is changing but still represents a diverse industry that is meeting the challenges and embracing the opportunities these changes present. An overview and inventory of the agricultural sector identifies the current status of farming in Lee County.

- Land in agricultural production acres: 36,210
- Number of farms: 272
- Average farm size: 133 acres
- Market value of production 2008
  - all crop sales (includes horticultural crops): \$14,515,000
  - livestock sales: \$23,291,000
- Average age of farmers: 56.2 years
- Average Value of Farm and Buildings: \$615,587
- Average Market Value of Machinery and Equipment: \$74,273
- Average Total Farm Production Expense: \$96,541

(2009 NCDA&CS Ag Statistics; 2007 U.S. Census of Agriculture)

## **Agricultural Producers**

The average Lee County farmer is 56 years old, white and male. Sixty percent indicate that their primary occupation was something other than farming. This may indicate operations are specialized and directed to niche markets or farmers are able to operate agricultural operations while employed in other industries (Table 1).

## **Agricultural Production**

### ***Farm Acreage***

Farmland in 2007 made up 36,210 acres in the county or 21.9 percent of the county land mass of 163,168 acres (U.S. Census of Agriculture 2007). Figure 1 indicates that farmland has steadily decreased over the last 20 years with 6,426 acres or 8.5 percent lost. The greatest percent change in farm acreage was noted between 2002 and 2007 with a 21 percent decrease for the five-year period.

### ***Farm Numbers***

Figure 2 illustrates the dramatic decrease in the number of farms from 345 to 272 which represented a decline of 7 percent in 20 years. The quickest decline of 11 percent occurred from 2002 to 2007, which may in part be attributed to shifts in commodity prices and changes in federal crop support programs.

### ***Average Farm Size***

Farm size has followed this trend as well. The average farm size in 1997 was 145 acres. In 2007 it was 133 acres. While the distribution of farm size, as noted in Table 2, has remained fairly static, the greatest decline has been noted in farms with acreages between 50 and 179 acres. The majority of farms (83 percent) are less than 180 acres. This has been consistent over the last decade.

Much of this regression can be attributed to population growth. From 2000 to 2008, the county's population increased by 20.1 percent, growing from 49,190 to 59,091 (U.S. Census Bureau). With population growth, there is demand for more residential and commercial development as well as services to meet the needs of new businesses and residents. Farms provide ample space for these types of development.

Four studies conducted in North Carolina by Renkow (1998, 2001, 2006) and Dorfman (2004) and reported in the Agricultural Development and Farmland Preservation Trust Fund 2008 Annual Report clearly denoted the benefit of farm and forest land in controlling the costs associated with the provision of community services (Table 3).

Costs of services, an aging farm population and more farmers self-described as part-time due to down-sizing or pending retirement, make the future sustainability of farm and forest land a multi-faceted issue with far reaching implications. Additionally, increasing costs of farm operations and the need for producers to secure additional off-farm income to cover those costs continue to threaten the persistence of full-time farmers as much in some cases as does development pressure.

Lee County's farmers produce an array of agricultural products with tobacco reported as the number-one crop. Livestock production accounted for 57 percent of the total farm cash receipts generated in Lee County. The primary livestock operation is contract poultry, focused on broiler production. Lee County was ranked 28<sup>th</sup> of the 57 counties producing broilers in 2007 (NCDA&CS Agriculture Statistics 2009). Figure 3 depicts the total market value of all agricultural production in the county.

Over a 20-year period, the market value of all agricultural products increased by \$18,404,000 or 41.5 percent. This trend continued in 2008 with market value reported as \$40,937,593. The majority of this increase was due to an increase in broiler production, which provided market values of \$20,987,000 in 2007 (Figure 4) and \$23,291,000 in 2008 (U.S. Census of Agriculture 1987, 1997, 2007; 2009 NCDA&CS Agricultural Statistics).

The poultry production industry has experienced problems with the oversupply of broilers and subsequent bankruptcy of Pilgrim's Pride in 2008. The company cited increasing feed costs and an oversupply of poultry for its problems ([http://www.digtriad.com/news/local\\_state/article.aspx?storyid=99685.1](http://www.digtriad.com/news/local_state/article.aspx?storyid=99685.1)).

This trend could have future implications for the poultry industry in Lee County with the sale of the company. Currently, the processing plant in Sanford is in operation.

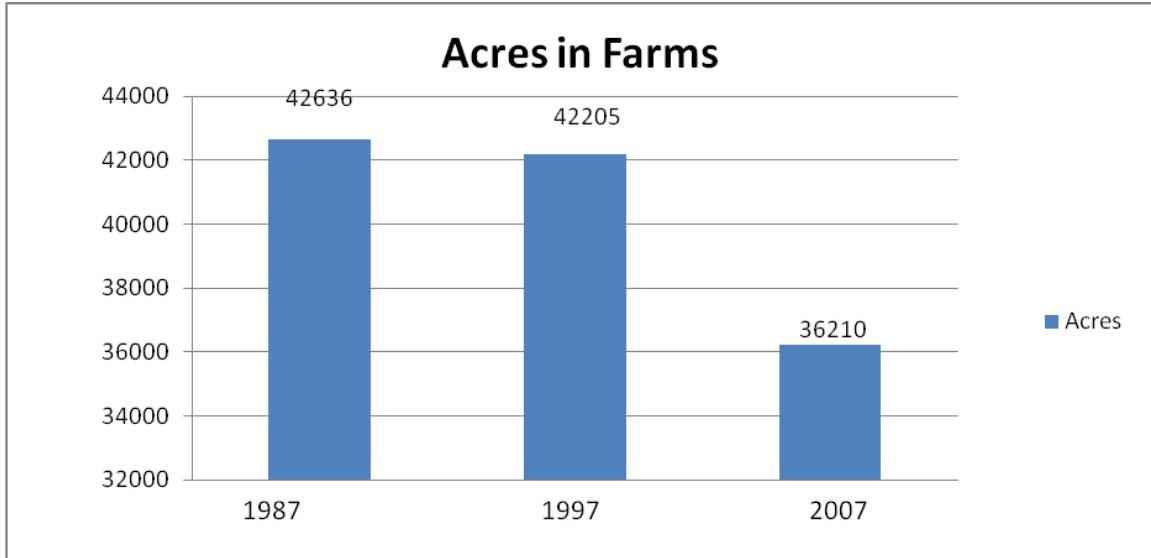
Although livestock accounts for more than half of farm cash receipts (\$23,291,000 in 2008), row crops contribute millions of dollars to the county's economy each year. Major row crops produced in the county are tobacco, corn, small grains and soybeans. Farm cash receipts for crops were reported as \$10,463,000 in 2007 and \$14,515,000 in 2008. Figure 5 represents a steady increase in revenue from the production of crops with a spike in 1997 attributed to increased tobacco production (U.S. Census of Agriculture 1987, 1997, 2007; 2009 NCDA&CS Agricultural Statistics). The steady increase noted over the entire 20-year period was attributed to increased commodity prices including soybeans and corn.

**Table 1. Characteristics of Lee County Farmers**

| Operator Characteristics                        | Quantity |
|---|----------|
| Principal operator's primary occupation—farming | 111      |
| Principal operator's primary occupation—other   | 161      |
| Principal operator's sex—male                   | 224      |
| Principal operator's sex—female                 | 48       |
| Average age of principal operator in years      | 56.2     |
| Race—Black or African American                  | 2        |
| Race—White                                      | 387      |
| Race—More than 1 race                           | 2        |
| Race—Spanish, Hispanic, Latino                  | 2        |

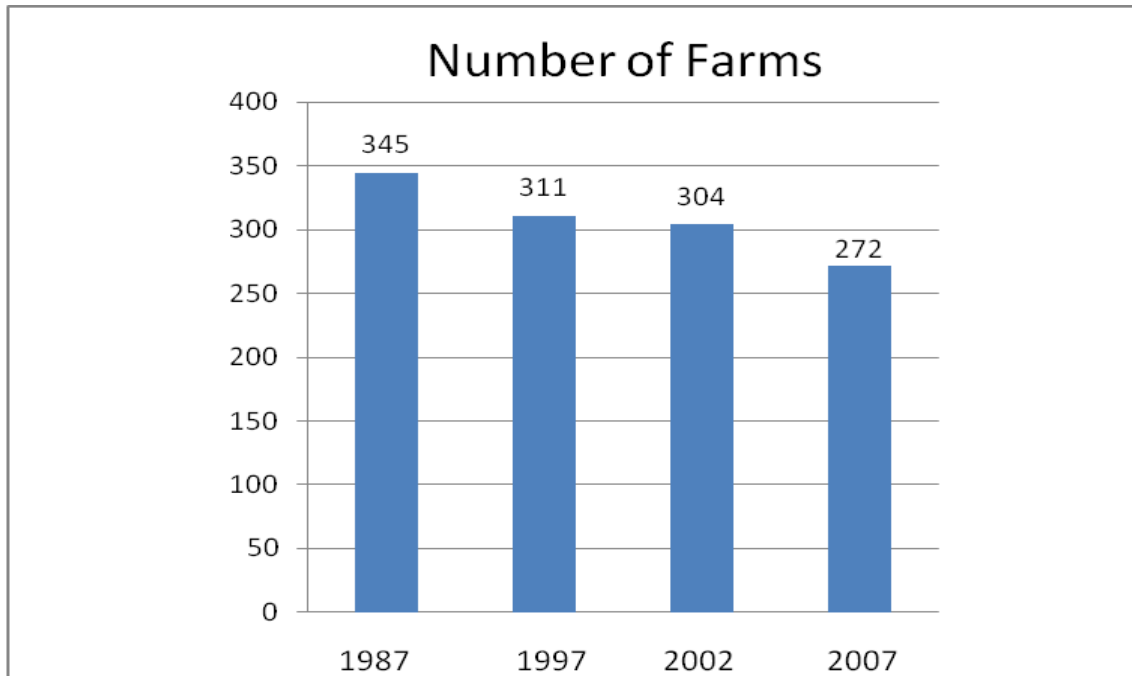
Source: 2007 Census of Agriculture

**Figure 1. Acreage in agricultural production**



Source: Census of Agriculture 1987, 1997, 2007

**Figure 2. Number of Farms in Lee County**



Source: U.S. Census of Agriculture 1987, 1997, 2002, 2007

**Table 2. Size of Farms by Acreage**

| Farms by Size | 2007 | 2002 | 1997 |
|---------------|------|------|------|
| 1-9 acres     | 21   | 15   | 20   |
| 10-49 acres   | 116  | 133  | 114  |
| 50-179 acres  | 90   | 104  | 125  |
| 180-499 acres | 35   | 33   | 38   |
| 500-999 acres | 4    | 9    | 8    |
| 1,000+ acres  | 6    | 10   | 6    |

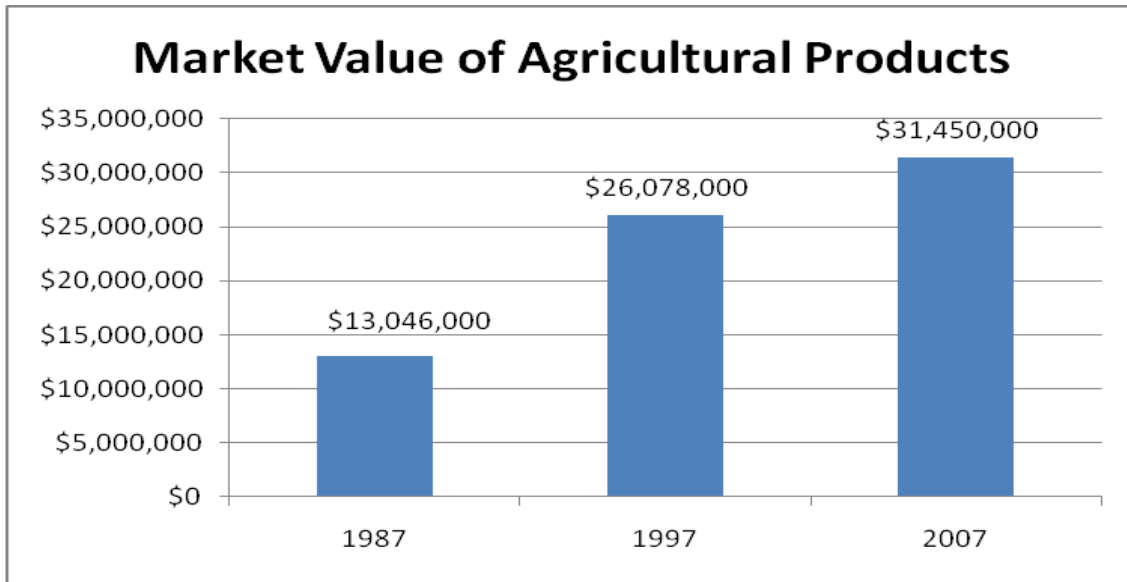
Source: U.S. Census of Agriculture, 2007, 2002, 1997

**Table 3. N.C. County Cost of Services Study**

| County   | Residential | Commercial/Industrial | Farm/Forestland |
|----------|-------------|-----------------------|-----------------|
| Chatham  | \$1.11      | \$0.47                | \$0.92          |
| Wake     | \$1.54      | \$0.18                | \$0.47          |
| Union    | \$1.30      | \$0.41                | \$0.24          |
| Orange   | \$1.31      | \$0.24                | \$0.72          |
| Alamance | \$1.47      | \$0.23                | \$0.59          |

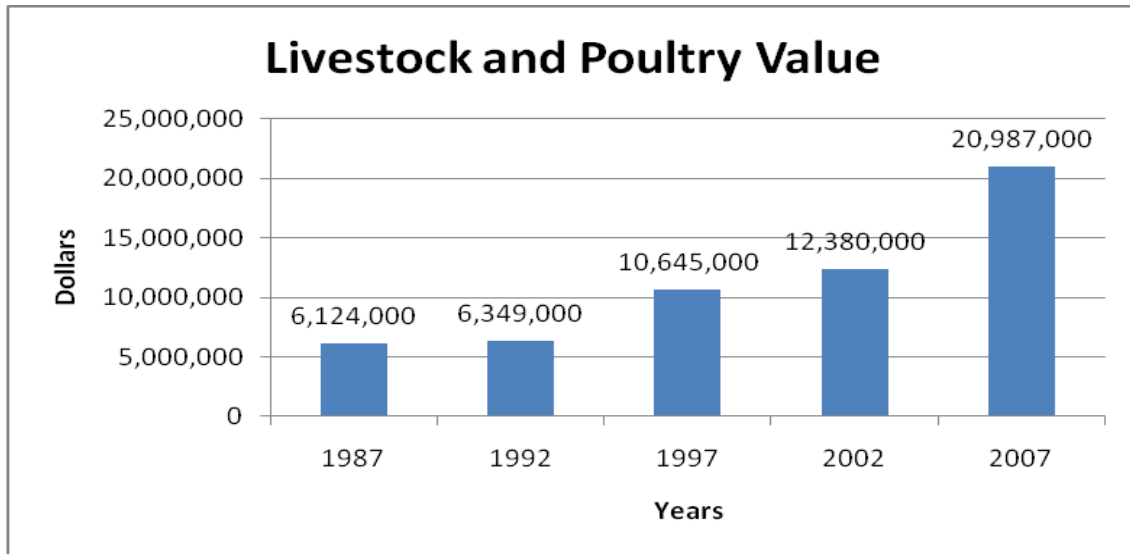
Source: NCDA Agricultural Development and Farmland Protection Trust Fund Annual Report 2009

**Figure 3. Total Market Value of Agricultural Products Sold**



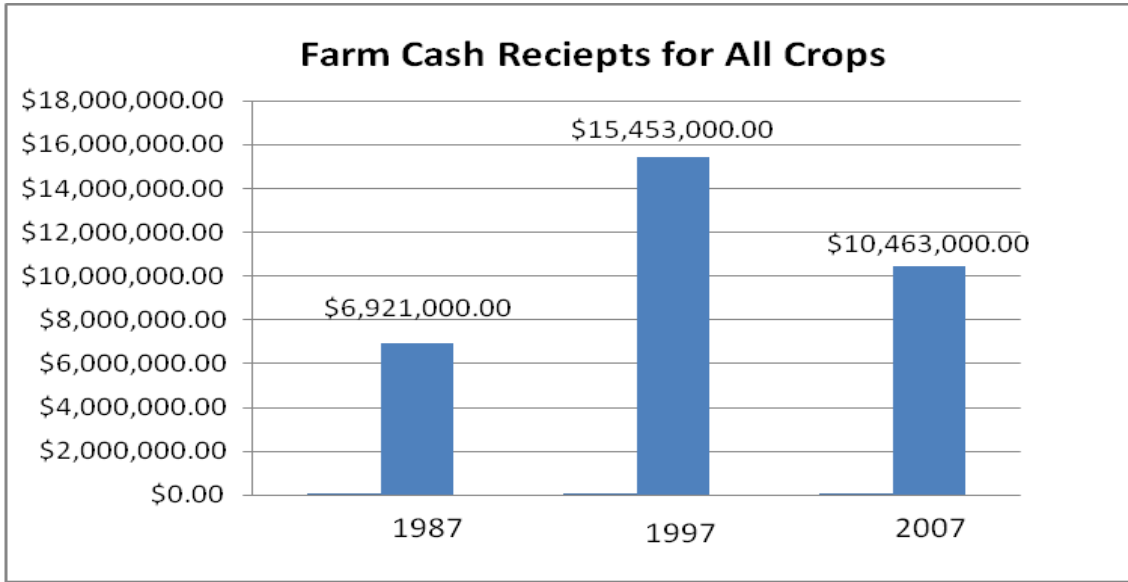
Source: Census of Agriculture 1987, 1997, 2007

**Figure 4. Total Livestock and Poultry Value Sold**



Source: U.S. Census of Agriculture

**Figure 5. Farm Cash Receipts for Crops**



Source: U.S. Census of Agriculture 1987, 1997, 2007

*The following provides an overview of the major row crop performances in the past five years.*

**Tobacco**

Tobacco program changes and the subsequent buyout had a significant impact on the portrait of agriculture in North Carolina. The buyout contributed to a reduction in farms and farmers in North Carolina. Although some portion of the decrease in farms in Lee County may be attributed to the buyout, tobacco is still the leading crop in the county. Tobacco added approximately \$7,419,000 to the county’s economy in 2007, which was more than a \$1million increase from 2002. As noted in Table 4, the number of tobacco farms in Lee County decreased by 68 percent from 1997 to 2007, with a higher percentage of farms lost from 2002 to 2007. This illustrates the impact of the buyout on the number of farmers growing tobacco.

Efficiency is crucial to profitability, and production quality is required for farmers to maintain production contracts with tobacco companies. Larger farms rely on economy of scale to reduce the costs of operation. Tobacco has transitioned into a contractual marketing system much like the swine and poultry industry. The contractual nature of the existing system has resulted in companies relying on those farmers that are efficient and can produce a consistent quality of leaf. The impact of the buyout has resulted in the loss of tobacco producers who elected to retire. Tobacco acreage, as noted in Table 4, has actually increased as has income from tobacco with a more than \$1 million increase in income reported (2007 U.S. Census of Agriculture).



***Soybean:***

Soybean production has increased over this 10-year period, even as production acres have declined from 2002 to 2008 (Table 5). This is representative of a trend of increased commodity price and demand (U.S. Census of Agriculture 1997, 2002; 2009 NCDA&CS Agricultural Statistics).

***Corn:***

Corn acreage almost doubled in the five-year period from 2002 to 2007 due to increased demand and price (Figure 6). Corn production in 2008, while reporting fewer acres, reported a level of production of 93,000 bushels.

***Forage Crops:***

Forage crop production acres have increased as cattle numbers have increased, but the majority of the forage acres serve as suitable cropland on which to spread poultry litter. There has been a steady increase in forage acres and production over the past 10 years (Table 6), and the utility of this forage by cattle and equine has also grown as a result of drought and increases in these areas of livestock production.

***Horticultural Crops:***

The number of farms reporting vegetable production increased by 40 percent in five years, while the acreages reported in production declined by 49 percent (Table 7). Some farmers in the county are specializing in value-added niche products for local use. Vegetable income for 2007 was \$302,000. Lee County agricultural producers also realized a sizable income from nursery, greenhouse and floriculture. In 2007, income generated from these commodities was \$1,294,000. In 2008, dollars reported from the sale of nursery, greenhouse and floriculture products totaled \$1,593,000, an increase of 19 percent (U.S. Census of Agriculture 2002, 2007; 2009 NCDA&CS Agricultural Statistics).

**Table 4. Tobacco Acreage**

| Harvested Crops     | Farms | Acres | Pounds    |
|---------------------|-------|-------|-----------|
| <b>Tobacco 2007</b> | 33    | 2,012 | 4,940,606 |
| <b>Tobacco 2002</b> | 64    | 1,645 | 3,695,757 |
| <b>Tobacco 1997</b> | 104   | 3,494 | 7,671,790 |

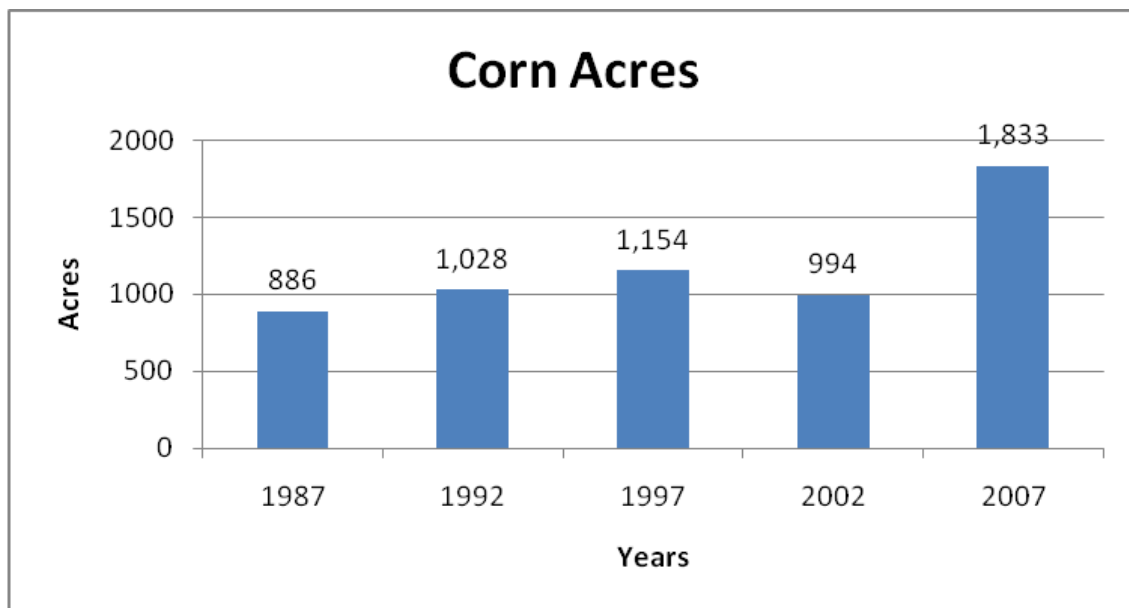
Source: U.S. Census of Agriculture, 2007, 2002, 1997

**Table 5. Soybean Acreage and Production**

| Harvested Crops                | Acres | Bushels |
|--------------------------------|-------|---------|
| <b>Soybeans for beans 2008</b> | 5,500 | 166,000 |
| <b>Soybeans for beans 2002</b> | 6,150 | 111,531 |
| <b>Soybeans for beans 1997</b> | 3,165 | 66,824  |

Source: U.S. Census of Agriculture 1997, 2002; 2009 NCDA&CS Agricultural Statistics

**Figure 6. Corn acreage**



Source: U.S. Census of Agriculture 1987, 1992, 1997, 2002, 2007

**Table 6: Forage Acreage and Production**

| Harvested Crops                      | Farms | Acres | Tons Dry |
|--------------------------------------|-------|-------|----------|
| <b>Forage—Land Used for Hay 2007</b> | 72    | 2,922 | 4,202    |
| <b>Forage—Land Used for Hay 2002</b> | 101   | 2,233 | 3,914    |
| <b>Forage—Land Used for Hay 1997</b> | 110   | 2,011 | 3,849    |

Source: U.S. Census of Agriculture, 2007, 2002, 1997

**Table 7. Vegetable Production**

| Harvested Crops                           | Farms | Acres |
|---|-------|-------|
| <b>Vegetables Harvested for Sale 2007</b> | 35    | 146   |
| <b>Vegetables Harvested for Sale 2002</b> | 25    | 285   |

Source: U.S. Census of Agriculture, 2007, 2002, 1997

## Forestry

The loblolly pine is the most commercially important forest species in southeastern North Carolina and in Lee County. The loblolly is a native tree with rapid juvenile growth which makes it ideal for lumber and pulpwood. The loblolly provides excellent habitat for numerous wildlife species and provides recreational opportunities to the residents of the county. Figure 7 delineates soils in Lee County that are considered to be the most suitable for the production of loblolly pine.

The longleaf pine is another important species for the forestry industry in Lee County; however, soils deemed most suitable for longleaf production in the county are limited to the southern portion of the county as denoted in Figure 8. The longleaf pine is valued for its lumber and pine straw production (NCSU Extension Forestry).

The forestry industry plays a significant role in the economy of the county. In 2008, 75 percent of total acreage or 113,193 acres in Lee County was reported in timberland (Figure 9), while in 2010 forestry is reported to occupy 65 percent of the land area with total forested land in the county reported as 107,600 acres. Of this acreage, 95 percent is privately owned, and the remaining 5 percent is managed by the county or municipal governments (N.C. Division of Forest Resources, Lee County). Often, forestry is part of a farm that provides additional income for the landowner so the two are closely tied to the profitability of the land.

Data from 2002 reported stumpage value of timber in Lee County at \$3,828,665. Stumpage is the actual price paid to the timber owner for standing timber. Of this total, \$3,650,753 was paid to private landowners with the balance going to public entities. The delivered price or price paid to the timber buyer upon delivery of the timber to a mill was reported in 2002 as \$5,844,456 with \$5,572,873 of this reported from forest land owned by nonindustrial private forest owners (2002 NCSU Forestry Extension, Forest Income Estimates by County for North Carolina).

In June 2008, Lee County ranked 48<sup>th</sup> out of the 100 counties in the state in income from timber harvested and delivered to mills with stumpage value reported as \$4,825,039 and delivered value as \$7,024,923. This marked increase in value again emphasizes the importance of forestry to Lee County especially considering the relatively small land area in the county (U.S. Forest Service, *Forest Inventory and Analysis Data 2006 and 2007 Timber Products Output Survey*).

It is notable that in 2010, 11 logging companies, 20 sawmill companies, 24 dealer/suppliers, five wood yards, one wood treating and one fiberboard plant were listed as companies that buy timber from Lee County. Additionally, 92 consulting foresters were listed as working in Lee County. The number of associated businesses and companies, some located in Lee County, delineate the importance of the county's forestry resources. (N.C. Division of Forest Resources, Lee County).

Additionally, forests and open space help protect, restore and sustain water quality, water flows and watershed health. Forests can contribute to efforts for managing carbon dioxide emissions and may play a key role in proposed ecosystem-services markets. The utility of forests and forest products in non-timber and emerging markets such as biomass and ecosystem services is crucial to the continued profitability of forest products. Financial incentives and opportunities such as these may assist in supporting the growth of trees and management of forests.

Educational opportunities also abound to engage limited resource farm and forest owners to improve management to assure maximization of income generation and to enhance forest health. Forest management plans provide an opportunity for landowners to improve management strategies and allows for participation in present-use tax valuation programs to assist the continuation of working forests.

Forest resources, along with agricultural lands, are quickly lost to residential, commercial and industrial development as well as to expansion of utility and transportation infrastructure. Rural areas are also subject to parcelization that impacts the long-term sustainability of those working farms and forests. This continuing trend affords county leaders the opportunity to identify regulatory and tax frameworks (planning, zoning and policies) that affect farmers and forest owners' desire and ability to sustain their farms and forests.

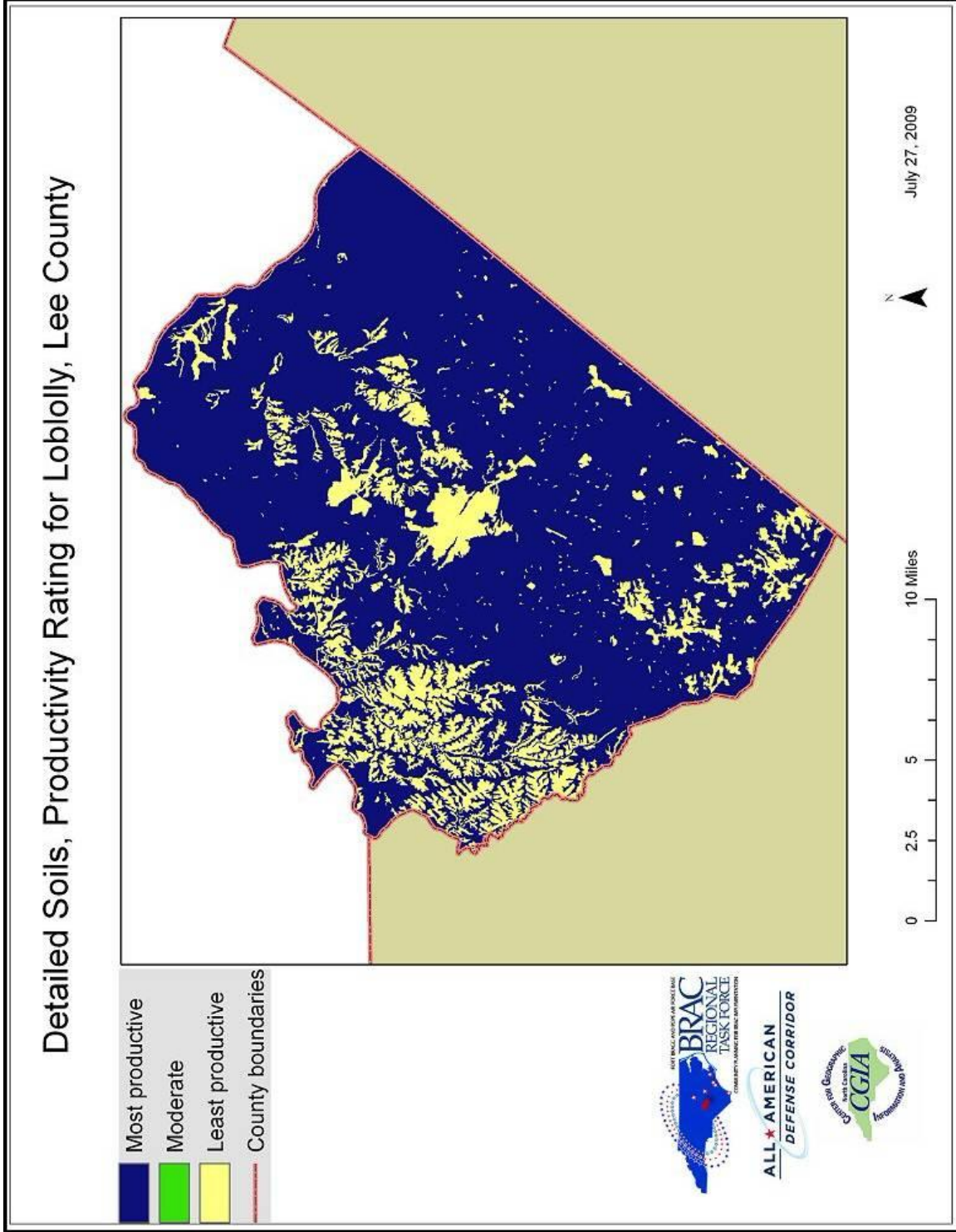


Figure 7. Detailed Soils, Rating Based on Site Index for Loblolly Productivity

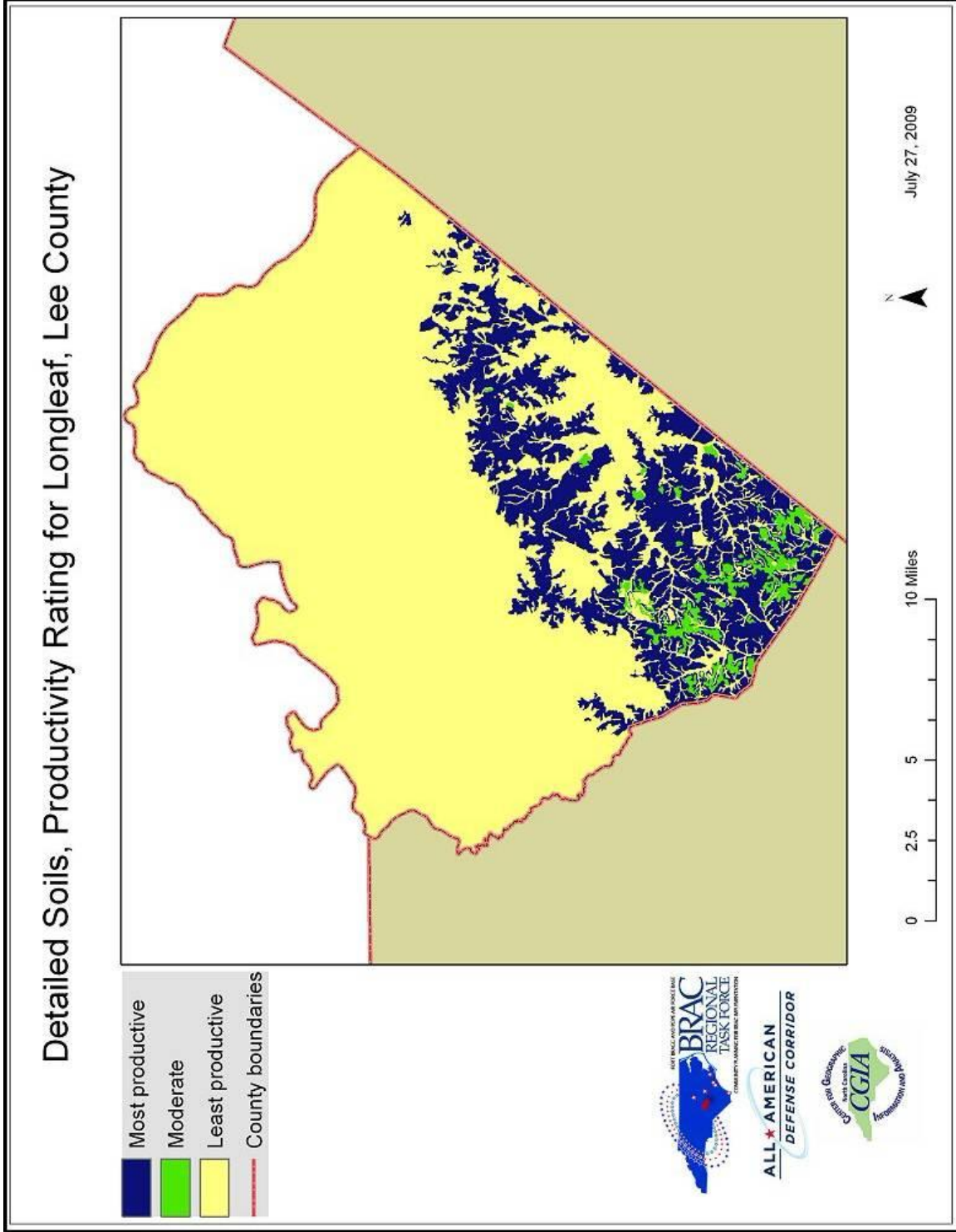


Figure 8. Detailed Soils, Rating Based on Site Index for Longleaf Productivity

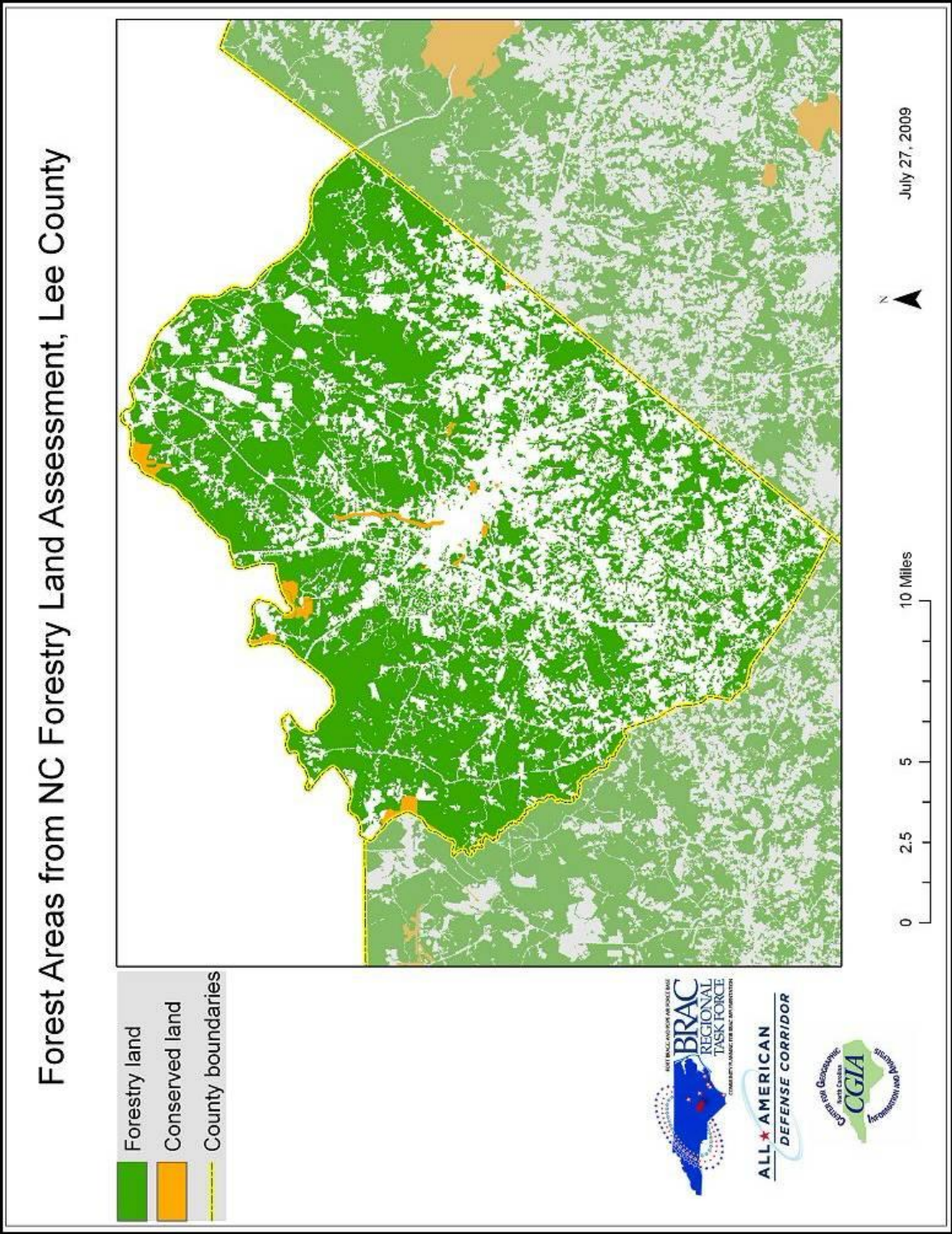


Figure 9. Forestry Land Identified in the N.C. Forestry Land Assessment 2008

## Agriculture/Food Industry Economic Impact

The food, fiber and forestry industries account for greater than one-fifth of the income and workforce of North Carolina. These industries make a significant contribution to the employment and economic indicators in Lee County as well. For 2006, the value of these industries to the county is reflected in Table 8. These figures denote the value-added income derived from the agricultural and agribusiness sectors present in Lee County. (Walden, IMPLAN, Mig,Inc.)

**Table 8. Value-Added Incomes of Agriculture and Agribusiness in Lee County**

| Agriculture/Food Industries         |                      |
|-------------------------------------|----------------------|
| Farming                             | \$51,060,211         |
| Manufacturing                       | \$80,924,000         |
| Wholesaling/Retailing               | \$65,398,560         |
| <b>Total county economic output</b> | <b>\$197,382,771</b> |
| Natural Fiber Industries            |                      |
| Farming                             | \$221,206            |
| Manufacturing                       | \$33,084,600         |
| Wholesaling/Retailing               | \$12,840,520         |
| <b>Total</b>                        | <b>\$46,146,326</b>  |
| Forestry Industries                 |                      |
| Farming                             | \$11,367,000         |
| Manufacturing                       | \$22,997,000         |
| Wholesaling/Retailing               | \$2,649,204          |
| <b>Total</b>                        | <b>\$37,013,204</b>  |

Source: Mike Walden, Agriculture and Agribusinesses in Lee County, 2006



## **Agricultural Land Base and Resources**

The temperate climate of the region offers residents year-round outdoor opportunities with Lee County reporting January average temperature of 37° Fahrenheit and average June temperature of 76° Fahrenheit. These temperatures accommodate excellent growing conditions for a variety of crops, and the average annual rainfall of 48 inches is adequate to provide good growing conditions.

The soil resources of the county are also conducive to a wide variety of crop and forest management systems. These soils also accommodate land uses that are often in conflict with agriculture or forestry. Figure 10 denotes the general soils map for Lee County, which is generally used for broad land-use planning. A vast majority of the total of the land mass of the county is represented as upland soils that are well drained and suitable for multiple uses such as farming and development.

One limitation of the well-drained and sandy to silty loam soils in Lee County is often the slope of the land. Thirty-five percent of the total land mass is on slopes of greater than eight percent, which can create issues related to use (Table 9). These slopes are very susceptible to major soil erosion and runoff issues. Forested land, terraced crops or pastures are more desirable uses for this type of slope.

Soil scientists have identified the types of soils that are most productive for crops. Soil types are classified, rated and mapped to reveal the pattern shown in Figure 11. Soil capability is high in most of the county as is noted from the previous soils data.

The base map for Lee County illustrates the range of elevation found in the county (Figure 12) and also denotes that the majority of the county is rural with urban centers located at major highway crossroads (Sanford). The map includes municipal areas, major roads, elevation and major water features.

Figure 13 illustrates the current use of land resources in the county with a large percentage in forested acres. Land currently supporting crops may be used as an indication of productive land and is noted to be dispersed across the county landscape.

Land not currently utilized as cropland does not indicate that the soils in these areas are non-productive. The soils may in fact be productive if the land were cultivated and may have been cultivated in the past but are currently being used for forests or pasture land. Consequently, Figure 14 looks at the current “land cover” or what is visible from an aerial view as the apparent land surface (forest, farmland, wetland, water body, pavement or rooftop, pasture, grassland, lawn or other). Some land cover types (e.g., grasslands) are more likely to support farmland than others (e.g., developed areas). Developed areas (rooftops and pavement) are evident in the Sanford area. Cultivated areas (yellow) are apparent in the southern part of the county, pastures are prominent (orange), and forests are more common in the northern half to two-thirds of the county outside of the urban area.

Lee County has soil and water resources that make it conducive for farms and forests and subsequently make these rural areas of interest to developers both residential and

commercial. The urban/rural interface can lead to issues that may eventually threaten the sustainability of farms and forests in the county. Figure 15 depicts the current population distribution in the county, which is concentrated in areas around Sanford and where transportation makes development and ease of movement and access available. However, there are significant areas in the county where suburban density is noted, and this is the residential development that can lead to a multitude of issues that can impact traditional farming and forestry operations without agricultural education and awareness.

The southern part of the county demonstrates a scattered suburban density pattern that, when viewed in concert with Figure 16, which denotes farmland viability, exhibits the potential for conflicting land uses in the future if planning and awareness are overlooked.

To determine farmland viability the N.C. Department of Agriculture and Consumer Services used numerous location factors to rate the viability of farmland. Viability takes into account concentrations of farms, farm suppliers, markets for crops, urbanization and compatibility with adjacent land uses ([www.onencnaturally.org](http://www.onencnaturally.org)).

As the population continues to grow in the region, whether as a result of armed forces relocating to the region or as a result of inherent population growth, knowledge and awareness of the impact of agriculture to the local economy needs to be addressed. This is so planning and development efforts can continue without adverse impacts to farm and forest industries. In order to help planners and local authorities identify areas in the county that are designated as most suitable for farms and forests, suitability maps have been created to visually identify these regions.

In rating suitability or potential for farmland, the “best farmland” receives the highest ratings as shown in Figure 17. The BRAC Regional Task Force collaborated with Sustainable Sandhills and regional stakeholders to develop custom “suitability maps” for farmland (and forest land and natural areas as well as land for commercial, industrial and residential uses). The maps rate all areas based on the five representations of land and location. Some of Lee County has the highest suitability ratings or potential for farmland (ratings of 7, 8 or 9), with some areas in mid-range (4, 5 or 6), while parts of the county lacking the best land and location have low suitability for farmland. Conserved land (orange on the map) is concentrated along the northwestern border.

While Figure 17 portrays farm suitability, Figure 18 combines areas of the county denoted as of highest suitability for farmland with areas identified as locations that also have a high suitability for commercial/industrial or residential development. This perspective highlights areas where there is less competition for land (green on the map) and where there are more likely to be competing plans and actions (purple and yellow on the map). Knowledge of these competing uses and areas of high probability for conflicting uses in the future will help to guide local officials as they plan for growth and infrastructural needs while preserving the agricultural economy of the county.

As farmers and forest land owners pursue ways to remain viable and profitable, utilization of existing farmland preservation and taxation tools are imperative. Management plans for working lands rely on more than the combination of land and location. Public policies can make a difference in land use. Tax parcel records from Lee County indicate the location of agricultural properties that are designated as taxable at present value (Figure 19). Land that qualifies for farm, forest or horticultural use can be taxed on that use rather than the highest and best use. The difference in these tax rates can help landowners maintain the land in production and focus putting their money back into the business rather than paying higher taxes.

While notable acreages are reported to be in the present-value taxation program, there are obviously acreages in forestry and cropland alike that do not appear to be taking advantage of this program. Figure 20 denotes that there is land with high farmland suitability that is not in the present-use program in Lee County. This illustrates suitability ratings for areas that are not in the present-use program. The areas of most concern are shaded dark blue to indicate high potential (or actual) and non-participation in the county tax program.

This is an opportunity to educate Lee County landowners, both present and absentee. It is also an opportunity for the resources within the county agencies to be used to their fullest extent. Agencies could be of service to landowners by conducting training, disseminating educational materials or assisting landowners in the development of management plans to meet the expectations for enrollment into the existing taxation program.

Of the land denoted in the present-use value program, most parcels show a high suitability rating for farmland as noted in blue on Figure 21. When the land parcels identified as enrolled in the present-use program are compared to parcels or areas of the county with land having a high suitability for industrial/commercial or residential development, there are potential conflicts for competing land uses that are noted in Figure 22 (denoted in purple and yellow). This information is valuable to local leaders and to farmers and forest landowners alike.

It is clear that the future holds opportunities and challenges for working farms and forests in Lee County as is the case statewide. Infrastructure also tends to lend opportunity for both the farming community and development. Farms benefit from North Carolina's network of "farm-to-market" roads to get crops to buyers. On the other hand, highways enable stores, factories and offices to reach and serve their markets. Highways and secondary roads also provide widespread homes with access to jobs and services. Figure 23 displays the locations of the N.C. Department of Transportation's "Transportation Improvement Program" locations. New highways change the maps of land and location that translate into the "best farmland."

Other types of infrastructure that are likely to change the pattern of farmland in the region are public water and sewer systems. Public systems support commercial, industrial and residential development and have benefits for surface water and ground water quality. Farms are not reliant on public water and sewer systems. Thus as systems extend beyond municipal areas into farmland, new lands become more suitable for development. Areas identified as having planned public sewer are shown in pink hatching in Figure 23. The entire county is served by public water.

How will future infrastructural projects impact farmland? Using the suitability results, it appears that the planned highways are in areas less suitable for farmland. The planned expansion of public sewer service (pink hatching in Figure 23) coincides with a mix of higher and lower farmland suitability. As development continues, the agricultural impact of growth should be considered.

Another perspective on infrastructure is available from detailed soils information. Locations that have soils with septic limitations would have higher suitability for development if public sewer service becomes available (Figure 24). Most of the areas of Lee County with higher farmland potential also have somewhat or very limited suitability for septic systems requiring higher cost for development and/or alternative systems.

Everything from taxation to soils to growth and infrastructure potentially impacts the future viability of agriculture in Lee County. This is why it is imperative for leadership and landowners to begin to assess the opportunities and challenges forthcoming to ensure a planned and prosperous agriculture and forest industry for the future.

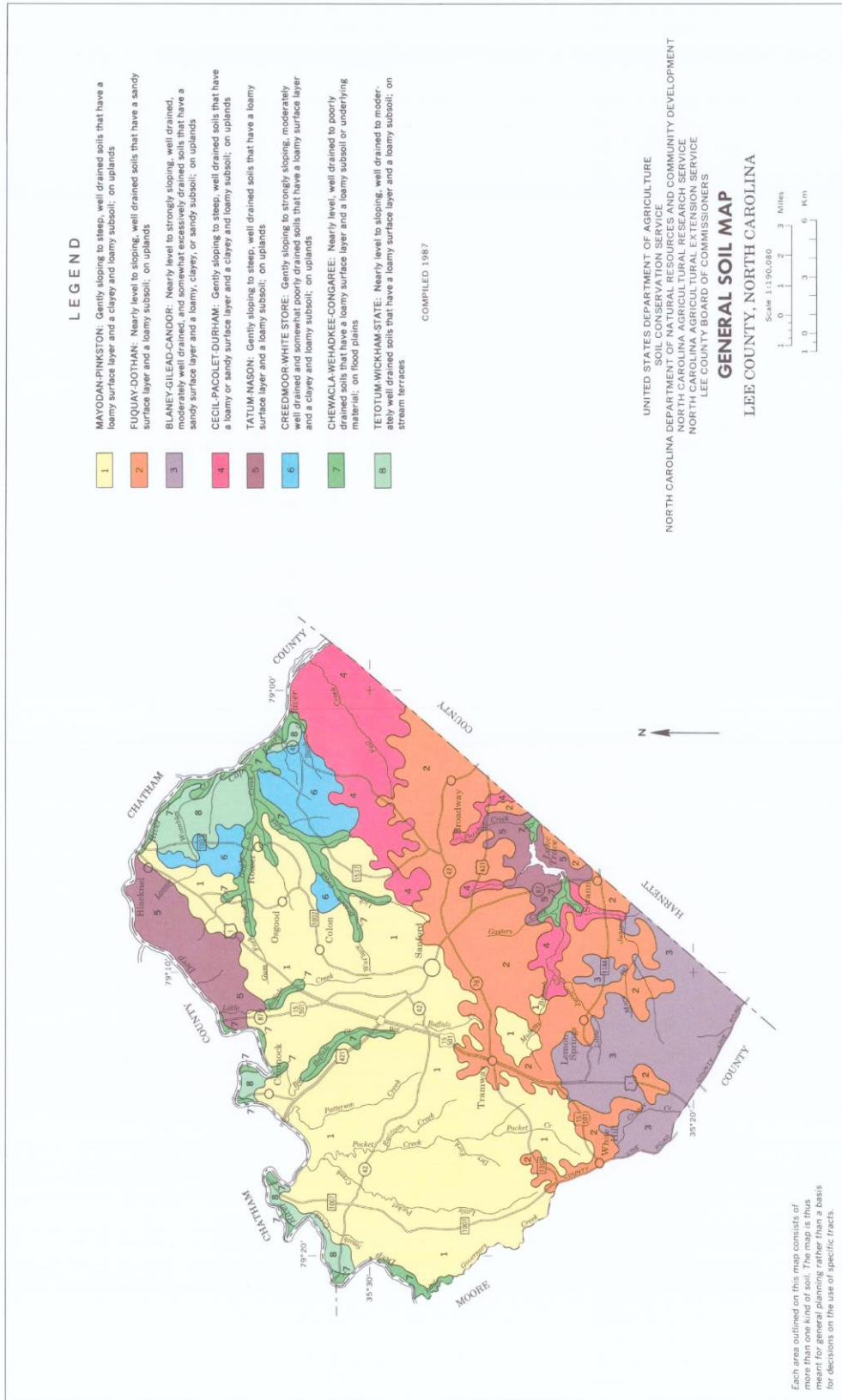


Figure 10. General Soils Map, Lee County, N.C. 1987

**Table 9. Acreage and Proportionate Extent of the Soils, Lee County**

| Map symbol | Map Unit Name   | Acres  | Percent |
|------------|---|--------|---------|
| BaB        | Blaney loamy sand, 2 to 8 percent slopes              | 3,741  | 2.3     |
| BaD        | Blaney loamy sand, 8 to 15 percent slopes             | 2,266  | 1.4     |
| CaB        | Candor sand, 0 to 8 percent slopes                    | 3,409  | 2.1     |
| Cf8        | Cecil fine sandy loam, 2 to 8 percent slopes          | 3,660  | 2.2     |
| CfD        | Cecil fine sandy loam, 8 to 15 percent slopes         | 3,787  | 2.3     |
| Ch         | Chewacla silt loam                                    | 6,963  | 4.2     |
| Cp         | Congaree silt loam                                    | 4,032  | 2.4     |
| CrB        | Creedmoor fine sandy loam, 2 to 8 percent slopes      | 4,076  | 2.5     |
| CrD        | Creedmoor fine sandy loam, 8 to 15 percent slopes     | 789    | 0.5     |
| DoA        | Dothan loamy sand, 0 to 2 percent slopes              | 3,463  | 2.1     |
| DoB        | Dothan loamy sand, 2 to 8 percent slopes              | 4,069  | 2.4     |
| DuB        | Durham loamy sand, 2 to 8 percent slopes              | 1,968  | 1.2     |
| FuB        | Fuquay loamy sand, 0 to 6 percent slopes              | 13,103 | 7.9     |
| GhB        | Gilead loamy sand, 2 to 8 percent slopes              | 5,009  | 3.0     |
| GhD        | Gilead loamy sand, 8 to 15 percent slopes             | 1,391  | 0.8     |
| MfB        | Mayodan fine sandy loam, 2 to 8 percent slopes        | 20,061 | 12.1    |
| MfD        | Mayodan fine sandy loam, 8 to 15 percent slopes       | 16,076 | 9.7     |
| MfE        | Mayodan fine sandy loam, 15 to 25 percent slopes      | 1,781  | 1.1     |
| MrB        | Mayodan-Urban land complex, 2 to 8 percent slopes     | 1,987  | 1.2     |
| NaB        | Nason silt loam, 2 to 8 percent slopes                | 2,967  | 1.8     |
| NaD        | Nason silt loam, 8 to 15 percent slopes               | 1,771  | 1.1     |
| PaF        | Pacolet fine sandy loam, 15 to 40 percent slopes      | 4,992  | 3.0     |
| PfB        | Pinkston silt loam, 2 to 8 percent slopes             | 6,332  | 3.8     |
| PfD        | Pinkston silt loam, 8 to 15 percent slopes            | 7,411  | 4.5     |
| PfF        | Pinkston silt loam, 15 to 40 percent slopes           | 10,712 | 6.4     |
| Pt         | Pits, quarry  | 85     |         |
| Ro         | Roanoke silt loam                                     | 1,043  | 0.6     |
| SIA        | State fine sandy loam, 0 to 3 percent slopes          | 1,026  | 0.6     |
| TaB        | Tatum silt loam, 2 to 8 percent slopes                | 2,393  | 1.4     |
| TaD        | Tatum silt loam, 8 to 15 percent slopes               | 1,792  | 1.1     |
| TaE        | Tatum silt loam, 15 to 30 percent slopes              | 2,056  | 1.2     |
| ToB        | Tetotum fine sandy loam, 1 to 4 percent slopes        | 3,940  | 2.4     |
| Ud         | Udorthents, loamy                                     | 1,310  | 0.8     |
| Ur         | Urban land  | 803    | 0.5     |
| VaB        | Vaucluse gravelly sandy loam, 2 to 8 percent slopes   | 1,343  | 0.8     |
| VaD        | Vaucluse gravelly sandy loam, 8 to 15 percent slopes  | 885    | 0.5     |
| VaE        | Vaucluse gravelly sandy loam, 15 to 25 percent slopes | 268    | 0.2     |
| W          | Water   | 1,608  | 1.0     |
| Wn         | Wehadkee fine sandy loam                              | 6,410  | 3.9     |
| WsB        | White Store silt loam, 2 to 8 percent slopes          | 2,335  | 1.4     |
| WsD        | White Store silt loam, 8 to 15 percent slopes         | 1,363  | 0.8     |
| WwB        | Wickham sandy loam, 2 to 8 percent slopes             | 1,623  | 1.0     |

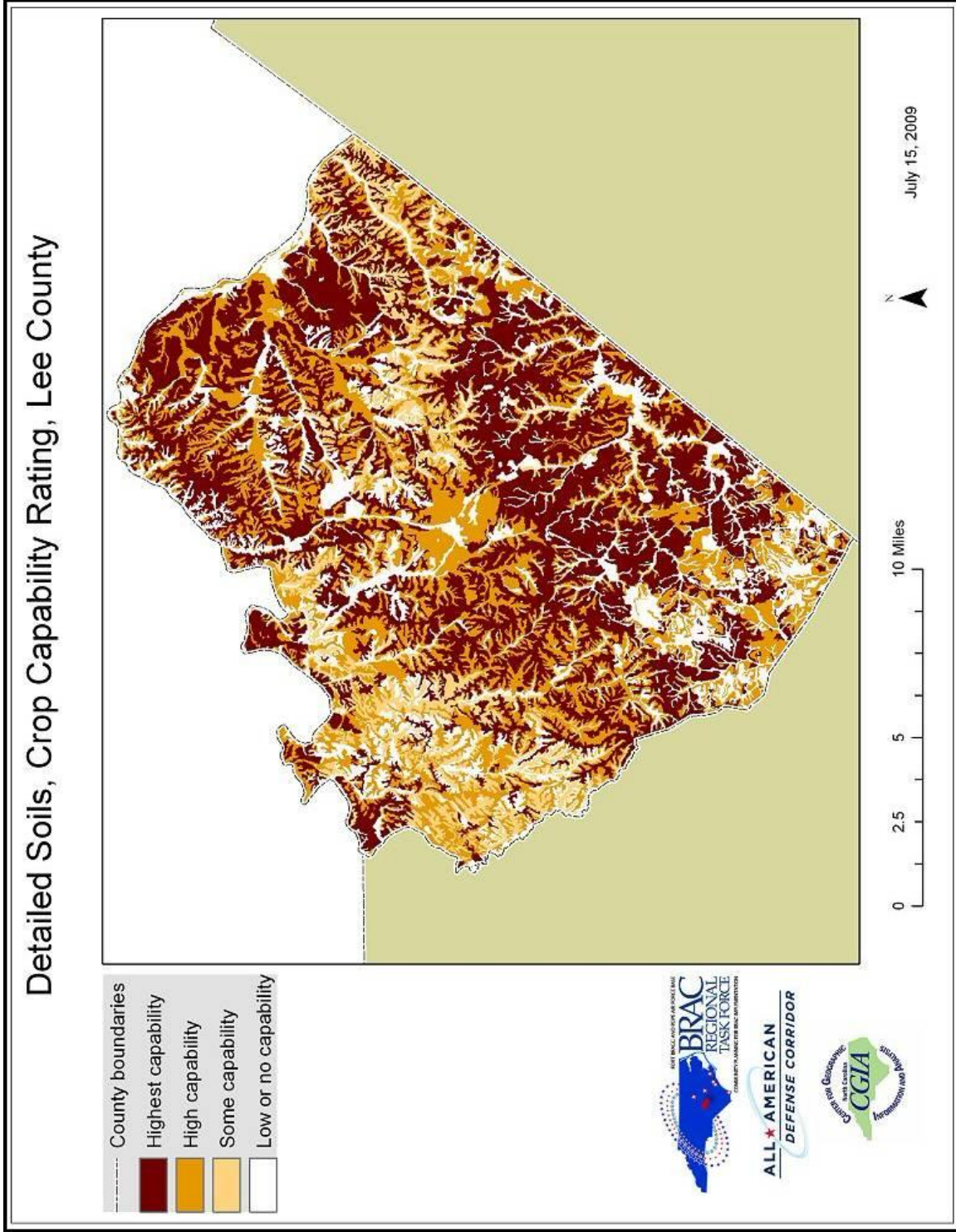


Figure 11. Crop Capability Rating from Detailed Soil Survey. Source: Natural Resources Conservation Service

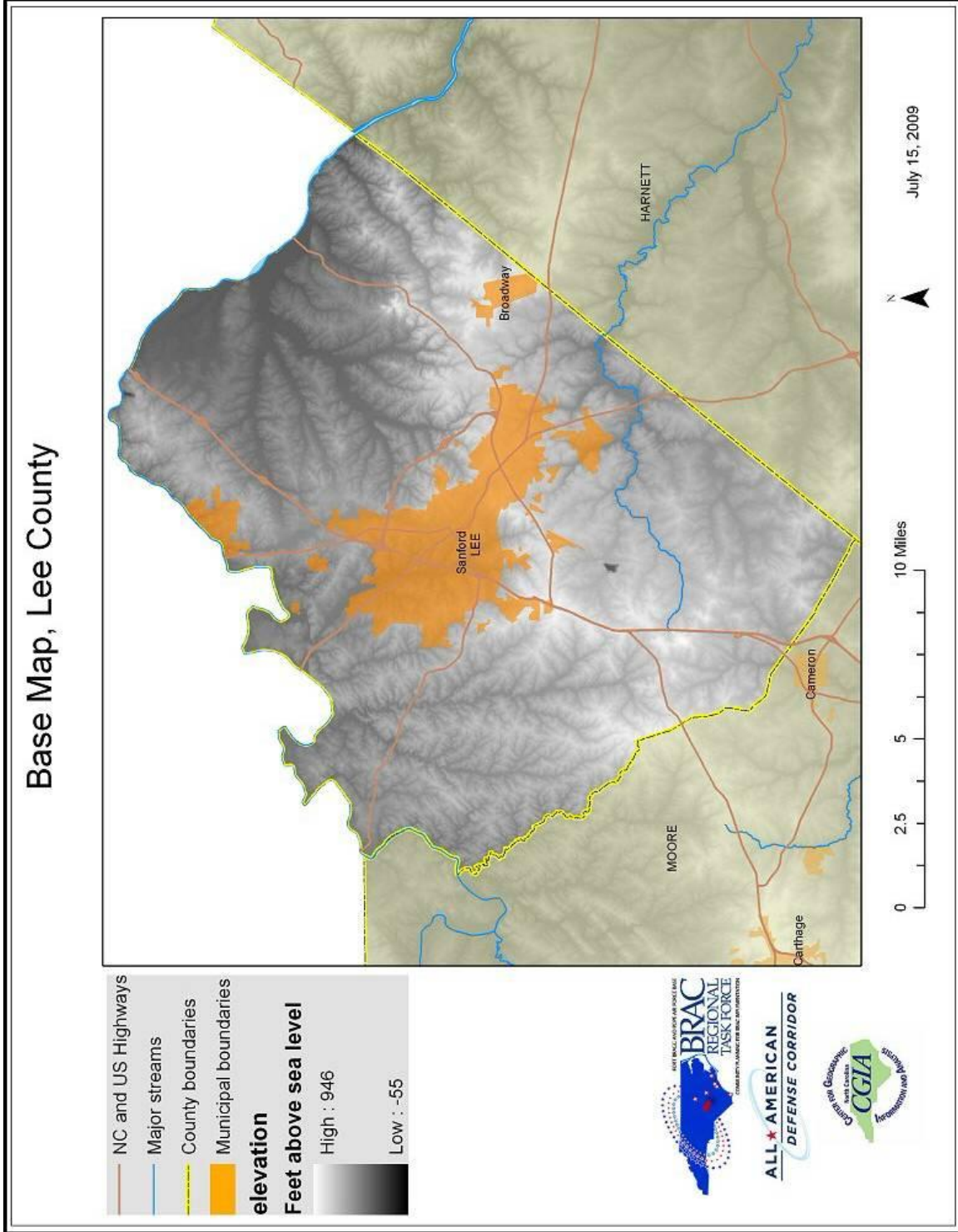


Figure 12. Base Map including Highways, Municipalities and Elevation, Lee County. Sources: N.C. OneMap and N.C. Department of Transportation



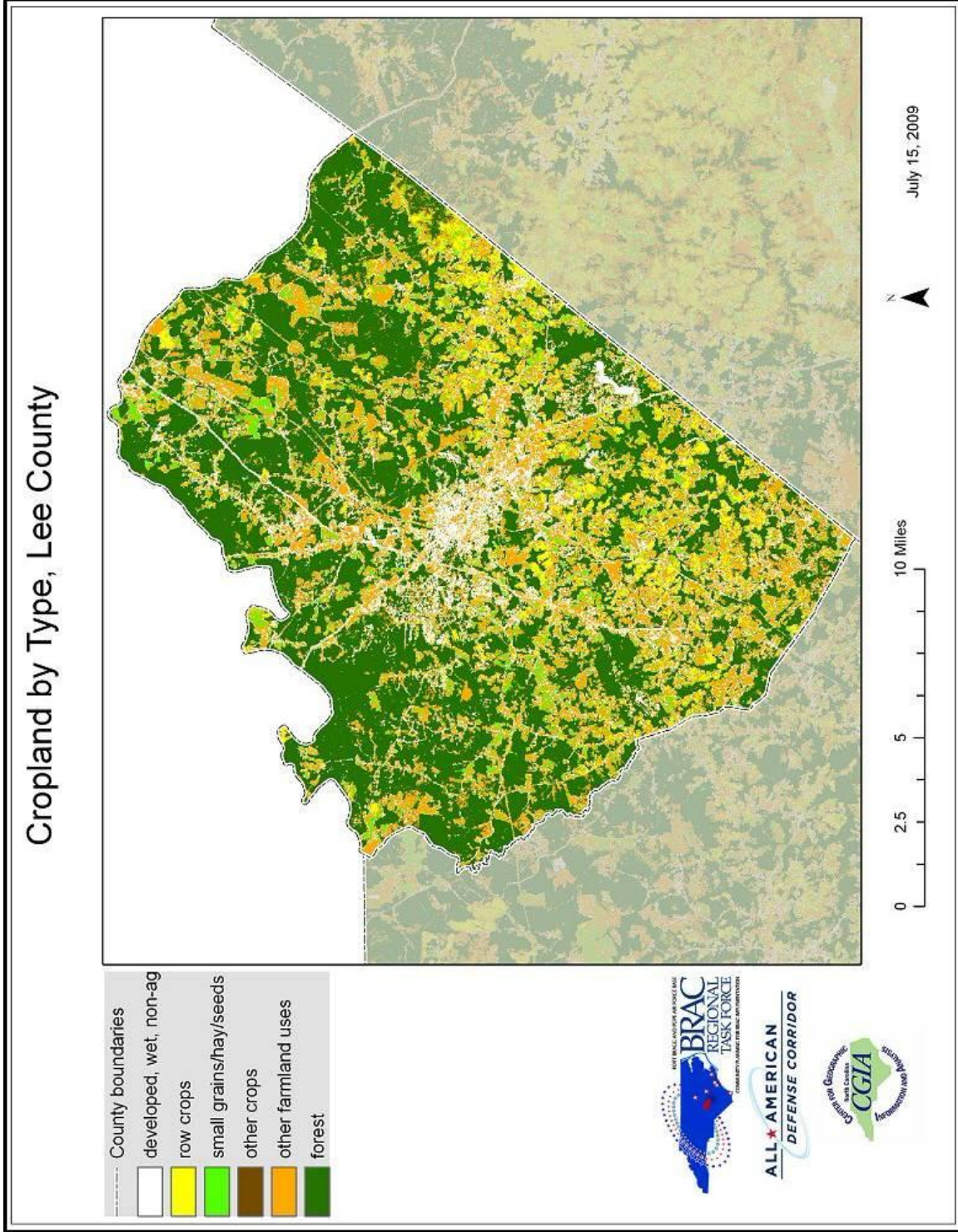


Figure 13. Cropland Type, Lee County. Source: U.S. Department of Agriculture

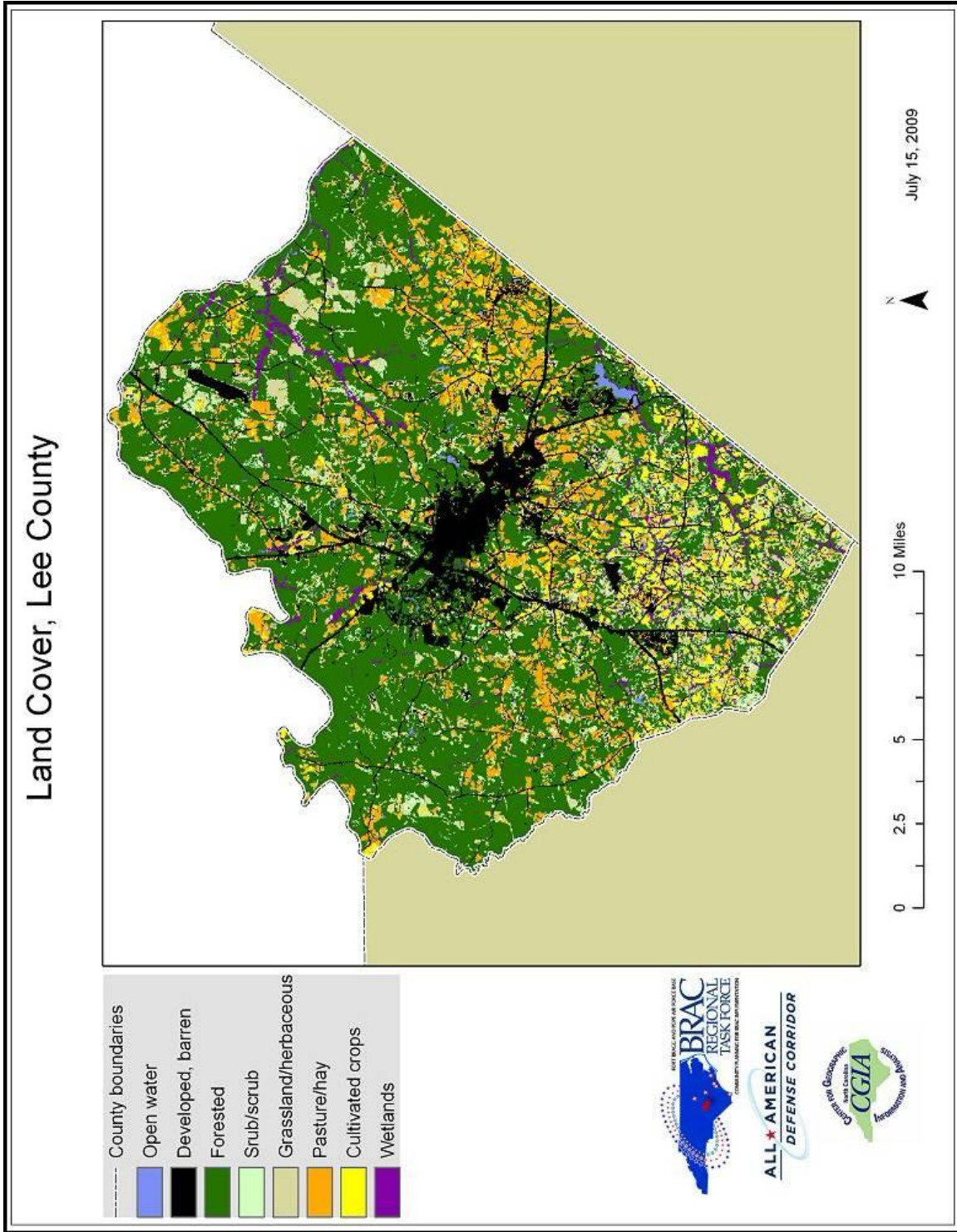


Figure 14. Land Cover by Type, Lee County. Source: U.S. Geological Survey

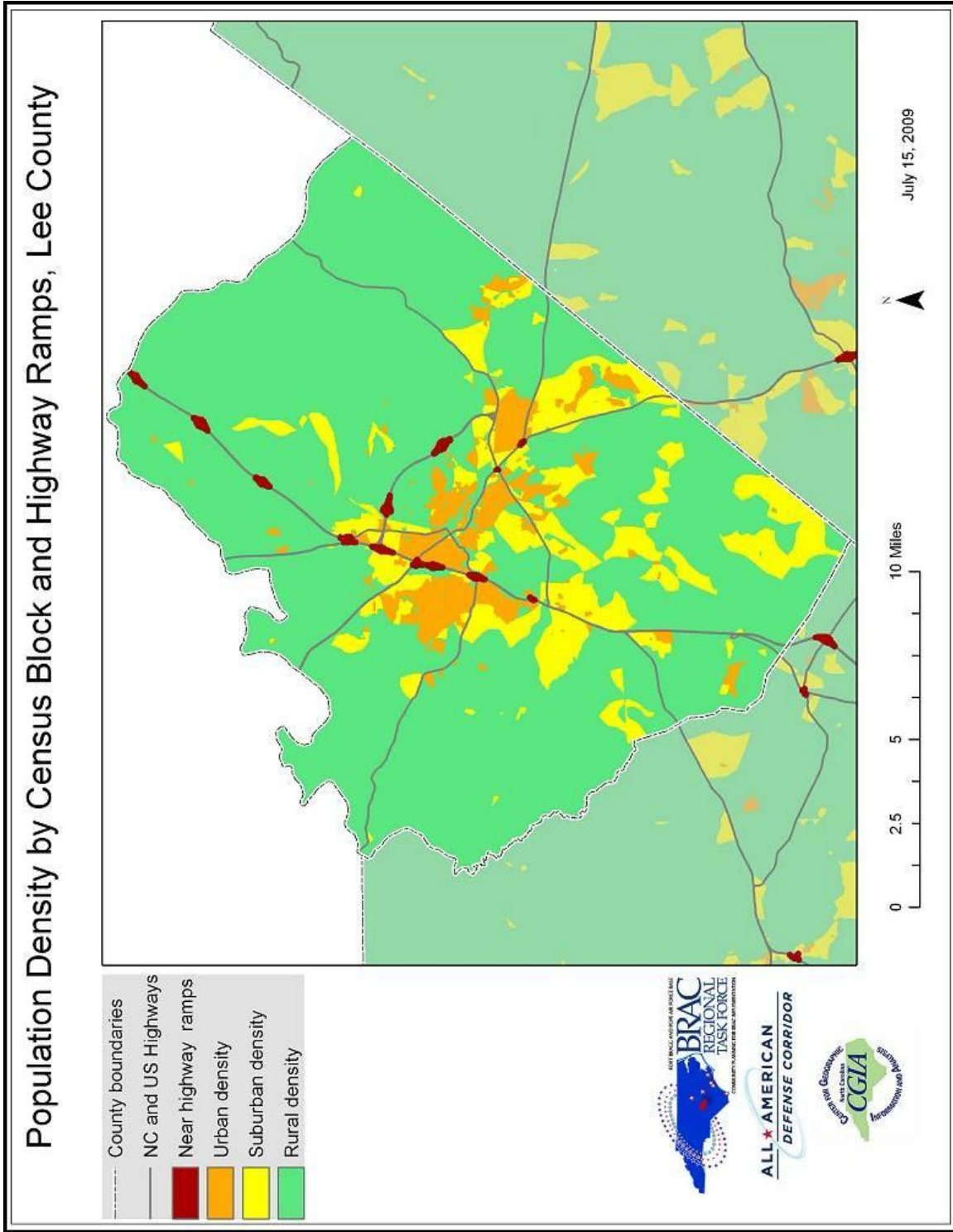


Figure 15. Location Factors for Farmland, Lee County. Sources: N.C. OneMap, Census 2000, and N.C. Department of

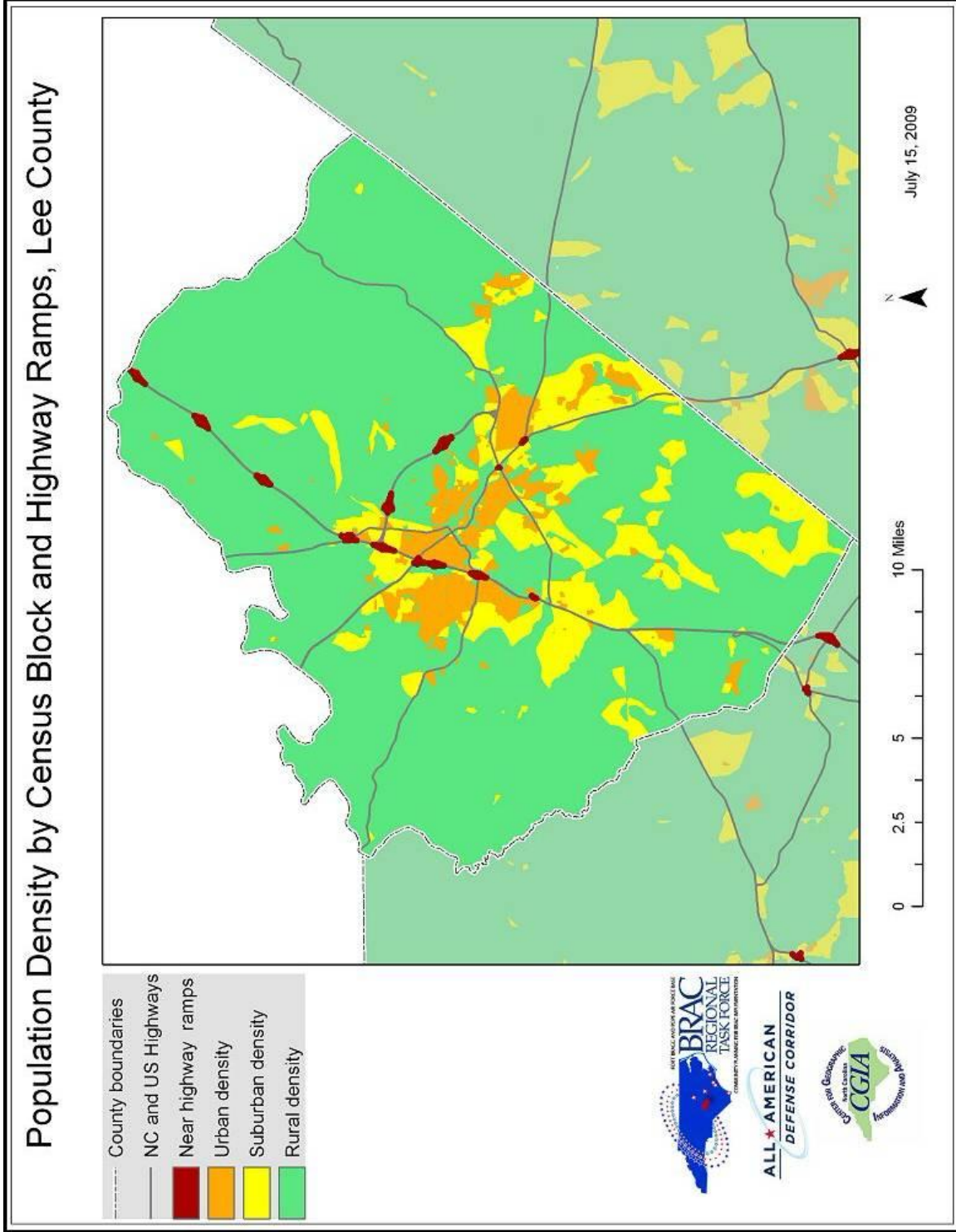


Figure 16. Farmland Viability, Lee County. Source: N.C. Department of Agriculture & Consumer Services

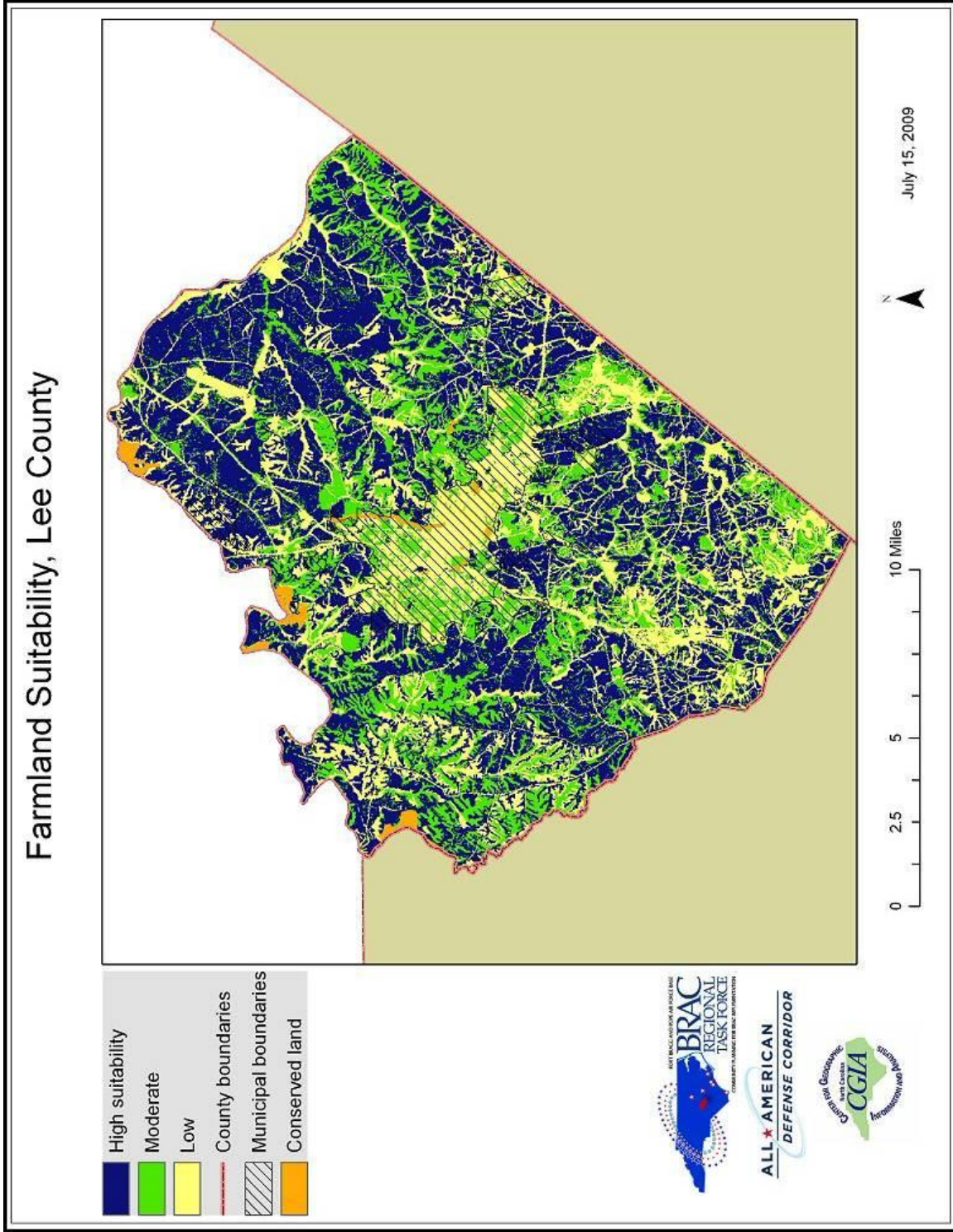


Figure 17. Farmland Suitability, Lee County. Sources: CGIA, Sustainable Sandhills and BRAC Regional Task Force

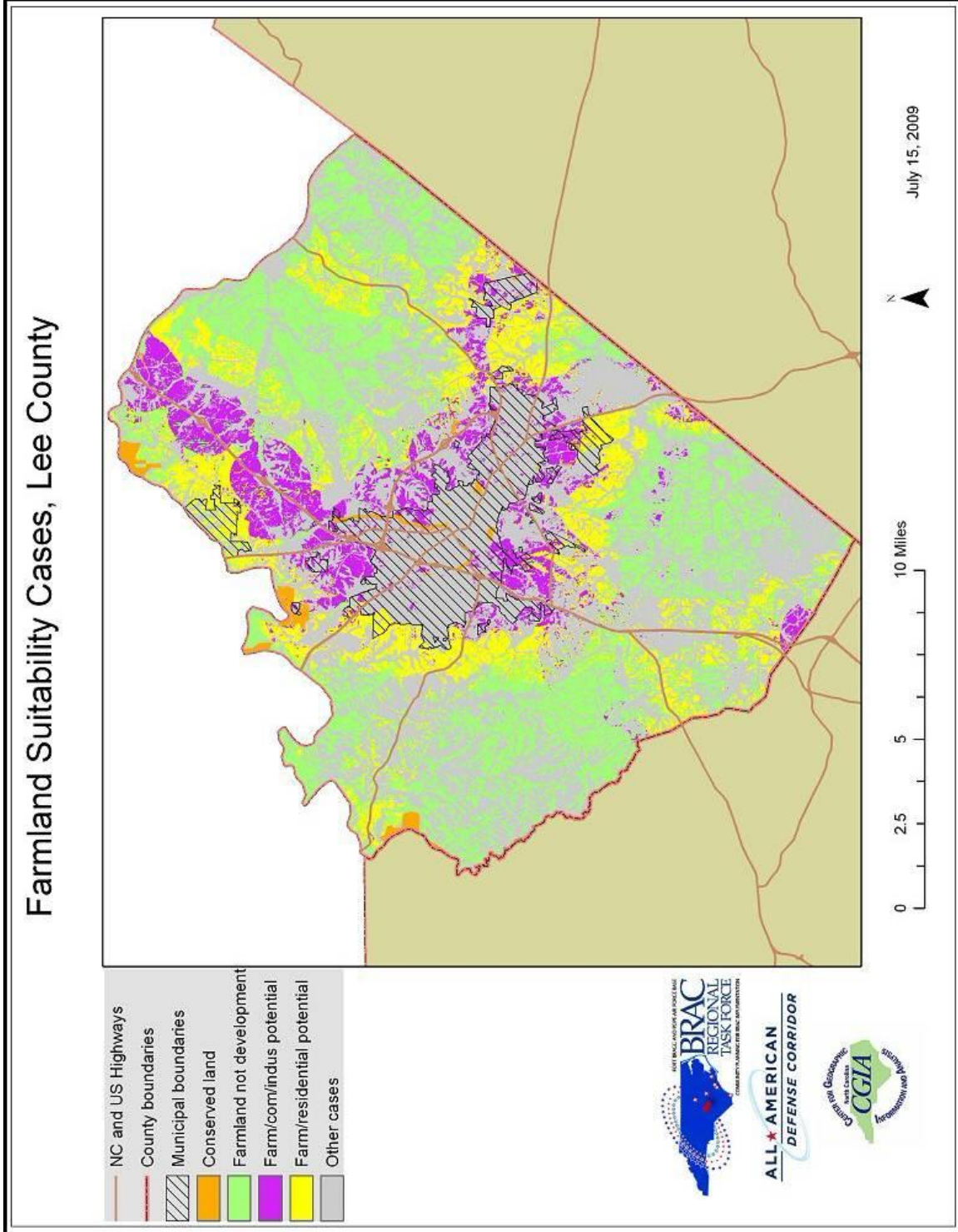


Figure 18. Combination Cases for Farmland and Other Land Use Types, Lee County. Sources: CGIA, Sustainable Sandhills, BRAC Regional Task Force

# Land in Present Use Status by Type, Lee County

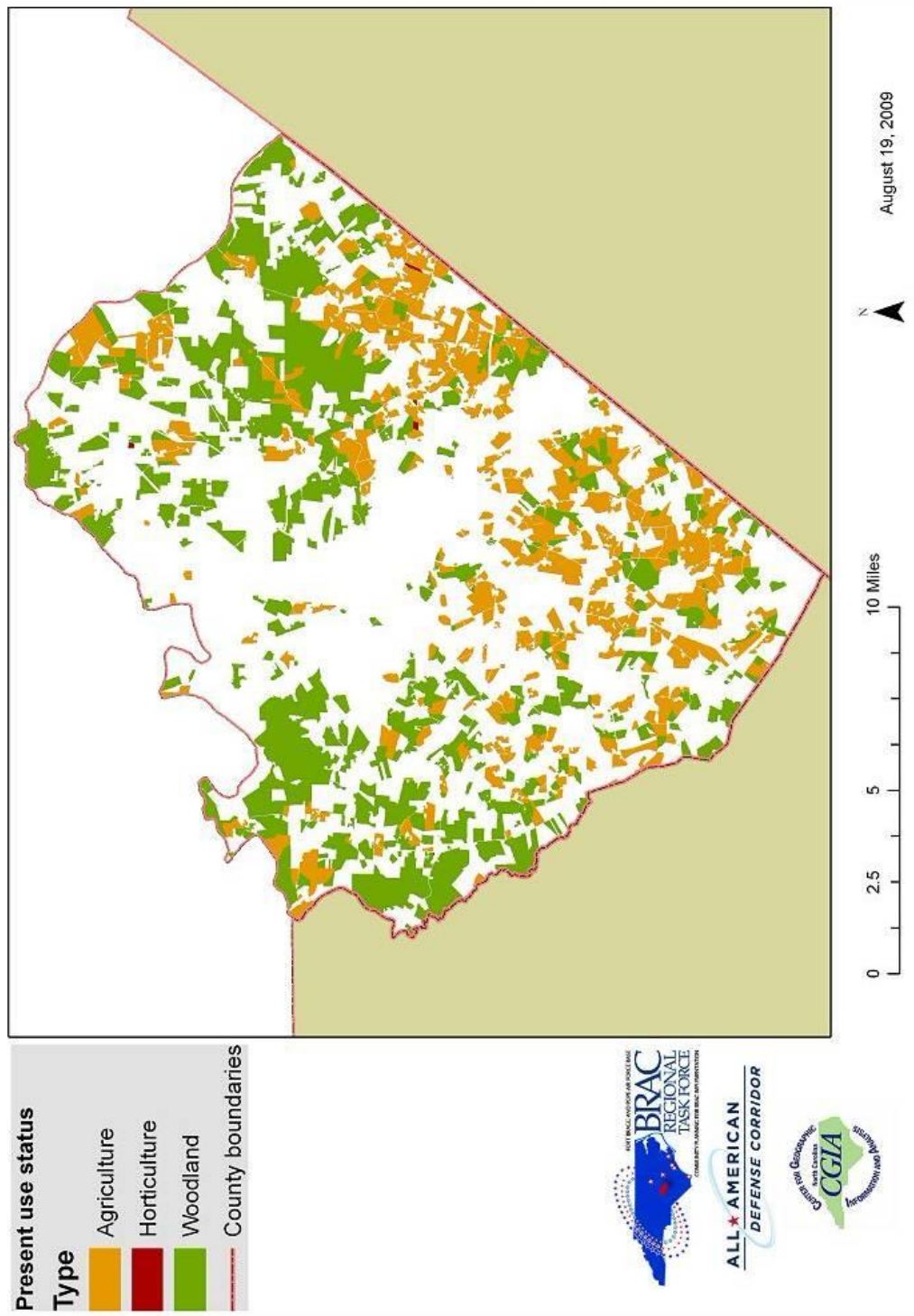


Figure 19. Lee County Parcels with Present Use Value Status by Type. Source: Lee County

# Farmland Suitability on Parcels Not in Present Use Status, Lee County

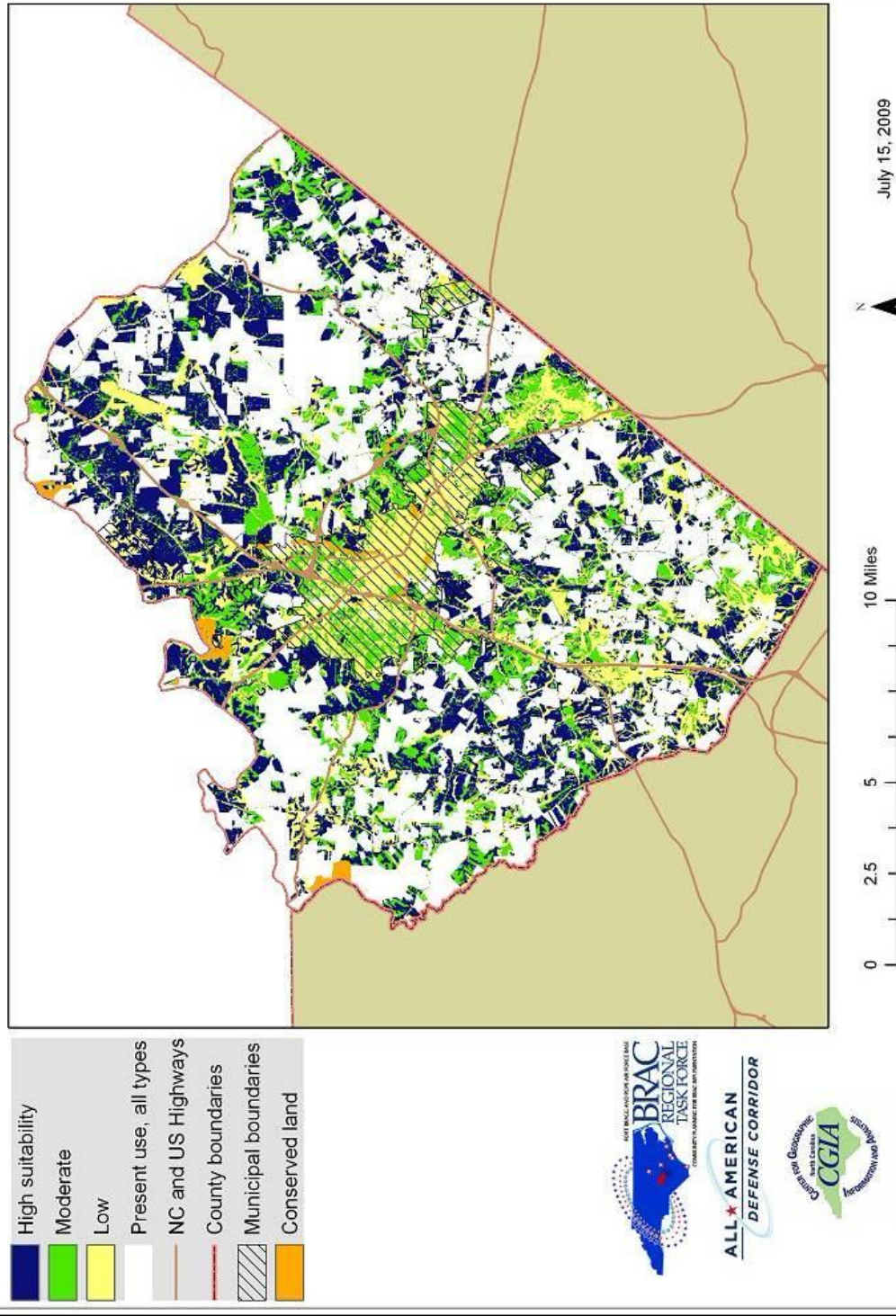


Figure 20. Suitability Ratings in Areas Not in Present Use Tax Status, Lee County. Source: CGIA and Lee County



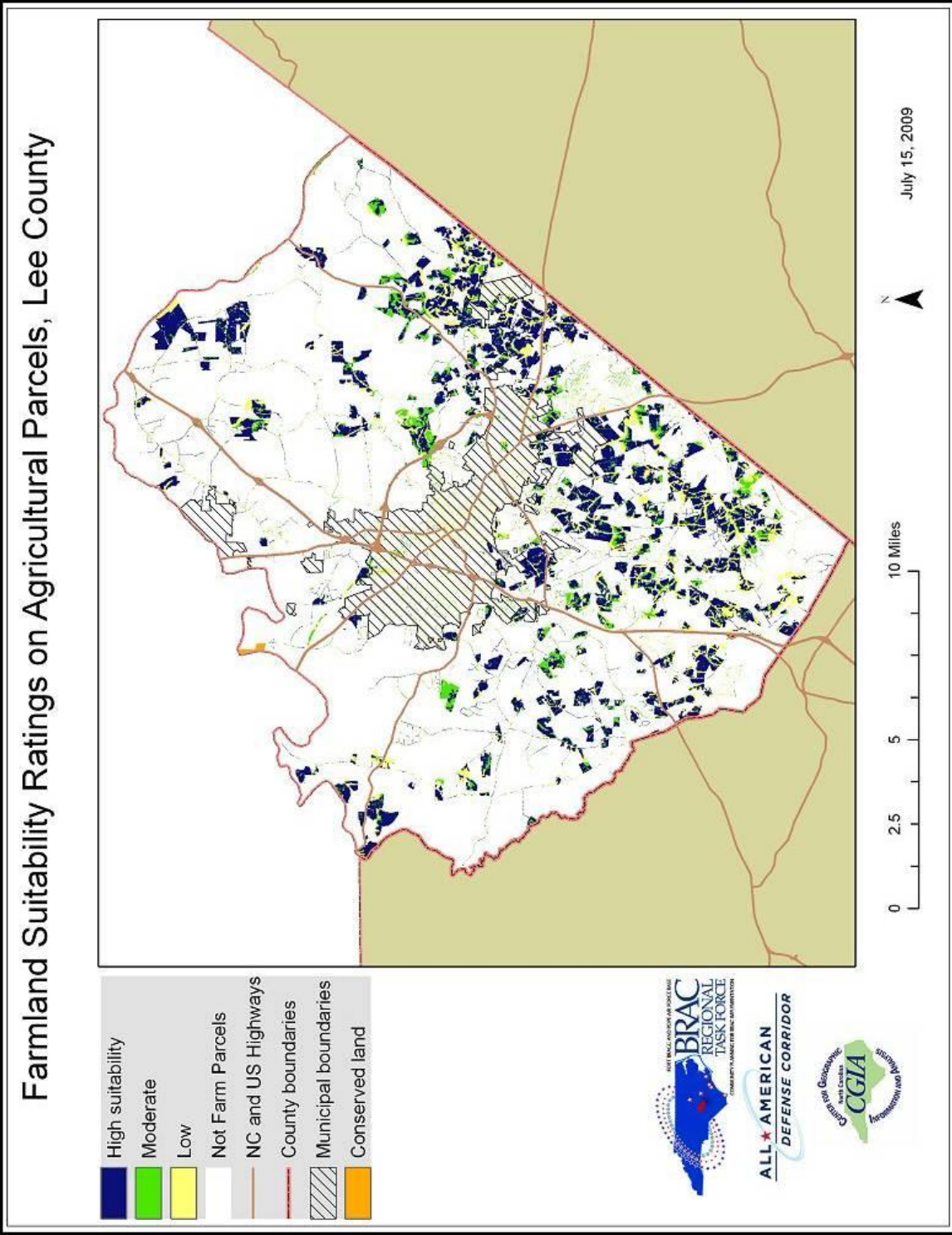


Figure 21. Farmland Suitability Ratings, Farmland Parcels (Present-Use Value) Not Including Woodland Parcels, Lee County. Sources: CGIA and Lee County

# Farmland Suitability Cases on Agricultural Parcels, Lee County

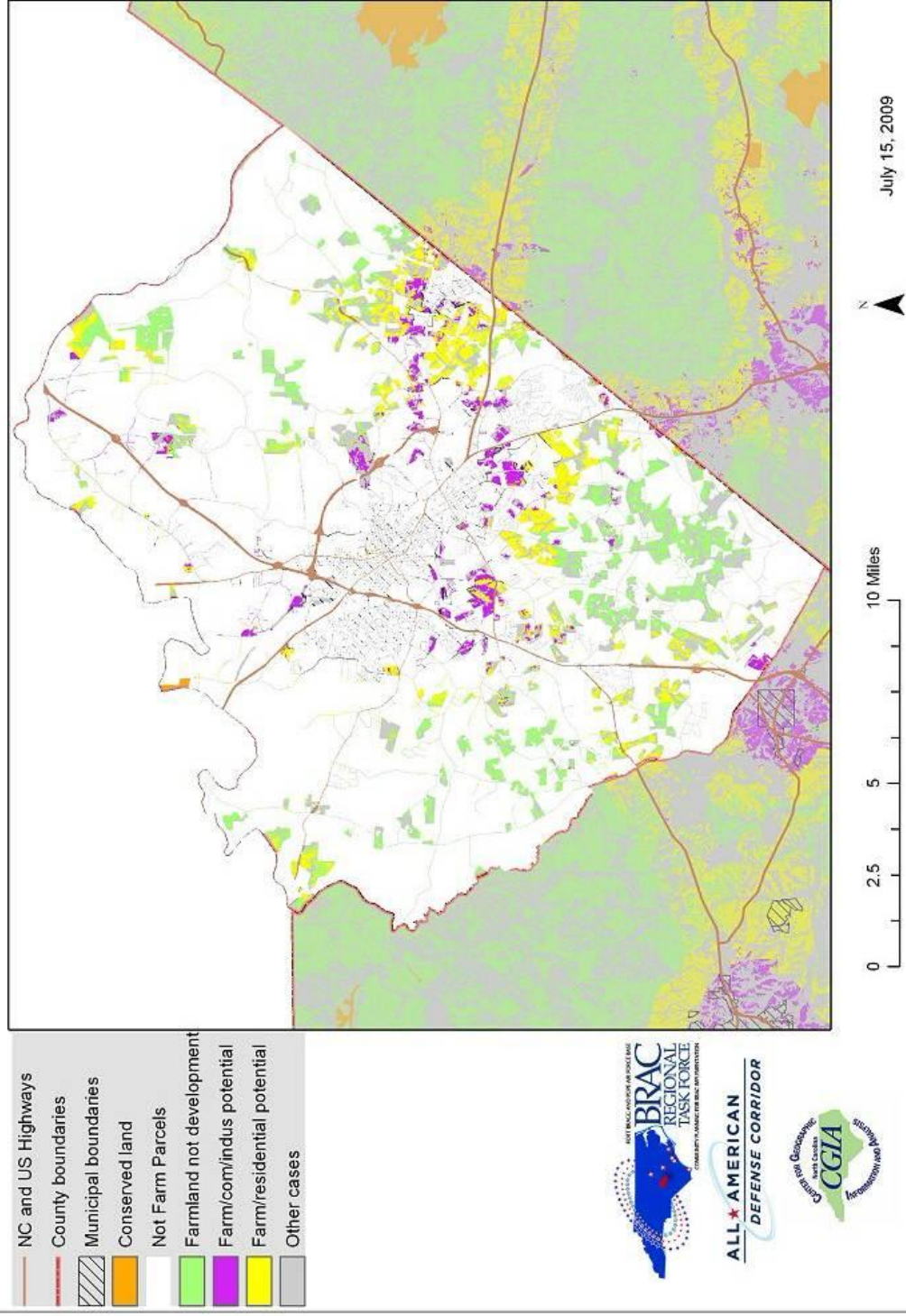


Figure 22. Farmland Suitability Cases for Farm Parcels, Lee County. Source: CGIA and Lee County

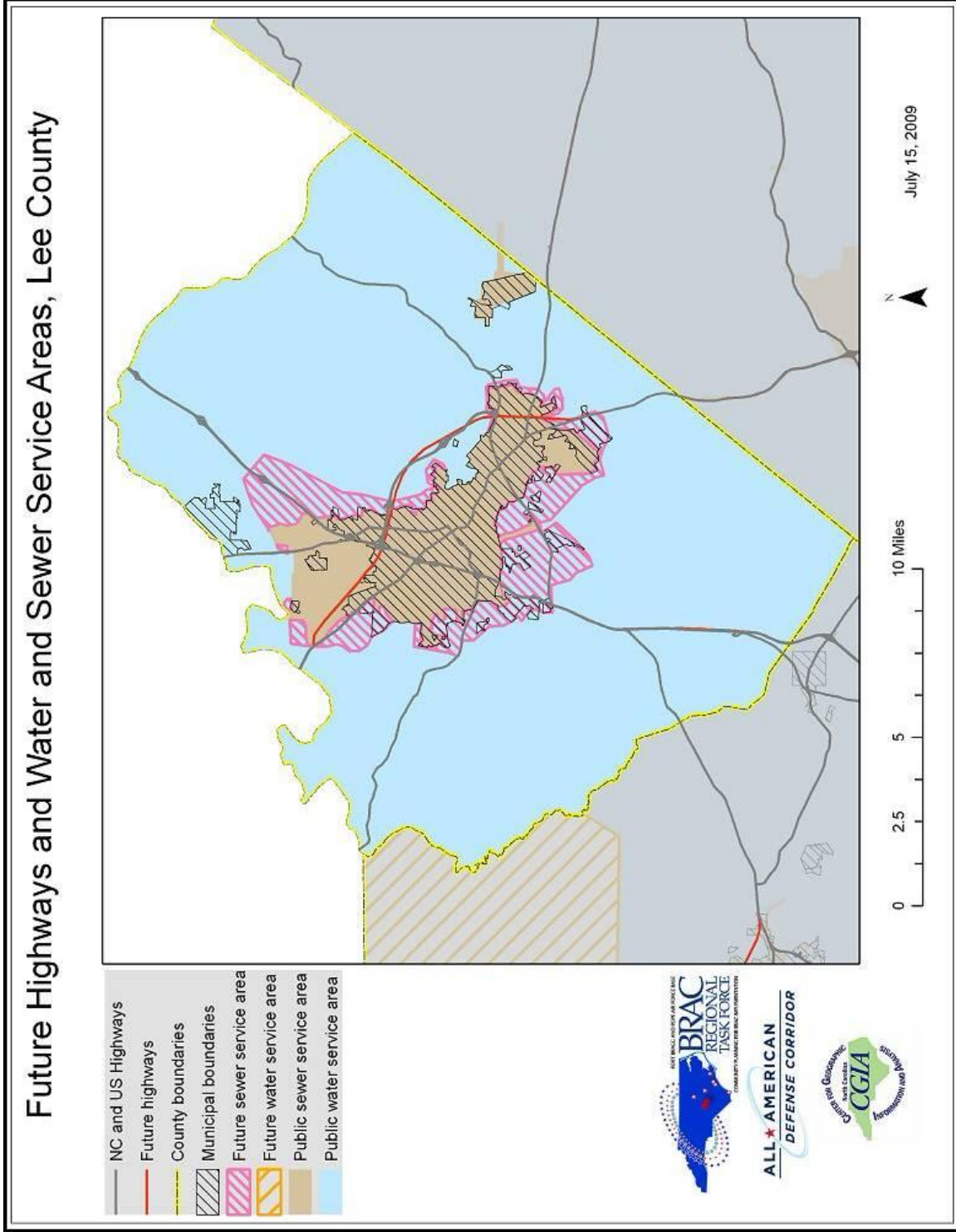


Figure 23. Infrastructure in Lee County. Sources: N.C. Rural Economic Development Center, CGIA, and N.C. Department of Transportation

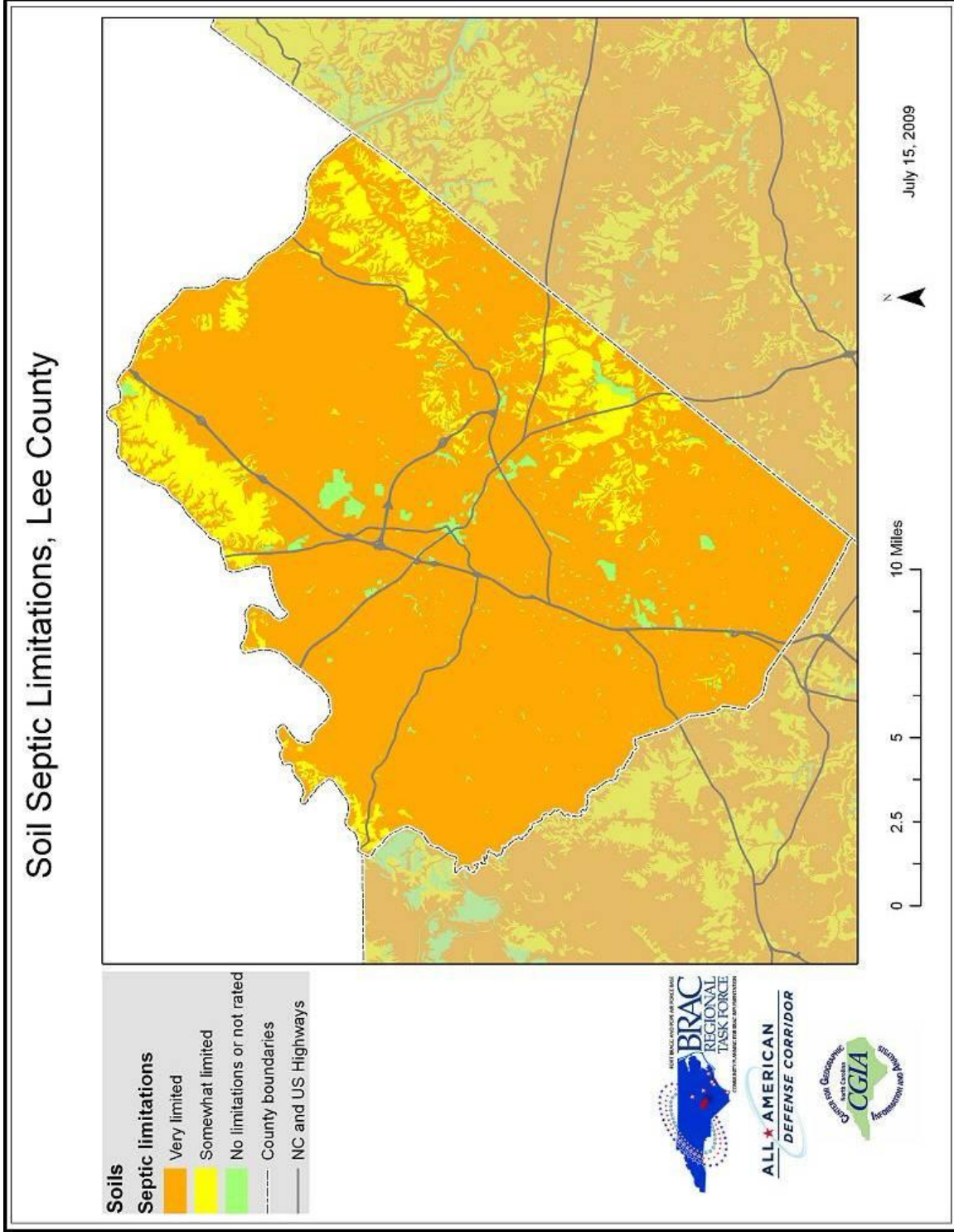


Figure 24. Detailed Soil Survey, Septic Limitations Lee County. Source: Natural Resources Conservation Service

# Working Lands Protection Programs

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## Voluntary Agricultural Districts (VAD)

Established by N.C.G.S. §§ 106-735 through 106-744 and Chapter 153A North Carolina General Statutes and administered at the county level. Voluntary Agricultural Districts are designated areas where commercial agriculture will be encouraged and protected. The purpose of this is to promote agricultural values and the general welfare of the county and, more specifically, to increase identity and pride in the agricultural community and its way of life, and to encourage the economic and financial health of agriculture and forestry. The ordinance provides protection from non-farm development and other negative impacts on properly managed farms.

Lee County adopted its VAD ordinance on September 15, 2008. Its stated purpose is to encourage the preservation and protection of family farms, to increase the visibility of agricultural, forestry and horticultural operations and to protect and to promote these land uses. In addition, the Town of Broadway signed a Memorandum of Understanding with Lee County in April 2009 with a stated purpose:

*...to continue to develop and expand the framework of cooperation between the County and municipality, ...to develop mutually beneficial Voluntary Agricultural District Programs.*

The Lee County Board of Commissioners appointed an Agricultural Advisory Board to implement the VAD Program, which currently has more than 1,600 acres enrolled in Lee County.

Basic requirements of the Lee County VAD are as follows:

- Lee County is divided into seven regions – Pocket, West Sanford, Deep River, Cape Fear, East Sanford, Jonesboro, Greenwood
- To secure county certification as qualifying farmland in a Voluntary Agricultural District (VAD), a farm must:
  - Be participating in the farm present-use-value taxation program established by N.C.G.S. §105-277.2 through §105-277.7, or is otherwise determined by the county to meet all the qualifications of this program set forth in G.S. 105-277.3;
  - Be managed, if highly erodible land exists on the farm, in accordance with the Natural Resources Conservation Service defined erosion-control practices that are addressed to said highly-erodible land; and
  - Be the subject of a conservation agreement, as defined in N.C.G.S. §121-35, between the county and the owner of such land that prohibits non-farm use or development of such land for a period of at least 10 years, except for the

creation of not more than three lots that meet applicable county zoning and subdivision regulations.

- Be located in the unincorporated area of Lee County or in the Broadway town limits as per the MOU signed in April 2009.

In order to implement the purposes stated, the VAD ordinance provides for the creation of voluntary agricultural districts, which meet the following standards:

- The District shall contain a minimum of five contiguous acres of qualified land; and
- All land enrolled in a region shall be part of a single district. If a single farm has acreage in two or more regions, the farm shall participate in the district that the owner designates.

## **Enhanced Voluntary Agricultural Districts**

Established by N.C.G.S §§ 106-743.1 to .5, an Enhanced Voluntary Agricultural District is a VAD formed of one or more farms that are subject to an IRREVOCABLE 10-year agreement to limit development. In return for the condition of irrevocability the landowner receives the added benefits of being able to receive 25 percent of gross revenue from the sale of nonfarm products and still qualify as a bona fide farm, and being eligible to receive up to 90 percent cost-share assistance from the Agricultural Cost Share Program if requested by the Soil and Water District Board. Currently Lee County does not have the Enhanced Voluntary Agricultural District program.

## **Conservation Easements**

A conservation easement is a written agreement between a landowner and a qualified conservation organization or public agency under which the landowner agrees to keep the land available for agriculture and to restrict subdivision, non-farm development and other uses that are incompatible with commercial agriculture.

### ***Basic Requirements:***

- Permanently foregoing the right to subdivide or develop the land being conserved. There will be other limitations on activities to preserve the land's productivity, environmental values and rural character.
- Cash payments in the range of \$20,000 to \$40,000 are needed to cover the costs of the transaction. These costs are for legal services, a survey, an appraisal, long-term stewardship services provided by the conservation partner and other miscellaneous activities. In some cases grant funds will cover these costs.

### ***Other Information***

- A portion of the property can be left out of the easement, thereby providing an area for future homes and other non-farm activities.
- Agricultural activities including forestry are allowed under the agreement.
- Despite the term "easement," access to the public is not provided by the agreement.

- The value of a conservation easement is determined by a licensed land appraiser and is typically between 25 percent and 75 percent of the land's market value.
- A periodic inspection of the property is required to ensure that development does not occur. This provision will be included in the agreement.
- The agreement is recorded on the county's land records and runs with the title. All future landowners must comply with the terms and conditions of the agreement.

### *Financial Benefits*

- If the conservation easement is donated then the landowner will likely qualify for a federal income tax deduction and a state income tax credit. The value of these benefits depends on the appraised value of the easement and the income tax situation of the landowner.
- A conservation easement can also be sold by the landowner through a transaction commonly referred to as a Purchase of Development Rights (PDR) or Purchase of Agricultural Conservation Easement (PACE). Funds to purchase a conservation easement can be raised from private and government sources. North Carolina and the federal government have programs to purchase agricultural conservation easements. Funding through these programs is very competitive and will generally amount to a percentage of the easement's value. The tax benefits described above can be claimed for any of the easement's value above the purchase price.

## **Term Conservation Easements**

Also called Agricultural Agreements, these agreements are similar to conservation easements, but apply for a finite period of time agreed to by the landowner and conservation partner.

## **N.C. Agricultural Development and Farmland Preservation Trust Fund**

N.C.G.S. § 106-744(c) established a trust fund to be administered by the commissioner of agriculture. The purpose of the trust fund is to provide monies to purchase agricultural conservation easements and to fund programs that promote the development and sustainability of farming, and the transition of existing farms to new farm families. Counties and nonprofit conservation organizations can apply for grants for these purposes. The General Assembly appropriated \$8 million to the trust fund for the 2008 fiscal year and \$4 million for the 2009 fiscal year. (John Bonham, Hoke County 2009)

## **State Right-to-Farm Law**

By statute, North Carolina farmers are granted the right to farm without legal interference from non-farm neighbors and local governing bodies, subject to certain limitations. Pre-litigation mediation of farm nuisance claims is mandatory. This law applies only to nuisance actions. It does not apply to other types of legal action.

## **Present Use Value Property Tax**

Working farms, forests and horticultural lands by state statute are afforded a property tax assessment based on their agricultural working value, as opposed to the value of their land for industrial or residential development. Agricultural land must be actively engaged in the commercial production or growing of crops, plants or animals and under a sound management program. Ten acres must be under cultivation and have produced an average gross income of at least \$1,000 in the last three years. Forest land must be actively engaged in growing trees under a sound management program and consist of 20 acres. There are no income requirements for forest land. Horticultural land must be actively engaged in production or growing of fruits and vegetables or floral production. At least five acres must be in actual production and produced an average gross income of \$1,000 for the past three years. This tax deferred program affords landowners some amount of cost control that would otherwise limit their ability to farm profitably. Present Use Value information can be obtained from the Lee County Tax Office or N.C. Cooperative Extension, Lee County.

## **Transfer of Development Rights**

A program set up by local units of governments that utilize conservation easements to preserve farmland by providing incentives to increase development density in designated area. The program identifies the “sending area” where conservation is being encouraged and the “receiving area” where development is preferred. A landowner in the receiving area can purchase a conservation easement on a property in the sending area and receive additional density allowances. In North Carolina counties must receive authorization from the General Assembly to develop and implement a TDR program. However, no general TDR program exists in North Carolina.

## **Farm Transition Planning**

Making careful plans for the transfer of ownership of farm property and assets from the current owner to the next can be enough to preserve a farm for decades. Many options are available when planning an estate or land transfer. Farm owners can increase the likelihood of a successful transition that maintains the viability of the farm by obtaining professional assistance early in the process. The need exists to provide educational and technical resources to professionals and landowners as they continue to age and indicate a lack of transition and estate planning efforts.



# Challenges and Opportunities: Survey and Interview Results

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Surveys and interviews were conducted with Lee County farmers, agribusinesses and non-farm residents to identify challenges and issues facing agriculture. The surveys were conducted in the late winter and early spring 2009 to collect data and opinions on Lee County agriculture. The survey instruments were dispersed by the Lee County Working Lands Protection Plan (WLPP) team members in paper format and via on-line versions to target audiences.

In addition to the distribution of surveys, personal interviews were conducted. These interviews were directed to key members of the community in all three target groups. A summary of survey/interview results serve to identify specific challenges identified and to reveal opportunities that these challenges afford for the future of agriculture in Lee County.

## **Agribusiness Analysis**

The majority of agribusiness respondents (67 percent) have operated their current agribusiness for more than 20 years, and most were located in the Sanford area of the county. The range of business types represented through the surveys and interviews included equipment dealers, equipment repair and parts, agricultural consultants, farm supply, agricultural chemical dealers, as well as processors and distributors.

Of the businesses that responded, 50 percent denoted that the majority of their business came from Lee County farmers (Figure 25) with less than 25 percent of all business reported coming from outside of the county.

Agribusinesses in Lee County also indicated that they, for the most part, had either remained the same in size or actually had increased in size over the last five-year period. When asked about future trends with regard to business growth or market share, the outlook was comparably optimistic for the future (Figure 26) with the majority of businesses indicating they would add new product lines for both farmers and non-farmers to acquire this added market share.

Business owners were asked to identify trends in agriculture that they noted in Lee County. Primary trends identified were the diversification of farming operations with increased utility of specialty and direct market options. Much of this was believed to be as a result of increased regulations on animal operations, commodity program changes, commodity pricing and an interest in local foods. These changes and trends were noted as opportunities not only for farmers but for local businesses as well.

In order to adequately prepare Lee County agriculture producers and businesses for these opportunities, business owners felt that a number of training and education

opportunities existed within the county. Figure 27 represents the types of information that is needed to assist farmers in development of products and markets. Notably, business owners felt it important to educate both youth and non-farm residents about the impact of agriculture to the county and the opportunities that agriculture affords its residents.

Agribusiness owners were asked what government support or program/ policy issues they felt were important to the sustained viability of both their enterprises and agricultural producers. The issue designated as the most important by 100 percent of respondents was to evaluate and consider the impact of capital gains and estate tax reform. This concern is directly related to the continued viability of the farmer and the farming community. The transition of farms and associated businesses to the next generation of farmers relies heavily on these reforms and actions which can afford continuation of these operations without penalty or dissolution as a result of taxation. Both income tax reform and present use tax valuation were noted to be of equivalent importance to respondents as well as concern over the value and availability of land for agricultural production. All levels of government are seen to play a role in these policy determinations, and thereby the opportunities exist for the agricultural community to make these concerns known to local leadership and to utilize this voice to impact state and national policy.

In addition, information on risk management, estate planning, and market development were felt to be very important to business owners responding to the survey. These topics offer opportunity for training of this audience and should be explored as programming potential for appropriate agencies within the county. Technical training in nutrient management, environmental management and best management practices were also denoted to be of interest to survey respondents.

When asked if agribusiness owners supported local government funding for Farmland Preservation, 100 percent responded that they did support use of local funds to support efforts to assist in the preservation of farms and forests.

Additional opportunities that business owners felt should be pursued were:

- Target agriculture with economic development and marketing initiatives, including agricultural tourism development.
- Provide farmers, forest landowners and agribusiness investors with business planning and market development assistance.
- Develop programs to encourage county agencies and leaders to promote local agribusinesses and to purchase locally grown products.
- Foster greater recognition and public support for agriculture and forestry by educating the public on the economic, community and environmental benefits of farming and forestry.

Agribusiness leaders clearly realize the importance of a viable agricultural sector in Lee County to the economy, environment and general well-being of all citizens. There is support for government funding of farmland preservation tools and programs.

Marketing, consumer awareness and education were viewed as key tools to preserve and enhance agriculture for the future. Educational programs need to be developed to engage youth in agricultural careers, either in production or processing. Agricultural business leaders also recognize the need to reestablish political ties on all levels of government. Politicians need to be educated on the importance of agriculture and programs that will continue to help agricultural retention and expansion.

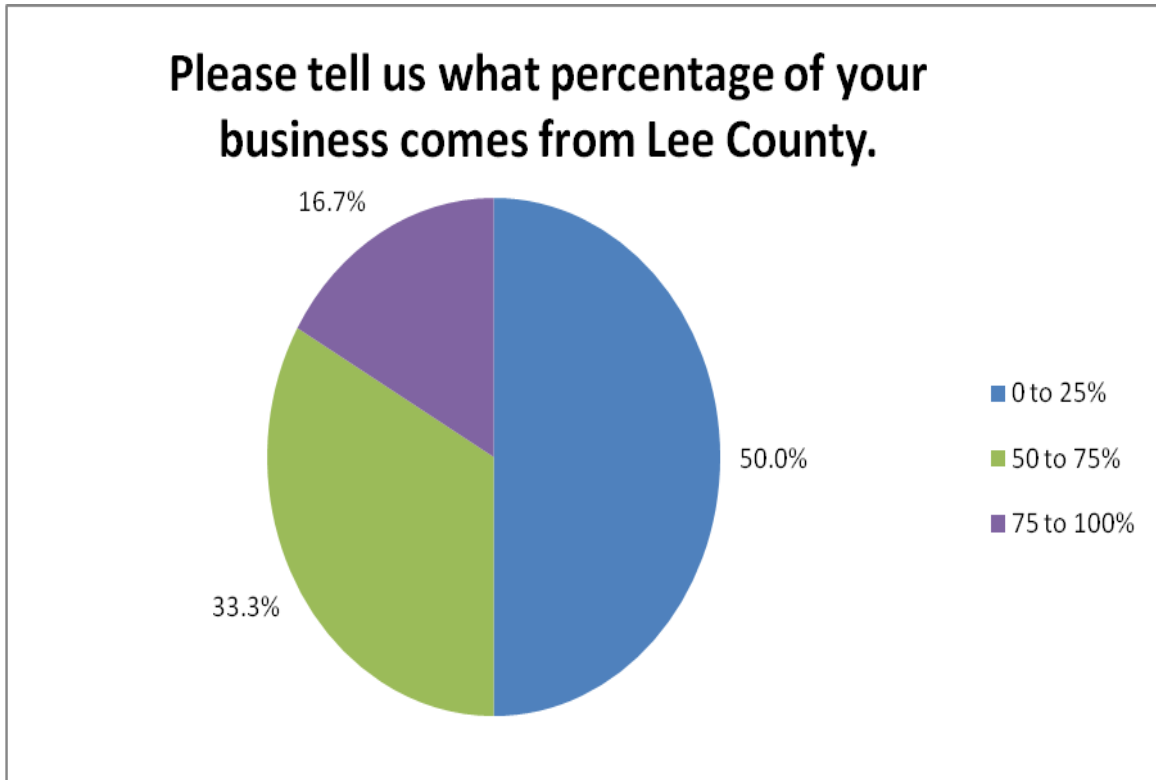


Figure 25. Lee County Agribusiness Survey

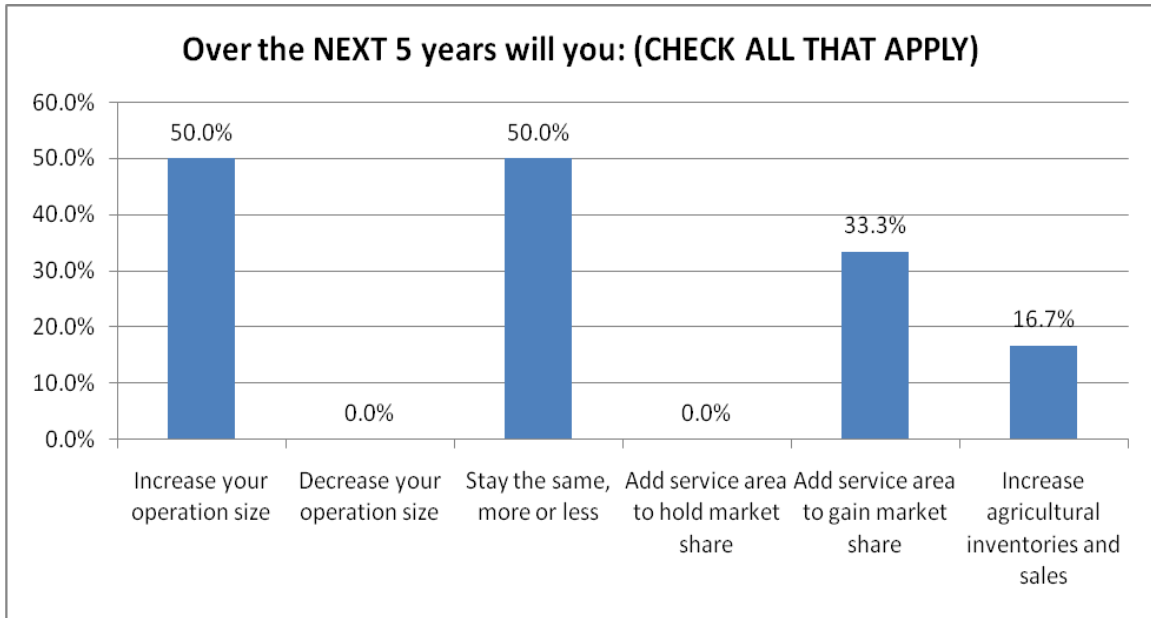


Figure 26. Lee County Agribusiness Survey

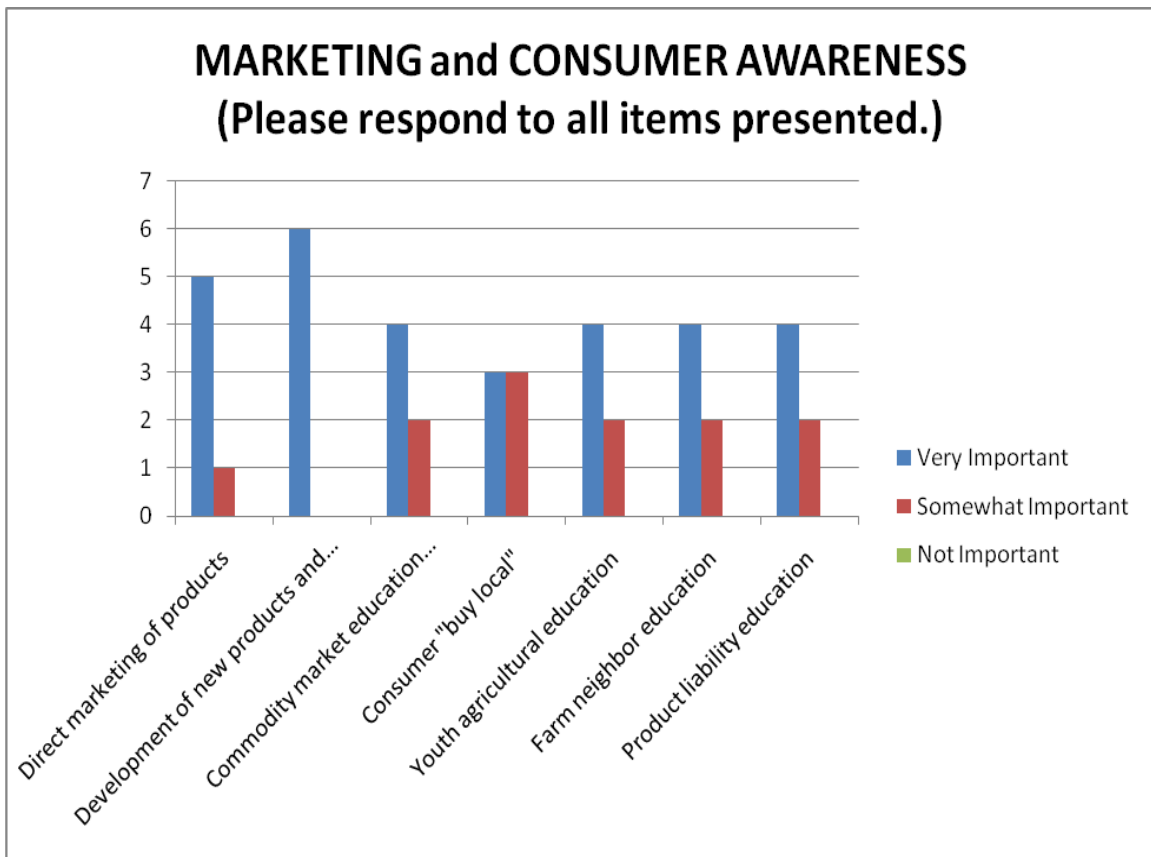


Figure 27. Lee County Agribusiness Survey

## **Agricultural Producer Analysis**

Agricultural producers that responded to the surveys represented the eight townships and two cities in Lee County. The average age of farmers surveyed was 59 years, which is slightly older than the state average age of 57 as reported in the USDA 2007 Census of Agriculture. Total acres farmed by respondents were 7,200 acres with almost half of this acreage farmed outside the county. The vast majority of acreage (89 percent) is owned by the farmers with the remaining percentage leased. Only 28 acres of land represented is enrolled in the VAD program in Lee County.

Crops grown by respondents were primarily row crops with soybeans, small grains and corn for grain grown by the largest percentage of farmers (53 percent). However, 20 percent of respondents grew tobacco, 27 percent grew vegetables, 33 percent produced hay. A small percentage grow other crops including tree fruits and small fruits.

Respondents also represented the livestock industry, including beef cattle and broiler producers. Fifty-three percent of those that responded own and manage land for timber production, which is a good representation of the large forest industry in the county and shows the diversification that landowners and producers seek to maintain income on their lands.

Sixty-two percent of the surveyed farmers indicated that they sell directly to consumers through a variety of marketing channels, and 44 percent indicated they use brokers, dealers or third-party entities for products sold.

Seventy-eight percent of the surveyed farmers indicated that only up to 25 percent of their household income is from the farm. A large percentage of the farmers surveyed were part-time farmers, and only 12 percent of the respondents were full-time farmers. Of those designated as part-time farmers, Figure 28 indicated the vast majority of their income comes from direct market sales.

Sixty-seven percent of farmers surveyed indicated that they had been farming for 20 or more years and 72 percent responded that they expect to be farming for an additional 10 years or more. When asked what they intend to do with their farm or land upon retirement, 69 percent indicated that they would either sell the farm/land to other farmers or transfer to a family member to farm.

Areas of interest expressed by farmers for consideration of program and/or policy reform included income tax reform (72 percent), capital gains and estate tax reform (89 percent), present use value and taxation (89 percent) and estate planning for farm transition (83 percent).

Anticipated longevity of farming operations and the intent to retain much of the current farm and forest land as working lands affords additional opportunity to explore enrollment in VAD and EVAD programs and development of farm transition and estate planning trainings. Encouragement and training of farmers to become active and educate local leaders on the impact of tax reform on the farming community should also be pursued.

While most farmers surveyed had knowledge of numerous programs including the EVAD program, ADFP Trust Fund, present use tax valuation and others, only one producer had land entered into the Lee County VAD program. This indicates an opportunity for enrollment of other producers in the county.

Another opportunity for farmers to explore as alternative income may be the use of land for recreational purposes. None of the respondents currently used land for applications other than farming. With landowners, this might create an avenue for additional income through hunting leases and other recreational activities.

Farmers in Lee County also reported few conflicts related to their farming operation and neighbors (Figure 30). Of the 19 percent that reported problems, all stated that the issues were associated with trespass or trash dumped on farm properties. No complaints were associated with their farming activities.

When asked to assess the support of agriculture by local government on issues related to keeping taxes reasonable, protecting rights to farm, planning and zoning, and provision of services, farmers reported that local government support ranged from somewhat supportive to not supportive.

This indicates a need for farmers to work with local officials to better educate them as to the impact of policy on agriculture in the county. Seventy-five percent also indicated they would support local government funding of farmland preservation, which is in keeping with the sentiments of agribusiness owners in the county.

Training and education not only of the farming community but also of all residents of the county, were listed as important areas for education. Opportunities for training of farmers included:

- Training on small woodlot management, pesticide management, nutrient management and organic farming opportunities
- Assistance with tax incentives for new agribusiness ventures and business planning assistance
- Additional promotion of agritourism in Lee County and increased opportunities of local product marketing, direct marketing and development of niche markets.

Producers were also asked to identify programs and issues that they felt would be important to ensure continued viability and profitability in their farming operations.

Responses included:

- Majority believed conservation cost share programs (72 percent), right to farm (71 percent) and farm/land values (89 percent) were very important to continued profitability
- Majority believed environmental issues such as water-use restrictions (71 percent) and soil regulations (64 percent) were going to be essential to land and natural resource access in the future.

- Farmers rated youth agricultural education (66 percent) and farm neighbor education (72 percent) as the top two marketing and consumer awareness programs that need to be employed in the county.
- Seventy-eight percent of producers felt there is a need for additional buying cooperatives, and 72 percent felt there is a need for additional selling cooperatives for farmers.

Lee County farmers are acutely aware of the many issues facing them now and in the future. An aging farm population indicates that farm transition and transfer will take place over the next 20 years, and with fewer younger farmers available to take over production on these farms, many farms may fall out of production, which could result in land being divided and sold through estate settlement processes. Additionally, generations of farming expertise may be lost. This is an invaluable asset to the local agricultural economy.

Low commodity prices coupled with the rising cost of production have resulted in low profitability and inadequate farm income for farmers across North Carolina. This affects the farmer's cash flow, receivables, return on investment and incentive and ability to invest in continued operations. These factors may make a farmer's ability to hold on to his or her business untenable in the future. Lee County farmers have identified low prices as well as the high costs of taxes, labor, regulatory compliance requirements and utility expenses as additional factors affecting their bottom line.

Numerous opportunities have been identified by Lee County farmers to assist in the preservation of working farms, but local leadership and agencies must be engaged to successfully provide for the needs of the farmers. Efforts to address these challenges and opportunities must be pursued and should include:

- Support of farm operations and the right to farm to ensure farmers have a supportive business environment.
- Development of policies and ordinances that encourage agriculture and do not inhibit or discourage farming and forestry operations.
- Increase non-farmer neighbor awareness of farm and forest practices and issues through education and increased VAD enrollment.
- Continued support of existing programs that reward farm and forest practices that maintain and improve water, air and wildlife habitat quality.
- Development and support of educational programs for young people and young farmers on agriculture and farming opportunities.
- Development and expansion of direct marketing campaigns.
- Development of small woodlot management organization and encourage the adoption of forest management plans aimed at maximizing income.
- Working with farm transition organizations or developing local programs to develop the farm management capacity of young farmers.

- Provision of business plans for farmers who want to phase out tobacco to food crops or other new business ventures.
- Increasing farmer and forest landowner knowledge of funding opportunities with Golden Leaf Foundation, NCDA's ADFP Trust Fund, Tobacco Trust Fund and other funding sources through awareness and educational programs.
- Educating local government and landowners on planning techniques and tools that reduce pressures on farming and forest operations.
- Promoting locally grown produce. Identify peak times for specific products and advertise to local residents and encourage local agencies and institutions to use local products. (NCDA's Farm Fresh, the SLOW Food Movement, Community Supported Agriculture)
- Diversifying the agricultural production base through research into new commodities that can be grown in Lee County.
- Facilitating private investment of capital in the local agriculture industry.
- Providing farmers, forest landowners and agribusiness investors with business planning and development assistance.
- Providing farmers and landowners with the knowledge and resources needed to make informed decisions about leasing their land for gas exploration and production, which may or may not disqualify their land from participating in the present-use value program.

Major implications drawn from the survey and interview data indicated that Lee County farmers need an array of training and educational sessions to maintain and expand their operations. They need assistance from government at all levels to preserve and promote agriculture as an economic engine in Lee County. Farmers need additional education and information about the value of voluntary agriculture districts, tax credits, farm transition procedures, small woodlot management, water and soil, pesticide management and diversified farming opportunities. Farmers indicated a need for additional education on farmland preservation tools, tax credits and available grants. With the average age of farmers at 56 in Lee County (2007 U.S. Census of Agriculture), there are dire needs for education and awareness of farm transition options, estate planning and taxation. Farmers also indicated an additional need for training on value-added enterprises that will generate additional revenue for the farm such as agricultural tourism, recreation and new crop options.



### What percentage of your farm income comes from retail sales or other direct marketing?

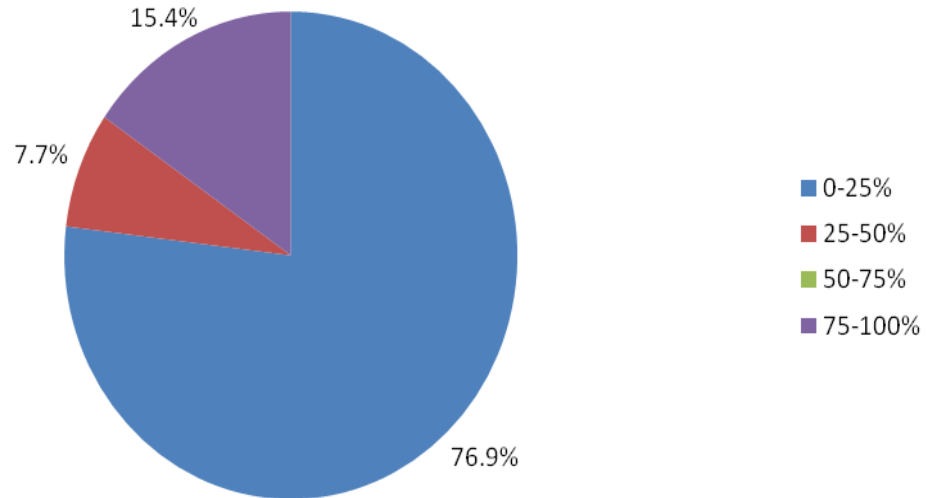


Figure 28. Lee County Producer Survey

### If you retire, what do you expect to do with your farm/land?

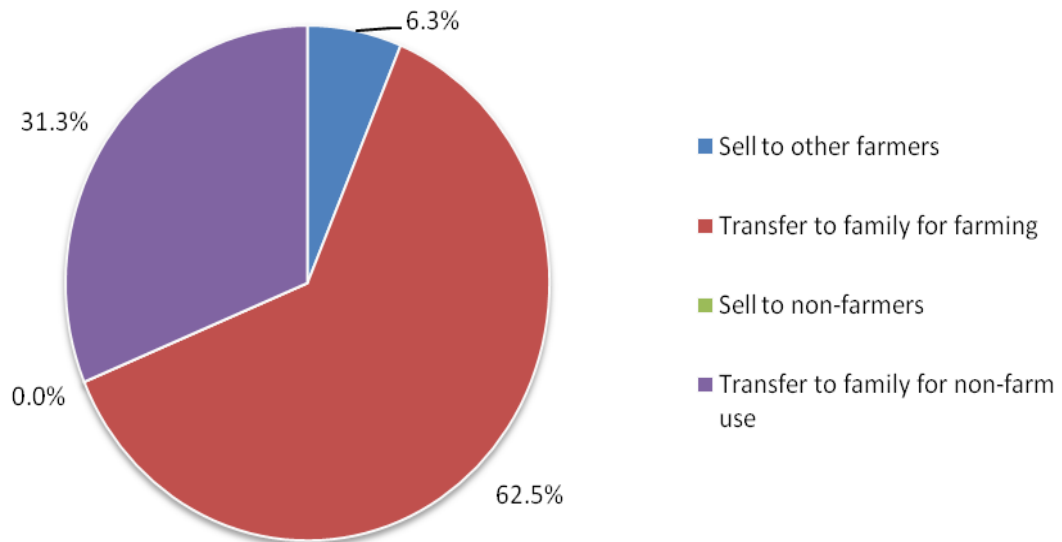


Figure 29. Lee County Producer Survey

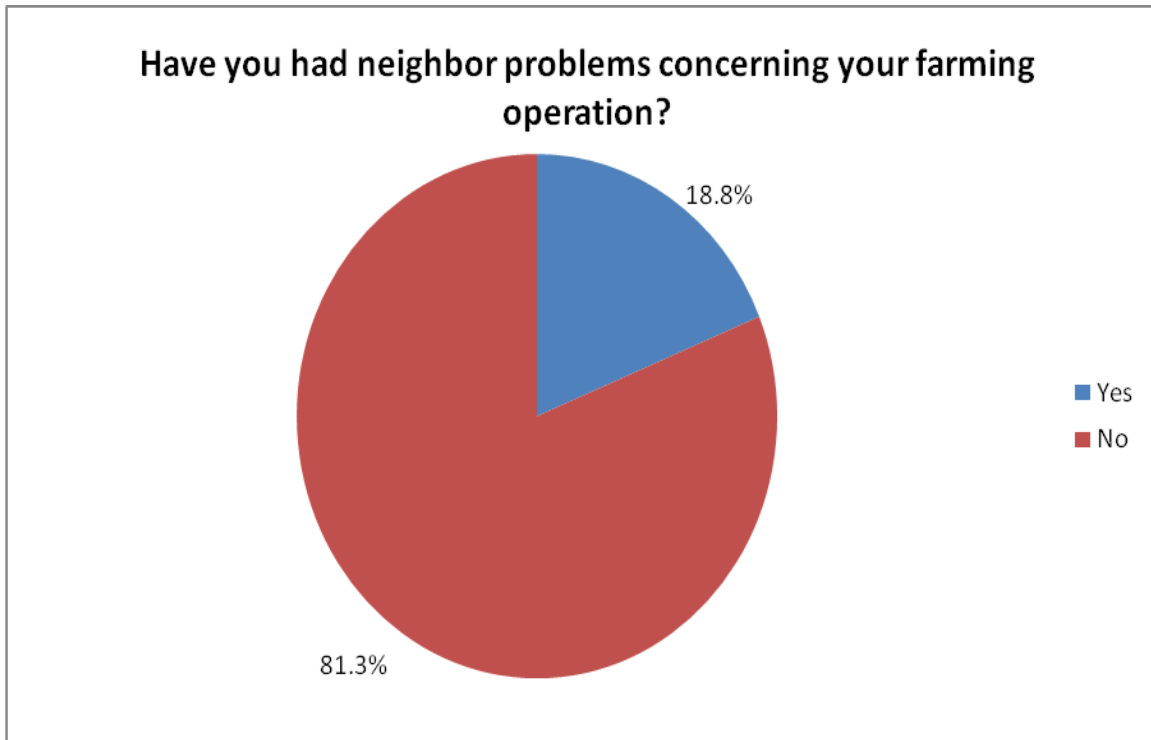


Figure 30. Lee County Producer Survey

### Non-Farm Resident Analysis – Challenges and Opportunities

Non-farm residents’ support and understanding of the impact of agriculture and forestry to the economic stability and aesthetic quality of the county is important in order to ensure working land viability. These residents utilize many of the products and services provided by the agricultural community. As the rural/urban interface increases with continued growth, non-farm residents’ knowledge and understanding of the industry is paramount to agriculture’s future. While farmers and agribusiness owners acknowledge this, interaction with non-farm residents is necessary to engage and educate current and future county residents about agriculture and encourage them to become active participants in this effort.

Non-farm residents that participated in the surveys and interviews represented all of the townships and towns in Lee County. Eighty percent of residents that responded were 50 years of age or older and 58 percent have lived in Lee County for 20 or more years (Figures 31 and 32).

Almost 50 percent of respondents indicated that they had move to Lee County from areas outside of the southeastern U.S., further exemplifying the influx of population moving into North Carolina. This also highlights the need to educate residents on the impact of agriculture in the county and the state (Figure 33). Additionally, 50 percent of

non-farm respondents indicated that they lived within one-fourth mile of a farm or timber operation, and 59 percent had visited a farm or timber operation within the last year with only 4 percent indicating they had never been on a farm.

The occupational categories of respondents also were varied as noted in Figure 34, which again exhibits the wide range of representation from those surveyed.

In an effort to determine the knowledge and perceptions of non-farm residents toward agriculture and forestry, a number of questions were asked. Respondents were asked their view of agriculture over the last five years. Figure 35 illustrates that 79 percent of Lee County residents felt that agriculture was holding its own or has expanded over the last five years.

Only 12.5 percent of respondents were aware of the economic impact of agriculture in the county (Figure 36). This points out a need to educate non-farm residents of the value of agriculture, which was reported as over \$280 million in Lee County in 2006 (Walden, IMPLAN, Mig Inc.).

Even though the majority of non-farm residents surveyed were not informed about the economic impact of agriculture and forestry in Lee County, they did overwhelmingly feel that local government should take steps to help preserve farmland and promote the expansion of agricultural businesses in the county (Figures 37 and 38). Should residents better understand the impact of these industries on the economic well-being of the county, this could foster support for local leaders to investigate and initiate programs and policies to support the industries.

Residents do profess to patronize local businesses. Ninety-four percent of respondents purchased products from fruit and vegetable stands, and 74 percent utilized U-Pick operations. All believed that this was important to the local economy. Residents were looking for products produced on known family farms that utilized best management practices and were looking for products with superior taste and nutritional quality.

Lee County residents surveyed also recognized the intrinsic benefits of farming.

- 96 percent believed farming enhances scenic beauty of Lee County.
- 98 percent believed farming enhances open spaces in Lee County.
- 98 percent believed local farmers deliver high-quality products.
- 92 percent believed farming is a positive asset to the environment.

While residents acknowledged that farmers are good neighbors (84 percent), some residents acknowledged problems with activities associated with farming operations. Figure 39 illustrates the range of issues and denotes that odors and slow moving vehicles tend to be the issues of most prevalence.

As residential development moves to the farm's edge, new neighbors find themselves faced with the realities of agricultural production processes: dust, odors, noise from machinery and slow moving farm equipment on roadways. Complaints create a hostile operating environment, which can end up in costly litigation and at worst, can result in

curtailment of farm operations. As Lee County continues to experience urban pressure, with over 20 percent population growth anticipated in 10 years from pressure asserted by Research Triangle Park and the expansion of Fort Bragg, education and involvement of non-farm residents as to the value and activities of agriculture and forestry becomes more crucial to the continued viability of Lee County farms.

While issues were noted by respondents as they related to farming activities, the overwhelming majority (76 percent) of non-farm residents surveyed indicated their support for local government funding for farmland preservation. Residents also indicated that youth agricultural education was extremely important and supported the programs that encourage young people to pursue agriculture as a career.

The non-farm residents of Lee County, while lacking accurate knowledge about the impact of agriculture to the county, were acutely aware of the inherent benefits of the industry. The majority of respondents supported the industry personally and perceptually. This support offers an opportunity for the farming and forestry industries to educate and embrace these residents for their continued support. Among the opportunities that emerged were to educate people who move to Lee County about the impact of agriculture to the county. Education should include:

- Information about farming and forestry operations and concurrent operational activities (dust, slow-moving vehicles, etc.)
- Information about the economic impact of agriculture to the economy
- Information about opportunities to support local agricultural operations and businesses.

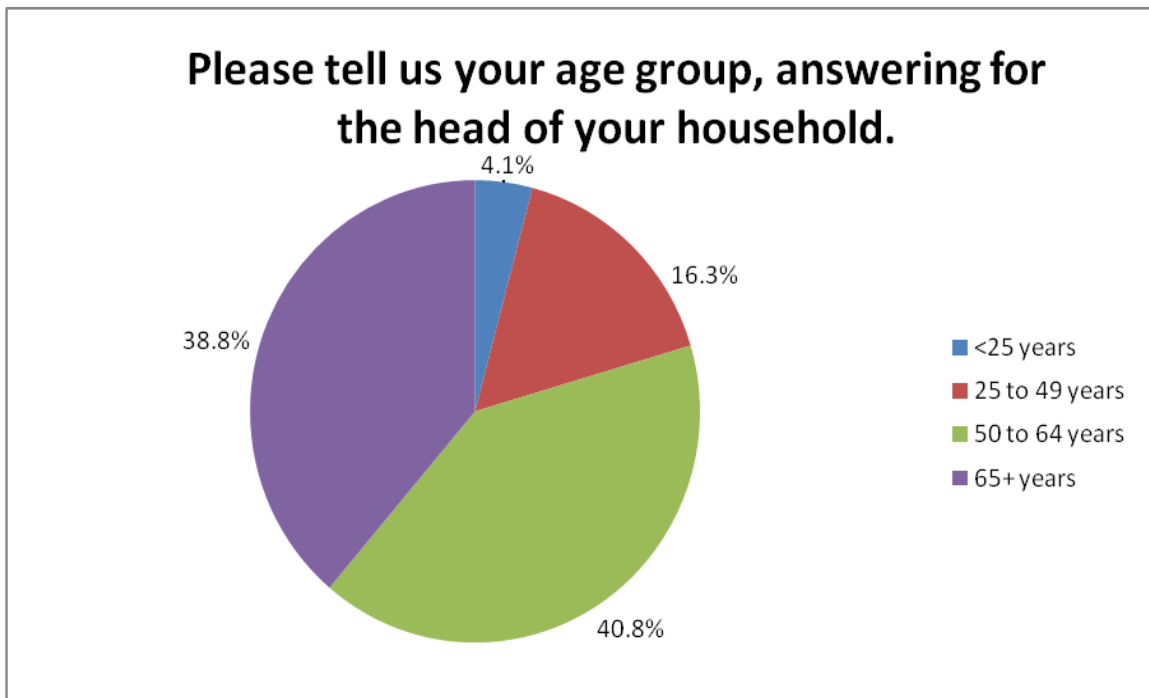
Information about these issues and others are needed to bridge the knowledge gap of people who are not from agricultural backgrounds. While backgrounds may differ, these residents are key to the future of agriculture in Lee County and can support efforts to encourage agriculture's viability. Opportunities include:

- Promoting and expanding the current Farmers Market in Lee County.
- Protecting working lands as a valuable natural resource by developing sound land use policies and conservation measures that encourage agricultural production.
- Encouraging protection of working lands located in public water source areas, including reservoirs, streams and water recharge areas and encourage alternative uses to diversify and benefit farmers while meeting the needs of residents.
- Identifying productive areas of agricultural land to direct residential and industrial growth away from those areas to avoid disruptions to agricultural operations.
- Fostering dialogue between non-farmers, government officials and the agricultural community.
- Organizing a group of local citizens to promote awareness of local, state and national issues affecting Lee County agriculture.

- Improving marketing skills and resources (i.e. co-ops and develop new markets) for Lee County farmers and forest land owners.
- Encouraging young people to be farmers and work directly with families who are farming. Provide monetary incentives (i.e. college tuition, tax breaks, etc.) to encourage youth to go into farming.

Opportunities exist to strengthen support for the agriculture and forest industries in Lee County. Education and awareness as well as communication and cooperation are keys to ensure that the rural/urban interface can continue to support one another for the future in Lee County. Data reveals that Lee County’s non-farm residents are eager to support the preservation of farms and forests in the county.

A summary of opportunities for all target audiences may be found in Appendix B.



**Figure 31. Lee County Non-Farm Resident Survey**

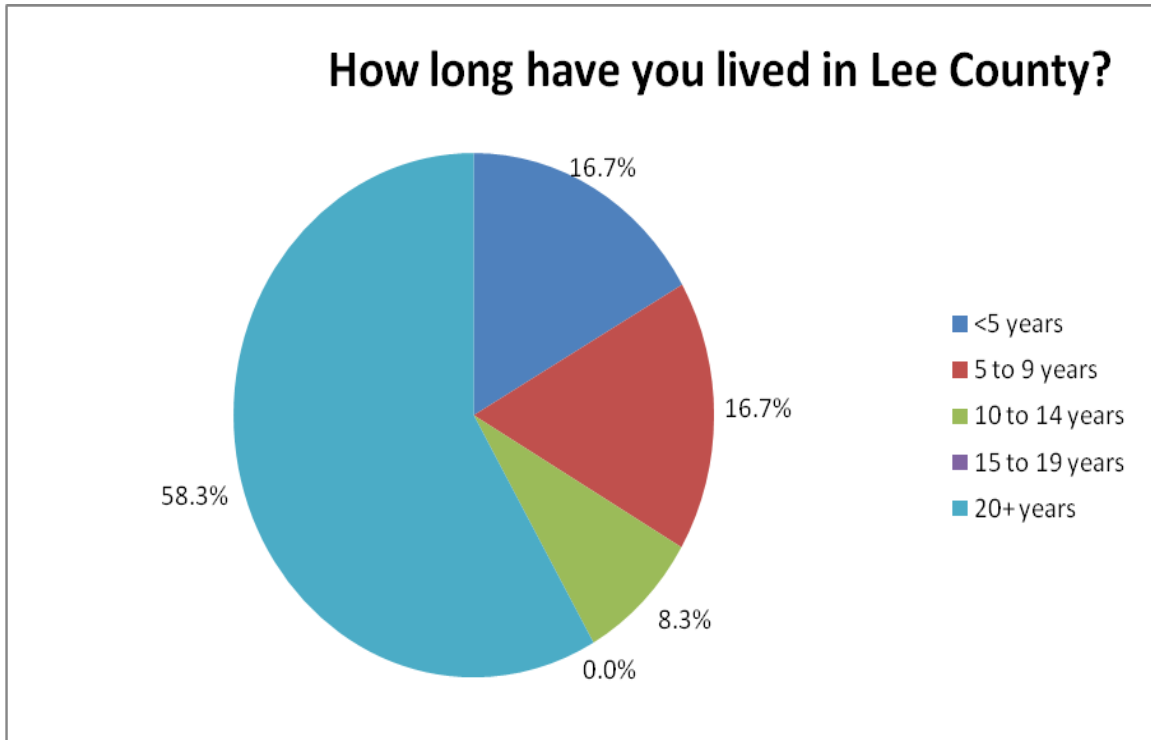


Figure 32. Lee County Non-Farm Resident Survey

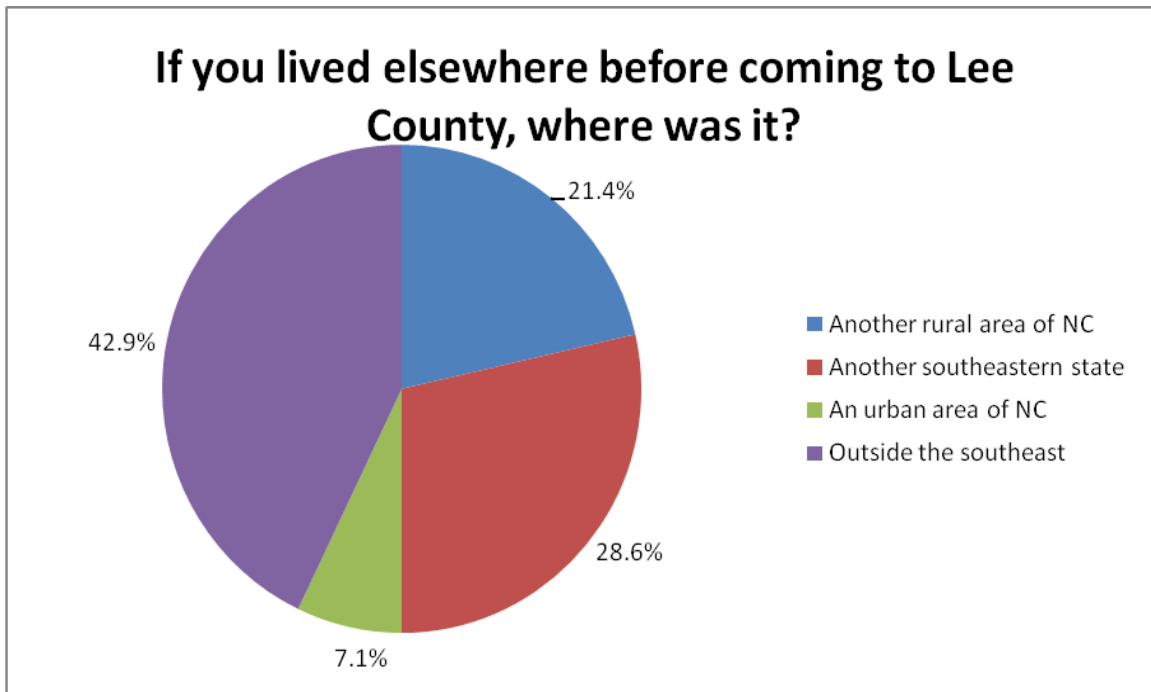


Figure 33. Lee County Non-Farm Resident Survey

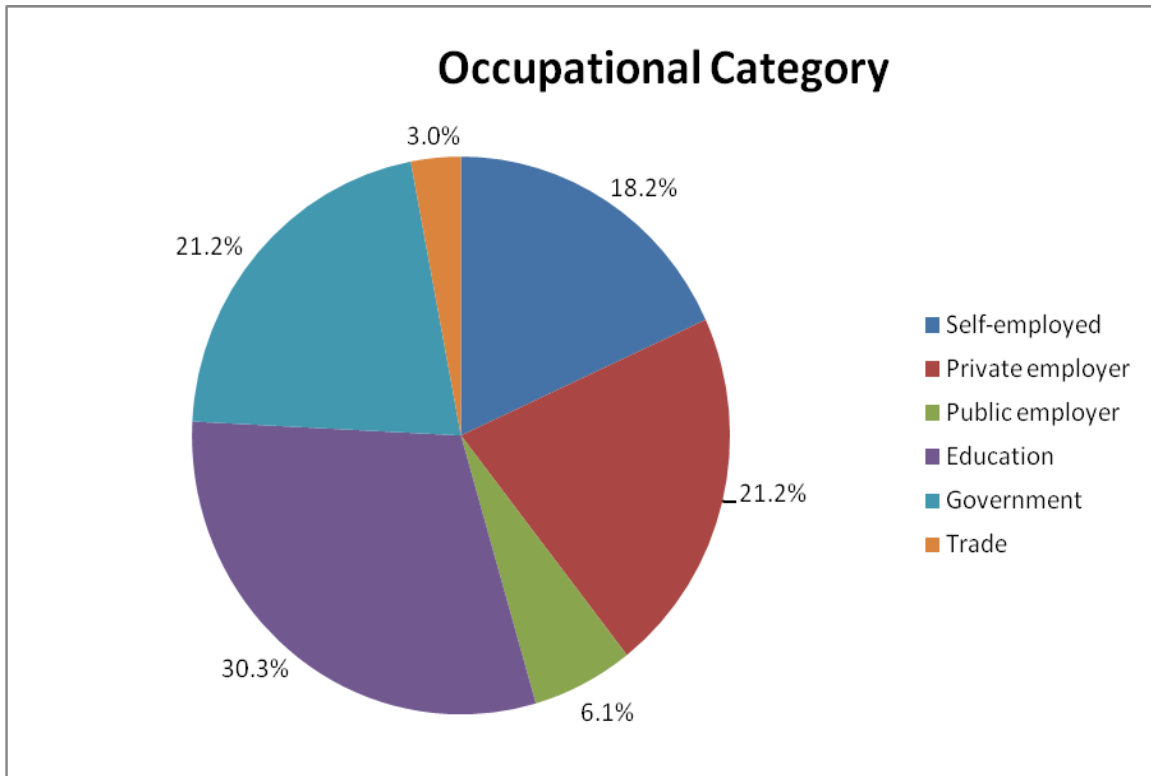


Figure 34. Lee County Non-Farm Resident Survey

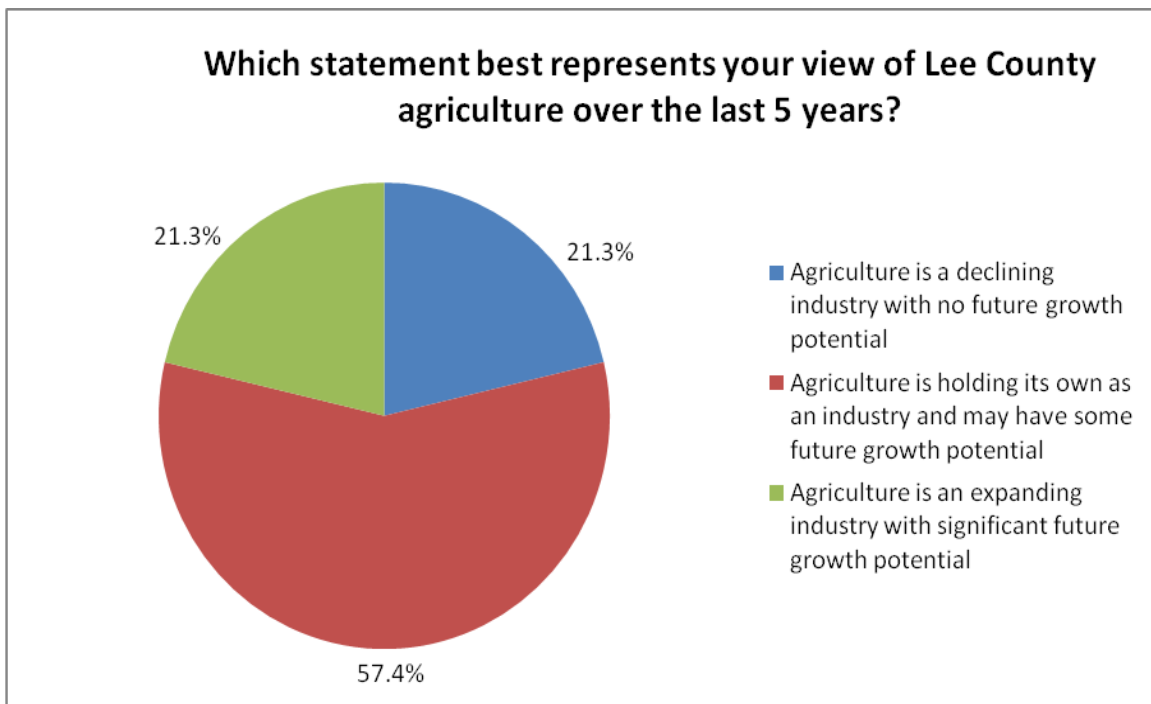


Figure 35. Lee County Non-Farm Resident Survey

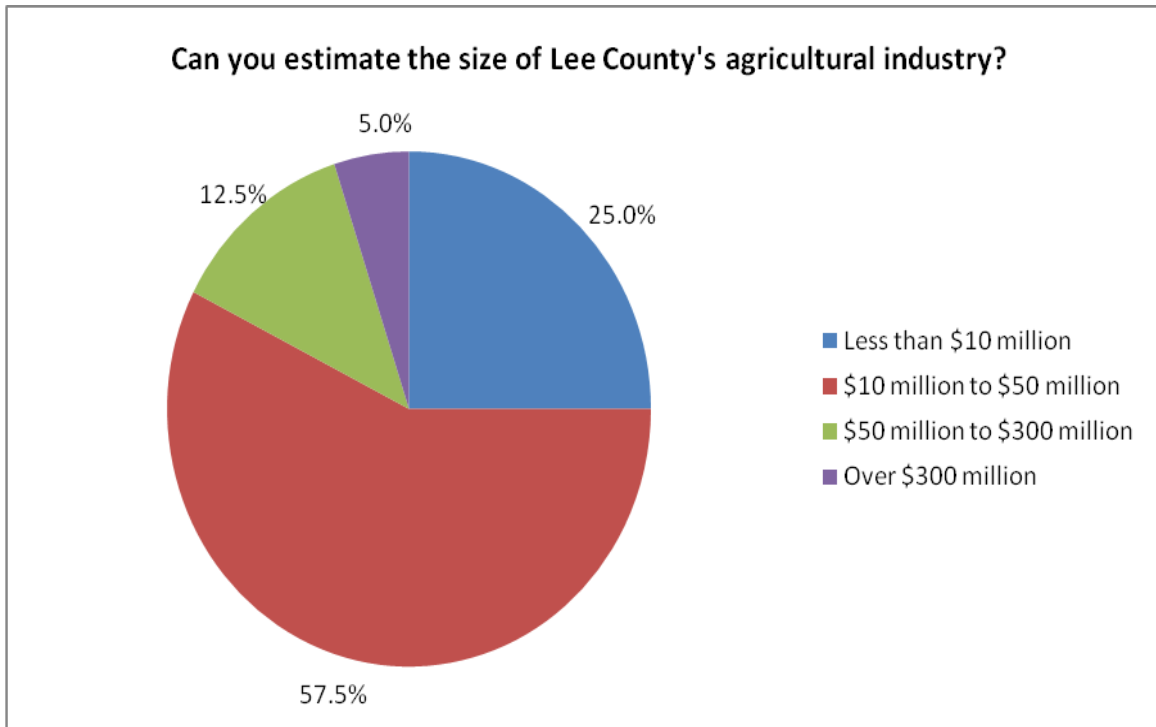


Figure 36. Lee County Non-Farm Resident Survey

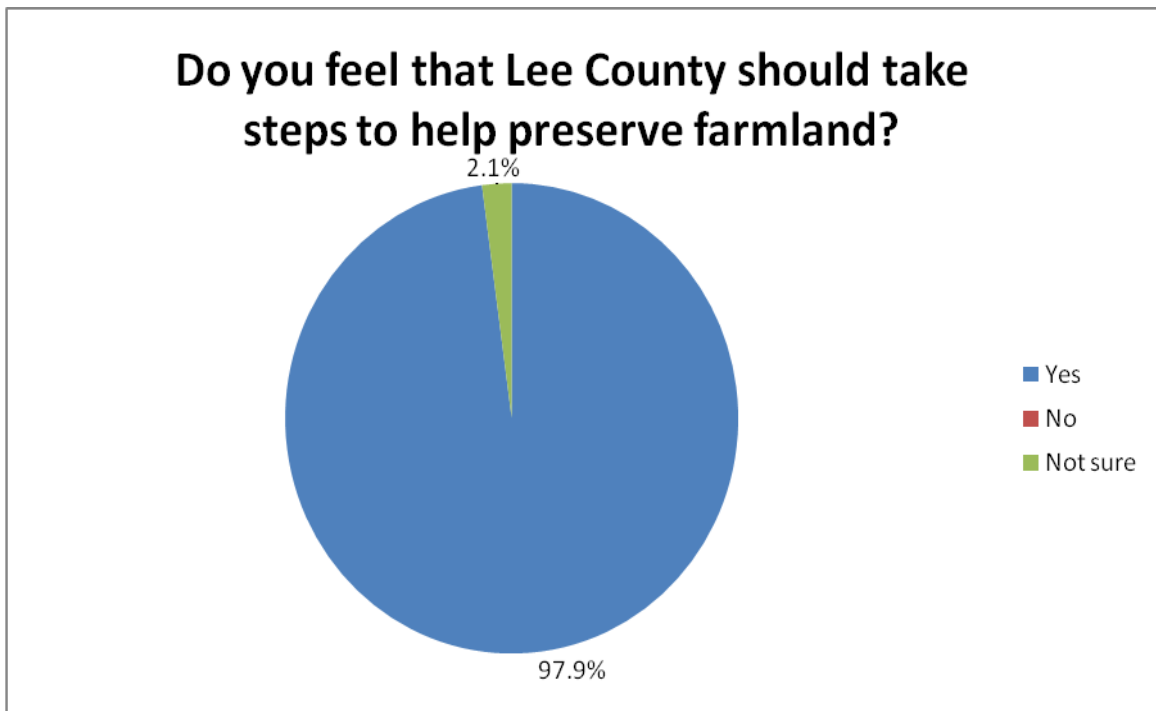


Figure 37. Lee County Non-Farm Resident Survey



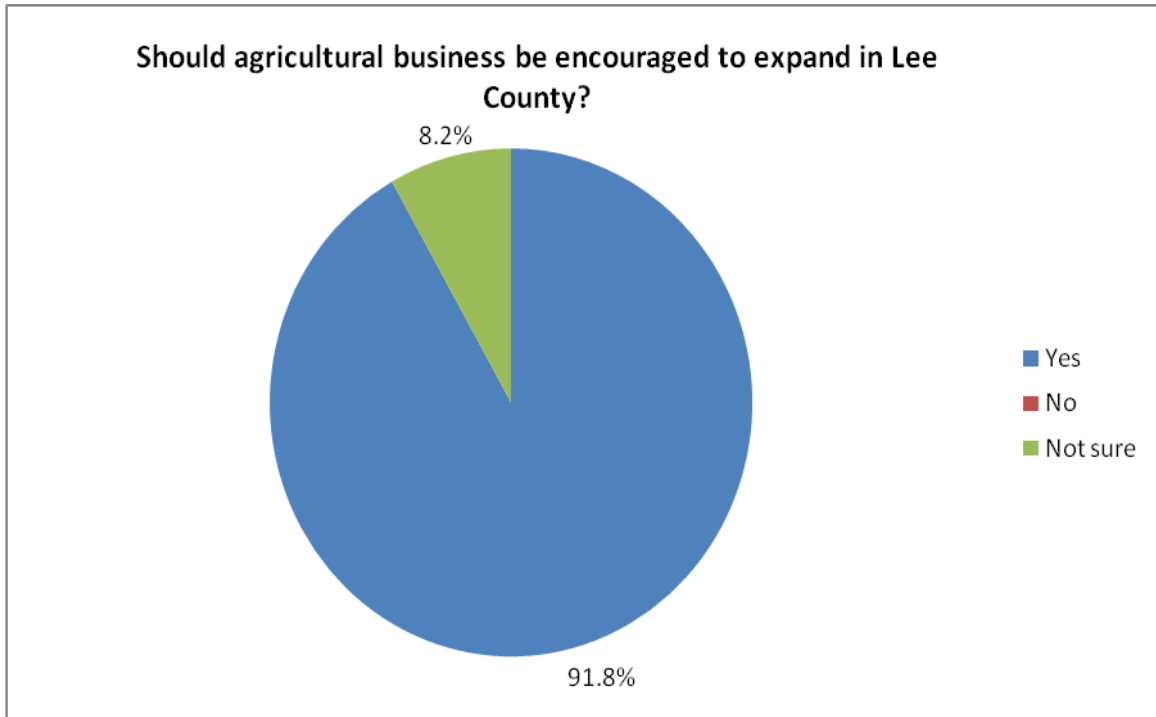


Figure 38. Lee County Non-Farm Resident Survey

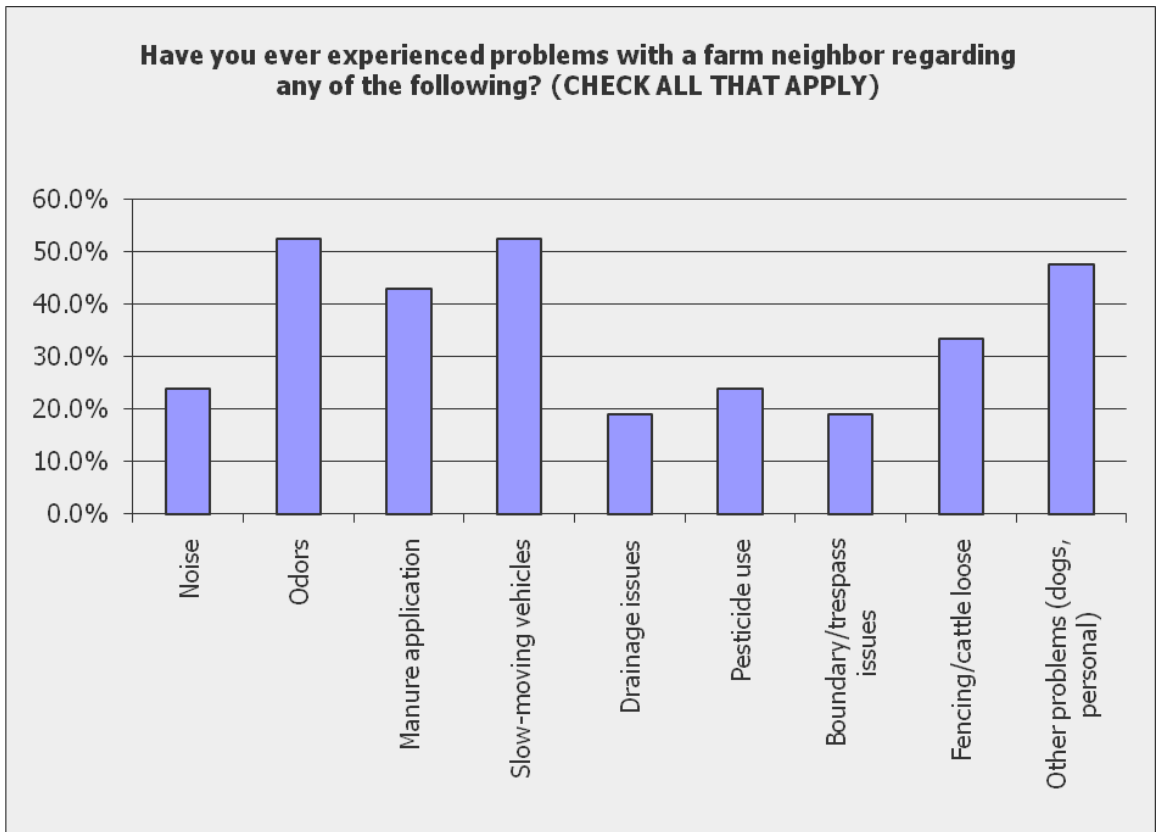


Figure 39. Lee County Non-Farm Resident Survey

# Recommendations

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The following recommendations will be effective only if county leadership and agencies embrace the effort to sustain and expand agriculture and its industries through support and action. Numerous agencies and groups in the county including, but not limited to, N.C. Cooperative Extension, Lee County; Lee County Planning and the Lee County Forestry Association, continue to collaborate on education and training, and recognize the need to direct planning efforts to support agriculture and agribusiness. Additional support for these agencies and others' efforts will help to meet the recommendations presented in this working lands plan. The following recommendations are resultant of the data gathered herein and reflect the opportunities and challenges that can be utilized to promote and enhance agriculture in Lee County.

## **Recommendation 1:**

Actively work to engage citizens, local government and organizations in preserving, supporting and promoting farming, forestry and agribusiness in Lee County.

### ***Action Steps:***

- Educate county residents on the importance and economic impact of farmland preservation.
- Conduct round table discussions on how the Economic Development Commission and the Chamber of Commerce can better assist agribusiness in marketing and business development.
- Encourage the Chamber of Commerce to offer a membership structure that is conducive to farm and forest land owner membership.
- Begin preliminary discussion of a public/private funding partnership for farmland preservation programs with local government, the public and local business sector.
- Encourage user friendly website relating to Present Use Tax Value Program

### ***Implementation Period:***

Immediately after adoption of Lee County Working Lands Protection Plan.

### ***Responsible Parties:***

N.C. Cooperative Extension, Lee County; Lee County Government Departments; Sanford Area Chamber of Commerce; Lee County Board of Commissioners; Lee County VAD Agriculture Advisory Board; Lee County Soil and Water Conservation District; N.C. Division of Forest Resources, Lee County; Lee County Economic Development Commission

## **Recommendation 2:**

Create an awareness campaign that will educate local leaders and citizens on the value of agriculture to the county. A comprehensive and well-planned educational program on Lee County agriculture (agribusiness, farming and forestry) will produce better relations and understanding of the impact and needs of agriculture.

### ***Action Steps:***

- Continue to conduct an annual local government leaders' tour of Lee County's diverse farm, forest and agribusiness operations.
- Continue to promote agriculture and agriculture enterprises during Farm City Week events.
- Once every two years present to local officials a program on the State of Agriculture.
- Raise awareness of the benefits of consuming local foods.
- Enhance the awareness of agriculture in Lee County through effective media outlets. Partner with agriculture representatives to educate civic, school and religious organizations about agriculture.
- Encourage the Office of Economic Development to plan for and seek funding for the expansion of agribusinesses, agricultural and forestry operations.

### ***Implementation Period:***

Fall 2010 and continuing

### ***Responsible Parties:***

N.C. Cooperative Extension, Lee County; Lee County Soil and Water Conservation District; Natural Resources Conservation Service; Sanford Area Chamber of Commerce; N.C. Division of Forest Resources, Lee County; Lee County Farm Bureau; Lee County area farmers and forest landowners; NCDA&CS Regional Agronomists; Lee County VAD Agriculture Advisory Board

## **Recommendation 3:**

Create an enhanced forest management education program to address forest management, taxation and income options.

### ***Action Steps:***

- Encourage membership in the Lee County Forestry Association to all forest owners through a marketing plan using all available media (newspaper, websites, mailings to owners and announcement at all events).
- Expand small timber management seminars offered through Extension to reach limited resource and minority forest landowners as well as absentee landowners.
- Provide education on the present-use value taxation program.

- Make forest owners aware of current resources from agencies involved with forestry such as N.C. Cooperative Extension, Lee County; NCSU Extension Forestry and N.C. Division of Forest Resources, Lee County (See Appendix for Cost Share Assistance Chart).

***Implementation Period:***

Fall 2010 and continuing

***Responsible Parties:***

N.C. Cooperative Extension, Lee County; N.C. Division of Forest Resources, Lee County; Lee County Forestry Association; Lee County Tax Administration

**Recommendation 4:**

Develop and promote a comprehensive youth and young adult agricultural leadership development program. Programs such as the N.C. Farm Bureau's Ag in Classroom, Soil and Water Resource Conservation Workshop, Farm Bureau Institute for Agriculture Leaders, NCSU's SUCCEED! Tobacco Short Course for young tobacco growers, N.C. Farm Bureau's Young Farmers and Ranchers Program, Carolina Farm Credit's Beginning Farmer, N.C. Cooperative Extension's Junior Master Gardener Program, 4-H and FFA all provide curriculum. Farmers, agribusiness and non-farm residents all rated youth education as an important component of a farmland preservation plan.

***Action Steps:***

- Provide youth and young adults the opportunity to actively participate in agriculture organizations such as FFA, 4-H and other agriculture leadership opportunities.
- Encourage youth and young adults to participate in agriculture leadership opportunities that emphasize issues, careers, economic challenges and opportunities facing agriculture. Youth would develop an understanding of the agriculture industry.
- Farm Bureau, in collaboration with other agriculture agencies, will implement "Ag in the Classroom" and other education programs targeted to school-age children. Enlist the support of Farm Bureau and other agricultural agencies to support this effort.
- Develop a farm and agribusiness mentoring program that provides interested high school and college students the opportunity to receive hands-on learning experience on farming and agribusiness operations.

***Implementation Period:***

Spring 2011 and continuing

***Responsible Parties:***

N.C. Cooperative Extension, Lee County; Lee County Farm Bureau; Lee County Public Schools; Sanford Area Chamber of Commerce; Lee County Soil and Water

### **Recommendation 5:**

Make needed leadership, technical and business training readily available for existing and new farmers and forest landowners through a variety of delivery modes that best fits the landowners' schedule and learning style.

#### ***Action Steps:***

- Develop training such as computerized pesticide record-keeping, water and soil quality, farmland preservation, tax credits and value-added products.
- Educate farmers and forest landowners on new revenue opportunities such as carbon credits, mineral rights, water rights, energy production, agricultural tourism venues and leasing of land for recreation and hunting.
- Provide business development assistance to farmers, forest landowners and agribusinesses.
- Provide educational programs in transition and estate planning for farm and forest landowners.
- Provide training on production of new commodities and marketing techniques for beginning farmers and encourage enterprise diversification of established farmers.
- Create awareness and encourage farmers, forest land owners and agribusiness owners to become advocates for the industry.

#### ***Implementation Period:***

Spring 2011 and continuing

#### ***Responsible Parties:***

N.C. Cooperative Extension, Lee County; Central Carolina Community College; N.C. Division of Forest Resources, Lee County; Lee County Soil and Water Conservation District; Natural Resources Conservation Service

### **Recommendation 6:**

Increase efforts to educate farmers, landowners and non-farm residents on the available farmland preservation tools. As of June 2010, 1,600 acres+ were enrolled in the newly enacted VAD program in Lee County.

#### ***Action Steps:***

- Use all media to educate farmers and forest landowners on the value of VAD.
- Educate small woodlot owners about the benefits of forest management plans for enrollment in both the Present Use Value Tax Program and the VAD.

- Encourage responsible parties and government officials to give leadership to the Working Lands Preservation Plan.
- Ensure that principles of farmland preservation are incorporated into updates in the Lee County Land Use Plan and land use policies including the Unified Development Ordinance (UDO).

***Implementation Period:***

Winter 2011 and continuing

***Responsible Parties:***

N.C. Cooperative Extension, Lee County; Lee County VAD Agriculture Advisory Board; N.C. Division of Forest Resources, Lee County; Natural Resources Conservation Service; Lee County Soil and Water Conservation District; Lee County Tax Administration; Sanford/Lee County Planning Department; Joint Planning Commission

**Recommendation 7:**

Develop a strategy for the creation and implementation of an Enhanced Voluntary Agricultural District Ordinance for Lee County.

***Action Steps:***

- Engage the Lee County VAD Agriculture Board members to undertake the development of an EVAD ordinance.
- Seek adoption and Board of Commissioner support and passage of EVAD ordinance.
- Develop a series of educational sessions to inform farmers of the advantages of enlisting in the EVAD programs.
- Provide guidance to interested landowners and families as to benefits and restrictions associated with enrollment into an EVAD program emphasizing the importance of EVAD enrollment as being a family decision.
- Seek out funding for costs associated with EVAD programs.

***Implementation Period:***

Spring 2014

***Responsible Parties:***

Lee County VAD Agriculture Advisory Board; N.C. Cooperative Extension, Lee County; Lee County Soil and Water Conservation District; Natural Resources Conservation Service; Lee County Government Departments and Commissioners; N.C. Division of Forest Resources, Lee County; Lee County Farm Bureau

## **Recommendation 8:**

County agriculture agencies working with the Lee County VAD Agriculture Advisory Board will pursue programs and policies that encourage the protection of working lands.

### ***Action Steps***

- Educate citizens about farm and forest practices such as odors, slow moving vehicles, noise, smoke and chemical use.
- Develop a communication network in which local officials, planners, county agriculture agencies, farmers and forest land owners are informed of infrastructure expansion affecting agriculture and forestry operations.
- Inform farm and forest landowners of potential adverse impacts to infrastructure placement and encourage dialogue to minimize negative impacts.

### ***Implementation Period:***

Immediately after the adoption of the Lee County Working Lands Protection Plan

### ***Responsible Parties:***

Lee County Board of Commissioners and county manager; Lee County Soil and Water District; Lee County VAD Agriculture Advisory Board; N.C. Cooperative Extension, Lee County; N.C. Division of Forest Resources, Lee County; Sanford/Lee County Planning Department

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# Appendix B: Opportunities

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## **Agricultural Opportunities**

Data obtained from agricultural producers, agribusiness owners and non-farm residents through surveys and interviews revealed agricultural opportunities for which all target audiences indicated support.

### **Agricultural Business Owners**

- Target agriculture with economic development and marketing initiatives, including agricultural tourism development.
- Provide farmers, forest land owners and agribusiness investors with business planning and market development assistance.
- Develop programs to encourage county agencies and leaders to promote local agribusinesses and to purchase locally grown products.
- Foster greater recognition and public support for agriculture and forestry by educating the public on the economic, community and environmental benefits of farming and forestry.
- Support of local government funding for the preservation of farms and forests.
- Education and technical training in a range of areas including risk management, estate planning, nutrient management, environmental management and best management practices.

### **Agricultural Producers**

- Training on small woodlot management, pesticide management, nutrient management and organic farming opportunities.
- Assistance with tax incentives for new agribusiness ventures and business planning assistance.
- Additional promotion of agritourism in Lee County and increased opportunities of local product marketing, direct marketing and development of niche markets.
- Support of farm operations and the right to farm to ensure farmers have a supportive business environment.
- Development of policies and ordinances that encourage agriculture and do not inhibit or discourage farming and forestry operations.
- Increase non-farmer neighbor awareness of farm and forest practices and issues through education and increased VAD enrollment.
- Continued support of existing programs that reward farm and forest practices that maintain and improve water, air and wildlife habitat quality.

- Develop and support educational programs for young people and young farmers on agriculture and farming opportunities.
- Development and expansion of direct marketing campaigns.
- Development of small woodlot management organization and encouragement of the adoption of forest management plans aimed at maximizing income.
- Work with farm transition organizations or develop local programs to develop farm management capacity of young farmers.
- Develop business plans for farmers who want to phase out tobacco to food crops or other new business ventures.
- Increase farmer and forest landowner knowledge of funding opportunities with Golden Leaf Foundation, NCDA's ADFP Trust Fund, Tobacco Trust Fund and other funding sources through awareness and educational programs.
- Educate local government and landowners on planning techniques and tools that reduce pressures on farming and forest operations.
- Promote locally grown produce. Identify peak times for specific products and advertise to local residents and encourage local agencies and institutions to use local products. (NCDA's Farm Fresh, the SLOW Food Movement, Community Supported Agriculture)
- Diversify the agricultural production base through research into new commodities that can be grown in Lee County.
- Facilitate private investment of capital in the local agriculture industry.
- Provide farmers, forest landowners and agribusiness investors with business planning and development assistance.

## **Non-Farm Residents**

- Educate people who move to Lee County about the impact of agriculture on the county. Education should include:
  - Information about farming and forestry operations and concurrent operational activities (dust, slow-moving vehicles, etc.)
  - Information about the economic impact of agriculture on the economy
  - Information about opportunities to support local agricultural operations and businesses
- Protect working lands as a valuable natural resource by developing sound land-use policies and conservation measures that encourage agricultural production.
- Encourage protection of working lands located in public water source areas, including reservoirs, streams and water recharge areas, and encourage alternative uses to diversify and benefit farmers while meeting the needs of residents.

- Identify productive areas of agricultural land to direct residential and industrial growth away from those areas to avoid disruptions to agricultural operations.
- Foster dialogue between non-farmers, government officials and the agricultural community.
- Organize a group of local citizens to promote awareness of local, state and national issues affecting Lee County agriculture.
- Improve marketing skills and resources (i.e. co-ops and new markets) for Lee County farmers and forest land owners.
- Encourage young people to be farmers and work directly with families who are farming. Encourage farming to youth by providing monetary incentives (i.e., college tuition, tax breaks, etc.)

# Appendix C: Surveys

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## **Agricultural Producers, Agribusiness and Non-Farm Surveys**

Surveys and interviews were conducted in the county to account for the trends, issues and opportunities the community as a whole identifies for agriculture. The populations targeted were producers/landowners, agri-businesses and the general non-farm public.

The county team distributed the surveys through their meetings, to their advisory boards and on their websites. The team also provided names of key people in the county to interview. All the survey and interview responses were compiled to determine the response.

Copies of the three surveys are below.