Lenoir County Farm and Forest Protection Plan

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Acknowledgements

The North Carolina's Eastern Region (NCER), with funding from the N.C. Department of Agriculture and Consumer Services Agricultural Development and Farmland Preservation Trust Fund, contracted with Mount Olive College's Lois G. Britt Agribusiness Center to create farm and forest protection plans in a four-county region. NCER's mission is to identify barriers and generate regional plans for economic growth. NCER recognizes and supports the agricultural industry in eastern North Carolina and is committed to identifying economic development opportunities for agricultural producers and agribusinesses.

W. Stan Dixon prepared and wrote the Lenoir County Farm and Forest Protection Plan. Dr. Dixon has an Ed.D. from N.C. State University. He retired in 2009 from N.C. Cooperative Extension as County Extension Director. Editors for the plan were Grace Lawrence and Sandy Maddox. Ms. Lawrence has a master's degree in education and has worked in the environmental field for more than 15 years. Dr. Maddox has a doctorate degree in adult education, is the director of the Lois G. Britt Agribusiness Center at Mount Olive College and has more than 30 years of experience in agriculture. Statistical data, charts and figures were developed by Edward Olive, Mount Olive College student and Collegiate FFA student advisor.

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NORTH CAROLINA'S EASTERN REGION

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Executive Summary

Agriculture is an important component of the fabric of life in Lenoir County. The goal of this Farm and Forest Protection Plan is to recognize the importance of agriculture and assess the challenges, opportunities and issues that are facing this industry. This plan provides recommendation on ways to enhance agriculture and agribusiness in Lenoir County.

Farmland is an irreplaceable natural resource, and the farmers who are stewards of this land significantly impact the economy and quality of life for county residents. The economic impact of agriculture and agribusiness in 2008 was 28.6 percent of the county value added income. Agriculture also accounts for 18.7 percent of total county employment (Mike Walden, NCSU). Lenoir County possesses abundant natural and human resources that will enable agriculture to expand and prosper in the future.

Lenoir County has not experienced the population growth observed in other counties and the state, but agriculture has been impacted by commercial growth from new industries and residential growth in rural areas. Competition for land is one of the primary concerns stated by the Lenoir County farmers who were surveyed, with 81 percent not owning sufficient land for expansion and 66.7 percent citing that high land rental rates adversely affect their operation and potential expansion. Lenoir County farmers are facing other challenges to their operations, such as aging farmer population, lack of farm transition plans and increasing input cost. These issues present opportunities to enhance agriculture through the education and support of local government and citizens.

Non-farm residents surveyed believe local government should take action to preserve farmland as a valuable resource and encourage farmers to expand. They believe that farming enhances the scenic beauty and open spaces of the county while providing a positive impact on the environment. Conversely, non-farm residents surveyed did not have a good understanding of the economic value of agriculture and agribusiness to the county. The impact on agriculture in Lenoir County is noted:

- Agriculture and agribusiness contributed $577,220,612 in total income in 2008.
- Lenoir County ranked 11th in the state in total cash receipts from farm products in 2009.
- Lenoir County ranks, in cash receipts, 18th in livestock and 13th in crops in 2009.
- Lenoir County was fourth in the state in head cabbage production in 2009.
- Lenoir County ranked seventh in tobacco production in 2009.
- Lenoir County was ninth in cotton and 11th in corn production in the state in 2009.

- The average value of farm and buildings was $969,173 and $140,949 for equipment in 2008.

At the heart of the Lenoir County Farm and Forest Preservation Plan are the recommendations based on the information provided by farmers, agribusiness leaders and non-farm residents through personal interviews and surveys. The recommendations and action steps were developed to provide a guide for protecting and enhancing agriculture in Lenoir County. The success of this plan depends on the collaboration between local government, agricultural organizations, farmers, agribusiness and citizens of the county. The plan needs to be evaluated annually to celebrate accomplishments and add new recommendations, as needed. The recommendations are:

1. Develop and adopt a Voluntary Agricultural District.
2. Support programs and policies that promote agricultural growth.
3. Develop technical, business and marketing training for maintenance and expansion of agriculture.
4. Promote appreciation and awareness of the benefits of agriculture to elected officials and citizens.
5. Expand and support youth agricultural education programs.
6. Promote agricultural career awareness and develop a new farmer mentoring/apprenticeship program.

The intent of this plan is neither to limit nor restrict landowners' rights and uses. The plan is intended to serve as a guide for actions to provide landowners and residents an increased awareness of farmland preservation opportunities and agricultural awareness. Agriculture is important to the county and its economy and to the well-being of family farms. However, the ultimate decision of farmland preservation rests in the hands of the owners of farms and forests.

A Need for Action: Lenoir County

Agriculture is the number-one industry in North Carolina, contributing $74.3 billion of the state's $400 billion gross product in 2008. Lenoir County's economy is greatly impacted by agriculture's ranking 11th in the state in total cash receipts in 2009 (N.C. Department of Agriculture and Consumer Services Agricultural Statistics). Lenoir County leadership is cognizant of the importance of agriculture to the local economy and is supportive of a Farm and Forest Protection Plan that addresses issues related to farm and agriculture viability for the future. The goal of the Lenoir County Farm and Forest Protection Plan is to provide a strategic action plan that will guide local leaders in their efforts to preserve farms and forests, as well as to continue to market the many benefits of the agricultural industry.

This plan is grounded on three basic tenets:

- Agriculture is an important component of Lenoir County's economy.
- Preserving farmland is in the public interest.
- Farmland is an irreplaceable natural resource.

According to the North Carolina Department of Agriculture's Agricultural Development and Farmland Preservation Trust Fund, the state has lost 600,000 acres of farmland and more than 6,000 farms since 2002. Between 1990 and 2002, 1 million acres of forestland was lost with three quarters lost to urban growth (http://www.ncadfp.org/aboutus.htm). The National Resource Inventory, a survey of the country's private land conducted by the USDA Natural Resource Conservation Service in cooperation with Iowa State University, listed North Carolina as third nationwide in loss of prime farmland—766,000 acres. Jon Scholl, President of American Farmland Trust, stated, "The findings from the 2007 National Resource Inventory (NRI) serve as a stark reminder that our nation's agricultural land base and the benefits it supplies is threatened by poorly planned development." (http://www.farmland.org/news/pressreleases/America-Has-Lost-23-million-acres-of-farmland.asp)

The development of the Lenoir County Farm and Forest Protection Plan is through a partnership between North Carolina's Eastern Region, Mount Olive College Lois Britt Agribusiness Center and funding from the North Carolina Agricultural Development and Farmland Preservation Trust Fund. This plan reports the state of agriculture in the county and the opportunities and challenges confronting agriculture. Agriculture is defined to include horticulture, farming (row crops and livestock) and forestry. The North Carolina General Assembly defined agriculture in General Statue G.S. 105-277.2 through 105-277.7 as:

- Minimum Acreage of production land:
    - 10 acres for agricultural use
    - Five acres for horticultural use
    - 20 acres for forest use
- Production must follow a sound management plan.
- Agricultural and horticultural land must have at least one qualifying tract that has produced an average gross income of at least $1,000 for the three years preceding the application year
- Forest land must be following a forest management plan.

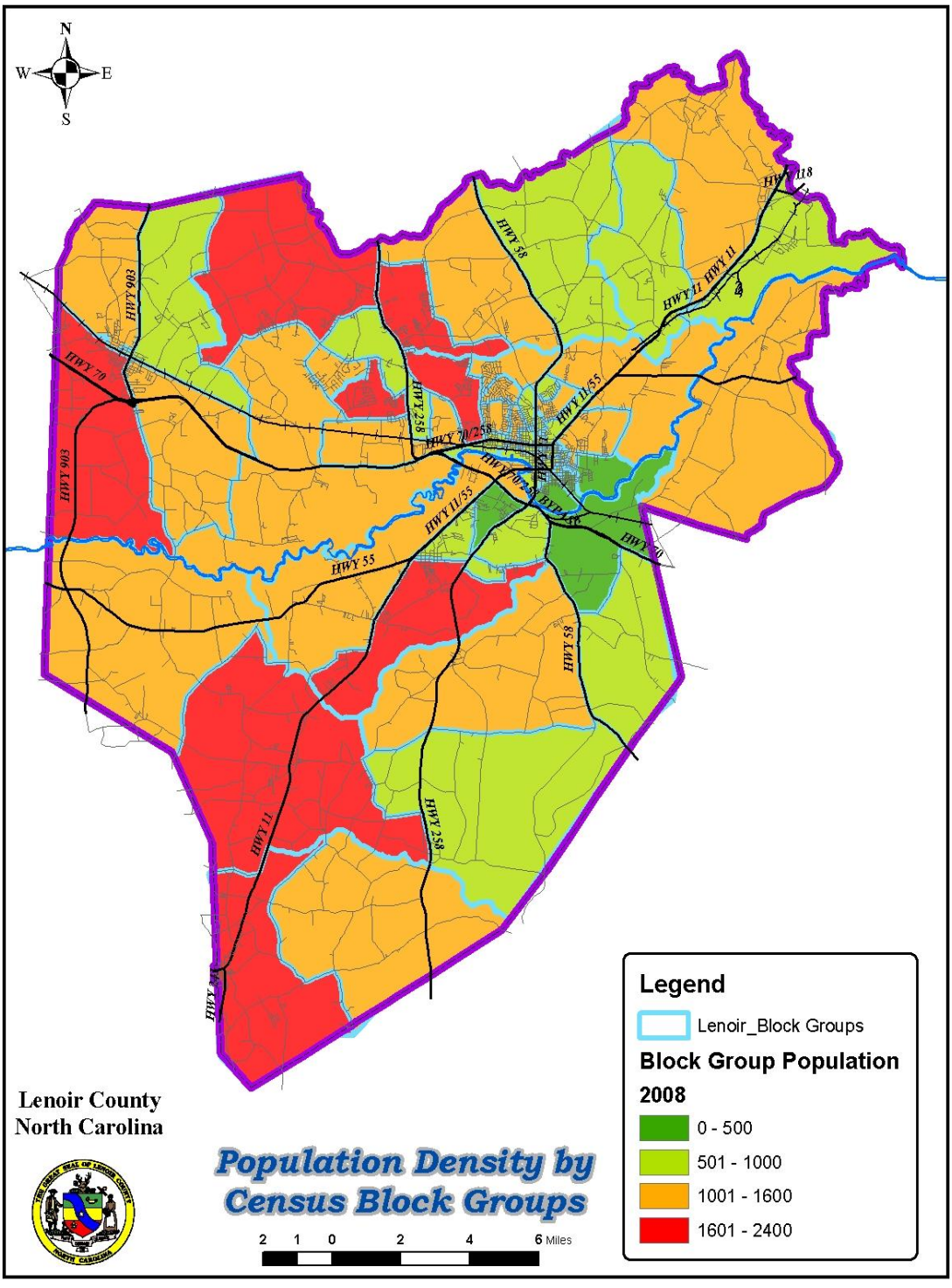
To provide direction for the plan development, a county team was organized by the North Carolina Cooperative Extension Lenoir County Center director. The team membership was composed of Lenoir County Government representatives, North Carolina Cooperative Extension, farmers, agribusiness and non-farm residents.

In order to determine challenges and opportunities to agriculture in the county, personal interviews and written surveys were utilized. Interviews were conducted with farmers, citizens and agribusiness leaders. Surveys were distributed in hard copy at meetings and electronically through the internet via Survey Monkey. The data collected depicts the state of agriculture and future needs in Lenoir County. This data was used to develop the recommendations that will assist county leadership in keeping farm and forest land viable now and in the future.

Overview of Lenoir County

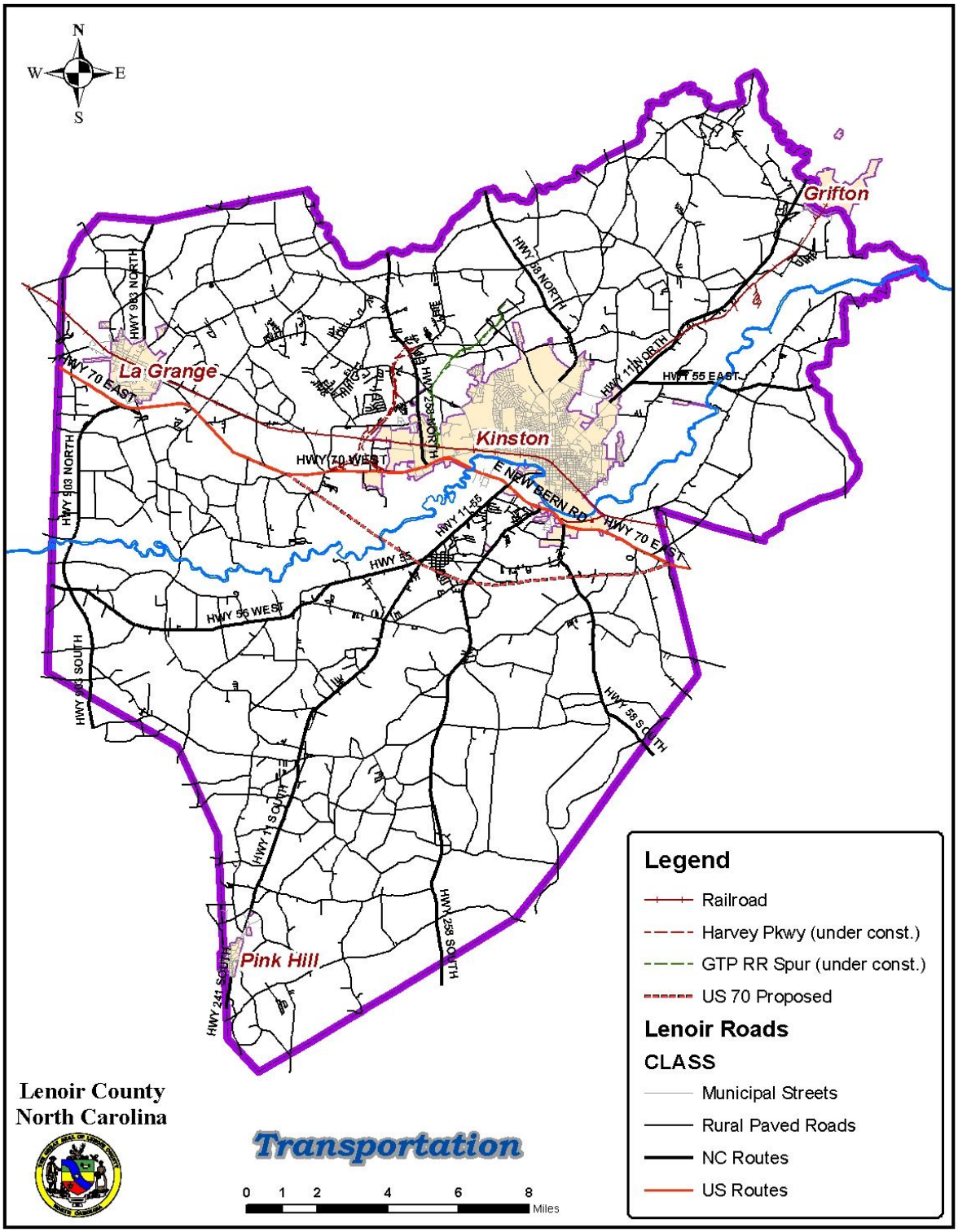
Lenoir County is located in the central coastal plain of North Carolina, 75 miles from the capital, Raleigh, and 75 miles from Morehead City, one of the state's two seaports. There are 255,900 total acres in the county. The county is home to three incorporated municipalities: Kinston, the county seat; La Grange, on highway 70, 10 miles west of Kinston; and Pink Hill, located on Highway 11, 15 miles south of Kinston (http://www.co.lenoir.nc.us/index.html).

The 2010 population of Lenoir County is 59,495, a 0.03% decrease from 2000 when the population was 59,620 (U.S. Census Bureau). Even with this slight decrease in population Lenoir County is still not immune to the pressure of growth (Map 1: Population Density).



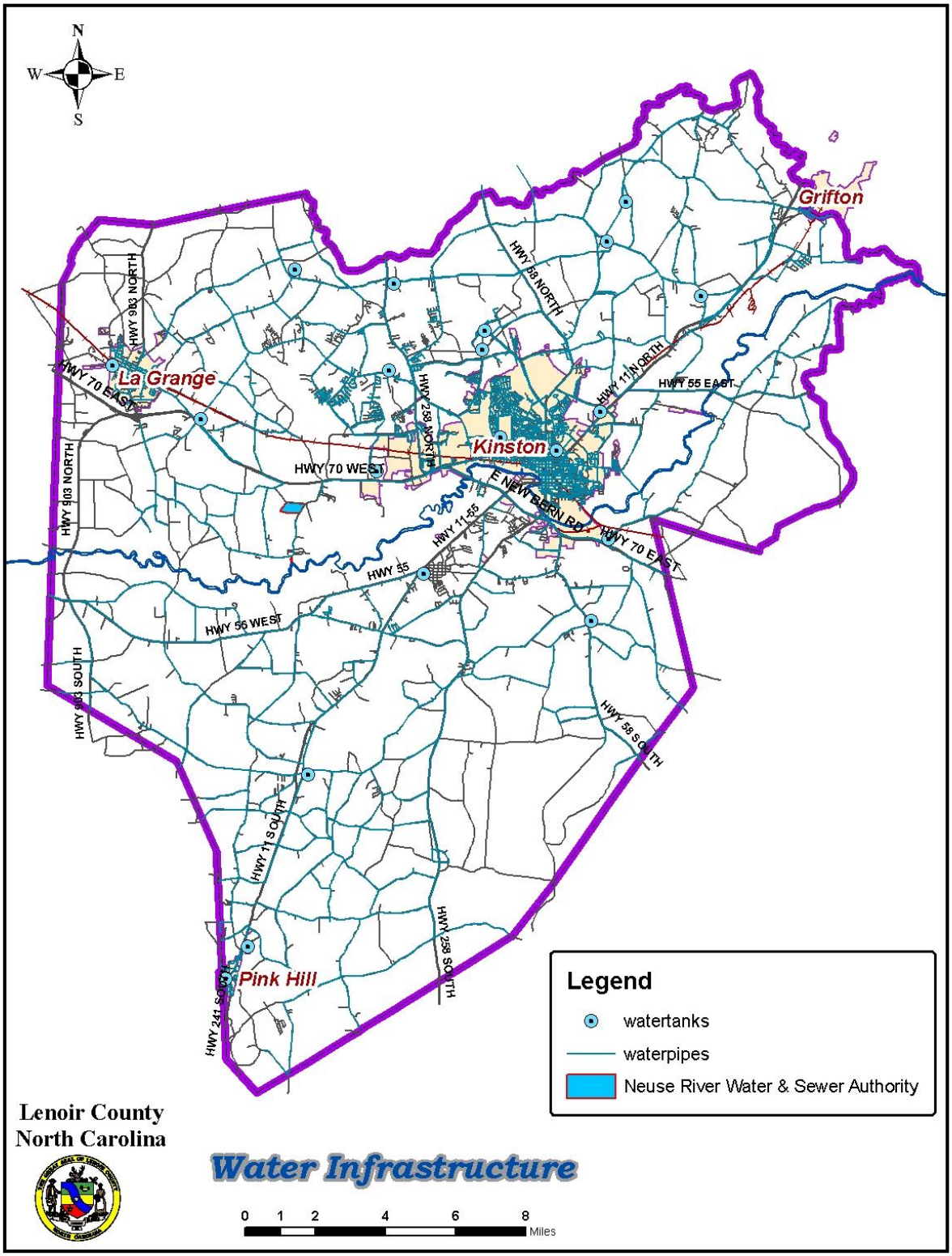
Map 1: Population Density

Currently, a Highway 70 bypass plan is being developed to provide quicker access to the county and its growing manufacturing base. Lenoir County is a balanced blend of farming and manufacturing. The county is home to the North Carolina Global TransPark (GTP), a 2,500 acre industrial/airport site. The GTP is strategically located to offer excellent access to rail, highways and air for the distribution of products. (http://www.ncgtp.com/index.html) The Lenoir County transportation map depicts the available system in the county (Map 2: Transportation).

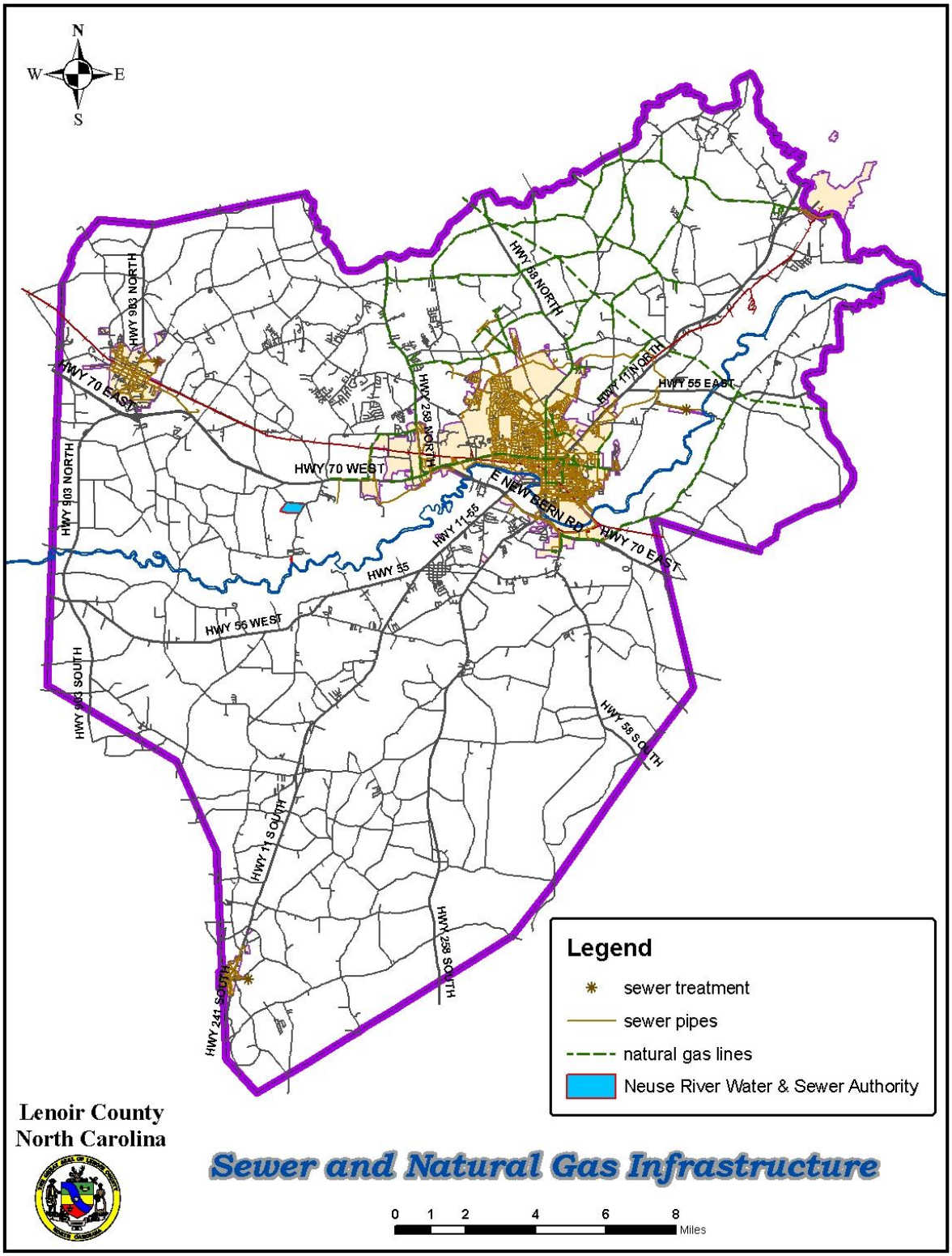


Map 2: Transportation

There are a variety of manufacturing companies that have chosen to locate in Lenoir County. Some examples are DuPont, West Pharmaceuticals Services, Spirit Aerosystems, Westinghouse, Moen, Electrolux, MasterBrand, Lenox and Barnhill Contracting Company. Lenoir County has been fortunate to have good infrastructure in place to facilitate industrial growth. Infrastructure placement can have a detrimental effect on agriculture if not properly planned, resulting in the loss of productive land to development. Maps 3 and 4 highlight water, sewer and natural gas infrastructure located in the county. This infrastructure has helped position Lenoir County in attracting businesses and industries.



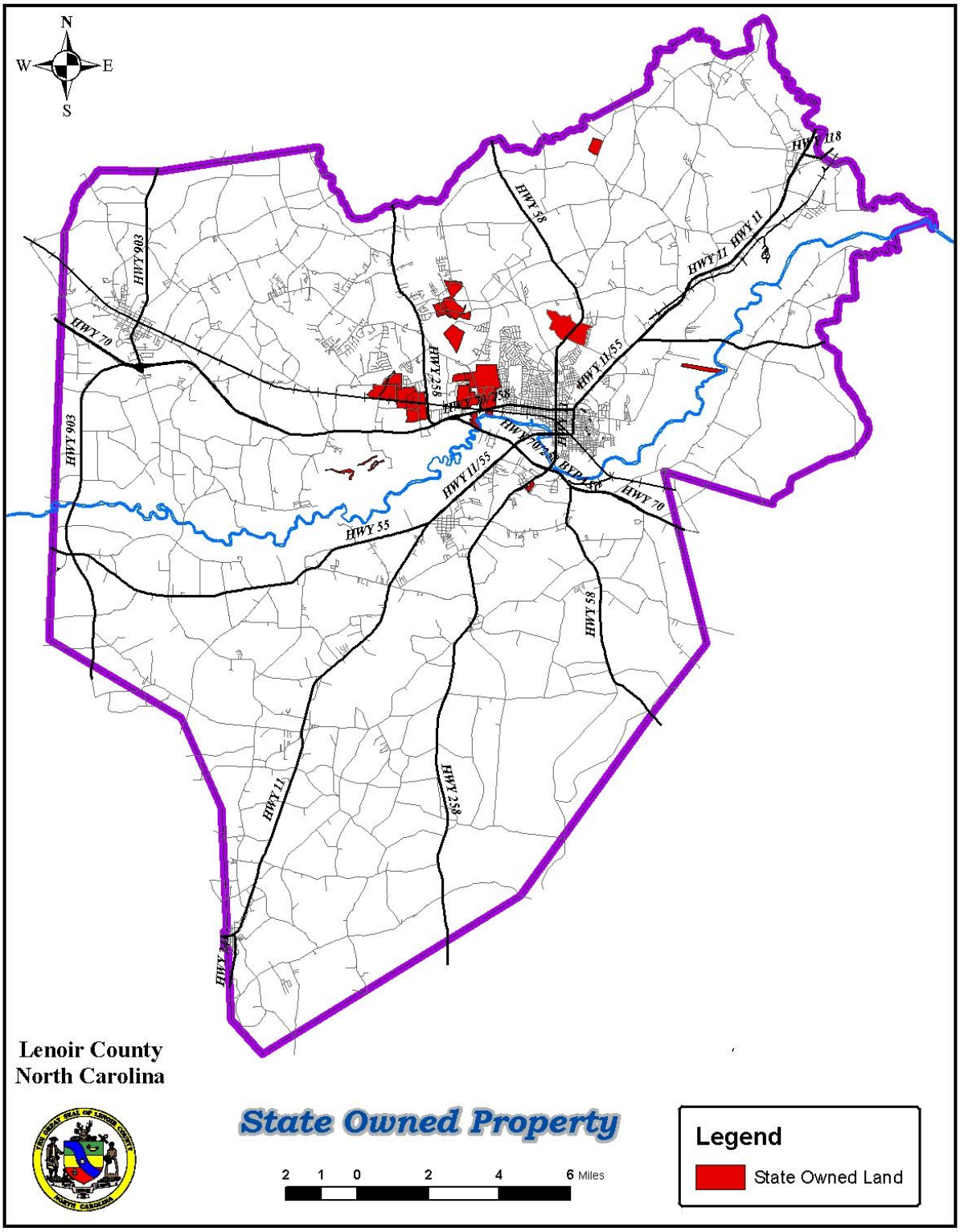
Map 3: Water Infrastructure



Map 4: Sewer and Natural Gas Infrastructure

Agribusiness is important to the county, which is served by East Coast Equipment, Harvey Fertilizer and Gas Company, Helena, Cardinal Chemicals, J. C. Howard Farms, Mills International, Carolina Greenhouses, Carolina Soil and Pink Hill Dixie Chemical. The newest agribusiness in the county is Sanderson Farms, the nation's number-four poultry producer. Sanderson Farms has constructed a hatchery, feed mill and processing plant that employs 1,500 people. The location of the plant has provided poultry contract growing opportunities for farmers in the county and area. (http://www.kinston.com/news/sanderson-71306-county-welcomed.html)

The county is home to several state-owned properties (Map 5), such as the Caswell Developmental Center, operated by the North Carolina Division of State Operated Healthcare Facilities (http://www.caswellcenter.org/) and the Lower Coastal Plain Tobacco/Cunningham Research Station as well as Caswell Research Farm. The stations are operated by the North Carolina Department of Agriculture and Consumer Services (NCDA&CS) and North Carolina State University and provide facilities for research, teaching and extension. (http://www.ncagr.gov/research/lcptrs.htm)

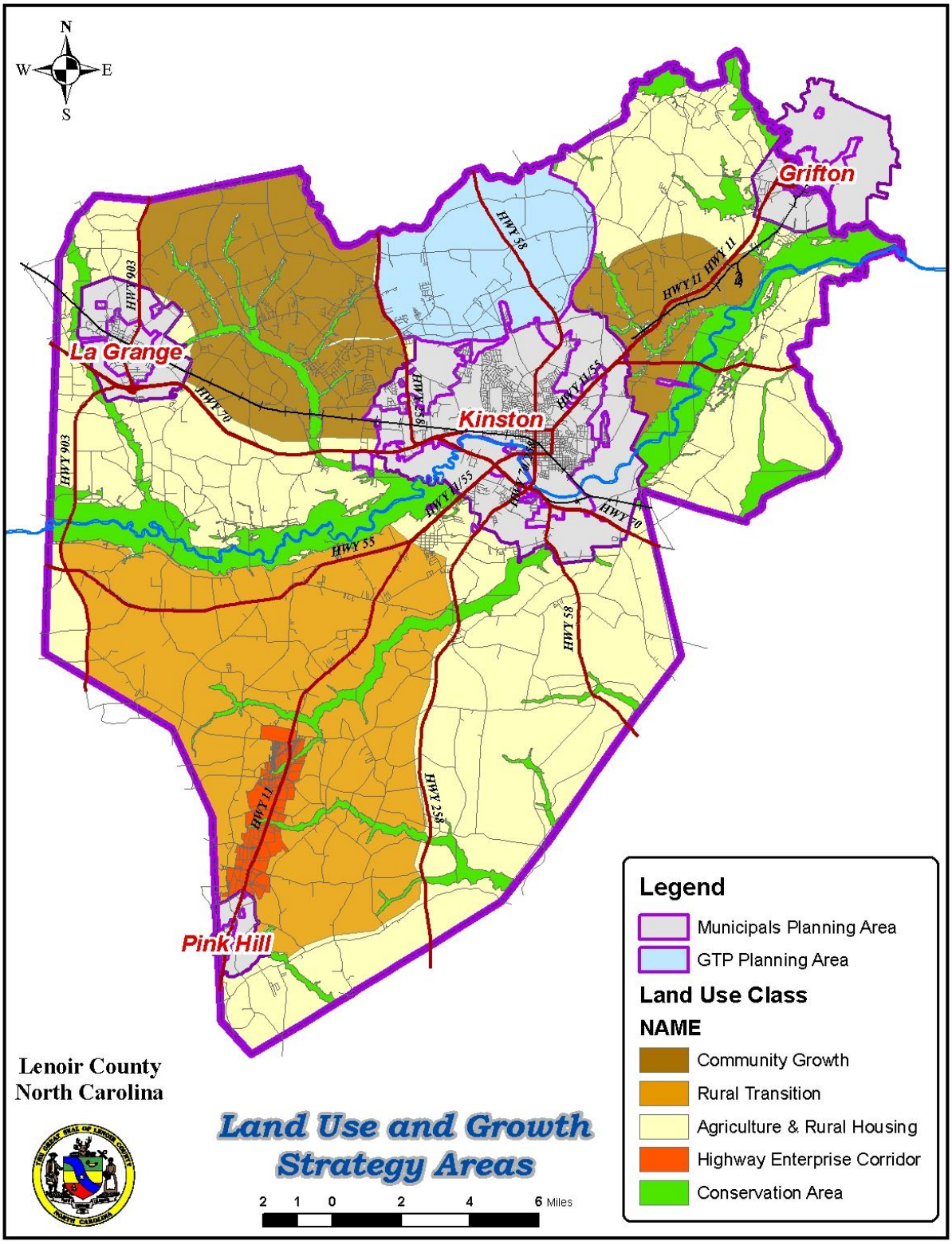


Map 5: State-Owned Property

Agriculture has a large impact on the economy in Lenoir County. In 2009 the total cash receipts for farming were $185,547,598 for crops and livestock, ranking Lenoir as 11th in the state. (2010 NCDA&CS Agricultural Statistics) Forestry is an integral part of agriculture in the county contributing more than $32 million in income. Forest lands account for 40 percent of the total land area, with 92 percent owned privately. (http://ncforestservice.gov/search.htm) Data from 2008 IMPLAN (Mig,Inc.), as reported by Dr. Mike Walden at N.C. State University, agriculture and agribusiness accounted for 28.6 percent of total county gross product. (http://www.ces.ncsu.edu/depts/agecon/counties/lenoir.pdf)

The preservation of farmland and farming are imperative to the continued prosperity of Lenoir County and its citizens. Even though agriculture is constantly changing through commodity shifts and market diversification, it remains a vital component of the economy of the county and all of eastern North Carolina. Citizens of Lenoir County have enjoyed many other attributes from farming such as open space, recreation, wildlife habitat and the retention of the county's rural character and history.

The interface of rural and urban areas can present challenges, but these can be addressed through farmland preservation planning, which provides local government with a tool to guide policy and programs that will ensure that agriculture remains a viable entity. Land use and growth strategy in the county are shown in Map 6, which illustrates the interface between agriculture and urban growth. We must always remember that it all starts with the land.



Map 6: Land Use and Growth Strategy Areas

Natural Attributes

Located in the east central region of North Carolina and consisting of 255,900 acres, Lenoir County is in the Coastal Plains physiographic province. With short breaks separating the uplands and flood plains in many areas, Lenoir County is mainly level to gently sloping. Ranges of land elevation from 10 feet close to the Neuse River to nearly 60 feet near the Trent River and 161 feet at the boundary lines with Duplin and Wayne counties. There are two major rivers in the county: the Neuse, which bisects the county in half and the Trent River. Lenoir County is entirely contained within the Neuse River Basin.

The climate of Lenoir County is mild. It is excellent for growing a variety of crops since the average growing season is 209 days. The normal minimum average temperature is 50.7 degrees Fahrenheit, and the average maximum temperature is 75.4 degrees. (http://www.nc-climate.ncsu.edu/dynamic_scripts/cronos/query.php)

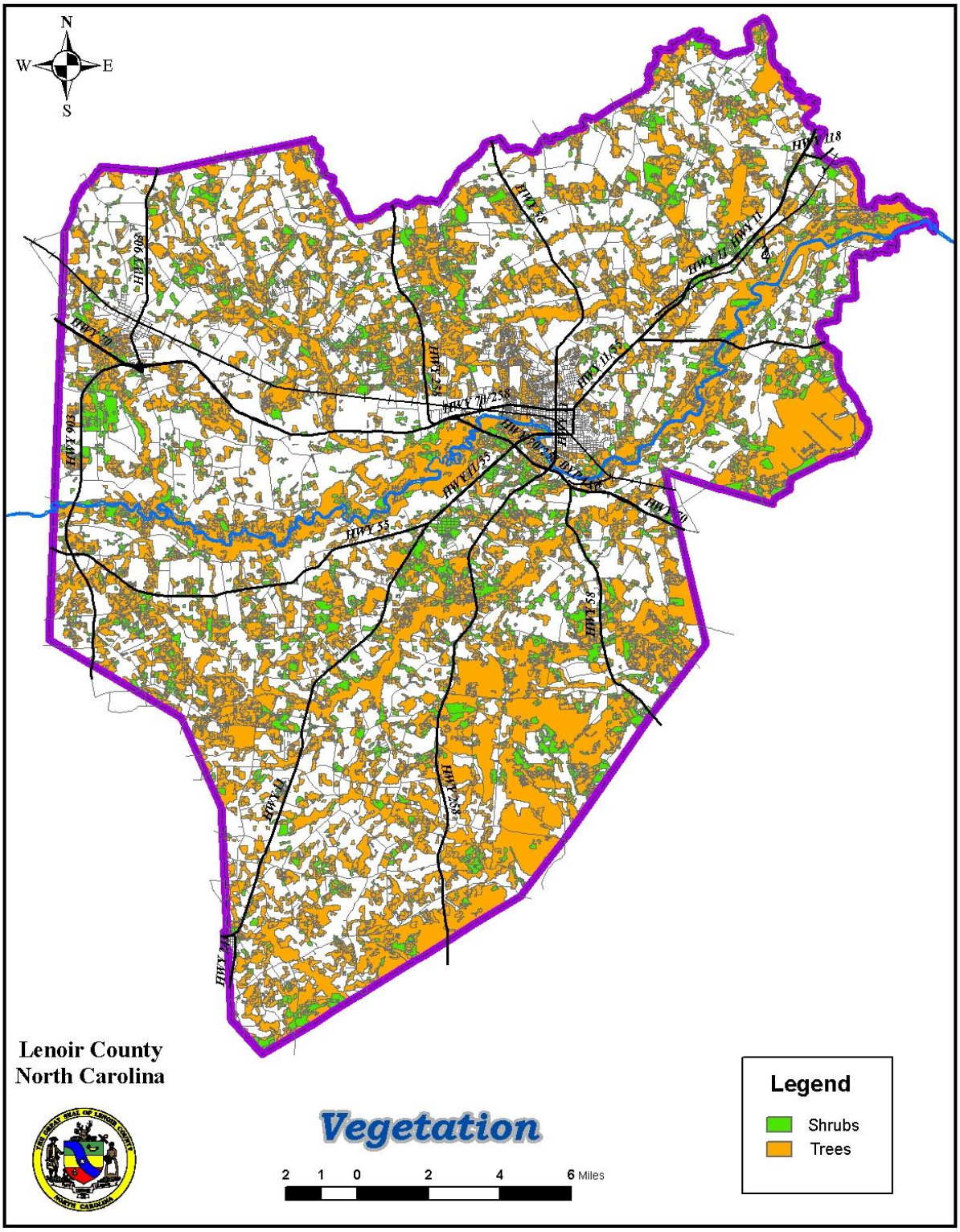
One of the most important ingredients for crop production is soil. Lenoir County has eight soil associations.

1. Norfolk-Goldsboro is well drained and moderately well drained soils that have loamy subsoil. This association comprises 30 percent of the county and is well suited to all locally grown crops, including corn, tobacco, soybeans, small grains and produce. Limitations are seasonal high water table, slope and runoff.
2. Pocalla-Wagram-Lakeland association is mainly level to strongly sloping soils that are well drained to excessively drained soils. The county consists of 25 percent of this association, with most of it cultivated, and the rest pastured, forested or used for nonfarm purposes. Main limitations for use are leaching of plant nutrients, low available water capacity, blowing soil and slope.
3. Rains-Lynchburg association is poorly drained to somewhat poorly drained soils, which are mostly flat and in depressions. This association makes up 15 percent of the county and is mainly forested. Loblolly and pond pines are the major tree species found on these soils. The use and management of these soils are limited by high water table and surface ponding.
4. Johnston-Chewaela-Kinston association is nearly level soils that are found along major streams and are poorly drained. The county consists of eight percent of this association and is mainly wooded, with mixed hardwoods. It is suited to cultivated areas for soybeans and corn. This association is affected by flooding, stream overflow and surface water ponding.
5. Kalmia-Johns-Kenansville association makes up 10 percent of the county and is well drained to somewhat poorly drained soils. This association is wooded, used for nonfarm purposes and can be cultivated. The major crops are tobacco, corn, small grains and produce. Trees that grow well are loblolly pine, oak, gum, holly, dogwood and maple.

Limitations are plant leaching, soil blowing, low water capacity and seasonal high water table.

6. Torhunta-Lumbee association is a very poorly drained to poorly drained soils. The association only makes up six percent of the county. The vast majority is wooded with pond and loblolly pine, gum and maple. Some areas are cultivated with corn and soybeans. The main limitations are water ponding and seasonal high water table.
7. Leon-Murville association is somewhat poorly drained to very poorly drained and is nearly all wooded. The important tree species are loblolly, pond and longleaf pine. Locally produced crops are not suited for this association due to leaching of plant material, water ponding and seasonal high water table. The association is only found in three percent of the county.
8. Leaf-Craven-Lenoir association is poorly drained to moderately well drained soils that make up three percent of the county soils. This association is primarily wooded, with some cultivated crops and pasture. The major tree species are loblolly and pond pine. If drained, corn, soybeans, tobacco, small grains and pastures can be produced. Limitations are moderate shrink-swell potential, slow permeability seasonal high water table and water ponding. (Lenoir County, North Carolina Soil Survey March 1977)

Agricultural use is suited for 70 percent of Lenoir County soils. The remaining 30 percent is suited for forest, pasture and cultivation when well drained. Vegetation areas are displayed in Map 7. Due to the climate and soils, Lenoir County is similar to the rest of Eastern North Carolina in that it is a good match for agricultural production. The soils are a profitable asset for crops and natural resource production. This makes it even more critical to plan for residential and commercial growth so that agriculture can remain an important part of Lenoir County's economy.



Map 7: Vegetation

Lenoir County: The State of Agriculture

Agriculture is a viable and important component of Lenoir County, contributing to the economy, quality of life and well-being of the community. Lenoir County farmers produce a variety of crops and livestock successfully. The 2007 U.S. Census of Agriculture ranks Lenoir County as eighth in total value of agricultural products sold and ninth in the value of livestock sold. A 2007 review of Lenoir County agriculture from NCDA&CS's Agriculture Statistics and the N.C. Forest Service provides this data:

- Land in farms: 137,550 acres
- Number of farms: 480
- Average size of farms: 287 acres
- Market value of products sold: $236,295,000
- Average age of farmers: 56.9 years
- Land in Forest: 101,700 acres

As in other counties in Eastern North Carolina, Lenoir has reported an increase in farmland of 13 percent from 2002 (121,520 acres) to 2007 (137,550 acres). Additionally, the numbers of farms were reported to have increased from 428 in 2002 to 480 in 2007 (2007 U.S. Census of Agriculture). While this is a reported increase, the actual state of agriculture has remained stable in both number of farms and acreage. A slight increase is expected to be reported in the upcoming census due to the influence of Sanderson Farms. Figure 1 highlights farmland acreage in the county since 1987. The source for all figures that follow in this section is the U.S. Census of Agriculture.

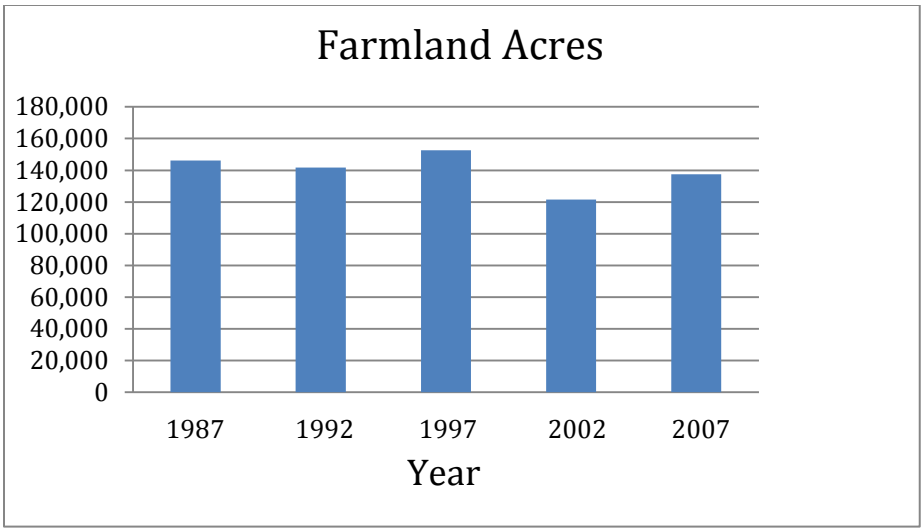


Figure 1: Lenoir County Farmland Acreage

While farm acreage has been variable over the last 20 years, the number of farms has steadily declined from 1987 (667 farms) to 2007 (480 farms) with a modest increase noted from 2002 to 2007 (Figure 2).

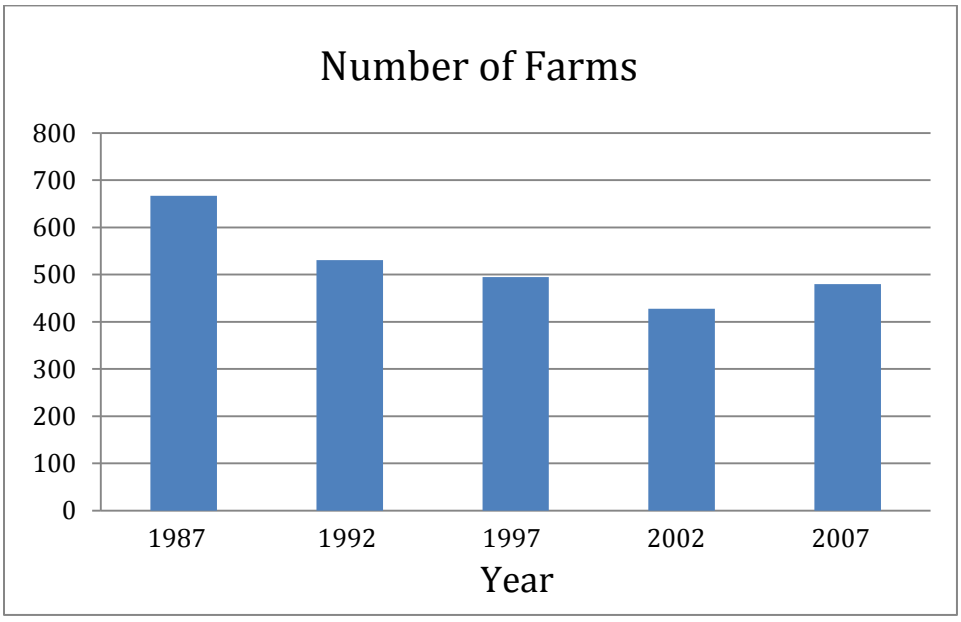


Figure 2: Lenoir County Farm Numbers

Agriculture, Agribusiness: A Leading Industry in Lenoir County

The increase in farmland and number of farms is indicative of a vibrant agricultural sector in Lenoir County. In 2009, Lenoir ranked 11th in total cash receipts for farm products according to the 2010 NCDA&CS Agricultural Statistics. Market value of products sold increased 67 percent from 2002 to 2007. A look back reveals that the market value of products sold has gone up and down in line with increases and decreases of farmland and number of farms. These increases and decreases can also be attributed to tobacco quota changes and fluctuation in livestock prices. Figure 3 shows the market value of agricultural products sold from 1987 to 2007.

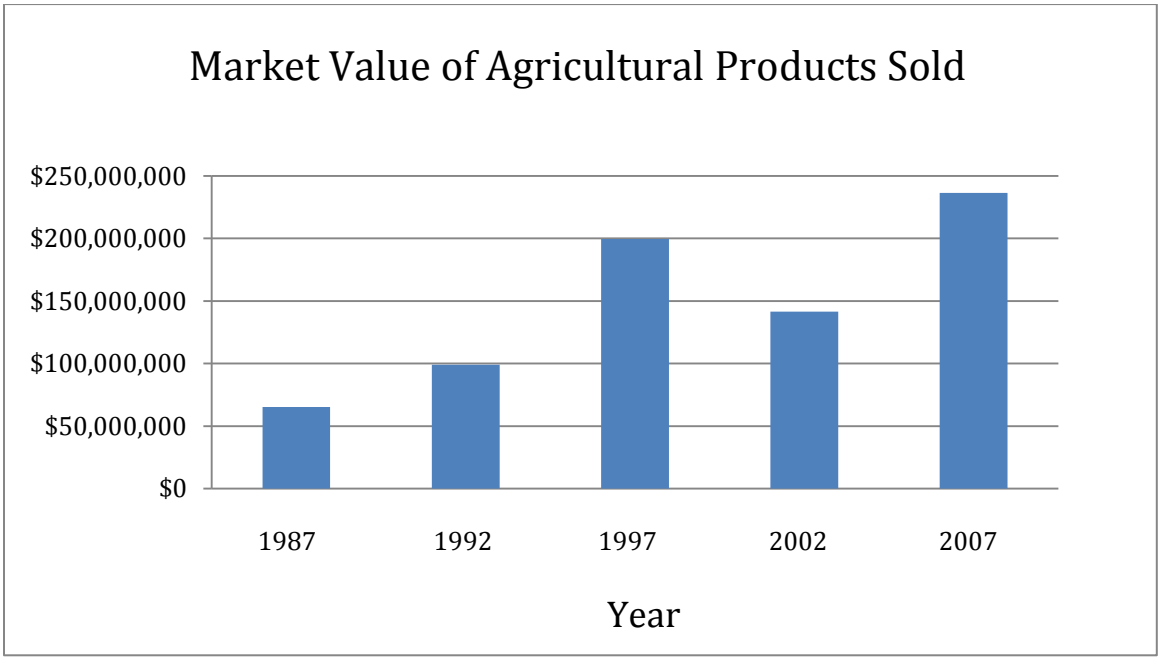


Figure 3: Lenoir County Market Value of Agricultural Products

Lenoir County Agriculture and Agribusiness Economic Impact

Dr. Mike Walden of North Carolina State University's Department of Agriculture and Resource Economics Department provided relevant data from IMPLAN (Mig, Inc.) that captured the economic importance of agriculture and agribusiness to Lenoir County in value-added dollars. The total county value added, including agriculture food, natural fibers and forestry industries, was $2,015,454,127 in 2008. All agriculture and agribusiness total income for that same year was $577,220,612 which was 28.6 percent of the county's total income. These viable sectors provided a total employment of 18.7 percent or 6,413 jobs in 2008.

Top Commodities in Lenoir County

Lenoir County agriculture comprises a variety of commodities produced by farmers. Table 1 lists the top income contributing commodities for the county. The data is provided by NCDA&CS's Agricultural Statistics 2008 and 2009 reports. These figures represent the economic impact of the commodities on the Lenoir County economy. The differences from year to year can be explained by market price fluctuations and decreases in acreage and animal inventory.

Commodity	2008	2009
Tobacco	$25,293,000	$31,468,000
Cotton	$7,592,000	$6,800,000
Soybeans	$7,825,000	$12,640,000
Corn	$4,433,000	$8,774,000
Wheat	$4,918,000	$6,203,000
Vegetables, Fruits, Nuts &Berries	$4,541,000	$4,996,000
All Forest Products	$7,424,000	$7,032,000
Livestock (Number of Animals)		
Hogs & Pigs	305,000	290,000
Cattle	4,100	3,500
Turkeys	1,611,000	1,160,000
Broilers	4,000,000	3,800,000

Table 1: Commodity and Livestock Values

Livestock

Livestock production is responsible for a large part of the agricultural economy in Lenoir County. The value of livestock, according to the U.S. Census of Agriculture, nearly doubled from $99,649,000 in 2002 to $166,432,000 in 2007. In 2009, livestock cash receipts decreased to $88,100,000. This fluctuation in sales can be contributed to the downsizing of livestock operations and decrease in market prices coupled with the continuing increase in feed and commodity prices.

Hogs are an important commodity in the county. Inventory numbers have fluctuated as a reaction to normal market adjustments over the last three years. The inventory numbers in 2007 were 357,268, in 2008 they were 305,000, and in 2009 they were 290,000. Still, Lenoir County ranked eighth in the state in hogs and pigs in 2009. In 2007, the U.S. Census of Agriculture reported sales value of $117,422,000 for hogs.

Lenoir County ranked seventh in the state in turkey production with 1,160,000 produced in 2009. Broiler numbers are 3,800,000 with a state rank of 37 (NCDA&CS Agricultural Statistics 2010). The value of sales of poultry and eggs according to the U.S. Census of Agriculture in 2007 was $48,274,000. The establishment of Sanderson Farms has resulted in growth in the broiler market as new farms continue to come on line in 2011. Livestock will continue to play an important role in the county due to the vertically integrated contract growing system, which assures farmers a market for their product and access to feed and animal inventory.

Crops

In 2009, Lenoir County ranked 11th in the state in total cash receipts from livestock, crops and government payments according to NCDA&CS's Agricultural Statistics. This ranking was due to the variety of row crops in addition to the livestock that are produced in the county. Lenoir County has been ranked as one of the top 20 counties for production of the following:

- **Seventh in the State for Flue Cured Tobacco Production (2009):**

  In spite of the demise of the tobacco quota system, the crop is still the most important row crop grown in the county. In 2009, Lenoir County produced 8,000 acres with a yield of 17,881,000 pounds. This was a significant increase from 2002, when only 5,539 acres were grown in the county with a yield of 10,442,990 pounds. In terms of income, tobacco sales were $25,957,000 in 2007 according to the U.S. Census of Agriculture. There are still some challenges to the production of tobacco due to the uncertainty of contract acquisition from the tobacco companies. In early 2011, some Lenoir farmers reported to the author that they did not have contracts renewed by a tobacco buying company. This trend was confirmed by Dr. Blake Brown of North Carolina State University's Agricultural and Resource Economics Department, who stated that one buying company did not renew contracts with the farmers in North Carolina in 2011. He also reported that a new buying company was offering contracts for 100 million pounds for the Asian market, but the China National Tobacco Corporation and the State Tobacco Monopoly Administration do not have current knowledge of the new company. This leaves farmers who signed contracts in limbo with no signed contracts received from the company. (http://www.ncsu.edu/project/tobaccoportal/wp-content/uploads/2011/03/Flue-Cured-Mar-1-Update.pdf)

- **Ninth in the State in Cotton Produced (2009):**

  Cotton is a crop that has acreage fluctuations from year to year driven by the global market price. In 2007, the county grew 23,189 acres; in 2008, it grew 17,700 acres; and in 2009, it grew 12,100 acres. In 2007, cotton value of sales was $11,324,000 in Lenoir County. With cotton prices at a market high, more cotton was planted in 2011. The National Cotton Council showed the calendar year (2011) average price of 133.2 cents per pound, with a high of 151.7 cents in January (http://www.cotton.org/econ/prices/monthly.cfm). Cotton Incorporated stated that

the price increase was due to tight supply, with world production estimated to be down by 417,000 bales. (http://www.cottoninc.com/MarketInformation/MonthlyEconomicLetter/)

- **Eleventh for Corn Production in 2009:**

  Corn acreage has also fluctuated over the past three years, as production is driven by price per bushel. This trend is illustrated by the plunge in price for corn that occurred in late April, 2011. On the Chicago Board of Trade, the priced dropped thirty cents to $7.39 per bushel (http://www.bloomberg.com/news/2011-04-28/corn-plunges-by-chicago-exchange-limit-as-demand-dwindles-soybeans-slump.html). In 2007, farmers in Lenoir County planted 34,307 acres, which ranked the county seventh in the state and had a sales value of $12,495,000 (2007 U.S. Census of Agriculture). In 2008, production decreased to 22,200 acres and there was a further decline in 2009 to 21,800 acres. This put Lenoir 11th in the state, but in terms of harvested bushels, the county ranked 10th with 2,504,000 bushels.

- **Wheat and Soybeans Increased Acreage:**

  Acreage planted for wheat has been on the increase since 2007 in Lenoir County. In 2007, there were 10,053 acres planted, with a value of sales of $1,304,000. NCDA&CS's Agriculture Statistics show that acreage increased to 15,000 acres in 2008, and an additional 700 acres were planted in 2009, which increased production to 15,700 acres.

  Soybeans mirrored this with planted acreage at 32,592 in 2007, which increased to 39,000 acres in 2009. The dollar value in 2007 in Lenoir County was $6,334,000 (NCDA&CS Agriculture Statistics). Both of these crops are similar to cotton and corn in that supply is driven by market demand and price.

- **Vegetables and the Green Industry:**
  For a number of years, Lenoir County has had a successful Farmers Market located in downtown Kinston beside the Neuse River. The market, which local and area produce farmers use to sell fresh products, is active practically the entire year, with a busy season from May through October. In 2009, Lenoir County had income of $4,996,000 from vegetables, melons, fruits, nuts and berries (NCDA&CS Agriculture Statistics). In 2009, the county ranked fourth in the state in harvested acres of cabbage. Along with produce, sales of nursery, greenhouse and floriculture added $9,734,000 to the economy (U.S. Census of Agriculture 2007).

Forestry

Lenoir County has 101,700 forested acres, of which 93,200 acres are privately owned. The remaining 8,500 acres are owned by timber companies (N.C. Forest Service, Lenoir County). When selling timber, stumpage is the price paid to the landowner for standing timber, and delivered value is the price paid to the timber buyer when the timber is delivered to the mills. In

2010, $1,944,965 was paid for stumpage, and $4,296,201 was paid for delivered value in Lenoir County. (Jeuck and Bardon, Income of North Carolina Timber http://www.ces.ncsu.edu/forestry/resources/documents/income10.pdf)

The North Carolina Forest Service provides best management practice plans and reforestation for landowners. In 2007, the N.C. Forest Service Lenoir County wrote 65 management plans in the county for a total of 2,700 acres. (http://www.co.lenoir.nc.us/documents/111907MeetingMinutes.pdf) However, budget cuts over the past several years have resulted in fewer harvested tracts replanted and a decrease in management plans written.

County Tax Revenue

Farms provide tax revenue to the county. In 2007, the U.S. Census of Agriculture reported that the estimated value of land and buildings was $465,202,000 with an average value per farm of $969,173 in Lenoir County. A 2010 cost of community services study done in Guilford County reported that agricultural lands are net contributors to the county, generating $1.62 in revenue for every dollar spent on community services. The study noted that farmland more than pays its own way in county tax revenue. (http://www.cals.ncsu.edu/wq/lpn/PDFDocuments/GuilfordCountyCOCSReportfinal.pdf). Forest and farmland compare more closely to commercial/industrial in cost of community services as seen in other studies across the state. This factor should encourage local government to consider incentives for farmland preservation similar to those for commercial/industrial development.

Farmland Protection Programs

(Compiled by John Bonham, 2009)

Present-Use Value Tax Program

Present-Use Value, or PUV, is a program established by N.C.G.S. §§ 105-277.2 to .7 and administered by the county assessor through which qualifying property can be assessed, for property tax purposes, based on its use as agricultural, horticultural or forest land. The present-use value is the value of the land based solely on its ability to produce income. Qualifying property is assessed at its present-use value rather than its market value. The tax office also maintains a market value for the land, and the difference between the market value and the present-use value is maintained in the tax records as deferred taxes. When land becomes disqualified from the program, the deferred taxes for the current and three previous years, with interest, will usually become payable and due.

Basic Requirements

- Minimum acreage of production land:
  - 10 acres for agricultural use
  - Five acres for horticulture use
  - 20 acres for forest use
- Production must follow a sound management plan.
- Agricultural and horticultural land must have at least one qualifying tract that has produced an average gross income of at least $1,000 for the three years preceding the application year.
- Forest land must be following a forest management plan.

Benefits

Protection from increasing land values that are based on development potential and the potential increase in property taxes

More information can be found at http://www.dor.state.nc.us/publications/property.html.

Voluntary Agricultural Districts (VAD)

Established by N.C.G.S. §§ 106-737 to 743 and administered at the county level, Voluntary Agricultural Districts are designated areas where commercial agriculture will be encouraged and protected. The purposes of the districts are to increase identity and pride in the agricultural community and to increase protection from nuisance suits and other negative impacts on properly managed farms. Lenoir County is pursuing the development of a Voluntary Agricultural District Ordinance.

Requirements

- Land must be enrolled in the Present-Use Value program or otherwise be determined to meet the qualifications of the program.
- The landowner must enter into a revocable agreement to limit development for a 10-year period.

Benefits

- Notification to buyers of nearby property that they're moving into an agricultural area
- Abeyance of water and sewer assessments
- Public hearings on the condemnation of farmland
- Stronger protection from nuisance suits
- Representation by an appointed board regarding concerns on threats to the agricultural sector

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 non-farm 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.

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.

Transfer of Development Rights

A program set up by local units of government that utilizes conservation easements to preserve farmland by providing incentives to increase development density in a 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.

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.

Right-to-Farm Law

North Carolina has a state right-to-farm law (N.C.G.S. §§ 106-700 to 701(2006)) that protects farm and forestry operations from being declared a nuisance as long as they have been in operation for at least one year and are operated properly and without negligence.

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.

Challenges, Opportunities and Trends: Survey and Interview Results

The methodology employed to access information, perceptions and attitudes related to agriculture and agribusiness in Lenoir County was approached through survey distribution and interviews of three targeted audiences: agriculture producers, agribusiness owners and non-farm residents of Lenoir County. Surveys were distributed by the Farm and Forest Protection Advisory Team, which consisted of the N.C. Cooperative Extension Lenoir County, Lenoir County Economic Development, the county manager's office and other Lenoir County staff.

In addition, the advisory team identified key leaders in Lenoir County from all three target audiences that were interviewed to better identify challenges and opportunities that exist for the agricultural industry in Lenoir County. All descriptive statistics contained in this document were calculated using data obtained though these processes. Survey and interview information revealed pertinent information on the state of agriculture in Lenoir County from the perspective of farmers, agribusiness and non-farm residents.

The challenges and opportunities facing Lenoir County agriculture are numerous. One common theme permeated responses from all target audiences: the need for education to address the challenges and opportunities that face agriculture now and in the future. Education of citizens about the importance of agriculture to the county's economy and the quality of life is extremely important to the continued success of the industry. The key to farming in Lenoir County and all of Eastern North Carolina is a well-informed citizenry that demands protection for agribusinesses, farms and forests by government at all levels.

Agribusiness Analysis

Lenoir County is home to a viable agribusiness sector that is indicative of the county's strong farming roots. Agribusiness is defined by the Merriam Webster dictionary as "an industry engaged in the producing operations of a farm, the manufacture and distribution of farm equipment and supplies, and the processing, storage and distribution of farm commodities." Dr. Mike Walden reported that agriculture and agribusiness combined contributed 28.6 percent of the total county value-added income in 2008. Lenoir County is home to Harvey Fertilizers and Gas Company; East Coast Equipment; Tidewater Transit; Mills International, Inc.; Pink Hill Dixie Chemical Company and Sanderson Foods.

Agribusiness owners that were surveyed and interviewed are representative of a variety of businesses ranging from equipment dealers, financial firms, farm supply and processors/distributors. The majority of agribusiness persons responding (83 percent) had been in operation more than 20 years (Figure 4).

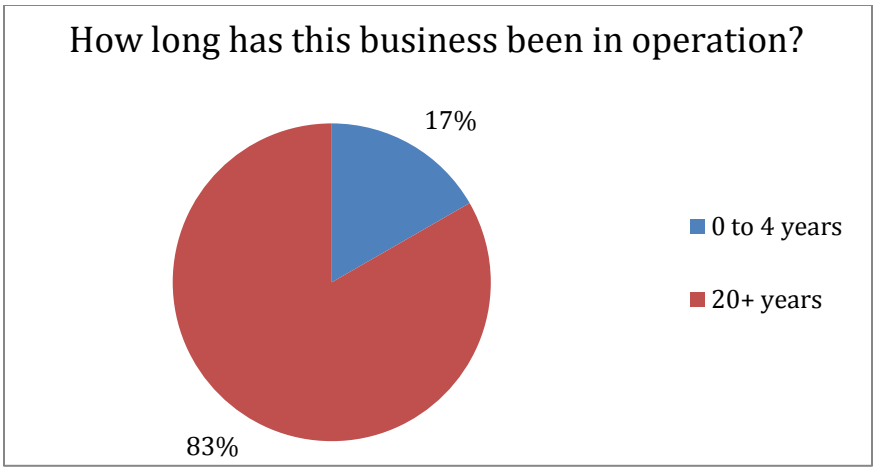


Figure 4: Lenoir County Agribusiness Surveys

Figure 5 illustrates that 50 percent of agribusinesses recognized that 25 to 49 percent of their business was generated from the farm community, and 33 percent of those contacted indicated that the farm community was responsible for 75 to100 percent of their business clientele. While non-farm customers do contribute to the agribusiness economy, the importance of the farming community is still recognized. In the last five years, 60 percent of agribusiness respondents reported an increase in their operation size, and 100 percent increased their agricultural inventories and sales. This growth is indicative of the agribusiness community's confidence in farming.

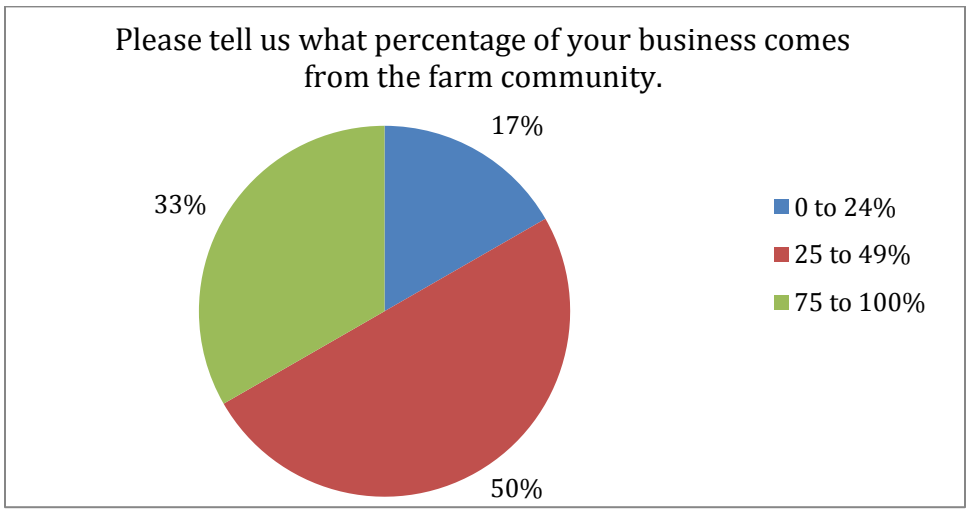


Figure 5: Lenoir County Agribusiness Surveys

Agribusiness owners also noted trends in agricultural production that could have impacts on their operations including, but not limited to, a decrease in the number of small farms, an increase in farm size, a shift to more sophisticated operations and commodity diversification (Figure 6). These trends are driven by global markets, farm value-added products and farm mechanization.

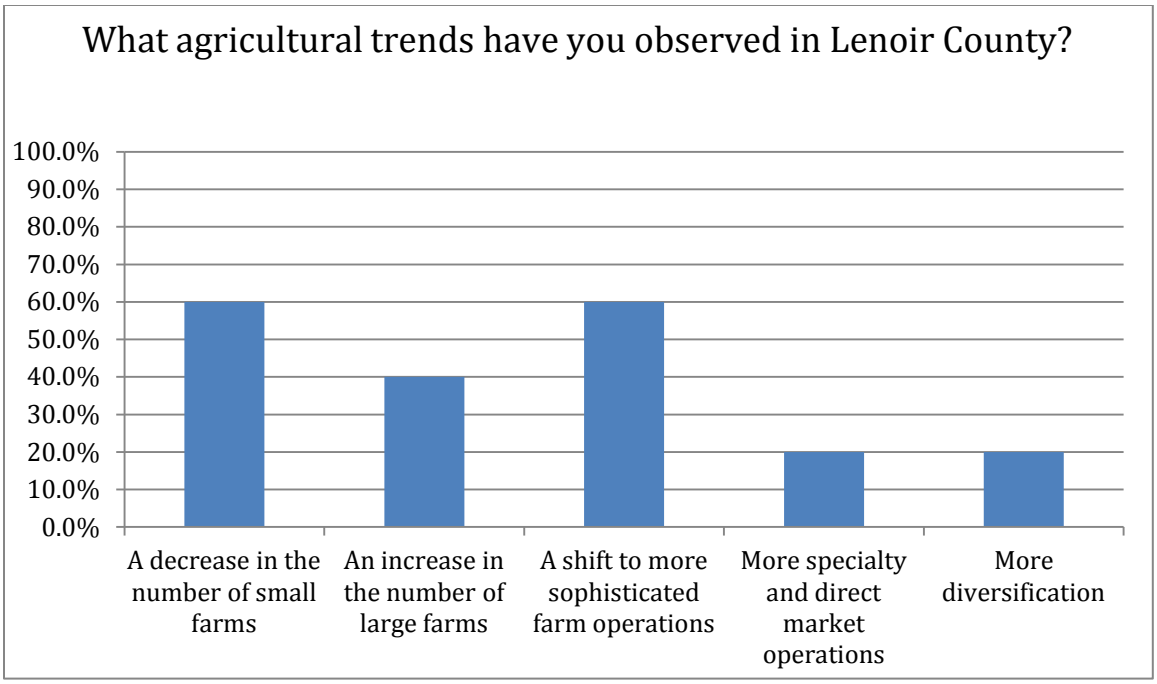


Figure 6: Lenoir County Agribusiness Surveys

Eighty percent of agribusiness respondents were not aware of the farmland preservation tools including Voluntary Agricultural Districts (VAD), Enhanced VAD, North Carolina's conservation easement tax credit and other programs. Sixty percent were not aware of agricultural present-use value taxation. This is evidence of a need to increase awareness of these tools through training and marketing.

Following are a list of challenges and opportunities expressed by the respondents that will have an effect on agriculture in the future.

- Eighty percent of farmers and agribusiness owners indicated a desire and need for farm and business transition/estate planning.
- One hundred percent of the respondents noted a need to encourage and promote agriculture and agribusiness as a viable career option.
- One hundred percent of those questioned noted that it is important to educate farm neighbors and the community about the impact of agriculture and agribusiness on Lenoir County's economic viability .
- One hundred percent of the respondents saw a need for consumer education on economic impact of buying local.
- All of those questioned said that youth education in the field of agriculture is of great importance, and continued support of these programs in secondary and post-secondary schools is essential to the future of agriculture.

- One hundred percent expressed that youth agriculture education taught in the schools was an important issue.
- Eighty percent of agribusiness owners said that they did not feel that the Lenoir County Economic Development Commission supported and recognized the importance of agribusiness to the local economy.
- Agritourism was reported by 60 percent of the respondents as an expansion/diversification opportunity for farmers.

Clearly, education not only of farmers but also of youth and non-farm residents is a crucial tool in maintaining and expanding agriculture in Lenoir County. There is a need to develop and implement an educational effort to showcase the importance of agriculture to the well-being of the county.

When asked what would provide additional assurance of success in their business, 75 percent felt that training and education on new technologies for agriculture and the ability to secure adequate financing for maintenance and expansion were important (Figure 7).

Figure 7: Lenoir County Agribusiness Surveys

Local government funding of farm and forest preservation was perceived as an important tool by 80 percent of respondents, which confirmed the importance they place on a viable and strong agricultural sector in the county. One respondent summed this up well in stating, "We need to continue to educate and re-educate the local population of the economic importance of agriculture to our county." Lenoir County is a Tier 1 county that is just starting to attract new industry, but the county will remain a rural and agrarian for many years to come.

The Lenoir County farming community has both challenges and opportunities, as expressed by agribusiness owners and summarized herein:

Challenges

- Aging farmers and identification of next generation of farmers
- Uncertainty of tobacco contract renewals from year to year
- Decrease in government agricultural payments
- Increasing input cost for farming and agribusiness
- Decreasing acreage resulting from urbanization/commercialization
- Stress from regulation resulting in excess record-keeping and time consumption
- Lack of understanding and support of agriculture by elected officials

Opportunities

- Livestock and poultry expansion as an alternative to row crops
- Support for locally grown food products by consumers and businesses
- Niche farming, such as specialty livestock, naturally grown produce and agritourism
- Need for farm transition/estate training for farmers
- Programs to assist youth in transition into the business of agriculture
- Education of citizens on the importance of agriculture to the economy and quality of life in Lenoir County
- Funding at all levels of government to maintain this vital sector

The agribusiness industry recognizes the importance of farming and agribusiness to the economy and environment of Lenoir County. Education is crucial in preserving and enhancing farming in the county for producers. There is a definite need to promote agriculture as a career and to educate youth on the career opportunities in all areas from farming to sales to processing. In addition to non-farm residents and youth, politicians need to be educated to ensure their support of agriculture and the tools needed to keep this sector viable and expanding.

Farmer Analysis

A review of the 2007 Census of Agriculture reveals that there were 480 farms in the county being cultivated by 444 male and 36 female farmers. The average age of farmers was reported as 56.9 years, and they were predominately Caucasian. Farmers providing information for the Lenoir County Farm and Forest Protection Plan represented operations from across the county. The average age of the respondents was 51.8 years old, slightly lower than reported in the 2007 Census of Agriculture.

The majority of operations (68.8 percent) were defined as farm production only with another 31 percent classifying their operations as primarily farm production with some timber production. Eighty-one percent of Lenoir County farmers surveyed indicated that they had been in operation for more than 20 years (Figure 8).

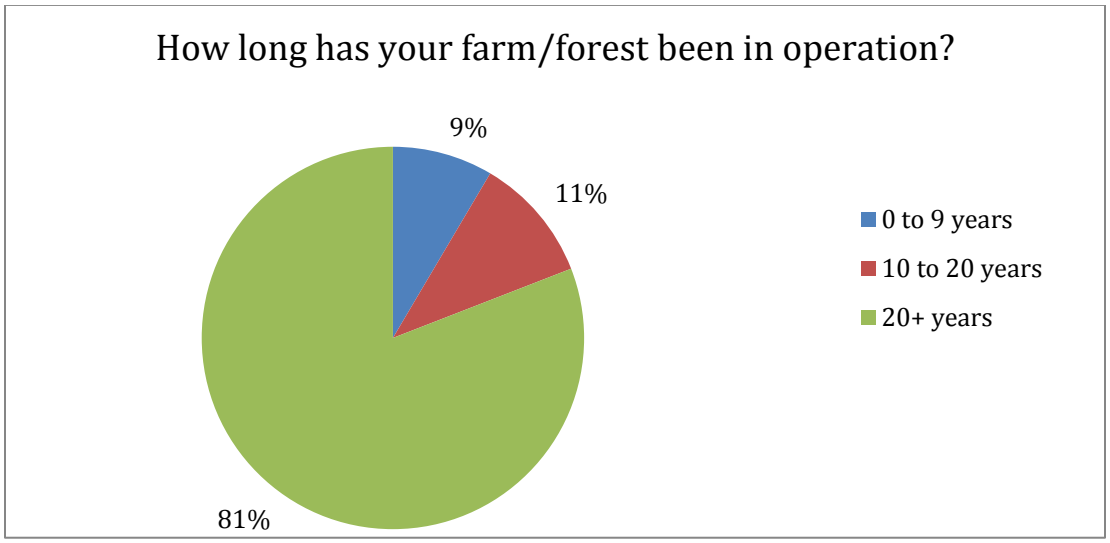


Figure 8: Lenoir County Producer Survey Number of Years Farms in Operation

Over 90 percent of responding farmers indicated that their operations provided their family the majority of their livelihood. This could explain the increase in farm acreage from 2002 to 2007, as reported by U.S. Census of Agriculture. Of the farmers responding, 52.1 percent had expanded their operations during the past five years. Interestingly, 80.9 percent indicated that they did not own sufficient property to expand or diversify their operation (Figure 9) indicating the importance of leasable land for operational expansion in Lenoir County.

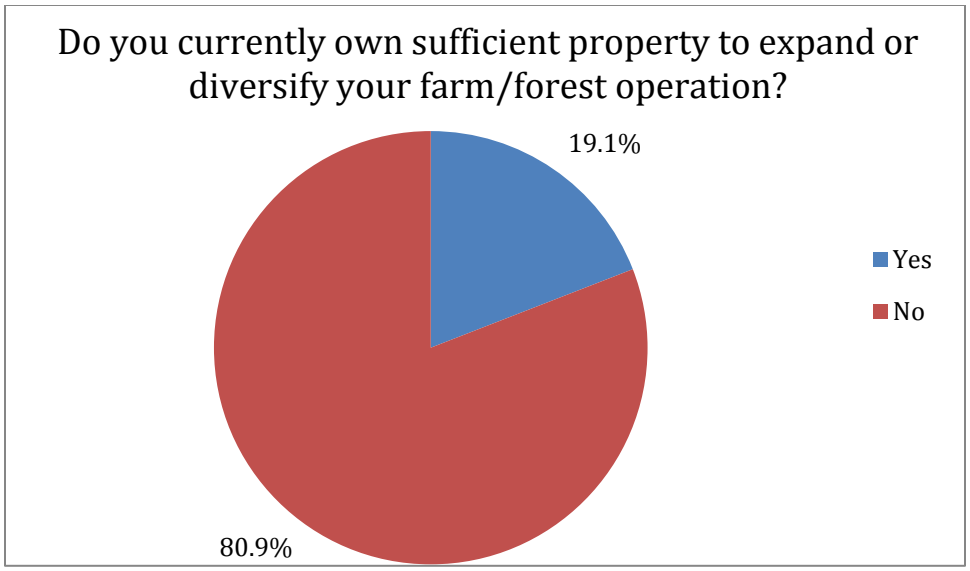


Figure 9: Lenoir County Producer Survey

Farmers who participated in the surveys identified the most critical issues expected to influence future farming operations as rising production costs, increasing land rental rates, product prices, regulatory costs and available labor (Figure 10). While most of these issues are out of the control of the farmer, input costs and land rental rates are driven by the market and competition for resources.

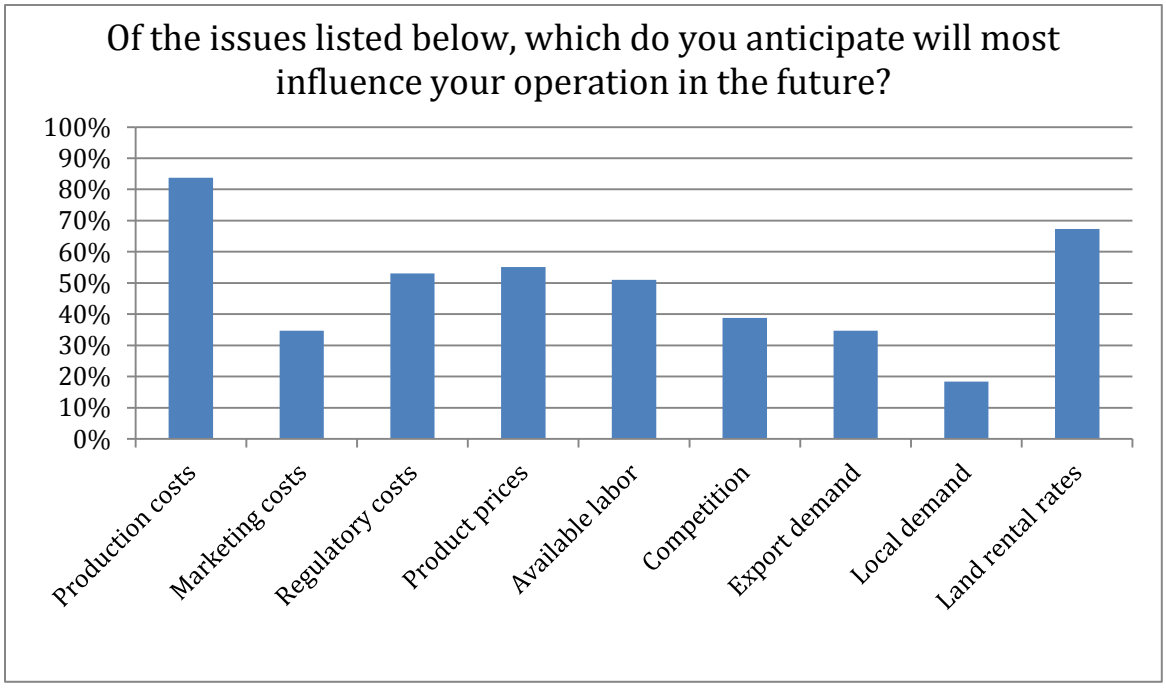


Figure 10: Lenoir County Agribusiness Surveys

Additional information from the farming community indicated that upon retirement, 87 percent expected to transfer the farm to family members for continued operation of the family farm (Figure 11). However, more than 76 percent of these same respondents do not have a farm transition plan. This indicates a need to assist farm owners who wish to retire to develop a transition plan. Because family farms are the backbone of agriculture in eastern North Carolina, educating farmers on how to pass their farms on to heirs is important to the future of agriculture.

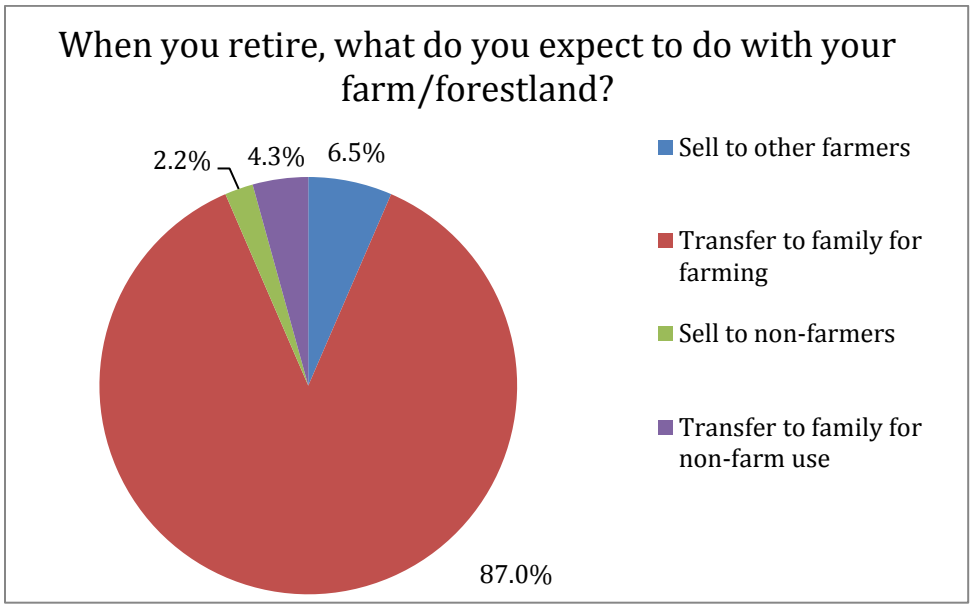


Figure 11: Lenoir County Producer Surveys

In 2009, the majority (91.6 percent) of forest land in Lenoir County was privately owned (http://www.dfr.state.nc.us/contacts/lenoir.htm). Seventy-one percent of respondents with forest land stated that they do not have a forestry management plan. A forest management plan is an invaluable tool for farmers and landowners to use this resource for greater profitability. Management plans are required for forest landowners to enroll properties in the county's Present Use Value program. The need for the development of an educational program to relay information regarding the benefits of a formal forest management plan is apparent from this data.

Fortunately, 75 percent of the farmers surveyed had not experienced any problems with neighbors in regard to their operation (Figure 12). Of those experiencing problems, the problems concerned boundary or trespassing conflict (66.7 percent), dumping/littering (41.7 percent), slow moving vehicles and chemical use (33.3 percent). Overall, farmers are viewed as good stewards and neighbors in Lenoir County. However, it's becoming more dangerous for farmers to move their equipment on roads, and farmers are having trouble with neighbors trespassing on their property.

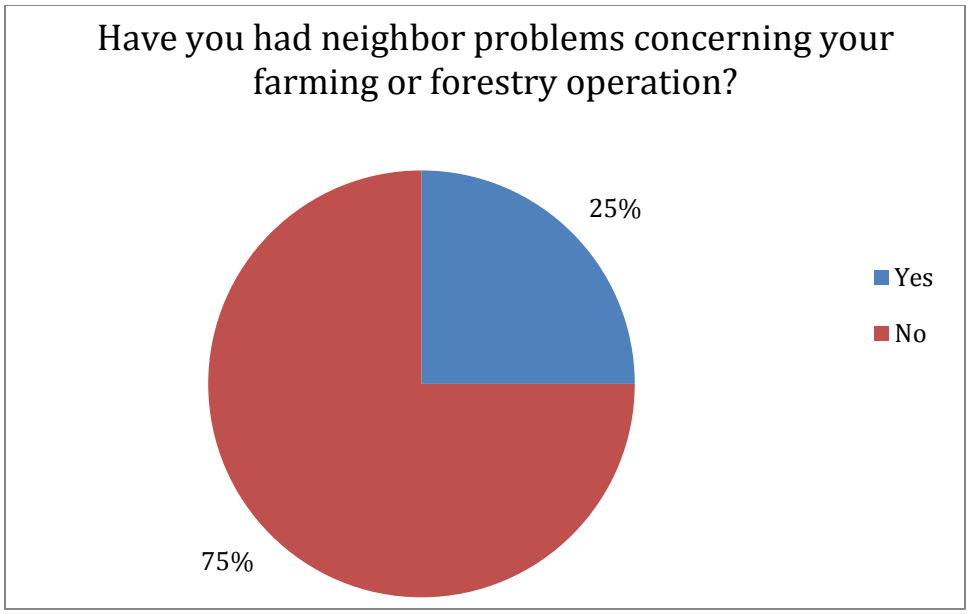


Figure 12: Producers Experiencing Problems with Neighbors

Local governments offer a deferred tax program beneficial to farmers and landowners and designated as the Present Use Value Taxation program (PUV). This program offers owners of forest land and those operating a bona fide farm a deferred tax program based upon their present use in agriculture, horticulture, or forest land. Over 50 percent of those who responded to the survey indicated that they were not aware of the program or not enrolled (Figure 13). While it has been documented in other counties of North Carolina that a number of forestland owners and absentee land owners are not aware of the PUV program and its qualifying criteria, the percentage noted here may not be representative due to the nomenclature utilized in survey instruments.

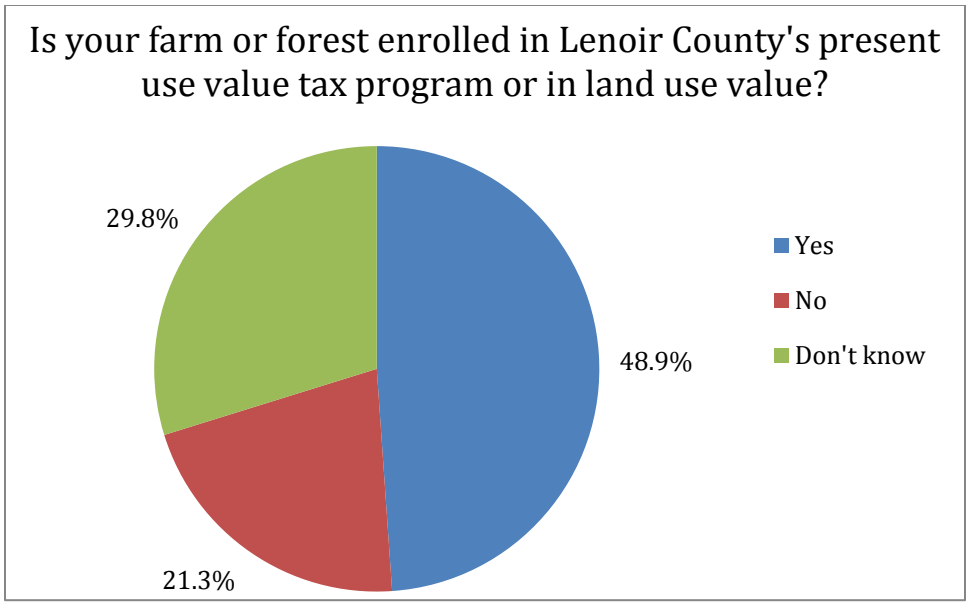


Figure 13: Lenoir County Producer Surveys

While nomenclature may be the culprit of this high percentage, it is still apparent that an educational program about the PUV program for forestland owners and absentee landowners would benefit some of Lenoir County landowners. An educational program to address qualifying criteria would greatly benefit these and other landowners with their understanding of the advantages of this program. While increased knowledge of this program could result in additional land enrolled in the program and, in turn, reduce tax revenues, the cost of community services for agricultural land versus residential land shows that the revenue outcome still provides a net gain to the county coffers. When Lenoir County farmers were asked to identify issues that were impediments to their profitability, more than 74 percent of the respondents listed local real property taxes and 66 percent cited local property taxes on equipment as significant burdens to family farms.

Additionally, farmers expressed a need for management, technical and marketing training on the following topics to enhance their operations:

- 95.8 percent do not market their farm and forest products to state and federal organizations, the military, hospitals and schools. Seventy-five percent expressed a need for training on application procedures for state and federal contracts. Lenoir County is uniquely positioned to serve institutions such as Lenoir Memorial Hospital, Lenoir Community College and two military bases are within 30 miles of county producers.
- 60.4 percent of producers indicated technical training on biofuel feedstock or woody biomass would be beneficial to possible diversification of their operations.

- 70.8 percent indicated training in Good Agricultural Practices certification could possibility increase profitability.
- 56.5 percent requested assistance/training in timber management, pine straw sales, development of a forestry management plan and selection process for forestry consultants.
- 63.3 percent indicated a need for business management planning
- 75.5 percent requested training on sales and marketing options for their farm/forest products.
- 57.1 percent indicated in interest in regional product branding.

The opportunities for training and education are multiple. This information should serve as a continuing guide for agencies and institutions involved in education within the county to develop plans for trainings, both short and long term, to serve the agriculture community.

Additionally, Lenoir County farmers and landowners showed a lack of awareness of existing farmland preservation tools that could be used to help them in their efforts to maintain their family farms. Eighty-eight percent of farmers were not knowledgeable of Voluntary Agricultural Districts, 83 percent had no knowledge of the Enhanced Voluntary Agricultural Districts Program, and 71 percent were unaware of North Carolina's Conservation Tax Credit.

Currently, Lenoir County does not have a Voluntary Agricultural District ordinance in place. The creation and adoption of a VAD ordinance and the endorsement of the Farm and Forest Protection Plan by the county's leadership are essential initial steps to ensure support for the agricultural community.

These steps will also provide tools to assist producers as they navigate means to retain their family farms. Lenoir County farmers who were surveyed and interviewed recognized the value of educating the non-farm public as to the benefits of agriculture to the county. Ninety-three percent of farmers were in favor of a program to increase non-farm residents' knowledge of the social and economic benefits of agriculture (Figure 14).

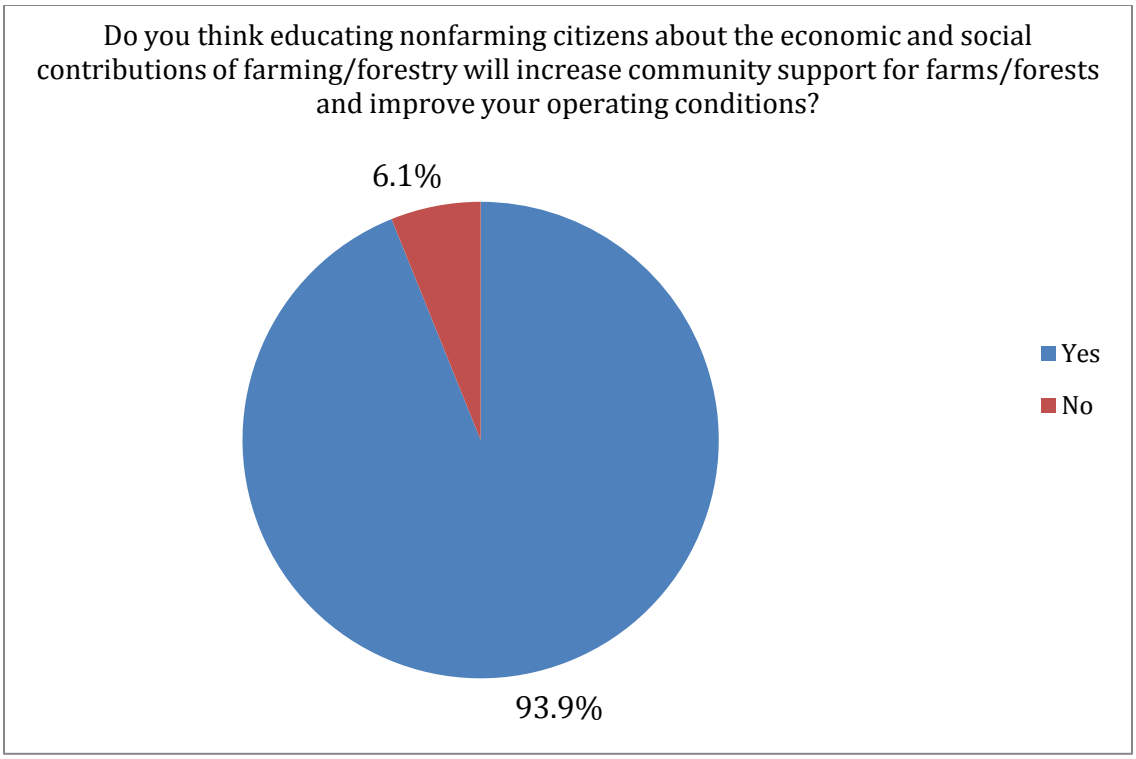


Figure 14: Lenoir County Producer Surveys

Over 93 percent of the farmers surveyed expressed a need to continue promotion of agriculture and forestry as a viable career opportunity, particularly in middle school through college. This illustrates their belief in the need to train youth in the importance of agriculture and the diverse agricultural opportunities for employment.

All of the producers surveyed believe it important to have county economic support for agriculture and agribusiness, and 98 percent stated that it is important to have tax incentives for agribusiness ventures. They also desire support of local outlets and programs such as farmers' markets, fairs, festivals and Lenoir produced products. When asked if they would support local government funding of farm and forest preservation, 86 percent were in favor of local funding being considered to support preservation efforts (Figure 15).

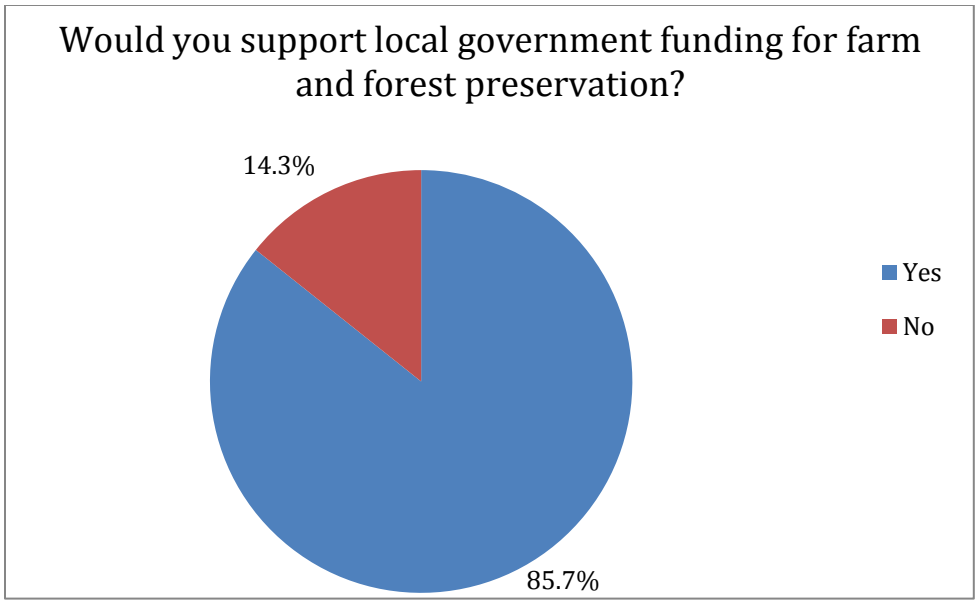


Figure 15: Lenoir County Producer Surveys

Personal interviews were conducted with livestock, row crop and produce farmers to obtain their opinion on the issues, challenges and opportunities impacting agriculture in the county. The respondents were part of a family farming operation, with at least one family member engaged in the operation. The following issues were stated as having an impact on family farms and the perpetuity and profitability of these operations:

- Lack of farm/estate transition plan. Only one producer interviewed had an active farm transition plan, and 100 percent were in favor of training on this important topic
- Need for forest/timber management training to maximize this valuable resource.
- Respondents were not familiar with Voluntary Agricultural Districts, but after explanation of the program would enroll their farms and encourage landowners and other farmers to enroll.
- The loss of good productive farmland to industrial sites. Encourage the use of less desirable land for industrial/commercial development.
- The lack of understanding of agriculture by non-farm residents and elected officials at all levels.

The following are perceived challenges to agriculture as stated by the interviewees:

- Unstable economic outlook, nationally and globally
- Competition among farmers for land, resulting in increased lease rates
- Increasing input cost, especially fuel and petroleum based products

- Increased environmental and labor regulations, which cut profitability and require time-consuming record keeping
- Securing adequate labor that is affordable and legal
- Urban sprawl and the infusion of people who do not understand agriculture and are annoyed by noise, odor, dust and equipment on the roads

The producers interviewed noted the following opportunities for agriculture enhancement in Lenoir County:

- The increasing need for food and fiber production to meet an ever increasing global population growth
- Agricultural marketing programs that showcase locally produced commodities
- Continued need for youth education in the schools, especially in high school
- Need consumer education programs on where and how food and fiber is produced and the economic benefit of these
- Need applied research to test new crops, farming methods and marketing techniques to keep farmers on the cutting edge
- Need a mentoring or apprenticeship program to train youth in farming that would allow them to phase into an operation over time
- Continued support of family farms with any tool available to keep them viable

The most important implication drawn from the survey and interview data is the farmers need technical training and an array of tools to maintain and expand their family farming operations. They state a need for assistance from all levels government to preserve agricultural as a strong economic engine in Lenoir County. Farmers want a Voluntary Agricultural District ordinance enacted by county government. Producers believe in the importance of youth agricultural education programs to teach young people about the many career opportunities available in production, processing and service. There is a need to educate non-farm residents on the economic and quality of life benefits of agriculture to the county. With the average age of farmers at 56.9 years old in Lenoir County, there is a compelling need for training on estate planning and farm transition options.

Non-Farm Resident Analysis

Surveys were distributed to non-farm residents of Lenoir County representing the communities and towns of Kinston, La Grange, Contentnea, Southwood, Falling Creek, Institute, Deep Run and Pink Hill. Their responses provide an unbiased perspective of agriculture in the county. The majority of respondents (65 percent) have been residents of Lenoir County for 20 years or

more. Sixty-five percent have lived near a farm or timber operation, and 58 percent are currently living within a quarter mile of a farm.

A positive result of this close association with agricultures is that 88 percent stated that farmers are good neighbors. With this in mind, 73 percent of the respondents had not experienced any problems with farmers. Of those who had experienced problems, complaints about slow moving vehicles were the most reported (Figure 16). However, when asked about resolution of any problems with their farming neighbors, 78 percent stated that nothing had been done to resolve the problem, and 75 percent never understood the purpose of the activity that caused the problem. This implies a need for a neighbor education program about operational processes of agriculture production.

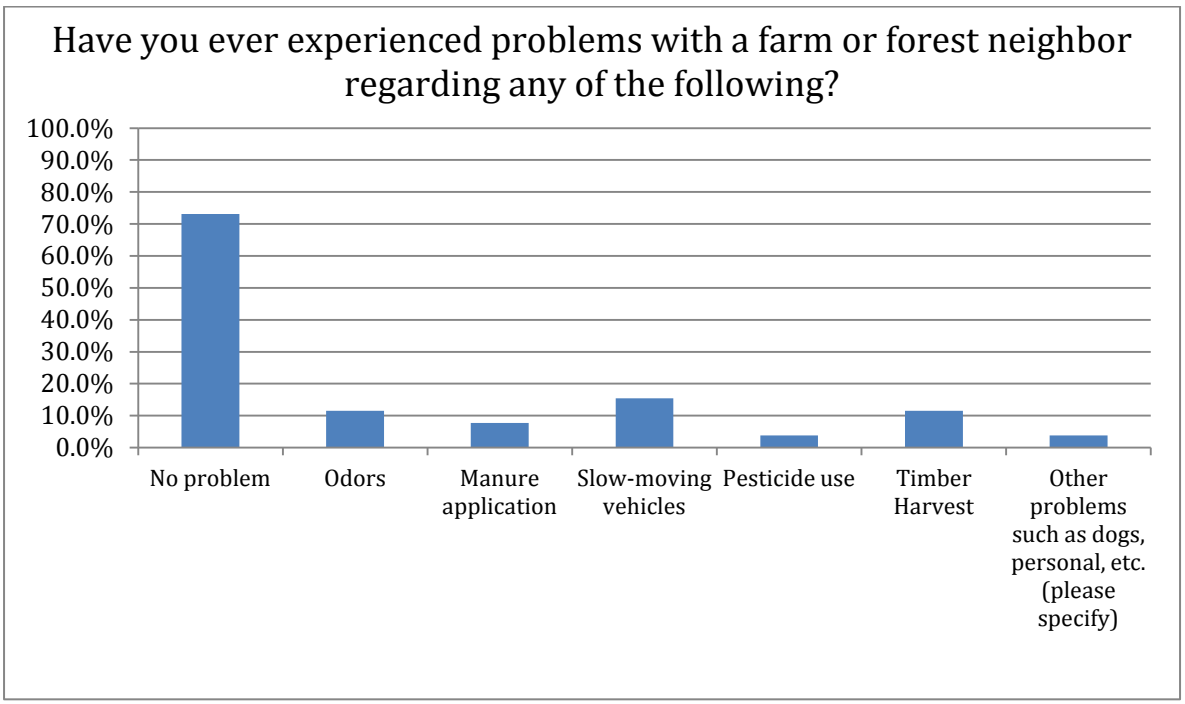


Figure 16: Non-Farm Resident Surveys

When asked about the strength of the agricultural industry in Lenoir County, only 15.4 percent of non-farm residents believe agriculture is a declining industry with no future growth potential. Fortunately, the majority believed agriculture remained a promising and expanding industry (Figure 17).

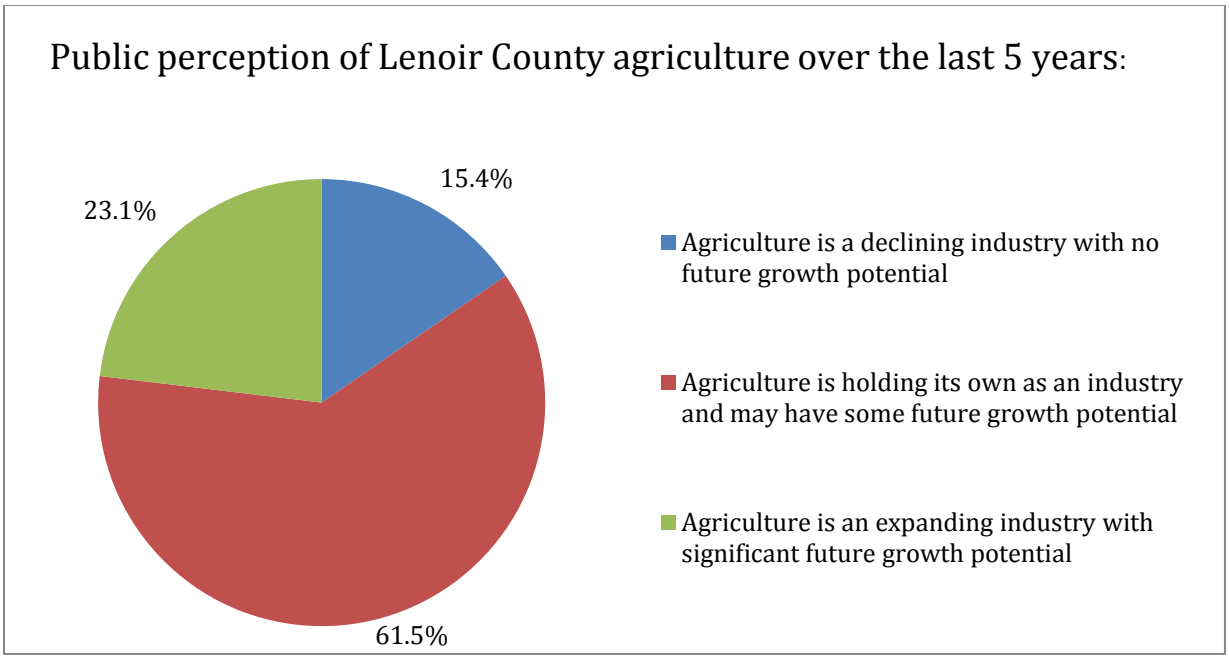


Figure 17: Non-Farm Residents Surveys

Lenoir County non-farm residents surveyed do not have a good understanding of the economic impact of the entire agricultural sector on the county's economy (Figure 18). This indicates a need for an educational awareness program targeting the public on the value of the agricultural industry which, in 2008, provided a total income of $577,220,612 to the county (Mike Walden, NCSU, IMPLAN [Mig,Inc.])

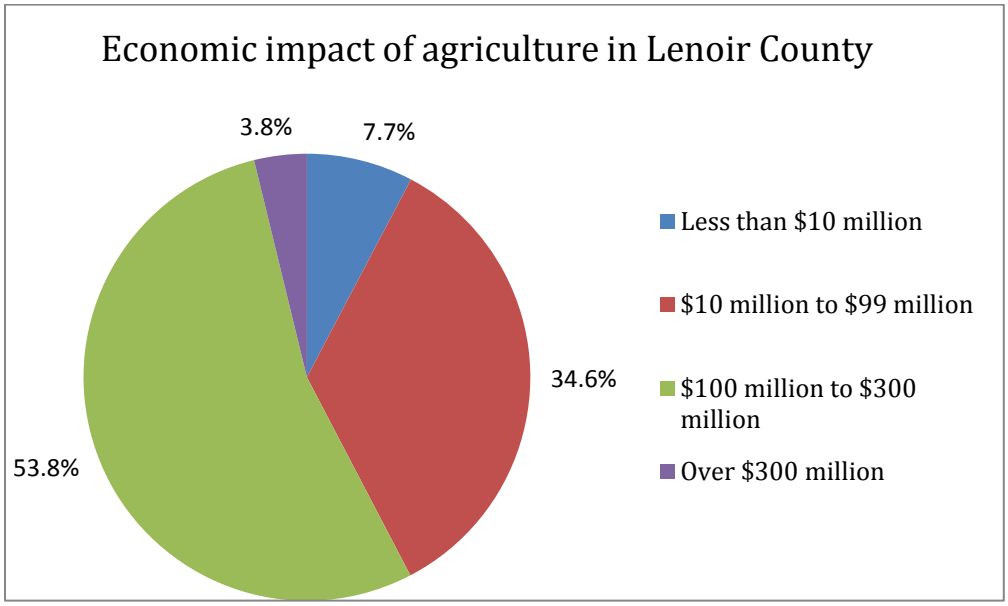


Figure 18: Non-Farm Resident Surveys

More than 94 percent of the Lenoir County residents surveyed stated that agricultural enterprises should be encouraged to expand. Almost 95 percent supported agriculture in the county by purchasing local produce and plants at farmers markets, roadside stands, pick your own operations, greenhouses and nurseries. On the other hand, only 33.8 percent of those surveyed have participated in agritourism activities.

The statistics below reveal non-farm residents agreement or disagreement with statements about agriculture in the county.

- 98.6 percent agreed farms and forests enhance scenic beauty and open space
- 91.8 percent agreed farmers are good neighbors
- 90.5 percent agreed local farmers deliver high quality products
- 89.2 percent agreed loans and grants are important to develop local farm enterprises
- 82.4 percent agreed farming has a positive impact on the environment
- 81.9 percent stated that farming and agribusiness are high technology businesses
- 67.1 percent agreed that farmers need to act like other businesses and compete
- 65.8 percent agreed farming presents a good career for enterprising persons
- 63.5 percent stated that tax breaks for farmers are important
- 94.5 percent disagreed with the statement that Lenoir County is not a farm area anymore and encouraging farm and forest operations is pointless

These statements clearly illustrate that non-farm residents surveyed have a positive image of agriculture in the county. More than 96 percent of the non-farm residents overwhelmingly supported farm and forest preservation efforts in Lenoir County (Figure 19).

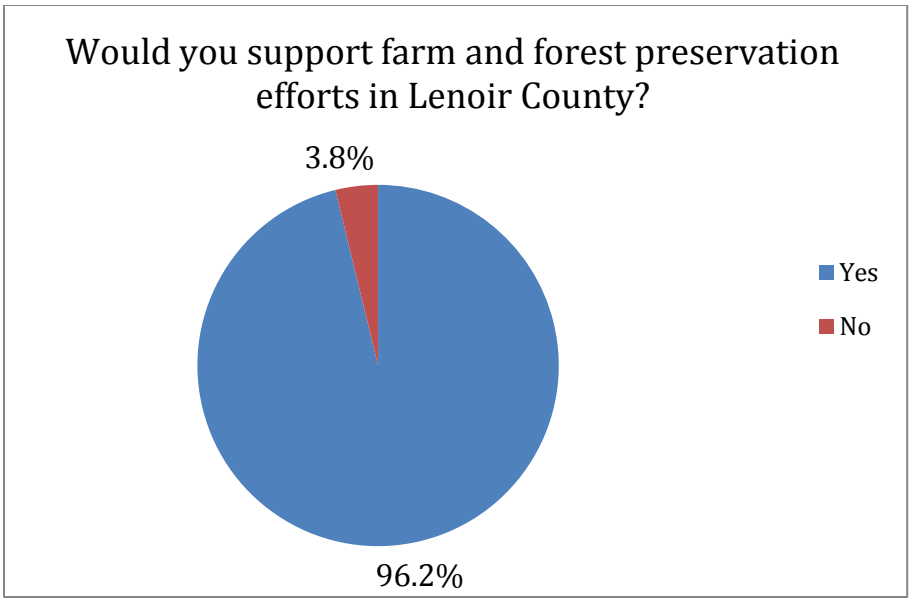


Figure 19: Non-Farm Residents Survey Support of Farm and Forest Preservation Efforts

Another positive opinion was that 77 percent were in favor of local government funding of farm and forest preservation, implying that they are willing to use their tax dollars even in these difficult economic times (Figure 20).

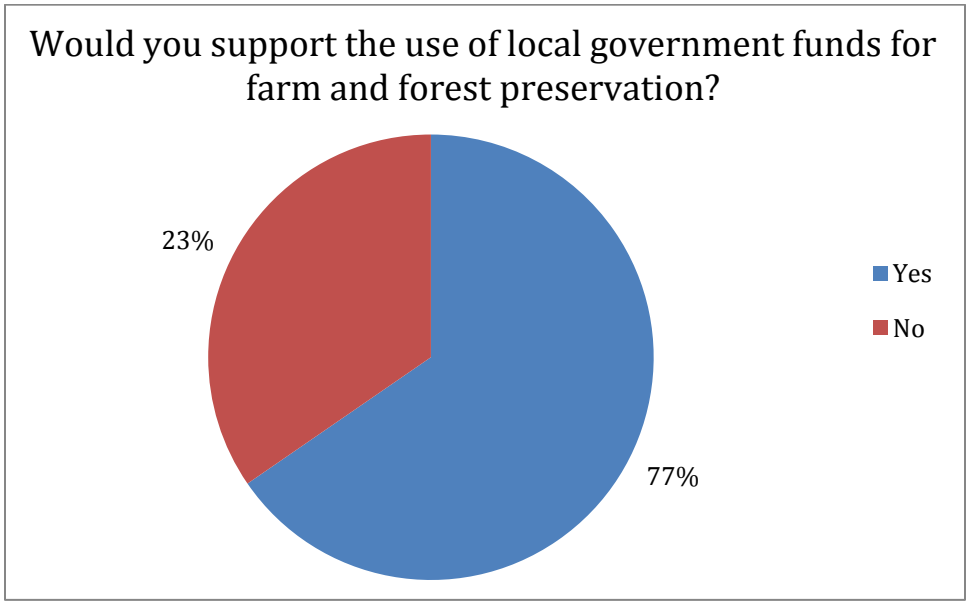


Figure 20: Non-Farm Resident Surveys

Personal interviews with non-farm residents substantiated the findings from the surveys. The interviewees were 100 percent in support of farmland preservation efforts in the county and

were in favor of the use of local government funding to ensure policies and programs that encourage the preservation of agriculture. The following statements from the interviewees reveal the needs for agriculture to be recognized by non-farm residents in Lenoir County:

- Emphasis needs to be placed on farm and forestry awareness in the county.
- The public needs to be educated on the economic impact of agriculture and the process required for food and fiber production.
- Youth education about agriculture and potential career opportunities is a needed program.
- Develop a way to encourage young people to pursue farming as a career.
- Protect farmland from commercial, industrial and residential use.
- Promote Lenoir agricultural products through labeling and marketing.

Non-farm residents value Lenoir county agriculture and are in favor of preserving and enhancing this vital economic sector. It is critically important to have a citizenry that is supportive of the preservation of the agricultural industry and that encourages its continued expansion.

Recommendations

The most important component of any strategic plan is the action steps that will lead to successful completion of the recommendations. These steps should be based on input from the citizens affected by the plan. The following recommendations are extrapolated from the data obtained through interviews and surveys of Lenoir County farmers, agribusinesses and citizens. For this plan to be effective, Lenoir County citizens, leaders, agencies and organizations must follow through with support and collaboration in achieving these recommendations. This plan needs to be evaluated annually to keep it up to date and viable. The annual update will ensure that recommendations are being accomplished and new ones added as needed. Following are recommendations that can be used to maintain and enhance agriculture in the county.

Recommendation One:

Support Programs and Policies that Promote Agricultural Growth in Lenoir County

Adoption and advocacy of the Lenoir County Farm and Forest Protection Plan is critical to protect and enhance agriculture in the county. Ninety-six percent of non-farm residents surveyed support farm and forest preservation efforts. Farmers need to be educated on available farmland preservation tools –71.4 percent were not knowledgeable about North Carolina Conservation Tax Credit, and 51.1 percent were not aware or enrolled in the Present Use Value Taxation program.

Action Steps:

- Endorse the Lenoir County Farm and Forest Preservation Plan and annually review the plan for progress and addition of any needed new recommendations.
- Utilize all available media outlets to inform county leadership and the public about the plan's progress and success.
- In order to promote harmony and respect, develop a system that positively handles citizens' complaints about agriculture in a timely manner.
- Develop a system utilizing an Agricultural Advisory Board to address citizen concerns/complaints about agriculture and its operational processes in a timely manner.
- Develop and implement an educational program for farmers and landowners regarding available farmland preservation tools and incentives suited for Lenoir County.
- Educate landowners and farmers on the benefits of Present Use Value Taxation that will encourage enrollment.
- Encourage local government, economic developers, land developers and planners to work with an Agricultural Advisory Board to engage and inform county agricultural

agencies and organizations on proposed and potential infrastructure projects that will impact agricultural production.

- Seek funding for and conduct a Cost of Services Study for Lenoir County.
- Conduct a study to investigate current policies and programs that pose undue burdens on the agricultural community including, but not limited to:
    - Rural transportation restrictions—weight limits, road width, traffic patterns, etc.
    - Nuisance lawsuits and complaints—boundary disputes, trespassing and dumping regulations and enforcement
    - Agricultural impact studies where requested to minimize detrimental impacts of development on agriculture

Timeline:

Efforts should begin after adoption of the Lenoir County Farm and Forest Preservation Plan in early 2012 with appropriate county agencies developing a strategic plan for action by the last quarter of 2012 and actions initiated by early 2013.

Responsible Parties:

N.C. Cooperative Extension Lenoir County Center, Lenoir County Farm Bureau Board, N.C. Department of Agriculture and Consumer Services, USDA Farm Service Agency, USDA Natural Resource Conservation Service, N.C. Division of Forest Resources Lenoir County, County Board of Commissioners and the Lenoir County Economic Development, Planning and Tax Departments

Recommendation Two:

Develop and Adopt a Voluntary Agricultural District Program

Currently, Lenoir County does not have a Voluntary Agricultural District (VAD) ordinance, and 88.3 percent of farmers are not knowledgeable about farm preservation tools such as VAD. All of the farmers interviewed stated that they would enroll in the program if it were available in Lenoir County.

Action Steps:

- Organize a VAD advisory board that will provide leadership in developing an ordinance that can be submitted to the County Board of Commissioners for approval.
- Design a marketing plan that utilizes all available media to educate farmers, landowners and non-farm residents on the benefits of a VAD in the county.
- Educate agricultural agencies to encourage and assist farmers and landowners in understanding and enrolling in the VAD.

- Engage agribusiness, especially livestock integrators, in the promotion of a VAD to their growers.
- After adoption of a VAD, begin a preliminary study on the development of an Enhanced Voluntary Agricultural District.

Timeline:

Development of a VAD ordinance should begin after the adoption of the Lenoir County Farm and Forest Preservation Plan. Informational workshops and guidance will be provided during the first quarter of 2012.

Responsible Parties:

N.C. Cooperative Extension Lenoir County Center should lead the process of creating a VAD with collaboration from these agencies and organizations: Lenoir County Farm Bureau Board, Lenoir County Soil and Water Conservation District, USDA Farm Service Agency Advisory and Natural Resource Conservation Service, Lenoir County Tax Office, N.C. Division of Forest Resources Lenoir County, Lenoir County Economic Development Department, Planning and Inspections Department, Register of Deeds and Lenoir County Board of Commissioners.

Recommendation Three

Develop Technical, Business and Marketing Training for the Maintenance and Expansion of Agriculture

Lenoir County farmers expressed a need for training. Bio-fuels, Good Agricultural Practices, local and regional marketing options, business management, marketing avenues to state and federal agencies, timber/forest management and farm transition planning were all identified to be important areas for training and opportunities for growth for family farms. Technological training was noted as important to producers who recognized the need for continued support of applied research to ensure farm profitability.

Action Steps:

- Develop and implement a series of trainings that will increase farmer knowledge on all areas of product marketing that will expand and open new markets for their products.
- Educate farmers on existing marketing programs such as Got to Be NC, Goodness Grows in N.C., N.C. MarketReady, Certified Roadside Market, Community Supported Agriculture (CSA), and other local and slow food movement programs.
- Design an informational network of agricultural support organizations that will assist existing and new farmers with development of new entrepreneurial operations (value added).
- Conduct trainings on technical skill topics that will enhance farmer knowledge about bio-fuels production, Good Agricultural Practices and business planning.

- Develop and encourage support for applied research projects evaluating value-added commodities.
- Provide a series of trainings on estate and farm transition planning for farmers and landowners to equip them with the knowledge to successfully pass the farm from generation to generation.
- Conduct forest management workshops that will educate farmers and landowners on all aspects of good forest stewardship, including management plans, tax options on timberland in the county's present use taxation program, pine straw production and selection of a forest consultant.

Timeline:

Program delivery in various areas, including marketing, production and forest management, should start in the winter of 2012, continue throughout 2012 and expand efforts over the next several years.

Responsible Parties:

N.C. Cooperative Extension Lenoir County Center, Mount Olive College Lois Britt Agribusiness Center, N.C. Department of Agriculture and Consumer Services, N.C. Forest Service Lenoir County, N.C. State University Program for Value-Added and Alternative Agriculture, N.C. State University Cooperative Extension specialists, Center for Environmental Farming Systems, Lenoir Community College, Lenoir County Soil and Water Conservation District, Lenoir County Farm Bureau Board and the USDA Farm Service Agency.

Recommendation Four

Promote Appreciation and Awareness of the Benefits of Agriculture to Elected Officials and Citizens

Create an awareness program that will educate citizens and elected officials on the economic and quality-of-life benefits of agriculture to Lenoir County. The data indicated that 96.2 percent of non-farm residents believe that the agriculture sector provides less than $300,000,000 to the county economy when it actually contributed more than $577 million in 2008. Agribusiness respondents were 100 percent in favor of a neighbor/community agricultural education program in Lenoir County. The results of a comprehensive educational program on Lenoir County could be cooperative understanding and appreciation between farmers, agribusiness, elected officials and non-farm residents.

Action Steps:

- Organize a Lenoir County Agricultural Awareness Task Force charged with developing a marketing campaign to educate the general public on the benefits of agriculture using all feasible delivery modes, including internet avenues.

- Develop an Agricultural Speakers Bureau that can advocate for agriculture and assist with the development and delivery of a locally based e-marketing campaign.
- Plan and implement, at least annually, an awareness tour of Lenoir County's diverse agricultural sector for local, state and federal government leaders.
- Develop a presentation showcasing the role of agriculture in Lenoir County to educate school, civic and religious organizations.
- Conduct town hall forums on pertinent agricultural issues with the Agricultural Advisory Board as the vehicle for this effort.
- Involve the next generation in the promotion of agriculture utilizing and supporting FFA and 4-H leadership.

Timeline:

Educational efforts will be developed with appropriate agencies during late 2012 and early 2013. Implementation of prioritized educational efforts will begin in late 2013.

Responsible Parties:

Kinston-Lenoir County Chamber of Commerce, Kinston-Lenoir County Tourism Development Authority, N.C. Cooperative Extension Lenoir County Center, NCSU College of Agriculture and Life Sciences, Lenoir County Farm Bureau Board, Lenoir County Schools, Lenoir Community College, Mount Olive College Lois Britt Agribusiness Center, N.C. Department of Agriculture and Consumer Services, USDA Farm Service Agency and Lenoir County Soil and Water Conservation District.

Recommendation Five:

Expand and Support Youth Agricultural Educational Programs

Agribusiness leaders, farmers and non-farm residents were all in favor of youth agricultural education as an important farmland preservation tool.

Action Steps:

- Develop and implement a Lenoir County Agricultural Youth Leadership Institute that will educate selected high school students (sophomores and juniors) about economics, career opportunities, benefits, challenges and opportunities facing the agricultural sector.
- Support the inclusion and expansion of the N.C. Farm Bureau's "Ag in the Classroom" curriculum and 4-H agriculture curriculum with primary and elementary students.
- Continue to encourage youth to actively participate in 4-H and FFA in order to develop leadership skills and agricultural experience.

- Include youth in the promotion of agriculture as members of the Agricultural Speakers Bureau.

Timeline:
Youth educational program efforts will begin in the summer of 2013 to provide time for development and marketing. A Leadership Institute will be developed and initiated during summer of 2014.

Responsible Parties:
N.C. Cooperative Extension Lenoir County Center, Lenoir County Public Schools, Kinston-Lenoir County Chamber of Commerce, Lenoir Community College, Mount Olive College Lois Britt Agribusiness Center, NCSU College of Agriculture and Life Sciences, N.C. Agribusiness Council and all N.C. commodity groups.

Recommendation Six:

Promote Agricultural Career Awareness and Develop a New Farmer Mentoring/Apprenticeship Program

The survey and interview data revealed a need to promote awareness of agriculture as a viable career option in production, processing, distribution and sales. A need for a method of apprenticeship for potential farmers that would assist them in gaining entry into this career was noted in surveys and interviews. The startup cost of a new farm operation is prohibitive for aspiring new farmers who do not have the needed resources, land and equipment. Soil science, crop science, chemistry and other aspects of agriculture and agribusiness should be promoted.

Action Steps:

- Develop a mentoring and workforce development program that provides interested individuals with hands-on learning experience with agribusiness enterprises. The program could be a combination of college classes and work internships.
- Collaborate with interested farmers to develop an apprenticeship program that would allow the entry of interested individuals in production agriculture. Individuals could apprentice for a determined length of time, which would allow them the opportunity to buy into the farm operation. This would provide them needed experience in all aspects of farming.
- Work with financial lenders to make capital available for the farmer apprentice that would allow him/her to continue the operation.

Timeline:
Identification of interested beginning farmers and transitioning farmers and the creation of a framework for internships/apprenticeships/mentors will start by late 2013. Work with partners to build this effort and identify potential users will begin 2014 and continue through 2015.

Responsible Parties:

N.C. Cooperative Extension Lenoir County Center, Mount Olive College Lois Britt Agribusiness Center, NCSU College of Agriculture and Life Sciences, Lenoir Community College, Lenoir County Farm Bureau, Center for Environmental Farming Systems, National Sustainable Agriculture Information Service and Financial Institutions in Lenoir County.

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Appendix

Agricultural Producer, 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, agribusinesses 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 survey and interview responses were compiled to determine the response. Copies of the three surveys follow.