Voices of North Carolina Agriculture: Current Issues and Innovations in Farmland Preservation

by Maggie Clary
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Acknowledgements

It’s a wonderful thing to be a student – so many people are willing to share their time and knowledge to help you get your start. I encountered many such generous individuals while researching and writing my masters project. First and foremost, I want to thank all of my interviewees for sharing your stories and expertise. Thanks to Lisa Creasman of the Conservation Trust for North Carolina for the brainstorming sessions and your genuine interest in my work. Thanks to my advisor, Dr. Dean Urban, for your guidance and support throughout my time at the Nicholas School. Thanks also to Dr. Charlotte Clark for your invaluable help. Finally, thanks to my family, friends, and Jonas. You’re the best.

Cover photo credit: Maggie Clary, taken at Vollmer Farm
Abstract
Agriculture is North Carolina’s number one industry, contributing $72 billion annually to the state’s economy and accounting for 17% of jobs. In addition to growing nourishing food, farms provide many other benefits to communities. These include food-related businesses and jobs, tourism opportunities, improved water quality, carbon sequestration, wildlife habitat, and the beauty of open spaces. Despite the importance of the agricultural sector, North Carolina is also a leading state in farmland loss. Between 2002 and 2007, total land in farms in the state decreased 7%, or about 600,000 acres.¹

This study seeks to understand the reasons for the high rate of farmland loss in North Carolina and how this trend might be stopped. To that end, a diverse array of stakeholders were asked to share their perspectives on the issue. Interviews were conducted with 16 farmers, state and county officials, and other professionals in the field. The interviews were recorded, transcribed verbatim, and manually coded to find common themes.

The results of this study consist of a number of key issues and trends that were organized into three main themes: (1) threats to farmland preservation, (2) the organizations, policies, and tools involved in current preservation efforts, and (3) innovative strategies to save more farmland. Discussion of these issues is followed by a set of recommendations derived from the research findings.

Overall, this masters project is intended to bring disparate voices into a common conversation, in order to gain a more comprehensive understanding of current issues and innovations in farmland preservation in North Carolina, and to use this collected wisdom to help guide the way forward.

Table of Contents

Abstract................................................................................................................................. 3
Introduction .............................................................................................................................. 5
Methods ................................................................................................................................. 6
Table 1: Summary of Interviewees...................................................................................... 11
I. Farming Challenges of Today............................................................................................ 12
   The Evolving Farm Economy............................................................................................ 12
   Threats to Farming and Farmland .................................................................................... 15
   The Next Generation of Farmers ....................................................................................... 17
   Water Concerns at the Forefront ..................................................................................... 20
II. The Front Line of Farmland Preservation......................................................................... 23
    Farmland Preservation Plans and Voluntary Agricultural Districts ................................ 23
    Conservation Easements for Working Lands................................................................. 26
    The Changing Roles of Conservation Districts and Land Trusts .................................. 29
    Finding Funding in a Tough Economy ............................................................................ 30
    Regional Differences ..................................................................................................... 34
III. Expanding the Preservation Toolbox................................................................................ 38
    Fostering New Markets ................................................................................................. 38
    Market-Based Conservation ........................................................................................... 42
    The Future of Farming .................................................................................................... 44
Recommendations and Areas for Future Research ................................................................. 46
Appendix A: Interview Guides ............................................................................................ 48
Appendix B: Farmland Preservation Resources: ................................................................. 49
“I’m the eighth generation. But, I’m here because my grandfather only had one grandchild. And I’m it. And I don’t have any children. So that’s the reason why I got involved in farmland preservation. Because I didn’t want to see it after all those years become a housing development.”
- Jane Iseley, Produce, Cattle, and Organic Tobacco Farmer, Burlington

**Introduction**

In a society that is continually changing, one constant is our need for delicious, nourishing food. The farms that grow this food provide communities with many additional benefits, including food-related businesses and jobs, tourism opportunities, improved water quality, carbon sequestration, wildlife habitat, and the beauty of open spaces. Agriculture is particularly important in North Carolina, where it is the number one industry, contributes $72 billion to the economy, and is the source of 17% of the state’s jobs. So why should we be worried? The U.S. Department of Agriculture’s 2007 Census of Agriculture revealed that North Carolina is also a leading state in farmland loss. Between 2002 and 2007, total land in farms in the state decreased 7%, or about 600,000 acres – an area larger than Wake County. North Carolina’s farmers are striving toward a goal that sounds simple, yet is increasingly difficult: to keep the farm.

This study seeks to understand the current challenges to farmland preservation in North Carolina and the innovative ways in which these challenges are being overcome. To that end, a diverse array of interviewees were asked to share their perspectives on the issue. These interviews revealed a number of key issues and trends that were then organized into three main themes:

1. **Threats to farmland preservation.** The first section discusses the challenges of farming in the post-tobacco economy, development pressure and the difficulty of transitioning land through the generations, challenges to beginning farmers, and concern about future water supply and government regulation related to nutrient runoff.

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II. Current farmland preservation efforts. The second section provides a discussion of planning tools for farmland preservation, conservation easements for working lands, the groups that hold conservation easements and their evolving roles, funding challenges, and finally regional differences in the prevalence and efficacy of farmland preservation tools.

III. Innovative strategies to save more farmland. The final section delves into examples of new market enterprises that are increasing farms’ economic viability, including markets for ecosystem services. It concludes with some of the interviewees’ perspectives on the future of farming.

Overall, the study is intended to bring disparate voices into a common conversation, in order to gain a more comprehensive understanding of current issues and innovations in farmland preservation in North Carolina, and to use this collected wisdom to help guide the way forward.

Methods
This study uses qualitative research methods to examine farmland preservation in North Carolina. A qualitative approach is appropriate when a research problem needs to be explored on a case-by-case basis, and when a rich, detailed understanding depends on the context or settings of the particular cases.3 The tradition of inquiry for this study is narrative analysis, defined by O’Leary as the interpretation of the stories of individuals, in which data collection and interpretation is often iterative, with the focus on story building.4 Creswell notes that narrative studies may have a specific contextual focus, which in this case is farmland preservation in North Carolina.5 Qualitative research is often not representative and cannot be generalized to all individuals affected by the issue being studied. However, in-depth engagement into problem situations allows the researcher to seek a richer, more empathetic understanding of the complexity of the issue.

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Therefore, qualitative research is well-suited to exploratory studies and to recommend areas for future (qualitative or quantitative) research.  

Interviewing is the most widely applied technique for conducting systematic social inquiry. Interviewing provides a way of generating empirical data about the social world by asking people to talk about their lives. A key step in this process is to identify the sampling frame, or panel, of candidate interviewees from whom inferences will be drawn. Approximately 90% of the information for this project was gathered from interviews with four farmers, four state officials, two county officials, two representatives of non-profit organizations, and four individuals from private corporations. The preliminary list of interviewees was chosen after a conversation with Lisa Creasman, Conservation Projects Manager for the Conservation Trust for North Carolina, in which we decided that the interviews would comprise a group of farmers and a group of professionals in fields related to farmland preservation. We then identified a list of key informants, select individuals who have specialized knowledge beyond their own experience. The key informants have spent their careers in agriculture-related professions in North Carolina, and are connected to many individuals also involved in farmland preservation efforts in the state. Following the initial interviews with key informants, the list was expanded using the snowball approach, a sampling method in which a list of interviewees is built through referrals. The initial interviewees were asked to identify others who meet the study criteria, and in this way the full list of interviewees was developed. Toward the end of the interviews, the key informants were consulted again to ask if there were other groups or individuals involved that I might have missed. This consultation proceeded in iterations until I was satisfied that I had interviewed representatives of all key perspectives. The complete list of interviewees can be seen in Table 1.

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While interview conversations may vary in structure, all interviews are interactional and constructed as a product of the talk between interview participants. The interviews for this project were conducted in a semi-structured fashion, in which I began with a defined questioning plan, but followed the natural flow of conversation and pursued interesting tangents. I prepared two interview guides, one that was used with farmers and one that was used with professionals in related fields (see Appendix A). Both were approved by Duke University’s Institutional Review Board, the organization that conducts scientific and ethical review of research studies to ensure the protection of human research subjects. Each interview took one hour or less. Seven interviews were conducted in person at the interviewee’s farm or office, and seven were conducted over the phone (one phone interview included three interviewees). In-person interviews were preferred, but due to logistical reasons this was not possible in all cases. However, I believe that the interviews conducted by phone were equivalent in length and substance to those conducted in person. Each interview was recorded and transcribed verbatim. With their permission, the interviewees real names and quotations were used.

The remaining 10% of the information used for this report was used to support the text of the interviews. Statistics on farmland loss, direct marketing, and organic agriculture were taken from the U.S. Census of Agriculture. Definitional and background information on programs and policies were sourced from relevant websites and published documents. For example, descriptions of voluntary agricultural districts and enhanced voluntary agricultural districts were obtained from the American Farmland Trust. In addition, when an interviewee made a comment that was anomalous but seemed important to the respondent, I explicitly sought other sources to explore that finding further. For example, I consulted with Matt Flint of the Natural Resources Conservation Service and Tara Allden of Restoration Systems, Inc., to address an interviewee’s concern about the effect of wetland mitigation on farmland in the eastern counties.

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Creswell states that the analysis of a narrative inquiry involves “restorying” the interview transcripts by reorganizing the stories into a general framework. The researcher details themes that arise from the story to provide a more detailed discussion of the meaning of the story. \(^{14}\) O’Leary notes that in qualitative data analysis, delving into the data generally occurs as it is collected and involves: (1) reading and re-reading; (2) annotating growing understanding in notes and memos; (3) organizing and coding data; and (4) searching for patterns in a bid to build and verify theories. \(^{15}\) I began my data analysis while transcribing the interviews. As common themes emerged, I manually coded these themes and looked for text that supported or opposed them. To document the variety and complexity of perspectives, I also noted issues that were particularly important to individual interviewees. A few topics were drawn from the interview transcripts, supplemented with research from web and print sources, and presented in separate boxes. This was an effort to highlight notable projects or current “hot topics” in North Carolina agriculture, and to draw out their potential to affect farmland preservation. Credible qualitative research seeks a “confluence of evidence that breeds credibility, that allows us to feel confident about our observations, interpretations, and conclusions.” \(^{16}\) This confluence was shown in the interview transcripts as the common themes were supported from different points of view. For example, it became clear that the relationship between conservation districts and land trusts is an important theme in the preservation of working lands because interviewees from both groups commented on this issue. While opinions varied on the roles of the groups, the significance of the relationship shone through. The project’s findings were also validated by the interviewees themselves, as each was given the chance to review and comment on a draft of the report.

Finally, the interviews exposed several issues that would benefit from further research and/or action. Five recommendations were developed based on these needs. The recommendations advocate for enhanced support for efforts that are currently

contributing to farmland preservation, to fill research gaps that would enable other farmland preservation initiatives to come on-line, and to promote communication and collaboration among North Carolina’s farmland preservation community. Above all, it is my hope that this project, which brings together many different perspectives into a simulated common conversation, will serve as a jumping-off point for real conversations in the future among those interested in preserving North Carolina’s farms.
Table 1: Summary of Interviewees

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Janice Allen</td>
<td>North Carolina Coastal Land Trust</td>
<td>Deputy Director</td>
</tr>
<tr>
<td>Andrew Branan</td>
<td>Wright Law Co. LPA, formerly of the North Carolina Farm Transition Network</td>
<td>Attorney</td>
</tr>
<tr>
<td>Gerry Cohn</td>
<td>Organic Valley, formerly of American Farmland Trust</td>
<td>Southeast Pools Coordinator</td>
</tr>
<tr>
<td>Jerry Dorsett</td>
<td>North Carolina’s Department of Environment and Natural Resources, Office of Conservation, Planning, and Community Affairs</td>
<td>Working Lands Coordinator</td>
</tr>
<tr>
<td>Dick Fowler</td>
<td>North Carolina Association of Soil &amp; Water Conservation Districts</td>
<td>Executive Director</td>
</tr>
<tr>
<td>Dewitt Hardee</td>
<td>North Carolina Department of Agriculture and Consumer Services, Agriculture Development and Farmland Preservation Trust Fund</td>
<td>Environmental Programs Manager</td>
</tr>
<tr>
<td>John Huisman</td>
<td>North Carolina Division of Water Quality</td>
<td>Senior Environmental Specialist</td>
</tr>
<tr>
<td>Jane Iseley</td>
<td>Iseley Farm</td>
<td>Farmer</td>
</tr>
<tr>
<td>Michelle Lovejoy</td>
<td>North Carolina Division of Soil &amp; Water Conservation</td>
<td>Area II Coordinator</td>
</tr>
<tr>
<td>Hunter Parks</td>
<td>Green Assets, Inc.</td>
<td>Executive Director</td>
</tr>
<tr>
<td>Derek Potter</td>
<td>Craven and Pamlico Counties</td>
<td>Farmer</td>
</tr>
<tr>
<td>Bruce Snelson</td>
<td>Snelson Farm</td>
<td>Farmer</td>
</tr>
<tr>
<td>Lynn Sprague*</td>
<td>Polk County</td>
<td>Agricultural Economic Development Director</td>
</tr>
<tr>
<td>Sandra Reid*</td>
<td>Polk County</td>
<td>Soil &amp; Water Conservation District Administrator</td>
</tr>
<tr>
<td>Betsy Burdett*</td>
<td>Polk County</td>
<td>Consultant Conservation Broker</td>
</tr>
<tr>
<td>John Vollmer</td>
<td>Vollmer Farm</td>
<td>Farmer</td>
</tr>
</tbody>
</table>

*Interviewed together
I. Farming Challenges of Today

The Evolving Farm Economy

The tobacco industry has traditionally been one of the most important industries in North Carolina and is the center of the state's agricultural heritage. Tobacco farmers operated within a system of quotas put in place in 1938, which in recent years became concentrated in relatively fewer hands. Yet as demand for cigarettes declined and foreign competition increased, the U.S. government decided to limit quotas and price supports. In October 2004, Congress legislated the end of tobacco quotas in exchange for a one-time buyout. One-third of the buyout money went to 10% of the owners, including some that were paid over $7 million due to the size of their quota holdings. While the largest farms prospered from the buyout, owners of smaller farms either diversified their crop production, took on second jobs, or sold their land.¹⁷

“I think tobacco is history, we used to raise tobacco here when I was younger. [...] There’s a lot of farmers who really depended on tobacco. [...] There aren’t so many people making a living farming anymore, you just about have to have a job, and I know people who are carpenters and preachers and work for the power company and whatever work they can do to be able to pay the bills and keep farming and keep their land. They try to pass it on to their sons but you know, a lot of kids don’t want to fool with it. [...] A lot of people don’t want to work seven days a week. There’s really no help for that but you have to have a love of the land and enjoy it. I don’t care how cold it is, I enjoy getting out on our hills and looking at the mountains, I don’t care if it’s blowing snow or anything, I enjoy it. [...] I do it more because I enjoy it than the money. [...] The farm’s a losing proposition as it is now.”

- Bruce Snelson, Cattle Farmer, Asheville

At present, agriculture in North Carolina is progressing along two parallel tracks: larger operations continue to expand, while smaller operations have responded to the fall of tobacco with a host of new marketing techniques and value-added products. While it takes substantial resources and courage to break from the tobacco tradition, many North Carolina farmers are forging a bright new future for agriculture in the state. Three of the

farmers interviewed own farms that grow tobacco currently or grew it in the past. Each testified to both the difficulties of farming and the new opportunities as they move on from conventional tobacco production.

“When my father died in ’87, Uncle Allen and I decided the handwriting was on the wall for tobacco. So we started diversifying, and started with a few rows of tomatoes, then embraced the new technology of plasticulture and started growing a lot of vegetables. Wholesaled them, continued to grow the tobacco, my uncle had a cattle herd and he continued to do that. In ’98 I got disillusioned with the world of produce wholesaling. It’s a cash, cutthroat business. […] I just decided that I wanted to start retailing our own things so we had some control over what the prices were. We renovated the old tobacco pack barn up here and started selling there. […] We decided in the following year that if we didn’t have snap beans this week and we had a neighbor that did have snap beans, we’d sell them for him if he’d bring them in. That worked well for him and for us. […] This year we had 32 neighbors who brought things in. We identify on the card who grew it, we have their pictures there so you have that relationship with your farmer.”

- Jane Iseley, Produce, Cattle, and Organic Tobacco Farmer, Burlington

“We do something that’s unique, something that people want to touch, and so we have a bright future in that. I’m excited about the turn we’ve made in moving from a tobacco-based economy on this farm to one that is more what people want. And it’s also so much more positive, think about growing something that helps people live instead of something that hurts people. My wife is an example, […] Betty has emphysema and she’s debilitated now as a result of that. And if she could undo what happened to her, she would. […] I’m excited about the fact that we’ve moved away from tobacco and we’re embracing a new kind of enterprise on the farm that has the potential to save the farm for the next generations.”

- John Vollmer, Organic Produce Farmer, Bunn
Farmland Preservation Highlight: 
Agritourism at Vollmer Farm, Bunn

When John Vollmer, his father, and his brother began farming together, they realized that their tobacco crops would not sustain future generations on the farm. Today, Mr. Vollmer and his son manage two separate enterprises on the land: organic vegetable and fruit production including pick-your-own strawberries, and agritourism on the “back 40” with school tours and family weekends.¹

Agritourism has increased in popularity in recent years, and a greater number of farmers are inviting tourists to visit, learn, and have fun on their farms. The NC Department of Agriculture and Consumer Services has an Agritourism Office that offers interested farmers guidance on how start their own agritourism enterprises.² Martha Glass, Manager of that office, reported that a growing number of farmers in North Carolina see tourists as a cash crop.³ Yet does agritourism produce enough revenue to make a significant contribution to farmers’ income? Vollmer Farm’s experience suggests that despite the many benefits of agritourism, the base agricultural enterprise is what supports the farm.

“Our own experience with agritourism is that that in itself is not what brings people to the farm, it’s the real agriculture. And so agritourism might be a part of that, and you might be able to make a little money at it but it’s not a big thing. In our area people go out to the farm maybe once or twice a year, but it’s not something that brings in income. You have to do something for people so there’s investment in infrastructure and there’s maintenance. We find that we’re just trading dollars on agritourism, we’re not really making any money. You can’t do it at every farm, and you’ve got to be people-oriented, you can’t be a stick in the mud.”

- John Vollmer, Organic Produce Farmer, Bunn


Threats to Farming and Farmland

As North Carolina’s farm economy evolves, it simultaneously faces challenges that threaten to derail that transition. The interviewees mentioned several state-level trends that threaten the viability of farming and farmland preservation in the state. Jerry Dorsett, the Working Lands Coordinator for the Department of Environment and Natural Resources, noted that the equivalent of South Carolina’s population today is going to be added to North Carolina, and cited statistics that say for each new person, two acres of open space is converted to another use. Dewitt Hardee of the Department of Agriculture and Consumer Services cited urbanization and industrial development as drivers that pressure farmers to sell their land.

“The threats are all economical. In our state, we have the threat of [...] a better use for the land or development pressures that occur, and enticing somebody who’s not making a reasonable livelihood to sell that piece of property for another use. Basically you’re talking about urbanization, you’re talking about industrial development. So stabilization of economics is the key to keeping the family farm running.”

- Dewitt Hardee, Agriculture Development and Farmland Preservation Trust Fund, N.C. Department of Agriculture and Consumer Services

The map below was created as part of a study conducted by the American Farmland Trust on agricultural land threatened by development. The red indicates areas with high quality farmland and high development pressure.

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Mr. Hardee also stressed the importance of county and municipal planning that identifies and avoids policies that might burden farmers. For example, changes in zoning have the potential to affect the type of operations farmers are allowed. In addition, farms’ residential neighbors who are uneducated about the noises and odors commonplace in production agriculture have brought nuisance lawsuits against nearby farms.  

Other interviewees named closer-to-home reasons for farmland conversion. Andrew Branan of Wright Law Co. described the difficulty of transferring the farm between generations and the complexity of the family relationships involved in such transactions.

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21 A. Branan, personal communication, 10 Jan. 2010.
“It’s the human element, and things just happen in life: people get sick, people need money, people die or divorce. The best hope that we can have is to try to get folks to put some structure in place to help determine what will happen to the resource in the event that those risks occur.”

- Andrew Branan, Wright Law Co.

The interviews illustrate the variety of opinions on the drivers of North Carolina’s high rate of farmland loss. Some, such as Gerry Cohn of Organic Valley, see increasing urbanization as an opportunity for farmers. City populations typically have more disposable income to spend on niche or value-added products, and enterprising farmers can take advantage of expanding urban markets to sell their products.\(^{22}\)

“Development pressure in certain areas is pushing on farms and making certain types of farming operations difficult, but with that development pressure also comes new customers. If you can take advantage of that opportunity, you can make it work pretty well.”

- Gerry Cohn, Organic Valley

John Vollmer, an organic produce farmer who has taken advantage of such opportunities with a “pick-your-own” berry operation and agritourism on his farm in Bunn, emphasized the importance of a viable enterprise that can last through the generations.\(^{23}\)

“If you don’t have some enterprise on the farm, you might pass a farm from one generation to the next, but can it go on from the next generation to the next to the next? Only if there is some kind of enterprise there that somebody can make a living at. [...] If you’re not receiving any income from any enterprise on that farm, then it becomes a real burden to the inheritor of that land, even though the [land has] great value. So it doesn’t take much to entice that person then to unload the burden and cash it in, so to speak.”

- John Vollmer, Organic Produce Farmer, Bunn

The Next Generation of Farmers
Passing the farm on to future generations is an issue raised by many of the interviewees as one fraught with financial, legal, and emotional difficulty. The U.S. Department of

\(^{22}\) G. Cohn, personal communication, 6 Jan. 2011.
Agriculture estimated the average age of North Carolina’s farmers in 2008 to be 57 years old, which means that retirement is on the horizon for many.\textsuperscript{24} Generational transfer is central to Andrew Branan’s understanding of farmland preservation, who ran the North Carolina Farm Transition Network (NCFTN) and currently conducts legal transactions for farmers with Wright Law Co.

“For me, it became very much a generational transfer thing, which I started to feel over time that conservation easements alone do not address. [...] My eyes were opened that there were so many other elements to it, and a conservation easement was a relatively easy thing to do. It’s a legal transaction with a lot of legwork involved, it’s not an easy decision, but there are tougher decisions that need to be made.”

- Andrew Branan, Wright Law Co.

While conservation easements restrict the right to develop or subdivide a property, they do not ensure that the land will continue to be farmed. The other, “tougher” decisions described by Mr. Branan include how property will be divided among the heirs and how the land will be managed. He further noted that farm transfer can be broken into three components: the right to earn income off the land, the right to manage the land, and the right to the equity. A landowner must put an agreement or structure in place to determine how those components will pass on to the next generation to ensure that his or her wish for the future of the farm is carried out.\textsuperscript{25} A succession planning survey conducted by NCFTN showed that most (67\%) of the North Carolina farmers surveyed had not discussed their retirement plans with anyone, 25\% had discussed this issue with family members, and just 7\% had discussed their retirement with a professional advisor – which Mr. Branan noted as a critical piece.\textsuperscript{26}

A related issue faced by today’s farmers is that their children may not want to take over the family farm, and individuals from non-farm families often find the costs of entering farming prohibitive.

\textsuperscript{25} A. Branan, personal communication, 10 Jan. 2010.
\textsuperscript{26} Branan, Andrew. “Planning the Future of Your Farm.” Presentation available at: www.ncadfp.org/documents/PFyfadfpTFRoadShow1107.ppt
“I think conventional, traditional farming has been sort of difficult for the last 20 years, that kids have grown up and seen mom and dad saying “This is awfully difficult, this is a really hard life,” so the last thing they want to do is go into farming. Finding that next generation of farmers is a challenge. [...] I think we’re testing out some new ideas and making some progress. Most universities now seem to have some kind of student-run farm or agriculture program going on where people can get some kind of exposure, lots of summer internships on local farms here and there. These are great first steps but may not fully prepare someone to run their own farm yet, so I think there’s a need to keep building intermediate steps along the way.”

- Gerry Cohn, Organic Valley

Gerry Cohn of Organic Valley offered several other ideas to engage and train the next generation of farmers, including community gardens, church gardens, and development-supported agriculture in which a small farm is placed in the middle of a housing development. He also mentioned some existing examples of successful training programs in North Carolina, such as the sustainable agriculture program at Central Carolina Community College in Pittsboro, and the Breeze Farm incubator program in Orange County.27 Lynn Sprague, the Agricultural Economic Development Director for Polk County, noted that other states have programs to help beginning and retiring farmers make non-family farm transfers affordable for both parties. For example, a loan program to allow beginning farmers to purchase new equipment coupled with a conservation easement to provide the retiring farmer with some income would help both to find financial middle ground.28

Farmers who lack heirs that want to farm but do not want to sell their land upon retirement may decide to lease or transfer the farm to a beginning farmer. The decision to transfer a farm to a non-family member is a difficult one, and the process of meeting candidates, building a relationship, and agreeing on the future management of the farm is a much more complex challenge than getting training programs and financial assistance into place. When it comes to matching beginning and retiring farmers, Mr. Sprague emphasized the importance of local knowledge, trust, and patience.

“One of the reasons that we’ve been successful in Polk County, we have broken agency structures and put somebody at a local level where I really know these people. If there’s a young farmer looking for a place, and I know there’s a family, they know that myself and our extension agent know the clients, we know the people, and we get down to just over kitchen table conversations. [...] We now have a farmer that has three different young people farming parts of his land. [...] He’s done it because we have an umbrella of trust for agriculture and he knows that we’re involved with other people. That transition is a real localized thing.”

- Lynn Sprague, Agricultural Economic Development Director, Polk County

Derek Potter, a row crop farmer in eastern North Carolina, experienced the difficulty of acquiring land first-hand. Mr. Potter did not inherit a farm and spent seven or eight years attempting to purchase his own land after he graduated from college. He currently owns approximately one hundred acres that he bought at auction, and rents about two thousand more. Despite the challenge of obtaining land, Mr. Potter commented that he had other advantages that allowed him to pursue his dream.29

“You just don’t start farming from scratch anymore. Row crop farming takes land and a lot of capital. I had the advantage that my father had farmed four to five hundred acres on the side for thirty plus years. I was able to rent his equipment until I was able to obtain my own. You can’t go down to the bank and say “I want to start farming.” That doesn’t happen, it takes outside help and a strong personal commitment to succeed.”

- Derek Potter, Corn, Soybean, and Wheat Farmer, Craven and Pamlico Counties

Water Concerns at the Forefront
Several interviewees voiced concern over agriculture’s ability to meet the requirements of water quality regulations, such as the nutrient management strategies introduced in the Tar-Pamlico, Neuse, Jordan Lake, and Falls Lake watersheds. Farmers in those watersheds gain credits for nutrient reductions by making ecosystem improvements through best management practices. These practices must be put in place after the baseline year stated in the watershed’s nutrient management plan. Farmers often make the case that preserving farmland protects watersheds from development, and therefore farmland preservation actions should be granted nutrient reduction credits. However,

John Huisman of the N.C. Division of Water Quality listed the lack of data on the relative water quality merits of farmland versus developed land as an impediment to farmers receiving nutrient credits for land conservation. In the absence of such information, developers are free to argue that their own nutrient management practices are superior to those on farms.\(^\text{30}\)

> "We have run into some situations in the lower Neuse River basin where developers come in and they want a credit for saying, "Well this all used to be corn and cotton here, and we’re developing it, and our calculations show that this many pounds were probably running off this field when it was a farm, and when we have this development it’s going to be much less.” They’re actually looking for credits for converting it from agriculture to development. [...] We hear it from both sides, with the agriculture folks saying it’s better for it to be agriculture than for it to be development, and the development folks are saying maybe not."

> -John Huisman, Senior Environmental Specialist, Division of Water Quality

An additional challenge in regulated watersheds is the relationship between the state’s Ecosystem Enhancement Program (EEP) and agriculture. EEP implements projects for watershed improvement and protection in order to offset the environmental impacts of new transportation development and economic development. In some cases, EEP works with farmers to place their projects on farmland.\(^\text{31}\) However, because EEP projects are used to offset nutrients from development, they cannot also be counted towards any nutrient reductions required of the agriculture sector in the watershed – this would be double-dipping. Mr. Huisman mentioned the Falls Lake watershed as an area where farmers’ participation in EEP could compromise the agriculture sector’s efforts to meet its nutrient reduction target.\(^\text{32}\) In a watershed where multiple parties want nutrient reduction credits, it is important for the agriculture community to make sure it can reach its targeted reductions before marketing further credits through EEP or a private mitigation bank.

\(^{30}\) J. Huisman, personal communication, 3 Feb. 2011.


\(^{32}\) J. Huisman, personal communication, 3 Feb. 2011.
In addition to these issues with watersheds affected by nutrient management plans, the farmers interviewed feel that they are already doing all they can to minimize nutrient runoff from their land.

“Our farm is pretty tight right now in terms of conservation, and I fail to see what else we could do different if it was there. I think that [the farmers] left out there are the better managers that there are. They realize that the value of their farms is in their soil, they don’t want to see it leave. So they’ve already implemented plans protecting their farms.”

- John Vollmer, Organic Produce Farmer, Bunn

“I really have the feeling that we’re looking after the land as well as we can. [...] I don’t know what else is out there in the way of practices that could be done. [...] That really ties into these Jordan Lake rules. I think we’re going to be alright in the Haw River section of it, but when you get over to the Falls, those folks have got to get 35% of the nitrogen out and what are they going to do? They’ve already done everything they can do. Where’s it going to come from?”

- Jane Iseley, Produce, Cattle, and Organic Tobacco Farmer, Burlington

The availability of sufficient water for farming in the future was another concern expressed by several of the interviewees. Michelle Lovejoy, Area II Coordinator for the Division of Soil & Water Conservation, noted that the Division has a program ready for deployment that would help farmers manage their water use, but the program has not yet been funded. She also commented that opinions about establishing water allocation system in North Carolina are decidedly mixed.  

“Right now, the water that flows across your property, you can use it at a reasonable use level. You can’t deny downstream people all water, but you can use what you need. Whereas a water allocation system, you’d have to register what your need is and people that registered [first] could get rights over people who are newly registered. [...] Some people say don’t register, because we don’t want them to know how much we’re using, and others say no we need to be the first to register because farming was there first and if not it’ll all go to the cities. There’s both those philosophies within the group that doesn’t support water allocation.”

- Michelle Lovejoy, North Carolina Division of Soil & Water Conservation

Despite existing reluctance to adopt a water allocation system, Ms. Lovejoy pointed out that water allocation could either harm or help farmland preservation in the state. She stated that if a farm was preserved but its water allocation was not, that could end farming on that land in the future. However, if scientists were able to establish that farmland assists in replenishing water bodies and also improves water quality, then support for farmland preservation could become part of a broader watershed management strategy.34

II. The Front Line of Farmland Preservation

Farmland Preservation Plans and Voluntary Agricultural Districts
Planning for agriculture establishes a framework for an economically and environmentally sustainable agricultural industry.35 Gerry Cohn of Organic Valley noted the importance of bringing together those who work on economic development, planning, and agriculture to envision and plan for the future of farming in the state.36

“I think for a county or any unit of government to be motivated to help preserve farmland they have to see a future for farming. The idea is that you want to create a stable investment climate. If the farmer doesn’t think the farm is going to be there, they’re not going to reinvest in their farm, so the farm will gradually deteriorate over time. If the county just sees all those declining farms and there’s no future for it, they’re not likely to put any resources or efforts towards it either.”

- Gerry Cohn, Organic Valley

The first proactive step for a county to prepare for the future of its agricultural community is to develop a farmland preservation plan. These plans identify the important land use challenges that the agricultural sector will face in the future, designate areas where agriculture should be encouraged, and identify investment and infrastructure needs.

36 G. Cohn, personal communication, 6 Jan. 2011.”
for increased profitability. Counties can also pass farmland preservation ordinances that establish voluntary agricultural districts. Voluntary agricultural districts (VADs) are institutionalized means for farmers in a county to organize and advocate for their interests. Local landowners sign up to be part of their VAD, and the board acts as an advocate for farmers to inform neighbors of their presence and decrease the likelihood of nuisance lawsuits, push for agricultural economic development to be included in the county’s future development plans, and make sure the county does not have any rules in place that threaten farming. Enhanced voluntary agricultural districts (EVADs) provide additional benefits to participant landowners in return for their agreement to a ten-year easement on their land. The map below shows which counties in North Carolina have VADs, EVADs, and farmland preservation plans as of December 2010.

Farmers are also advocates for agriculture in other government and non-government forums. For example, Jane Iseley is a member of the Agricultural Advisory Committee for the Jordan Lake nutrient management rules, and John Vollmer is on the board of the Tar River Land Conservancy. Bruce Snelson reported speaking to his County Commissioners about the importance of the present-use value tax to farmers. Gerry Cohn of Organic Valley thinks this kind of action is key to keeping farmers engaged in making sure their counties’ growth is friendly to agriculture.

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Conservation Easements for Working Lands
Conservation easements have long been one of the go-to tools for land preservation. A conservation easement is a voluntary, legally binding agreement that limits certain development to protect productive agricultural and forest land, ecological resources, historic sites, and/or scenic views. Conservation easements can be tailored to meet the landowner’s present and future land management and conservation goals. Easements do place certain restrictions on property, such as giving up the right to subdivide and develop the land, but can allow a landowner to continue to farm and timber their land. Easements can either be permanent or temporary, lasting for a specified number of years. In either case, while land protected by a conservation easement may be sold, inherited or given as a gift, the terms of the agreement travel with the title of the property to future landowners.\(^{42}\) In addition to their legal restrictions, easements make a clear statement of the current owner’s intention that the land stay in farming and also reduce the appraised value of the land so that if it is sold, another farmer might be able to afford it.\(^{43}\)

In North Carolina, both land trusts and the soil and water conservation districts are authorized to hold easements. Among other responsibilities, the easement-holder must monitor the property periodically to ensure that the terms of the easement are being upheld.\(^ {44}\) While the interviewees all noted conservation easements as a powerful conservation tool, they made it clear that easements are not necessarily a good fit for all landowners.

“Easements are perfect for many landowners who [...] are committed to what they want to happen to their land and have very strong support from their children, their spouses, their farming partners, or whoever the case may be. Easements may not be a good fit for others because of issues such as differences of opinion among the potential heirs of the property, maybe their economic situation is not stable to the point that they can tie their land down to a restrictive use and therefore impact the value of the property. [...] Easements are a business decision but it’s also a very emotional decision too, because of the personal tie to the land.”

- Dick Fowler, North Carolina Association of Soil & Water Conservation Districts

Easements are also a significant liability for the organizations that hold them. Michelle Lovejoy of the Division of Soil & Water Conservation educates districts about their duties as an easement holder in order to prepare them for the responsibility.

“I will say, it isn’t right for every district to hold easements. Something we always stress is that if you don’t have the staff time, or the understanding of what long-term monitoring is, don’t even go down this road. The last thing we want to happen is 30 years from now I’m retiring and some district is pointing the finger at me saying “Hey I’m holding 50 easements and we don’t have any staff anymore. What are you going to do about it?” In all these workshops, we encourage them but also try to tell them the full story and help them to avoid some of these pitfalls.”

- Michelle Lovejoy, North Carolina Division of Soil & Water Conservation

A contentious issue in land conservation is whether easements should be permanent or temporary. The N.C. Agriculture Development and Farmland Preservation Trust Fund (ADFP) provides funds for some temporary easements, as does the federal Conservation Reserve Enhancement Program (CREP). Michelle Lovejoy commented that many of the farmers enrolled in CREP have rolled their temporary agreements into permanent easements when their initial ten-year term ended, and she believes that farmers who are granted temporary ADFP easements will do the same.45

“Farmers are very conservative, and sometimes they have a hard time accepting a new technology or being the first one to move forward, but once they see the neighbor down the road consider a permanent easement they’re more likely to consider it. Or once they’ve had a temporary easement and they see that they can still do what they want with their farm and that it doesn’t hinder them any, I can see down the road that they’ll want to put them back into permanent easements if there’s a funding stream to help them out.”

- Michelle Lovejoy, North Carolina Division of Soil & Water Conservation

Dick Fowler, Executive Director of the NC Association of Soil and Water Conservation Districts, noted Agriculture Commissioner Steve Troxler’s support for temporary easements, and opined that a long-term successful easement program may need more than one option for landowners. However, Sandra Reid of the Polk County expressed opposition to the ADFP’s decision to fund temporary conservation easements.

“...I’m so against purchasing temporary easements for the very reason that we already have the enhanced voluntary [agricultural district] program that goes after ten-year easements that farmers have joined all over the state. So to use that money to buy temporary easements to me is a waste of money. [...] Instead of buying temporary something, spread the love across the state to the counties to help them be able to provide lower taxation for these farmers so they can continue to hold the land.”

- Sandra Reid, Polk County Soil & Water District

Ms. Reid went on to contend that if tax reductions were used as an incentive for farmers joining the Enhanced Voluntary Agricultural District (EVAD), which requires a ten year easement, perhaps one hundred or more EVAD easements could be funded with the same amount of money that would place temporary easements on just a few farms through the ADFP.

The comments of the interviewees made it clear that while conservation easements are a powerful legal tool for preventing the development and subdivision of land, they are not a good fit for all farmers. Therefore, it is important to look at easements as one option in a larger and still-expanding toolkit for farmland preservation.

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47 S. Reid, email communication, 3 Mar. 2011.
The Changing Roles of Conservation Districts and Land Trusts

In the last decade, the roles of North Carolina’s land trusts and soil and water conservation districts have evolved to the point that both entities now hold working land conservation easements. Land trusts historically placed easements on areas of natural beauty or ecological importance, and have recently entered the arena of working lands. Conservation districts historically worked with farmers to preserve water and soil resources, and recently have expanded that mission by exercising their authority to hold easements. In some areas, land trusts and conservation districts work in a parallel fashion, and in others they are forming a fruitful collaboration.48

“Land trusts for a long time were the only game in town, and here’s these - what they thought - new kids on the block, but when they stepped back and realized the relationships the districts have with the landowners, the know-how they have about farmland, most of them will come around and see it as a win-win situation. At the end of the day, working together more land is preserved than by not working together.”

- Michelle Lovejoy, North Carolina Division of Soil & Water Conservation

An example of this evolving relationship is the LandTrust for Central North Carolina, which has signed a memorandum of understanding with the Cabarrus Soil and Water District to collaborate in strategic planning and potentially share staff resources.49

Another collaboration among representatives of conservation districts, land trusts, and others involved in farmland preservation created the NC Association of Soil and Water Conservation Districts Working Lands Preservation Resource Manual and Working Lands Conservation Easement Guidance Document, a how-to manual on farmland preservation tools that includes working lands conservation easements. Jerry Dorsett, Working Lands Coordinator for DENR and one of the leads on the project, said that significant effort was put into building relationships between land trusts and conservation districts and learning about each others’ strengths and areas for improvement. For example, the land trusts have expertise in writing and holding easements, yet less experience writing farm conservation plans. Similarly, conservation districts have relationships with farmers and are skilled in developing conservation plans, but have less

experience holding easements. Janice Allen, Deputy Director of the Coastal Land Trust, commented on the compatibility of these strengths and the opportunities for land trusts and conservation districts to learn from each other.

"I feel like it's a newfound love. [...] We've started to do workshops together, we've started to work on specific farmland projects together, and every experience that I've had has been very positive. [...] I viewed several relationships as cross-training, they can help us a lot and we can help them out a lot because we're very knowledgeable about easements. We've done that in a few cases and it's been helpful."

- Janice Allen, Coastal Land Trust

Many of the interviewees stressed the importance of collaboration between land trusts and conservation districts and expressed optimism that more agreements like that between Cabarrus County and the LandTrust for Central North Carolina will be developed and more partnerships built.

"Easements require money to purchase them, the authority to hold them, and a relationship with landowners. No one segment can do it by themselves, and we won't ever be successful in North Carolina without all agencies and organizations working together. The need for farmland protection in North Carolina is so great no one entity can do it by themselves. There's a great opportunity to partner between the conservation districts and the land trusts in this regard."

- Dick Fowler, North Carolina Association of Soil & Water Conservation Districts

As the roles of land trusts and conservation districts evolve, it is important to ensure that efforts are not duplicated and that strategic planning recognizes the strengths of both groups. This will help to preserve more farmland in an environment where funding and other resources are increasingly constrained.

**Finding Funding in a Tough Economy**

While some landowners are in a financial situation that allows them to donate easements, many farmers interested in preserving their farm are in need of some form of compensation. Money for conservation easements flowed freely in the 1990s, but many

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of those sources have dried up in recent years due to federal and state budget cuts. Farmer John Vollmer considered getting a conservation easement in those days, but decided against it because he believed that would be an “ace in the hole” in case of future financial troubles. Now, it looks much less likely that he will be able to play that card.

“\textit{The old saying, a lot of farmers are cash-poor and land-rich, I think that’s pretty true. Most times a lot of their assets are tied up in their land, so if they restrict the use of that land, they need to be compensated for it. [...] Putting together a funding package is a major challenge, and that money does not keep pace with the demand.”}\n
\textit{- Dick Fowler, North Carolina Association of Soil & Water Conservation Districts}

Conservation easements are typically funded by multiple sources that require matching funds. Common funding programs include the federal Farm and Ranchland Protection Program, the North Carolina Agriculture Development and Farmland Preservation Trust Fund, and the North Carolina Clean Water Management Trust Fund. These programs choose to fund easements based on their priorities as dictated by their mission. The differing missions of these programs complicates the funding search because, for example, a farm that is not near a water resource would not be able to apply to the Clean Water Management Trust Fund. Differing missions also complicate writing the easements, because each funder requires certain land use and management priorities be written into the conservation easement. Finally, the multiplicity of funding sources is challenging because their application windows vary. This brings uncertainty into the funding application process and can create situations where an organization must turn down money after it was granted because a match could not be secured.

The Agriculture Development and Farmland Preservation Trust Fund (ADFP) was established in 2005 by House Bill 607, with the intent to support the agriculture industry by funding the purchase of agricultural conservation easements, public and private enterprise programs that promote profitable and sustainable family farms, and

\footnotesize{\begin{quote} 
51 L. Creasman, email communication, 16 Mar. 2011. 
\end{quote}}
conservation agreements targeted at active production of agricultural products.\textsuperscript{54} The budget for the ADFP’s first cycle (2007 to 2008) was $8 million. The following year its appropriation was cut in half, and following that it was halved again to a recurring appropriation of $2 million.\textsuperscript{55} Dewitt Hardee, Environmental Programs Manager for the ADFP, commented on the difficulty of establishing a new trust fund in the current economy.

\begin{quote}
“Being a new trust fund, we’re developing those relationships, trying to develop the programs, and it’s been a little difficult in the beginning when your economics around you is very tight, and you’re asking for resources, you’re basically begging for resources to get things to occur. So those are challenges. But at the same time, we’ve found out that we’ve searched a little harder, reached out to more people, and you have more of a community group working together.”

- Dewitt Hardee, Agriculture Development and Farmland Preservation Trust Fund, N.C. Department of Agriculture and Consumer Services
\end{quote}

The state’s budget crisis could worsen the funding situation further. Nearly $74,000 has been removed from the ADFP’s budget this year due to Governor Perdue’s 3.5% budget reduction request, and the Governor’s proposed budget for next year would dissolve the ADFP Trust Fund.\textsuperscript{56}

\begin{quote}
“When you consider farmland protection in North Carolina, there’s a disconnect between the high rate of farmland conversion to non-agricultural uses, the pending increase in North Carolina’s population, and the fact that agriculture is by far the number one economic driver in the state, with the financial resources provided by the state to protect and conserve agricultural lands.”

- Dick Fowler, North Carolina Association of Soil & Water Conservation Districts
\end{quote}

Limited state financial support for farmland preservation emphasizes the need for collaboration and creative thought to stretch those funds as far as possible.

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\textsuperscript{55} D. Hardee, personal communication, 14 Dec. 2010.
\textsuperscript{56} D. Hardee, email communication, 3 Mar. 2011.
\end{flushright}
Farmland Preservation Highlight:  
The Fuel the Forces Initiative

Military base expansions are major economic drivers in the eastern part of the state, and related development threatens farmland in surrounding counties. However, the military has an interest in preserving farms to facilitate training, and now for another reason: to grow crops for biofuel. The Fuel the Forces Initiative has paired the military with regional partners to assess the creation of a market for canola oil that can be converted to biodiesel for military jets.

Canola is not traditionally grown in North Carolina, therefore the Initiative is studying incentives the military might offer farmers to grow canola, what processing facilities would be necessary, and how to ensure that the fuel meets the military’s quality standards. Jerry Dorsett, Working Lands Coordinator for the Department of Environment and Natural Resources, said that once these components are fully understood and ready to be implemented, eastern farmers willing to grow canola will be ensured a market for their crops. This will provide them with greater security in planning for the future of their farms.¹

“There’s a lot of steps to the process but when you do all that, what you’ve done is created a closed-loop market, and all of a sudden someone who owns land or might purchase land can look at that and say “Ok, I can be assured I’ll be able to have a market, I’ll be able to afford to own that land.” There are a lot of individuals, if they don’t have those guarantees or assurances or some help they won’t be able to do that.”

- Jerry Dorsett, NC Department of Environment and Natural Resources

Despite this bright outlook, concerns exist about the long-term viability of this new market, and whether acres currently devoted to food production will switch to growing biofuels. This remains an issue to watch as it develops.

Regional Differences

While farms closest to urbanizing areas in the piedmont and mountains are the most threatened by development pressure, the presence of this threat also tends to direct the majority of farmland preservation resources to those areas. This situation has created concern regarding the equity of available opportunities for farmers in more rural regions to preserve their land.57

“That’s another issue in poorer communities, eastern NC if you want to generalize it. When I’d talk about money for easements in the state farmland trust fund they’d say, “Why do we want to send our money up to Chapel Hill so people can preserve their nest egg right outside the university?” It didn’t make sense, and they’ve got a good argument – that money flows towards areas of high development pressure.”

- Gerry Cohn, Organic Valley

The eastern region of the state, traditionally home to large expanses of row crops, poses unique problems to those concerned about farmland preservation. Gerry Cohn went on to discuss how farmland conservation easements can be a poor fit for eastern farmers and land trusts.

“Some of the tools that land trusts traditionally use, they’re not that applicable in places with less development pressure, and you can see that there are is not as much land trust activity in the eastern part of the state. In those areas it’s not farmland preservation, it’s more farming preservation and innovation.”

- Gerry Cohn, Organic Valley

Janice Allen of the Coastal Land Trust, which covers 31 eastern counties in North Carolina, explained that land trusts calculate the value of an easement according to an appraisal of the “highest and best use” of the parcel. In urbanizing areas, that use is typically residential or commercial development, therefore the landowner is giving up value by agreeing to an easement that restricts that type of activity. In the eastern counties, however, this differential value may not exist.58

57 G. Cohn, personal communication, 6 Jan. 2011.
“When we're working on the east coast we do have a lot of viable agricultural communities still, and when we are talking to those landowners and they may be interested in putting their land under easement either donating it or selling a farmland easement, there's the problem of value. When they're in a predominantly agricultural community, the highest and best use of that land is often farming, it's not development. So there's no extra value to be bought or donated. That's an incentive that isn't there. [...] I think that is one issue that has to be resolved, what do we do for these great farming areas, how do we keep them before development comes?”

- Janice Allen, Coastal Land Trust

In areas where residential and commercial development pressure is not felt directly by farmers, the indirect effects of development can still be experienced through compensatory wetland mitigation that is required by the Clean Water Act. When developers plan a project that will result in unavoidable impacts to a wetland, they are required to restore that wetland in another location. In North Carolina, wetlands are restored by the developers themselves, the state’s Ecosystem Enhancement Program, or private mitigation banks. Voluntary wetland restoration and preservation is also performed by the U.S. Department of Agriculture’s Wetlands Reserve Program (WRP). Matt Flint, Assistant State Conservationist-Technology for the U.S. Department of Agriculture’s Natural Resources Conservation Service, noted the existence of sub-regions in eastern North Carolina where there are concentrations of mitigation and voluntary restoration projects using cropland. The U.S. Army Corps of Engineers’ map of private mitigation banks can be seen below. While this map does not show all wetland restoration activity in the state, it does show a cluster of private activity in the east.

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61 M. Flint, email communication, 1 Apr. 2011.
63 M. Flint, email communication, 28 Mar. 2011.
Tara Allden of the private mitigation bank Restoration Systems, LLC, wrote that most of her company’s wetland mitigation sites are on tracts that were previously farmed, yet are composed of hydric soils that are difficult to maintain without flooding. Farmers are offered between $6,000 and $10,000 an acre to allow Restoration Systems to restore a wetland on that property in order to offset development elsewhere. Wetlands restored for compensatory mitigation are placed under permanent easements. Payments for WRP projects, in contrast, average $1,000 to $1,500 per acre. The WRP offers landowners the options of a permanent easement, a 30-year easement, or a restoration cost-share without an easement.

Although farmers who agree to place wetland restoration projects do so voluntarily and are paid for the use of their land, the fact that most cropland in eastern North Carolina is cash-rented on an annual basis can mean that renting farmers may be pushed off by such

64 T. Allden, email communication, 16 Mar. 2011.
Derek Potter, a corn, soybean, and wheat farmer who rents acreage in Craven and Pamlico Counties, believes that wetland mitigation is a major driver of farmland loss in eastern North Carolina. His comments show how two conservation goals, wetland restoration and farmland preservation, can conflict.

“... You go take a productive acre of land that’s already drained, already been used properly, and then come back, stop the ditches on it, plant a few wetland trees on it, and call it a restored wetland. You’re not benefitting anybody, it just appeases the regulators. [...] I’m not saying they shouldn’t go preserve some of the areas that are in wetlands currently, but to go take productive farmland and put it back in wetlands, I have a real issue with that. I think you’re taking something that’s a productive asset and making it a negative asset. Because you’re putting that stuff back in wetlands and it’s not going to produce food or fiber for anybody. You’re not going to be able to cut timber off it, you’re not going to be able to produce a crop on it.”

- Derek Potter, Corn, Soybean, and Wheat Farmer, Craven and Pamlico Counties

A final important actor in land conservation in eastern North Carolina is the military. The military is a strong and consistent contributor to the state’s economy, and the major bases are located in the eastern counties. In 2009, military activities contributed $23 billion or 7% to the state gross domestic product, second only to agriculture. While the military is a leading economic driver in the region and brings in large numbers of service men and women, it also has an interest in preserving rural areas to facilitate its training exercises. The Military Growth Task Force was established to plan for these needs, and has involved local communities, land trusts, and conservation districts in its attempts to manage and monitor military growth. Another important upshot of the military planning effort is that it has motivated eastern counties to develop farmland preservation plans.

Jerry Dorsett of the Department of Environment and Natural Resources noted that in general, eastern counties’ implementation of farmland protection measures lags behind

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68 M. Flint, email communication, 28 Mar. 2011.
the rest of the state due to the relative lack of development pressure. However, Janice Allen of the Coastal Land Trust believes this is changing.

“\textit{The big Military Growth Task Force regional planning effort is pushing many counties to realize that they need to figure out how to preserve their quality of life, which includes agriculture. [The military] is an important economic driver and with the Grow the Force Initiative, we are going to see a lot of growth in the mid-coast, an influx of people coming in for the military bases. Now’s the time to not only plan for the growth, but, if possible to also protect our quality of life.”}

- Janice Allen, Coastal Land Trust

III. Expanding the Preservation Toolbox

Fostering New Markets
In a speech at the Farm to Fork Summit held by the Center for Environmental Farming Systems in May 2009, Governor Bev Perdue said, “Y’all are red hot. You are beginning to change the tide, directing the links between local agriculture, jobs and the economy. Finally people across the state and the country are beginning to realize you are red hot.”

Local agricultural innovation is flourishing in North Carolina, in spite of – or perhaps because of – the challenging economy. Individual farmers, nonprofits, county governments, and other organizations have looked beyond their traditional roles to find new markets for North Carolina’s local food products. These efforts are directly linked to farmland preservation, because farms with profitable enterprises are much less likely to be sold. Betsy Burdett, a Conservation Broker and consultant to the Polk County Soil & Water District, commented that market opportunities and conservation easements work together to preserve farmland.

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“It takes a whole team and community to keep farmers alive. [...] You don't support the farmer, he's out of business and it's gone. You don't put a conservation easement on [the land], you don't have it for the next guy. Ask your Wall Street guys, do they like short term or long term? Without one you don't have the other. [...] If you try to separate short-term from long-term benefits, then you're not giving a holistic solution to the problem, which is a big problem. And it's not going to be settled one way or the other.”

- Betsy Burdett, Conservation Broker

Farmers are increasingly taking advantage of growing markets for local and organically grown food in North Carolina. As of 2007, North Carolina was home to 3,712 farmers selling directly to consumers for a total value in direct sales of over $29 million. North Carolina has an estimated 200 farmers’ markets and 100 Community-Supported Agriculture programs (CSAs). The number of certified organic operations nearly doubled in two years, increasing from 85 in 2006 to 156 in 2008. The interviewees noted that the higher prices brought by organic products allow farmers to make a living off of smaller acreages and keep mid-sized farmers in business. Both John Vollmer and Jane Iseley sell produce directly from their farms and provide opportunities for families to visit and learn about their operations. Such educational experiences are important as fewer children grow up on farms. Jane Iseley noted that when she asks children whether they’ve visited a farm before, in recent years the number of raised hands has dwindled. These farmers realize that their connection to their community may be their best marketing strategy.

Non-profits can also play a role in fostering new market opportunities. Andrew Branan argued that this is best accomplished through spin-off private enterprises.

78 A. Branan, personal communication, 10 Jan. 2011.
Polk County has turned agricultural market development into an effort that involves county government and the entire community. When the county received a grant from the ADFP to create a Farmland Preservation Plan, it raised the need for an office of Agricultural Economic Development. That office has four functions: to reconnect the community to agriculture, to help existing agricultural businesses, to find new opportunities, and to preserve farmland. Lynn Sprague was hired as the state’s first full-time Agricultural Economic Development Director, and since his arrival, he and his fellow Polk County residents have made astounding improvements to the market opportunities for the county’s farmers. Mr. Sprague said that Polk County’s actions, many of which are highly innovative, are based on the belief that farmland preservation cannot succeed in the absence of economically sound farms and community support. Mr. Sprague believes that what he and his partners have accomplished in Polk County can be replicated by any county that takes a close look at the strengths and weaknesses of its agricultural economy and is willing to invest in improving its market opportunities.  

Farmland Preservation Highlight:
Mill Spring Agricultural Development Center, Polk County

“We’ve taken over an abandoned school that was abandoned in 1992, it’s a two-story old high school that was built in 1928 – I’ll just call it a dead horse. [...] Last year we counted 450 different people that did volunteer things in that building, out of a population of 19,000 people. That’s the type of energy we’ve set off in this county.”

- Lynn Sprague, Polk County Agricultural Economic Development Director

The Polk County Soil and Water Conservation District’s acquisition of the former Mill Spring School to house the Mill Spring Agricultural Economic Development Center was a major step towards raising the profile of Polk County agriculture by providing a focal point for the county’s farming community and its supporters. The Center is intended to serve as a resource center for agricultural development, farmland preservation, education, community service, and business development.

Current projects at the Center include agribusiness development, Soil & Water Conservation Programs, Friends of Agriculture breakfasts, a retail farm store and farm-to-fork café, workshops and courses, green power projects, and a community supported agriculture (CSA) distribution center.\(^1\) Lynn Sprague, Agricultural Economic Development Director for Polk County, emphasized that the Center is key to integrating agriculture back into the culture and heritage of the county.\(^2\) In addition, the Center is expected to serve as a model for other counties interested in creating a vibrant local food economy.\(^3\)

\(^1\) Polk County Farmland Preservation, “Mill Spring Agricultural Center.” 2011. Available at: http://polkcountyfarms.mynetworksolutions.com/millspringagcenter.html
\(^3\) Polk County Farmland Preservation, “Mill Spring Agricultural Center.” 2011. Available at: http://polkcountyfarms.mynetworksolutions.com/millspringagcenter.html

Photo credit: Polk County Farmland Preservation, 2011. Available at: http://polkcountyfarms.mynetworksolutions.com/photogallery.html
Market-Based Conservation
In addition to producing food, farms provide other “ecosystem services” such as carbon sequestration, water filtration, and wildlife habitat that have value for humans yet are rarely paid for. This has started to change, however, as markets for carbon credits already exist and markets for other services, such as water quality, are in development. The idea behind such markets is to put a price on ecosystem services so that landowners will be compensated to provide them in the quantities that society requires. Farmers, who own large swaths of land and have a keen understanding of how it is managed, are ideal candidates for ecosystem service markets. In addition, it is hoped that the additional income stream from such markets could improve farmers’ bottom lines and help them keep their farms. Michelle Lovejoy of the Division of Soil and Water Conservation is optimistic that such opportunities will come to North Carolina.

“As far as ecosystem services, the sky’s the limit right now. [...] There’s people who are interested in wind power, there are people who would be interested in doing wildlife habitat corridors, we’ve started down the road of talking to the wildlife resources commission and the green infrastructure map they’ll do at a county level for planning purposes, so some of the districts are getting involved in that. [...] Carbon sequestration, that’s one of the other ones I could see a district going out and certifying a farm and running the numbers to prove how much carbon they can sequester based on crop rotation, or if they’re just looking at forestry, based on if it’s not timbered for 50 years what they might be able to sequester, depending on however the national model moves forward.”

- Michelle Lovejoy, North Carolina Division of Soil & Water Conservation

Hunter Parks, founder and Executive Director of Green Assets, Inc., sells carbon credits from forest projects in eastern North Carolina and other states in the southeast. While Green Assets’ focus is on forested land, Mr. Parks said that most of his clients also own tillable acres and see the carbon credits as a way to increase their overall revenue.\(^8^0\)

\(^8^0\) H. Parks, personal communication, 1 Feb. 2011.
“What we’re finding is a lot of people who have land and they’re trying to find any revenue source that they can from it. The farming side of it is not always going to put them in a situation where they can keep the farm. [...] Most of the projects we are working on or are getting started on are tillable acres that back up to a forestland and has the same landowner, and he wants to do something with that forestland, create another revenue source so that it would help him be able to keep the entire piece of property.”

- Hunter Parks, Green Assets Inc.

Carbon markets are the most advanced of all ecosystem service markets, yet they are still in the developmental stages. The current minimum forest parcel size to market credits is 500 acres. While smaller parcels can be aggregated to reach this requirement, the precision of carbon accounting still needs improvement. Protocols to gain credits off of tillable acres are being developed, but the cost of developing such a project is currently prohibitive. Mr. Parks noted that as carbon prices increase, the cost of developing a farmland project will be more justified. However, it appears that a national or global carbon price is needed for such markets to really take off. Mr. Parks reported that most credits are being bought in California, where the California Air Resources Board emissions regulations are due to go into effect in 2012. 81 Selling carbon credits may not be a readily available option for most farmers at present, but it is certainly something to remain aware of as market opportunities grow.

Markets for other ecosystem services such as water quality are still largely conceptual. Nutrient management strategies in the Neuse River and Tar-Pamlico Sound allow developers to buy a certain portion of their nutrient reductions from the Ecosystem Enhancement Program, private mitigation banks, or in the Tar-Pamlico case through donations to the NC Division of Soil and Water Conservation’s agricultural cost-share programs, but farmers are not yet able to sell credits from conserving their land. A key barrier to nutrient reduction credits for farmland conservation is the lack of scientific data to prove that farmland is better for water quality than development. 82

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81 H. Parks, personal communication, 1 Feb. 2011.
82 J. Huisman, personal communication, 3 Feb. 2011.
“I think a big part is just this lack of information to make the case at this point. [...] I’m hopeful that [...] maybe in a couple years we’ll be able to come back to the Environmental Management Commission and say there’s been additional studies and there are certain benefits [of land conservation] that we can quantify in terms of nutrient reduction, but I just don’t feel like we’re there yet. When it comes to writing these nutrient management strategies we try to keep them pretty open-ended to allow for the evolution of new technology and data, and not close the door on things, it’s just at this point we couldn’t find a way to say yes.”

- John Huisman, Senior Environmental Specialist, Division of Water Quality

Water quantity is another potential future source of land conservation credits, for example, preserving a farm in a drinking water recharge area would allow more water to filter into the soil than if the area is paved and water runs off to streams.\(^83\) However, the provision of such credits would likely require a water allocation policy, an idea that has come up in state policy discourse but has yet to gain much traction.

A final form of market-based conservation that may gain traction in North Carolina in the future is a system of transferable development rights. Such a system allows developers to increase the density of their projects in areas designated for homes or businesses in return for placing an easement on a rural parcel. Michelle Lovejoy of the Division of Soil and Water Conservation said that Orange County tried such a plan, but the cities refused to sign on so the policy was restricted to the unincorporated county. This rendered it useless, because no developers were interested in placing high-density development outside of city limits. For transferable development rights to work in the future, Ms. Lovejoy felt that there will need to be significant educational outreach to county and municipal boards to get full buy-in.\(^84\)

**The Future of Farming**
The future of farming in North Carolina is bright, as farmers seek opportunities beyond tobacco by experimenting with new crops, organic agriculture, and direct marketing, and new markets for ecosystem services are visible on the horizon. However, this is a time of severe budget challenges at every level of the economy – state, county, municipality,

\(^83\) M. Lovejoy, email communication, 11 Mar. 2011.
conservation organizations, and individual farmers. If North Carolina’s agricultural future is to become a reality, farmland preservation must become a priority at each level. The following quotations show a few of the interviewees’ visions, hopes, and uncertainty about their farming futures.

[On permanent conservation easements] “In perpetuity is a long time. A long, long time. And who knows what viable agriculture will look like 50 years from now? [...] I can see the point in time where land that is not too far from urbanizing areas, instead of being in corn or soybeans or grazing animals like it is now, that easement could turn into two-acre garden plots for homeowners. It could turn into grass and open space, and we may not see a combine and a tractor and a plow out there, but we also won’t see houses and shopping centers. How you define agriculture is going to be an interesting thing as time goes on.”

- Dick Fowler, North Carolina Association of Soil & Water Conservation Districts

“I think we have a really thriving enterprise that can pass on from one generation to the next, the question is, is there going to be a farmer in that group? I think if it becomes too burdensome for people to maintain what we have out here then they will do something different with it. But we have that dream, that there’s going to be someone farming this land for a number of years. I really think that the value of some of the crops that we’re learning about how to grow, blackberries, blueberries, strawberries, they’re always in demand for people. You can grow food and make it wholesome and good, and allow people to touch it and get it, that is really powerful.”

- John Vollmer, Organic Produce Farmer

“I don’t know what’s going to happen to my land. I’ll be honest with you, I don’t know. [...] It’s not like going to the office nine to five, it’s a real lifestyle. And I made the decision years ago, in my other career I chased the dollar and quantity was important to me. But at some point I made the decision that quality was more important. It takes that sort of mindset to farm. I don’t know what is going to happen.”

- Jane Iseley, Produce, Cattle, and Organic Tobacco Farmer, Burlington
Recommendations and Areas for Future Research
The following recommendations are based on a synthesis of the information from the interviews, and should not be taken as the opinion of any individual interviewee or the Conservation Trust for North Carolina.

1. **Create an online repository of farmland preservation success stories.** These should include new marketing strategies, instances of non-family farm transfers or lease agreements, financing mechanisms, and others. Award a yearly innovation prize to encourage use of the website and the development of new farmland preservation strategies.

2. **Hold a statewide summit to discuss how land trusts and conservation districts can work together to most efficiently preserve farmland.** Any existing concerns of the two groups should be openly addressed, and the summit should include regional breakout sessions to address issues specific to the Mountain, Piedmont, and Coastal areas.

3. **Support beginning farmer training programs and continue to search for intermediate steps toward increased farming responsibility.** Use training centers to build relationships among beginning and established farmers. Efforts should include arranging for farmers approaching retirement to visit these facilities and meet beginning farmers, with the goal of establishing a rental or leasing agreement or apprenticeship.

4. **Fund research on water quality to establish the effects of farmland conservation on nutrient runoff in comparison to development.** Farmland preservation will gain new supporters if it can be scientifically shown to improve water quality. A greater understanding of how farm management practices affect nutrient runoff is needed for farmers to gain access to nutrient trading schemes.

5. **Encourage direct marketing opportunities for local farm products.** Farmers markets and CSAs have taken off in many parts of North Carolina, but their spread should continue to be encouraged. Other opportunities such as farm-to-school
programs or other initiatives to get local food into nearby institutions and restaurants are a great next step.
Appendix A: Interview Guides
These questions were used to frame the interview conversations.

Interview Guide for Farmers

**Farm History**
1. How long have you been farming?
2. Do you own your land?
3. How did you come into your land?
4. Describe the physical characteristics of your land.
5. Was there ever a time when you considered selling your land for a non-agricultural use?
   a. If yes, would you mind sharing why?
   b. What prevented the sale?

**Current Practices**
6. What are your current farming operations?
7. Do you or another member of your family hold another job to support the household?
8. Are you currently doing anything that you would describe as a conservation practice?
9. Do you receive compensation for that practice?
   a. If so, from what source/program?
   b. Would you be able to continue the practice without compensation?
10. Would you consider implementing other conservation practices if you were paid to do so?

**The Future**
11. What do you see as the future of your land?
12. What do you see happening in the larger farming community, and how does that affect you?

Interview Guide for Professionals in the Field

1. Tell me about your (your organization’s) work.
2. Does your organization have an interest in preserving farmland in the state?
   a. If yes, why?
   b. How does farmland loss affect your organization’s interests?
3. In your opinion, what are the major threats to the preservation of farmland in North Carolina?
4. Does your organization currently do anything to mitigate those threats?
   a. If yes, how?
   b. If no, do you see any opportunities to do so?
5. Are there other organizations that you (your organization) might partner with to help preserve farmland in the state?
6. Are you aware of any sources of funding that could be utilized for farmland preservation, that are not currently being utilized to their full potential?
Appendix B: Farmland Preservation Resources:
These resources may be of assistance to farmers and other individuals interested in preserving farmland.

**Working Lands – Protecting your Farm or Forest**
The Triangle Land Conservancy

**Planning for an Agricultural Future: A Guide for North Carolina Farmers and Local Governments**
American Farmland Trust
[www.farmlandinfo.org/documents/31721/FINAL_NCP4Ag_AFT.pdf](http://www.farmlandinfo.org/documents/31721/FINAL_NCP4Ag_AFT.pdf)

**Working Lands Conservation Easement Guidance Document**
North Carolina Association of Soil and Water Conservation Districts

Other information on sustaining working farms through conservation can be found on the website of the Conservation Trust for North Carolina, available at: [http://www.ctnc.org/site/PageServer?pagename=prot_tobaccotrust](http://www.ctnc.org/site/PageServer?pagename=prot_tobaccotrust)