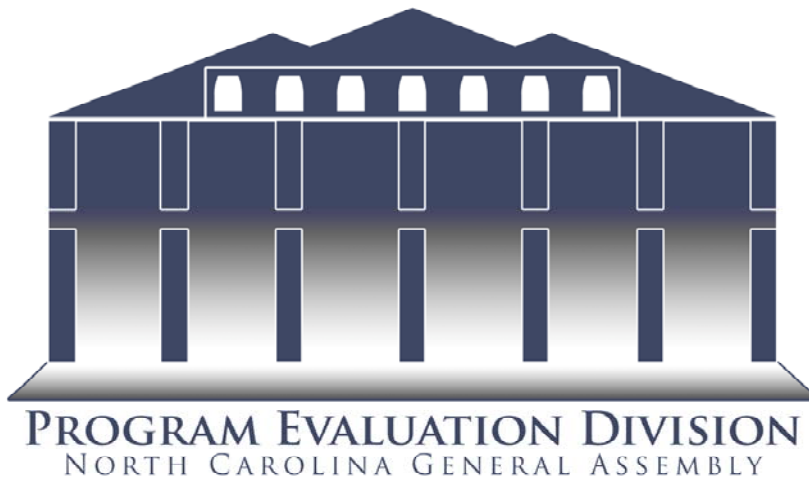


**Consolidating Agricultural Research
Facility Management Would Improve
Efficiency and Effectiveness**



**Final Report to the Joint Legislative
Program Evaluation Oversight Committee**

Report Number 2008-05-1

May 8, 2008



Program Evaluation Division
North Carolina General Assembly
Legislative Office Building, Suite 100
300 North Salisbury Street
Raleigh, NC 27603-5925
919-301-1404
www.ncleg.net/PED

200 copies of this public document were printed at a cost of \$995.63 or \$4.98 per copy.

A limited number of copies are available for distribution through the Legislative Library:

Rooms 2126, 2226
State Legislative Building
Raleigh, NC 27601
919-733-7778

Room 500
Legislative Office Building
Raleigh, NC 27603
919-733-9390

The report is also available online at www.ncleg.net/PED.



NORTH CAROLINA GENERAL ASSEMBLY
Legislative Services Office

George R. Hall, Legislative Services Officer

Program Evaluation Division
300 N. Salisbury Street, Suite 100
Raleigh, NC 27603-5925
Tel. 919-301-1404 Fax 919-301-1406

John W. Turcotte
Director

May 1, 2008

Representative Mary E. McAllister, Co-Chair, House Appropriations Subcommittee on Natural and Economic Resources
Representative Edith D. Warren, Co-Chair, House Appropriations Subcommittee on Natural and Economic Resources
Senator David F. Weinstein, Chairman, Senate Appropriations Subcommittee on Natural and Economic Resources
North Carolina General Assembly
Legislative Building
16 West Jones Street
Raleigh, NC 27601

Honorable Ladies and Gentleman:

The Current Operations and Capital Improvements Appropriations Act of 2007, HB 1473, S.L. 2007-323, Section 11.4, directed the Program Evaluation Division to examine the structure and management practices of the 18 agricultural research stations and research farms currently owned by either North Carolina State University or the Department of Agriculture and Consumer Services. The Act directed our Division to consider ways to achieve efficiency savings and whether it is desirable and feasible to consolidate or transfer to another State department these research stations and research farms.

Evaluation findings and recommendations contained in this report will be presented to the Joint Legislative Program Evaluation Oversight Committee on May 8, 2008.

On behalf of the Program Evaluation Division staff, I would like to thank the Agriculture Commissioner, the staff of the Department of Agriculture and Consumer Services, and the administrators and staffs of North Carolina State University and North Carolina Agricultural and Technical State University for their cooperation and many courtesies shown our evaluators during the evaluation.

Sincerely,

A handwritten signature in black ink, appearing to read "John W. Turcotte".

John W. Turcotte
Director

cc: Lynn Muchmore, Director of Fiscal Research Division



PROGRAM EVALUATION DIVISION

NORTH CAROLINA GENERAL ASSEMBLY

May 2008

Report No. 2008-05-1

Consolidating Agricultural Research Facility Management Would Improve Efficiency and Effectiveness

Summary

Legislation passed by the NC General Assembly during the 2007 session directed the Program Evaluation Division to evaluate the state's 18 agricultural research stations. The aim of the evaluation was to identify efficiency savings associated with station structure and management, with particular attention to examining whether or not all 18 stations should be owned and managed by a single entity. The evaluation scope included 11 additional research facilities owned and operated by the state land-grant universities.

Evaluation findings suggest the current divided management structure hinders planning, monitoring, and accountability across agricultural research facilities. In addition, reducing the number of facilities would allow limited funds to be allocated more strategically. Finally, an effective and efficient system for agricultural research is important to North Carolina's agricultural industry and citizenry.

The General Assembly should consider legislation that creates a system of all agricultural research facilities managed by the two land-grant universities instead of the NC Department of Agriculture and Consumer Services (NCDA&CS). The legislation also should establish an advisory board that includes representatives from NCDA&CS and both land-grant universities to provide guidance to the system from a much-needed statewide perspective. One of the board's first tasks should be the appointment of an independent panel to conduct a comprehensive review of facilities, including consideration of the recommendations in this report for streamlining the system. Finally, system management should consistently track data on system inputs, resource utilization, and research outcomes and provide annual reports to the public.

As shown in the following table, implementing these recommendations could save up to \$3.7 million in recurring and \$54.7 million in non-recurring state funds.

Estimated Recurring Fiscal Impact	Estimated Nonrecurring Fiscal Impact	Proposed Legislative Action
\$ 500,000	\$ -	Consolidate central management of agricultural facilities (Recommendation 1)
3,171,413	39,856,546	Close seven research stations, pending review of scientific necessity (Recommendation 3)
-	1,299,780	Sell or transfer discrete parcels attached to research stations but not used for research (Recommendation 3)
-	13,590,175	Sell or transfer NCDA&CS forest management tracts (Recommendation 1)
\$ 3,671,413	\$ 54,746,501	Total Estimated Fiscal Impact

Source: Program Evaluation Division.

Scope

As directed by the NC General Assembly, the Program Evaluation Division evaluated the structure and efficiency of North Carolina's 18 agricultural research stations. All stations are managed by the NC Department of Agriculture and Consumer Services (NCDA&CS), but ownership is split: 12 stations are owned by NCDA&CS and 6 are owned by NC State University (NCSU).

A series of recent events prompted this evaluation. In 2004, the General Assembly directed NCDA&CS and NCSU to work in consultation with the Fiscal Research Division to study research station funding and operations.¹ This report provided more of a description of the system than a critical review, and no action resulted from the effort. In January of 2006, NCSU's then-Director of the NC Agricultural Research Service in the College of Agriculture and Life Sciences formally suggested the stations should be transferred wholly to NCSU, and a proposal was included in the Senate version of the 2007 Appropriations Act.² However, the House of Representatives did not concur with the Senate proposal, and through the conference process, the Legislature directed the Program Evaluation Division to evaluate station management.³

To provide a more comprehensive overview of agricultural research in the state, the evaluation scope included field laboratories operated by NCSU and the NC Agricultural and Technical State University (NCA&T) farm. Forest management tracts owned and operated by NCDA&CS also were reviewed. Program Evaluation Division staff collected and analyzed data from several sources, including

- interviews with 17 NCDA&CS, NCSU, and NCA&T past and current administrators;
- interviews or written statements from 13 faculty researchers;
- on-site facility inspections and staff interviews at the 18 research stations, NCA&T farm, and 6 of the 10 NCSU field laboratories;
- a survey of 103 commodity association leaders, with responses from 62 (60%);
- a survey of 310 researchers, with responses from 191 (62%);
- surveys and interviews regarding agricultural research systems in 13 other states; and
- 2002-2007 fiscal and research grant data.

Background

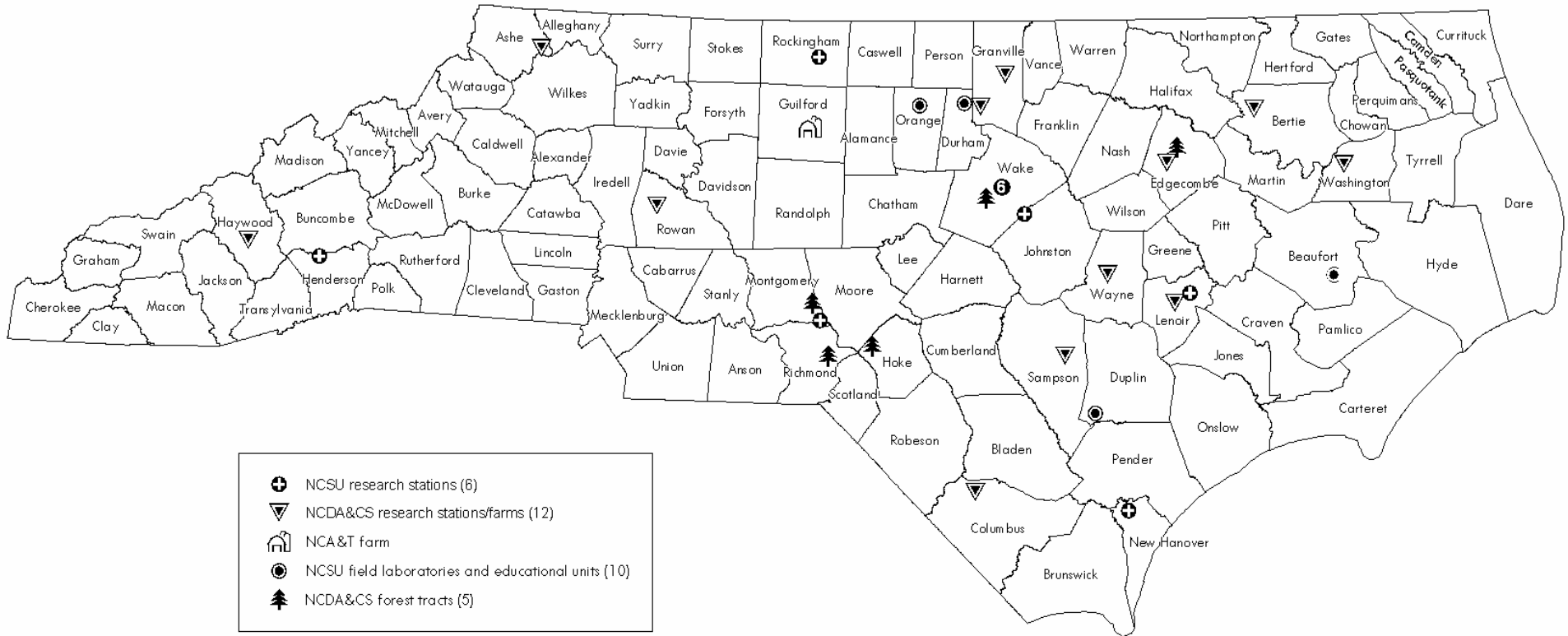
Agricultural research facilities are located in 23 of North Carolina's 100 counties (see Exhibit 1). In addition to 18 research stations, 10 field laboratories are owned and operated by NC State University (NCSU), and one university farm is owned and operated by NC Agricultural and Technical State University (NCA&T). The five forest management tracts owned and operated by the NC Department of Agriculture and Consumer

¹ 2004 NC Sess. Laws, 2004-124, Section 11.2.

² HB 1473, Section 9.15, 2007 Gen. Assem., Reg. Sess. (NC 2007).

³ 2007 NC Sess. Laws, 2007-323, Section 11.4.

Exhibit 1: Agricultural Research Facilities and Forest Tracts

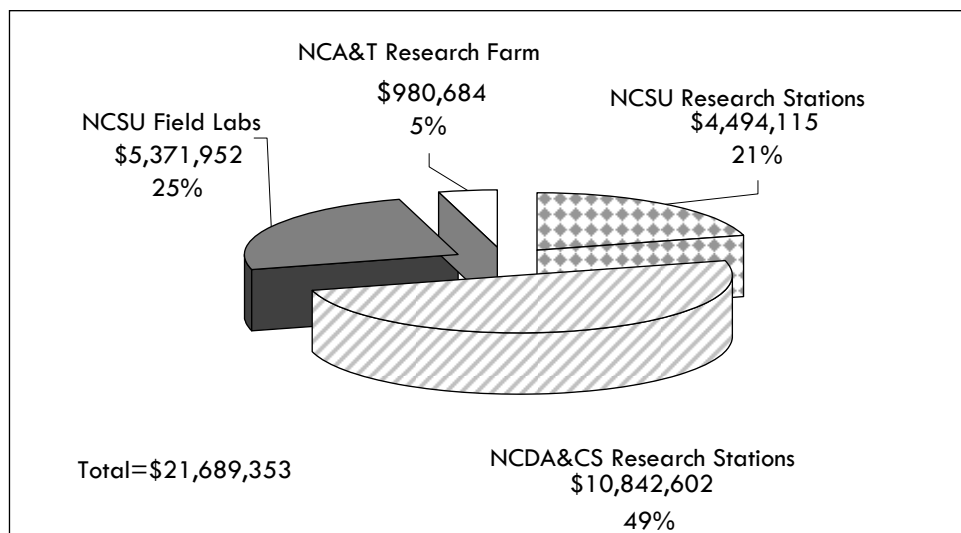


Source: Information Systems Division based on data from NCDA&CS, NCSU, and NCA&T.

Services (NCDA&CS) are not actively used for research studies, but are reviewed here because they are included in the Research Stations Division budget. Fiscal Year 2006-07 expenditures for all 29 research facilities were \$21.7 million, including \$17.8 million from state appropriations (see Exhibit 2).

Exhibit 2

FY 2006-07 Expenditures for Agricultural Research Facilities Totaled \$21.7 Million



Source: Program Evaluation Division based on data from NCDA&CS, NCSU, and NCA&T.

Research Stations. In 1877, North Carolina became the second state to establish an agricultural research station. NCDA&CS and NCSU (the state's largest land-grant university) have shared responsibility for the stations since 1912. Research stations provide facilities for university faculty research, teaching, and extension activities, and NCDA&CS has access to station employees and facilities as needed to pursue agency goals such as community activities and outreach. North Carolina is unique in its research station management structure: all other state systems are operated by land-grant universities.

Since its inception, the station management alliance between NCDA&CS and NCSU has been generally stable despite periods of discord.⁴ Stakeholders interviewed for this evaluation believed the arrangement has worked well, for the most part, and administrators have accommodated differences in policies and procedures across the entities. However, the dual management structure has complicated some processes. For example, these differences require administrators to know both systems: each has distinct accounting and human resources policies and procedures. Each entity has a different perspective on the existing level of collaboration on hiring and supervision of management staff: in interviews conducted for this evaluation, NCSU expressed dissatisfaction with the level of partnership, whereas NCDA&CS believed current procedures assured adequate input from both parties. In addition, the duality means the institution that manages the facilities (i.e., NCDA&CS) is not responsible for conducting outcomes-based research, as is the university.

⁴ For a detailed history of the stations, see Carpenter, W. L. & Colvard, D.W. (1987). *Knowledge is Power*. NCSU.

Today, the 18 agricultural research stations comprise 15,899 acres and are located across the Mountain, Piedmont, and Coastal regions of the state. Each is characterized by distinct soil types, environments, and capacity to host certain crops or livestock. Profiles of each of the stations are provided in Appendix A.

Station properties have been added gradually since the early 1900s. Some were acquired from private owners for agricultural research, whereas others were converted from state farms that had produced food and fiber for state institutions (e.g., the Cherry Farm). Unlike NCDA&CS, NCSU has flexibility in how it acquires lands and funds: land can be gifted to the university and is sometimes endowed for a specific purpose. For example, the Cunningham Research Station was given to NCSU with an endowment intended to support operations. The bequest stipulated the land be used expressly for agricultural research and any other use would result in its return to the benefactor.

Funding for research station operations comes from state appropriations and receipts generated primarily from the sale of excess commodities grown on the stations. Although federal funds support some research conducted at the facilities, no federal funds support station operations. Total expenditures were \$15.3 million for Fiscal Year 2006-07, \$10.8 million of which supported the 12 stations owned by NCDA&CS and \$4.5 million of which supported the 6 stations owned by NCSU.

Field Laboratories. Beyond the 18 research stations, NCSU owns and operates 10 university field laboratories, 6 of which are located close to the NCSU campus in Raleigh (see Appendix A, NCSU Field Laboratories). Whereas research stations are geographically dispersed across the state, proximity to campus provides enhanced opportunities for teaching and hands-on research for undergraduates as well as faculty and graduate students. Together, the field laboratories comprise 4,145 acres. Each field laboratory has a specific research focus, such as turfgrass or feed milling, and many feature educational units for the study of, for example, swine and chickens. Two of the field laboratory properties were recently given to NCSU, and administrators expect to develop them as sites to study biofuels and community farming. NCSU funds field laboratory operations from state appropriations and receipts generated primarily from the sale of excess commodities. No federal monies support operations. Total expenditures for the field laboratories were \$5.4 million in Fiscal Year 2006-07.

NCA&T Farm. Located less than five miles from the main campus in Greensboro, the 492-acre NCA&T farm hosts the university's research, academic, and extension activities. The farm is operated by NCA&T's School of Agriculture and Environmental Sciences and provides facilities for research on livestock, crops, and niche commodities such as mushrooms and organic farming (see Appendix A, NCA&T State University Farm). The smaller of North Carolina's two land-grant universities, NCA&T is a historically black university with a tradition of supporting minority farmers. Total expenditures of \$980,684 in Fiscal Year 2006-07 for farm operations were provided by state funds including appropriations and matching funds for the Evans-Allen Program (federal Evans-Allen formula grants support agricultural research at the 1890 land grant institutions).

Forest Management Tracts. The five forest management tracts, a total of 3,150 acres, are owned and managed by NCDA&CS under the Forest Management Program in the Research Stations Division.⁵ These tracts were originally farms that provided food and fiber to state institutions that were subsequently closed or transferred to other agencies. According to NCDA&CS and NCSU, there are no research projects on these properties other than teaching activities at the Dix Farm. Acreage provides wildlife habitat, buffer zones, and receipts from timber and pine straw that can—but do not necessarily—support capital improvements at the stations. These receipts are deposited in an NCDA&CS capital improvement account to be used for specific capital improvement projects or other purposes as directed by the NC General Assembly.⁶

Findings

Three central findings emerged from this evaluation. First, the divided management structure hinders planning, monitoring, and accountability across agricultural research facilities. Second, reducing the number of facilities would allow limited funds to be allocated more strategically. Finally, an effective and efficient system for agricultural research is important to North Carolina's agricultural industry and citizenry.

Finding 1. The divided management structure hinders planning, monitoring, and accountability across agricultural research stations, NC State University field laboratories, and the NC Agricultural and Technical State University farm.

There is no strategic plan. The current arrangement for agricultural research facilities in North Carolina hinders the creation of an optimal system to support academic research and related projects. The stations are split along ownership lines between NC State University (NCSU) and the NC Department of Agriculture and Consumer Services (NCDA&CS), and the NCSU field laboratories and NC Agricultural and Technical State University (NCA&T) farm are managed independently from one another (see Exhibit 3). Occasional resource sharing across facilities notwithstanding (stations may ship surplus hay or grain to other facilities to feed livestock), there is no strategic plan in place to guide the stations, let alone the entire complex of 29 research facilities in North Carolina. There is no statutory requirement for a coherent plan.

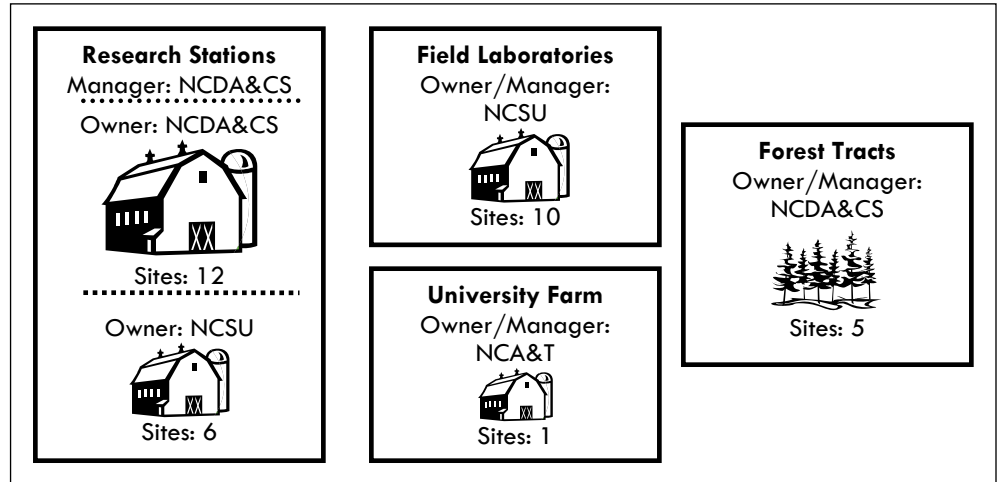
Without a plan, management cannot conclusively assess whether or not facilities are sufficient to meet North Carolina's agricultural research needs, are operating efficiently, or include redundant or excess facilities.

⁵ A sixth tract, the 54-acre Broughton Farm, is not included in this discussion as it is leased to Burke County Schools until 2035.

⁶ NC Gen. Stat. §146-30(c).

Exhibit 3

Separation Hinders System-wide Planning

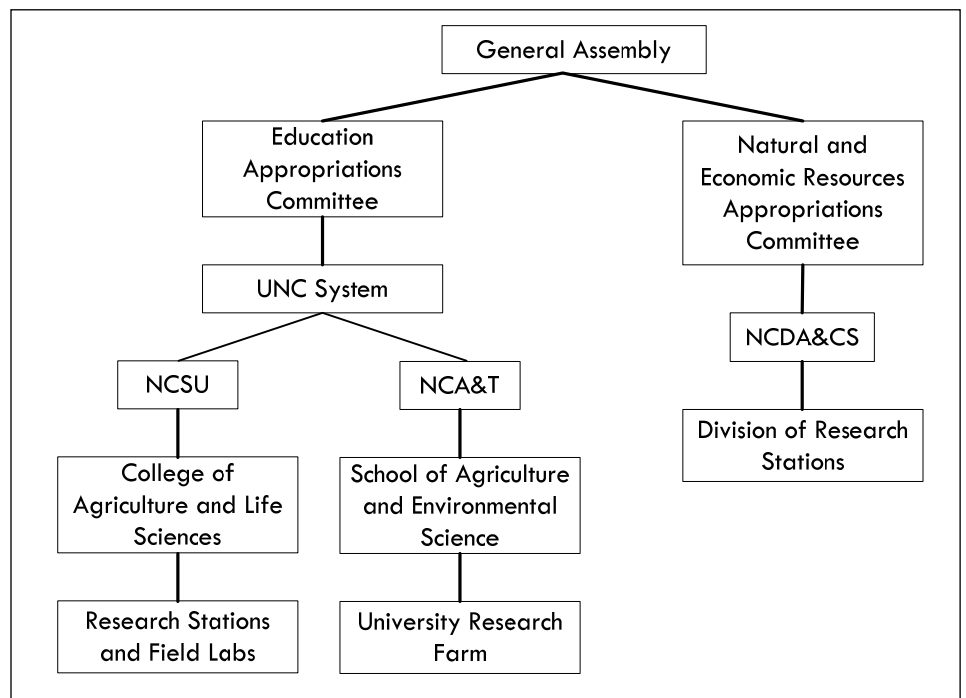


Source: Program Evaluation Division based on data from NCDA&CS, NCSU, and NCA&T.

The current arrangement perpetuates the lack of strategic planning. At the legislative level, the dual budget process inhibits planning because the NC General Assembly does not review all facilities in one budget committee (see Exhibit 4). In terms of systemic management, NCSU has the freedom to accept gifts of land and endowments that they can add to holdings without consideration of systemic implications. An NCSU administrator interviewed for this evaluation reported recent acquisitions were established as field laboratories and not research stations because NCSU wanted control over current and future activities, thereby enhancing operational flexibility. Whereas this freedom provides NCSU the latitude to control these facilities, adding new facilities exacerbates systemic fragmentation when acquisitions are not considered in the context of all facilities across the

Exhibit 4

Dual Appropriations Process Inhibits Comprehensive Planning



Source: Program Evaluation Division.

state. Achieving an optimal system can be accomplished only when all facilities are considered together.

Previous planning efforts have guided changes to discrete parts of the system rather than to the system as a whole. Completed in 2000, NCSU's long-range plan for the Lake Wheeler Road field laboratories recommended streamlining and relocating some activities for greater efficiency. A 2004 review conducted jointly by NCDA&CS and NCSU using experts from outside the state led to significant divestiture and consolidation of dairy operations at the research stations. Administrators at NCA&T conducted a review of the farm in 1999 that provided a roadmap for facilities improvement and strategic planning. Whereas each of these efforts achieved their intended goals, the goals have been isolated rather than systemic. Without centralized management over all 29 research facilities, a systemic analysis and plan has not been conceived and cannot be achieved.

Planning is more comprehensive and strategic in other states. All states except for North Carolina manage agricultural research stations through land-grant universities. In interviews conducted for this evaluation, directors of other state systems described their strategic planning.

- A recessionary state budget forced administrators of Virginia's 13 Agricultural and Research Extension Centers to consider streamlining their system. An appointed review panel is assessing the need for systemic change and future directions.
- The director of Indiana's system of 10 facilities explained long-range plans are critical and have provided the rationale for selling unneeded properties.
- Florida is currently developing a review focused on the state of science over the next 20 years. The goal is to keep the 13 centers and 3 demonstration sites competitive by guiding their future direction and budgeting decisions. The review will be site-by-site, followed by systemic analysis.

Basic management information is insufficient. Although most researchers and commodity association leaders who responded to evaluation surveys believed individual research stations were well managed,⁷ the divided management structure limits the amount of information available to make comparative judgments about stations. For example, the Program Evaluation Division expected to report on station resource utilization, and requested data on land use and grant dollars supporting research at individual stations to assess station activity over time. However, administrators from both NCDA&CS and NCSU stated utilization data were unreliable or incomplete. Without these data, it is impossible to accurately assess whether or not facilities are operating under or at full capacity or if resources are adequate to meet research needs. Records provide information about inputs (e.g., station funding and grants) and outcomes (e.g., research results and impact) but not utilization.

⁷ Survey instruments are included in Appendix B. Seventy-one percent (89 of 125) of researcher survey respondents agreed with the statement "the stations are well managed;" 46% agreed NCDA&CS should continue to manage the stations, 25% disagreed, and 29% were neutral. On the commodity association survey, mean responses to items 1 and 2 were 4.86 ($n = 54$, $SD = .59$) and 4.30 ($n = 51$, $SD = .94$), respectively.

Tracking utilization is not an unreasonable expectation. In an interview for this evaluation, Bruce McPheron, Chair of the Experiment Station Committee on Organization and Policy of the National Association of State Universities and Land-Grant Colleges, said he believes systems should be able to report not only utilization but also where grant money is being spent. In Pennsylvania, where he directs research facilities, there is a system that allows them to account for “every grant dollar” and where it is spent.⁸

Finding 2. Reducing the number of facilities would allow limited funds to be allocated more strategically.

Facilities struggle to meet research needs. Government programs need to operate within limitations and budgetary controls, but operating agricultural research facilities continuously with reduced budgets suggests there are too many sites competing for existing dollars. Only 35% of researcher survey respondents agreed research station facilities have been modernized, and 50% agreed NCSU field laboratories were up to date. These levels indicate facilities may struggle to keep pace with shifting research needs.

All of the 18 research station superintendents interviewed for this evaluation expressed concern about maintaining quality with tight operating budgets. They described frugal practices such as retrofitting old equipment to meet new demands, repairing equipment and constructing facilities in-house, and foregoing repairs when funding was unavailable. Lean operating budgets are compounded by increasingly competitive grant funding. Federal research expenditures have remained flat in real terms since the mid-1970s, and private sector funding accounts for an increasing share of grant support.⁹ Maintaining the quality of research in the face of fiscal pressures requires strategic thinking that ensures wise allocation of resources across a system that is adequate but not excessive.

Errors in research project management provide another indication that staff may be overextended or insufficiently trained. A sizeable minority of faculty survey respondents reported problems that imperiled the success of their research projects over a three-year period at the stations and at the NCSU field laboratories. Among 130 researcher survey respondents who had conducted research at stations, 31 (24%) reported problems. The same proportion of researchers at NCSU field laboratories reported problems (18 of 76, or 24%). More problems were attributed to staff at stations (29 of 129, 23%) than at NCSU field laboratories (9 of 76, 12%) or at the NCA&T farm (2 of 13, 15%). A base rate of problems is to be expected, especially as research protocols become more complicated, but management by a second, non-academic entity may heighten the opportunity for error.

Interviews with agricultural research station administrators in other states suggested fiscal pressures are not unique to North Carolina: researchers

⁸ B. McPheron (personal communication, January 17, 2008).

⁹ Fuglie, K., Ballinger, N., Day, K., Klotz, C., Ollinger, M., Reilly, J., Vasavada, U., & Yee, J. (1996, May). *Agricultural research and development: Public and private investments under alternative markets and institutions*. (Agricultural Economic Report No. AER735). Washington DC: USDA Economic Research Service.

and facilities everywhere feel the squeeze of rising costs and demands in the face of budget reductions and more competitive grants. But because North Carolina stations are funded both through NCDA&CS and NCSU, a widely held perception among stakeholders is deficits in one source counterbalance the other. Many of those interviewed for this report who stated North Carolina's system is among the best in the country cited funding stability as the basis for their argument. History suggests, however, the dual budget structure does not necessarily provide stability. Budget shortfalls in 2001-02 resulted in dramatic reductions to station budgets by both NCDA&CS and NCSU. The NCDA&CS agency budget was reduced by \$4.8 million in Fiscal Year 2002-03, with disproportionate reductions to the Research Stations Division: \$1.7 million—35% of the reduction—came from the Division, although the Division share of the agency's state appropriation in Fiscal Year 2001-02 was 15.8%.

Whereas some administrators interviewed for this evaluation believed differences between stations owned by NCSU and NCDA&CS were indiscernible, others disagreed; interviews with station superintendents supported a disparity. Superintendents were aware that funding for equipment replacement at NCSU-owned stations lagged behind NCDA&CS stations during the last five years. One superintendent who oversees facilities owned by both entities observed the differences in budgeting and said he sometimes juggled to meet the equipment needs of the NCSU station by borrowing equipment from the NCDA&CS-owned station. The split budget structure is at the heart of this issue.

Other states operate fewer facilities. Information on other state agricultural research systems also suggests North Carolina may have too many facilities: with 29 sites, this state has more agricultural research facilities than any other. A variety of locations is needed to represent a sample of the state's 520 soil types¹⁰ and numerous microclimates.¹¹ Some crops, such as peanuts and Christmas trees, require specific conditions to grow, and some research requires multiple sites for experimental design (i.e., replications). But even a state as large and varied as California (155,959 square miles) has just 10 agricultural research sites. In the southeast, Alabama is similar in size to North Carolina's 48,711 square miles and has 20 sites, while Georgia—16% larger than North Carolina—has 13 sites. It may be true that research facilities in these other states are insufficient to meet research needs, but the high number of sites in North Carolina coupled with fiscal challenges suggests the number of facilities requires review.

Activity levels at stations vary widely. A better assessment of the number of sites needed to meet activity demands would be resource utilization. In the absence of utilization information in NCDA&CS and NCSU records, Program Evaluation Division staff asked NCSU and NCA&T department chairs to survey researchers about the projects they were conducting. Projects were defined as three types of activities conducted at research facilities in 2007: research investigations; Cooperative Extension events such as workshops, visits, and demonstrations; and academic sessions or

¹⁰ R. Vick, State of North Carolina Soil Scientist (personal communication, March 21, 2008).

¹¹ According to the Office of the Dean, NCSU College of Agriculture and Life Sciences, microclimates are defined by state climate division, elevation, temperature, and precipitation.

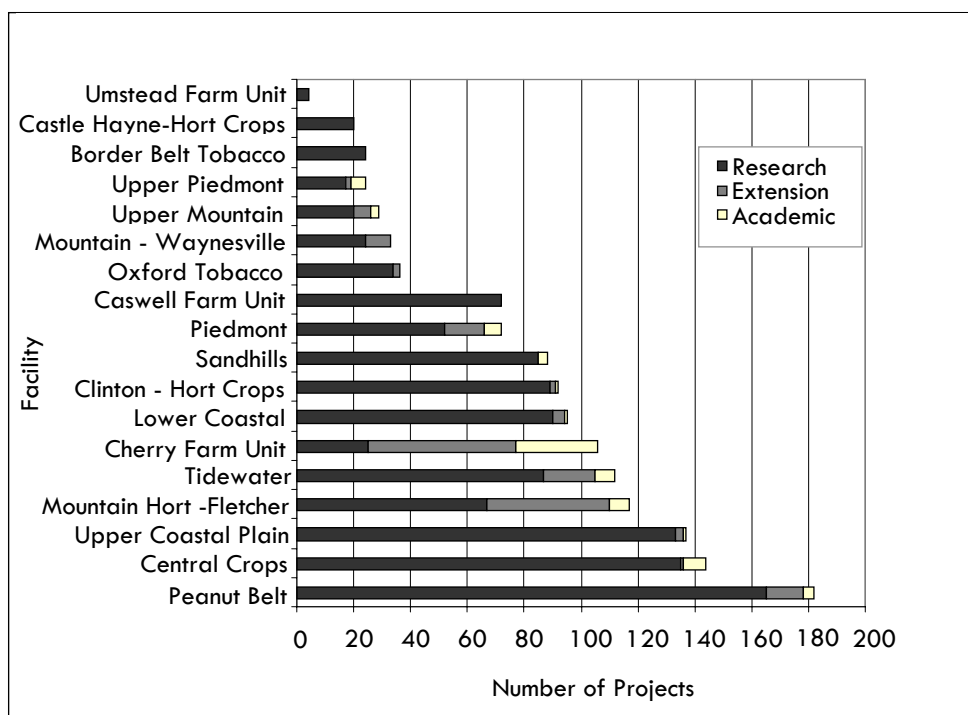
courses, where a multi-session course based at a facility (made up of a series of classes) counted as a single project. A total of 2,273 research, extension, and academic projects were reported across the 29 research facilities in 2007. Of these,

- 1,387 projects (61% of the total) were conducted at the 18 research stations;¹²
- 7 research stations hosted fewer than 40 projects at each site, as shown in Exhibit 5;
- together, the projects at these 7 stations comprised just 12% of projects conducted at research stations in 2007;
- station operations at these 7 sites accounted for 25% (\$3.2 million) of 2007 station appropriations; and
- faculty conducted more than 70 projects at each of the other 11 stations.

This analysis is not definitive: additional salient criteria such as scientific significance should be used to assess the importance of each site. However, relatively low project activity at some locations suggests these sites may be less essential than others with more activity.

Exhibit 5

Research, Extension, and Academic Projects at Stations, 2007



Source: Program Evaluation Division based on data from NCSU.

Forest management tracts are not serving a research purpose. Although the five forest management tracts are managed by the NCDA&CS Research Stations Division, information from the agency does not clarify their justification. They were not intended as research properties; with the exception of some teaching activities on the Dix property, no research has

¹² The data show 635 projects (28% of the total) were conducted at the 10 NCSU field laboratories, 250 of which were research, 332 were extension, and 53 were academic.

been reported on the tracts.¹³ Receipts generated by the tracts may—but do not necessarily—accrue to the research stations. For example, the 2007 Appropriations Act¹⁴ authorizes the use of timber receipts for capital improvements at Eastern North Carolina Agricultural Center, a 168-acre equine facility in Williamston which is not associated with the Division of Research Stations. Particularly in light of limited funding, these five tracts are extraneous to the intent of research facilities.

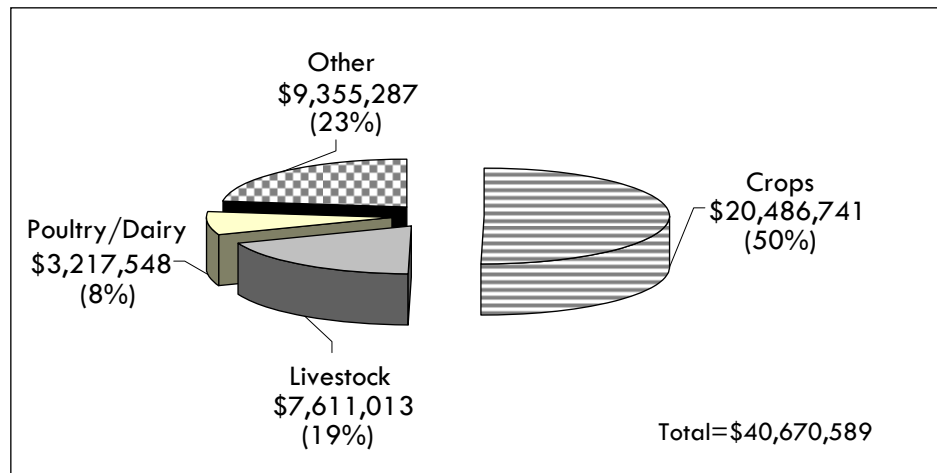
Finding 3. An effective and efficient system for agricultural research is important to North Carolina’s agricultural industry and citizenry.

Agriculture has a major economic impact on the state. A well-managed system of agricultural research and research facilities is important to North Carolina. Agriculture and agribusiness accounted for nearly one-fifth of North Carolina’s income and employees in 2005: food, fiber, and forestry industries provided \$66 billion (19%) in total income to the state and employed a total of 649,000 people (17% of North Carolina’s total employees). Home to more than 30 agricultural biotechnology-related companies, North Carolina is one of the nation’s top two states in the industry. In spite of the gradual disappearance of farmland that accompanies strong growth and development, there are still 48,000 farms in North Carolina that comprise close to one-third (29%) of North Carolina’s land. Small farmers make up the majority of holdings: 67% of farms are smaller than 100 acres.

Research conducted at agricultural research facilities attracts grant funding from federal, state, and private sources. Together, research projects at the stations, NCSU field laboratories, and the NCA&T farm garnered \$40.6 million in grant monies over fiscal years 2002 to 2006. As shown in Exhibit 6, half (50%) of the funds supported crop research.

Exhibit 6

Land-Grant University Faculty Received Over \$40.6 Million in Research Grants, 2002-2006



Source: Program Evaluation Division based on data from NSCU and NCA&T.

¹³ NCSU Department of Forestry research is conducted on over 85,000 acres managed by the NC Forestry Foundation.

¹⁴ 2007 NC Sess. Laws, 2007-323, Section 29.8.

Applied research improves agricultural practice and technology. The literature suggests agricultural research provides a 35% return on investment.¹⁵ In addition to economic impact, nonmarket benefits—for example, related to research on environmental objectives, soil and wildlife conservation, sustainability, and nutrition—have been documented but are less easily measured.^{16,17}

Outcomes reported by NCSU and NCA&T demonstrate research conducted at North Carolina's research facilities has benefited farmers and the field of agriculture.

- NCSU plant breeding researchers have developed close to 650 cultivars, germplasms, and parental lines.
- Since 1999, NCSU faculty members have developed 107 new plant varieties that were licensed to nurseries and seed producers nationwide.
- In 2007, NCSU College of Agriculture and Life Sciences faculty filed 16 invention disclosures and 29 patent applications and were issued 9 domestic and 1 foreign patent.
- Ninety percent of blueberries grown in North Carolina are varieties developed at the Horticultural Crops Research Station at Castle Hayne.
- NCA&T researchers are testing and demonstrating tillage practices that reduce costs and impact on soil quality.
- An NCA&T researcher has characterized 21 strains of shiitake mushrooms and has assisted approximately 150 new growers with their crop.
- A sweet potato variety developed by an NCSU researcher is grown on 70 to 75% of the state's sweet potato acreage.

Agricultural research is also integral to the future of North Carolina farming. For example, the recent surge in interest in and funding for research on biofuels has led to more acreage and higher income associated with crops such as soybeans and canola. Research on improving productivity helps sustain small farmers by increasing yields and thereby maintaining their farms in the face of urban development pressures. Research on niche crops can enhance profitability; for example, shiitake mushrooms can fetch as much as \$10 per pound.

Agricultural research stations offer benefits to the broader community. Cooperative Extension and NCDA&CS provide community outreach to school children and community groups. Cooperative Extension publishes practical advice to farmers, much of which is based on research conducted at the stations.¹⁸ The farming community also benefits from field days, learning the latest techniques and agricultural practices from researchers

¹⁵ Fuglie, K., et al. (1996, May). See footnote 9.

¹⁶ Alston, J. M. & Pardey, P. G. (1996). *Making science pay: The economics of agricultural R&D policy*. Washington, DC: American Enterprise Institute.

¹⁷ National Research Council. (2002). *Publicly funded agricultural research and the changing structure of US agriculture*. Washington, DC: National Academy Press.

¹⁸ Together with research and academics, Cooperative Extension is included in the central mission of land-grant institutions and provides residents with access to the resources and expertise of NCSU and NCA&T. Centers are partially supported by county funds and are located in all 100 counties and on the Cherokee Reservation.

on site. Stations donate yields to the poor when gleaners, from community service agencies such as the Food Bank or the Society of St. Andrew, collect and distribute crops once research is complete. NCDA&CS has used research stations as staging areas to help farmers deal with natural disasters, such as hurricanes or droughts. For example, with many farmers facing difficulties associated with the drought, five stations have served as sites for hay relief: hay shipments were brought to stations for distribution to needy livestock owners.

Facilities have clearly provided sufficient resources to produce these benefits. At issue is the degree to which the facilities use state appropriations effectively and efficiently, the question of return on investment for station resources, and whether the system as a whole can accommodate current and future research demands.

Recommendations

The NC General Assembly should consider legislation that creates a system of all agricultural research facilities managed by the two land-grant universities. In addition, the Legislature should establish an advisory board to guide the system that includes representatives from the NC Department of Agriculture and Consumer Services (NCDA&CS) and from both land-grant universities. The board should appoint an independent review panel to conduct a comprehensive review of the entire system with recommendations for streamlining operations. Finally, system management should consistently track data on system inputs, resource utilization, and research outcomes and provide annual reports to the public.

Recommendation 1. Create a system of agricultural research facilities managed by the land-grant universities.

Divided management hinders the development of an efficient system. Creating a system that includes all agricultural research facilities in North Carolina is the best and likely only way to achieve an optimally effective and efficient structure.

If agricultural research facilities are to keep up with research trends, then the land-grant universities should manage them. The land-grant universities will provide more suitable management to ensure rigorous research with maximum benefit for North Carolina farmers and agribusiness. Agricultural research is a scientific pursuit that should be conducted under the aegis of academic institutions rather than under NCDA&CS, which has never been responsible for research outcomes.

The 12 research stations owned by NCDA&CS should be transferred to NC State University (NCSU), and NCSU should manage all 18 stations. NCSU should continue to own and manage the NCSU field laboratories, and NC Agricultural and Technical State University (NCA&T) should retain ownership and management of the NCA&T farm. Within the universities, NCSU's College of Agriculture and Life Sciences and NCA&T's School of Agriculture and Environmental Sciences will manage their respective properties. Arrangements should be made to ensure NCA&T researchers have sufficient and satisfactory access to research facilities.

The transfer of research stations from NCDA&CS to NCSU requires legislation mandating a Type I transfer. When part of an agency is transferred to another department under a Type I transfer, its statutory authority, powers, duties, functions (including budgeting and purchasing), records, personnel, property, and unexpended balances of appropriations, allocations, or other funds are transferred to the other department.¹⁹ Under this recommendation, NCDA&CS would transfer the following to NCSU:

- the Fiscal Year 2008-09 certified budget for the Division of Research Stations (\$12.6 million), including the total operating budget and the capital improvement operating reserves for Cherry, Oxford, and Tidewater research stations;
- 164.75 personnel employed by the Division of Research Stations; and
- the 12 agricultural research stations currently owned by NCDA&CS.

The Type I transfer of the 12 research stations from NCDA&CS must include the consolidation of central management of the research stations and NCSU field laboratories, eliminating the dual systems for management, budgeting, purchasing, contracting, and human resources. The estimated annual savings from management consolidation is \$500,000.²⁰ This proposal eliminates four management and administrative staff at the stations funded by both NCDA&CS and NCSU, but it assumes the following positions will be retained:

- Assistant Division Director position (currently funded by NCDA&CS) to manage research station operations;
- Facility Agricultural Engineer II position (currently funded by NCSU) to support the maintenance of research station facilities;
- Administrative Assistant I position (currently funded by NCDA&CS) to support the increased personnel responsibilities created by the transfer of 164.75 positions to NCSU; and
- Accounting Technician IV position (currently funded by NCSU) to support the increased budgetary and accounting responsibilities resulting from the transfer.

The proposed reduction also assumes \$400,000 for equipment replacement for research stations will be maintained.

The proposed transfer has significant ramifications for the overall operation of NCDA&CS. The Fiscal Year 2008-09 certified budget for the agency's Division of Research Stations represents 12.5% of the total NCDA&CS certified budget for Fiscal Year 2008-09 (\$100.8 million, which includes General Fund and enterprise fund operations), and Division employees comprise 9.8% of the agency's workforce. Reductions in the NCDA&CS operating budget and workforce resulting from the transfer of the research stations to NCSU will require further review of how NCDA&CS provides the following departmental functions: budgeting, purchasing, contracting, human

¹⁹ NC Gen. Stat. §143A-6(a).

²⁰ The proposed reduction assumes elimination of the following four positions and their related operating costs: NCDA&CS Research Stations Division Director and Accounting Clerk IV (total savings from NCDA&CS = \$301,545); NCSU Facility Agricultural Engineer II (vacant) and Administrative Support Associate (total savings from NCSU = \$197,917). This analysis is based on Fiscal Year 2006-07 expenditures and current salaries for all positions.

resources, and property management and development. Reducing the overall size of NCDA&CS may offer further savings by decreasing demand for departmental overhead.

The forest management tracts owned and operated by NCDA&CS (see Exhibit 7) should remain with NCDA&CS and be reviewed by the NC Department of Administration, State Property Office with the intention of transferring them to other state or local agencies. For example, the Dix property is already under a Memorandum of Understanding with Wake County that incorporates the land into a county park. If no other state or local agency needs the forest management tracts, then the property should be declared surplus and sold, and the receipts from the sale should be deposited into the General Fund. Based on county property tax valuation, estimated nonrecurring savings would be \$13.6 million if all tracts are sold.

Exhibit 7

NCDA&CS Forest Tracts
Not Used for Agricultural
Research

Property Location	County	Tax Value of Property ⁱ	Deeded Acres
Cameron-Morrison	Richmond	\$ 573,093	465.00
Dix Farm ⁱⁱ	Wake	6,270,459	317.78
Fountain Farm	Edgecombe	695,925	381.74
McCain ⁱⁱⁱ	Hoke	4,459,992	1,740.77
Samarkand	Moore	1,590,706	244.39
Totals		\$ 13,590,175	3,149.68
Notes:			
ⁱ Land value is based on County Tax Office assessed value.			
ⁱⁱ The Dix Farm property is currently under a Memorandum of Understanding with Wake County that incorporates the land into the Yates Mill Pond County Park.			
ⁱⁱⁱ The tax value for the McCain property is based on assessed value of property with similar characteristics and use in Hoke County. Presence of endangered species (Red-Cockaded Woodpecker) restricts the future of this property.			

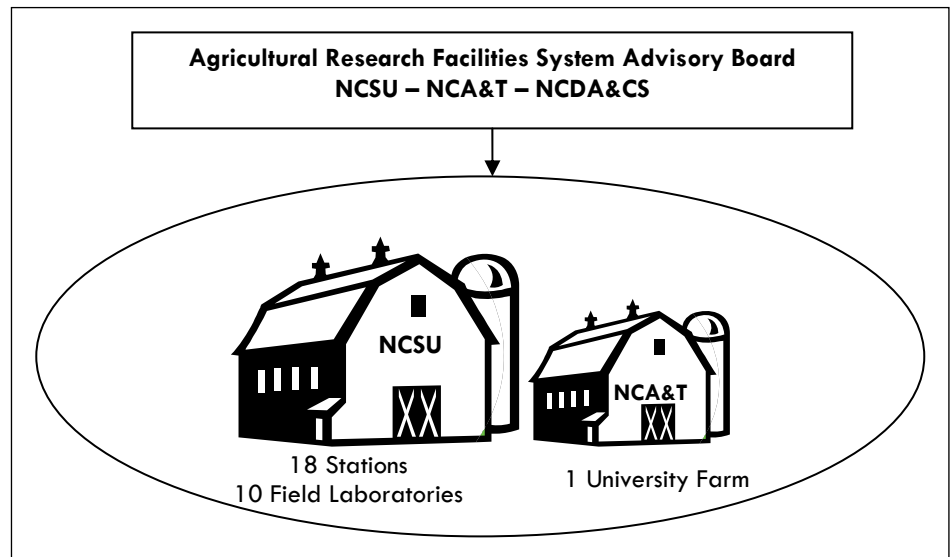
Source: Program Evaluation Division based on data from NCDA&CS.

Recommendation 2. Establish an advisory board including representatives from the NC Department of Agriculture and Consumer Services, NC State University, and NC Agricultural and Technical State University to oversee the system of agricultural research facilities.

The General Assembly should establish a multi-disciplinary, multi-agency Agricultural Research Facilities System Advisory Board to provide ongoing vision and leadership for the system (see Exhibit 8). The board should report directly to NCSU and NCA&T administrators who manage the system: the Dean of the College of Agriculture and Life Sciences at NCSU and the Dean of the School of Agriculture and Environmental Sciences at NCA&T. Board members would be charged with representing statewide interests including the practical, applied concerns of local farmers and the perspectives of commodity associations as well as the broader citizenry.

Exhibit 8

One System Shared by Land-Grant Universities and Guided by a Multi-disciplinary Advisory Board



Source: Program Evaluation Division.

The board would help to assure continued representation of the interests of production agriculture as well as basic research at the facilities. The 10 members should include

- the Commissioner of Agriculture or a designee;
- the Director of NCSU Agricultural Research and Cooperative Extension Service from the College of Agriculture and Life Sciences;
- the Director of NCA&T Agricultural Research and Cooperative Extension Service from the School of Agriculture and Environmental Sciences;
- one department head from the NCSU College of Agriculture and Life Sciences;
- one department head from the NCA&T College of Agriculture and Environmental Sciences; and
- five members representing wide agricultural interests to be appointed by:
 - the Commissioner of Agriculture (3 members);
 - the Dean of NCSU College of Agriculture and Life Sciences (1 member); and
 - the Dean of NCA&T School of Agriculture and Environmental Sciences (1 member).

Board members should elect their own chair. Costs should be minimal because members will come largely from existing state entities.

The board's statutory roles and responsibilities should focus on two main functions: strategic planning and system oversight. One of the first tasks would be to appoint a panel to conduct a thorough, comprehensive review and formulate a strategic plan for the system. The board should consult with stakeholders to appoint panel members from out of state, oversee the review, receive and disseminate the report, and implement the resulting strategic plan. In addition, the board should have the following responsibilities:

- at the direction of system management, periodically review the strategic plan and modify as needed to meet the needs of stakeholders including scientists, farmers, and commodity associations;
- ensure the concerns of stakeholders inform ongoing facility operations, activities, and future planning, holding public hearings as needed to gather input;
- review the role of receipts in supporting research facilities and operations; and
- recommend additional strategic planning reviews, as needed.

The board should meet regularly at the direction of NCSU and NCA&T managers to ensure the system of agricultural research facilities fulfills the needs of stakeholders who rely on rigorous research, far-reaching cooperative extension, and accessible academic opportunities.

The advisory board should be in place by January 1, 2009.

Recommendation 3. Conduct a comprehensive review to ensure the system meets current and future research needs efficiently and effectively.

One of the first tasks of the advisory board should be the appointment of a strategic planning review panel to conduct a detailed review based on the scientific merit of all agricultural research facilities. Unlike past reviews that have focused on specific commodities or facilities, this review would provide a comprehensive, systemic analysis. The review should be guided not only by agricultural science but also by current research needs, capacity for teaching and extension activities, and anticipated future research trends. Panelists should be recruited from out of state to ensure a balanced assessment. The panel's report to system management should include recommendations on land that might be sold, purchased, or transferred out of the system and the related potential cost effects. Finally, the report should include an accountability timeline to guide the implementation of recommendations.

During the comprehensive review process, the advisory board and the strategic planning review panel should consider the following actions:

- Closing the seven stations identified in Finding 2, where only 12% of projects were conducted in 2007. This recommendation does not consider the scientific impact of closure, and it would be the responsibility of the strategic planning review panel to determine whether these stations are critical to agricultural research in North Carolina. For example, Upper Mountain (site of 29 projects in 2007) may be needed because it is the only station at an altitude suitable for research on Christmas trees (above 3,000 feet), one of North Carolina's major commodity crops.

Exhibit 9 summarizes budget and acreage data for the seven stations with fewer than 40 projects. Estimated annual operating savings from closure of the seven stations would be \$3.2 million, and closure would eliminate 55 positions. In addition, the sale of the property would produce one-time savings if no other state or local

Exhibit 9: Stations With Fewer Than 40 Research Projects in FY 2006-07

Station Name	Owner	County	Deeded Acres	Total Station Value ⁱ	FY 2006-07 Total Expenditures	FY 2006-07 State Appropriations	Number of FTE
Border Belt	NCDA&CS	Columbus	101.44	\$ 714,700	\$ 315,295	\$ 279,051	5
Castle Hayne	NCSU	New Hanover	111.00	1,648,274	389,961	386,760	7
Mountain	NCDA&CS	Haywood	406.75	4,088,160	628,612	571,175	10
Oxford	NCDA&CS	Granville	426.44	1,827,190	848,582	785,231	13
Umstead ⁱⁱ	NCDA&CS	Granville	4,519.50	25,397,244	59,726	52,862	0
Upper Mountain	NCDA&CS	Ashe	452.91	4,146,836	700,109	660,466	11
Upper Piedmont	NCSU	Rockingham	815.63	2,034,142	502,896	435,868	9
Totals			6,833.67	\$ 39,856,546	\$ 3,445,181	\$ 3,171,413	55

Notes:

ⁱ Total Station Value was calculated using the County Tax Office land assessment value plus building and equipment values from the fiscal asset systems maintained by NCDA&CS and NCSU.

ⁱⁱ Land at Umstead Research Station is protected by a conservation easement (1,650 acres) and is designated as a protected area for endangered plants (350 acres).

Source: Program Evaluation Division based on data from NCDA&CS and NCSU.

agency needed the land. Based on county property tax valuation, estimated nonrecurring savings of \$39.8 million could be realized if the land for all seven stations were sold. If no other state or local agency needs the land identified by the review committee, then the property should be declared surplus and sold and the receipts from the sale deposited into the General Fund.

- Selling discrete parcels of land attached to existing research stations that are not being used for research and do not provide important functions such as buffers or areas for future expansion. For example, Caswell's holdings include the Dobbs Farm and an isolated forested area known as the "kite tract," both of which could be allocated to other state or local agencies or sold without detriment to facility operations. The county property tax valuation for these two areas at Caswell is \$1.3 million. The panel should review all research facility holdings and determine whether there are other discrete parcels that could reasonably be eliminated. If no other state or local agency needs the land identified by the review committee, then the property should be declared surplus and sold and the receipts from the sale deposited into the General Fund.
- Consolidating management of Mountain and Mountain Horticultural Crops Research Stations (located in Waynesville and Fletcher, respectively), assuming the review panel determines both stations should be kept. Located 30 miles apart, each has its own station superintendent. Stations in Kinston provide a model for consolidation, where one superintendent now manages the operations of three research stations (Lower Coastal/Cunningham and Caswell). Consolidating management would reduce operational costs and achieve greater effectiveness and efficiency.

Estimated annual savings from management consolidation is \$78,401.²¹

- Replacing the Central Crops Station located in Johnston County. This property is important to NCSU researchers largely because it is located just 30 minutes from NCSU. In spite of the poor soil quality, it was the site of 144 research projects in 2007, with plant breeding as a major focus. Replacement with similarly convenient property is recommended because the property straddles Highway 70, an extremely busy thoroughfare in Clayton, and is surrounded by commercial properties including a Wal-Mart Supercenter and a child-care facility where a visual barrier was erected so families would not be alarmed at the sight of crop spraying. The land has a tax assessment value of \$6.7 million (\$13,732 per acre). Terms of the deal could require the buyer to provide an acceptable new site.

The review panel should be appointed and the program review should begin no later than July 1, 2009. Recommendations from the review should be reported to the General Assembly by January 1, 2010.

Recommendation 4. Implement a reporting structure to hold the system accountable to the public.

Streamlining agricultural research facility management and budgeting will help to clarify accountability mechanisms. Statutory requirements should include annual reporting on the system by system managers (i.e., the specified NCA&T and NCSU deans) to the General Assembly and legislative staff through the appropriate legislative committees, including

- Senate Agriculture/Environment/Natural Resources;
- Senate Appropriations on Education/Higher Education;
- House Agriculture;
- House Agribusiness and Agricultural Economy; and
- House Appropriations Subcommittee on Education.

The first report should be submitted by January 1, 2009.

Annual reports should document advisory board activity (e.g., meetings, attendance, proceedings) and action on recommendations from the review panel. In addition, three basic types of data should be tracked over time and reported: system inputs, resource utilization, and outcomes.

System inputs consist of budget and grants information. A single budgetary process will help to track system appropriations and expenditures related to facility infrastructure and operations. This tracking in turn will enable a single reporting mechanism to the Legislature. Reporting also should cover research grants received and grant expenditures.

Resource utilization is essential to determine how and if facilities are meeting stakeholder needs and whether they are being used efficiently.

²¹ Estimated annual savings were calculated by adding current salaries and benefits for superintendents at Mountain and Mountain Horticultural Crops together and dividing total expenditures for the two positions to estimate the average cost of one superintendent position.

Some mechanisms, for example to document field days and extension activities, already capture the number and type of activities and the number of participants served. A system that tracks utilization of research station resources, however, has fallen into disuse and should be revitalized or revamped to provide accurate reporting to the Legislature. NCA&T already has a system in place that accounts for farm resource use. This information is critical to the ongoing review and assessment of the agricultural research facility system.

Outcomes associated with research projects are routinely reported by NSCU and NCA&T. Grant requirements typically require periodic reporting to grantors. The Agricultural Research Service and Cooperative Extension Service of NCSU's College of Agriculture and Life Sciences publish the *Annual Report of Accomplishments and Results* in accordance with the Agricultural Research, Extension, and Education Reform Act of 1998. Highlights are routinely reported in both universities' internal publications and in peer-reviewed academic journals. In addition to more immediate research results, reporting should document long-term benefits to North Carolina farmers. These outcomes should be summarized in appropriate form and reported to the Legislature.

Appendixes

Appendix A: Research Facility Profiles

Two-page profiles for each of the agricultural research stations, the NC Agricultural and Technical State University farm, and the NC State University field laboratories appear in Appendix A. Profiles include brief overviews including information on facility name and location; background and ownership; unique features; research and land use; major commodities; expenditures; and property value.

Appendix B: Evaluation Survey Instruments

Copies of the Commodity Association Survey (Appendix B.1) and the Researcher Survey (Appendix B.2) are provided in Appendix B.

Agency Responses

A draft of our report was submitted to the NC Department of Agriculture and Consumer Services, NC State University, and NC Agricultural and Technical State University for review and response. Their responses are provided following the appendixes.

PED Contact and Staff Acknowledgements

For more information on this report, please contact the lead evaluator, Carol H. Ripple, at carolr@ncleg.net.

Staff members who made key contributions to this report include E. Kiernan McGorty, Abby Parcell, Carol Shaw, and Pamela L. Taylor. John W. Turcotte is director of the Program Evaluation Division.

Border Belt Tobacco Research Station

Whiteville, Columbus County



Background

Established in 1949; moved to present location in 1956; hosts NCDA&CS Plant Industry Division, USDA Animal and Plant Health Inspection Service, and a US Department of Interior field office

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 110 miles

Unique Features

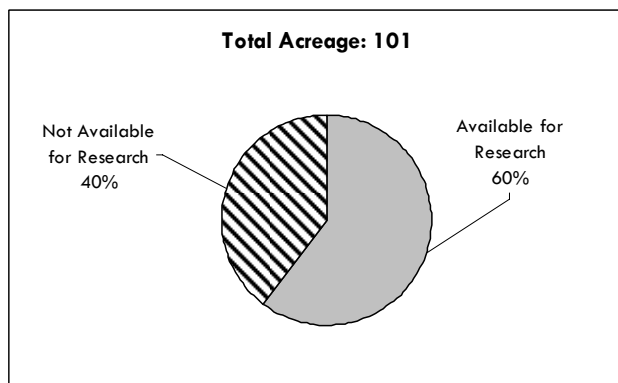
- Research conducted here and at Peanut Belt developed and tested peanut cultivars now grown on over 70% of North Carolina's seed peanut acreage
- Proposed project with Southeast Community College and Cooperative Extension Service will study oil seed crops used in bio-diesel production

2007 Research and Land Use¹

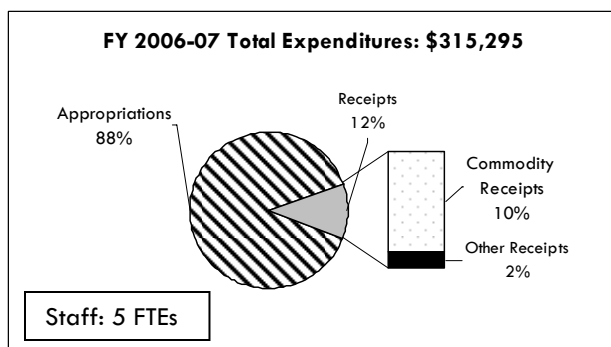
Research Projects: 24
 Extension Projects: 0
 Academic Projects: 0

Major Commodities

- Flue-cured tobacco
- Soybeans
- Burley tobacco
- Corn
- Peanuts



Fiscal Information



Property Assessment²

Tax value of the property:	\$178,145
Tax value per acre:	\$1,756
Buildings:	\$167,818
Equipment:	\$368,737
Total station value:	\$714,700

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

BORDER BELT TOBACCO RESEARCH STATION
Columbus County, North Carolina

Red Store Rd
SR 1534

SR 1532

Old Lumberton Rd
SR 1002

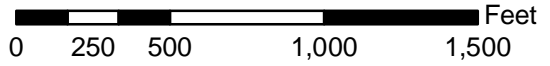
SR 1537

MAP LEGEND

— State Roads

LAND USE

- Cropland
- Non-Cropland
- Pond
- Timberland



Caswell Research Farm

Kinston, Lenoir County



Background

Established in the mid-1920s as a food production and therapeutic training site for the adjoining state hospital; transferred to NCDA&CS for use as a research station in 1974; merged management with Cunningham/Lower Coastal Plain Research Station in 2006

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 94 miles

Unique Features

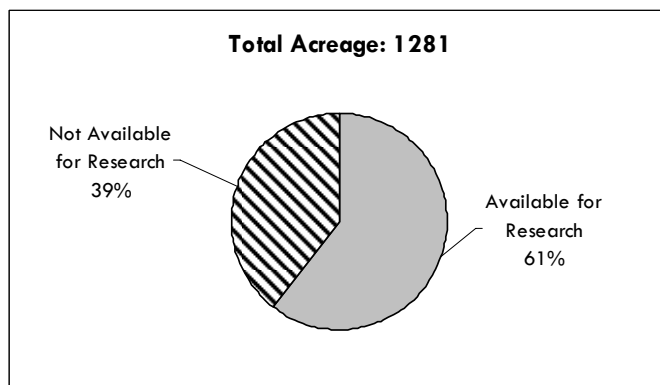
- Plans to expand and develop organic research on 40 acres of certifiable organic land
- Soybean breeding program generating work of state and national significance
- Breeders benefit from uniform, high-yielding soils

2007 Research and Land Use¹

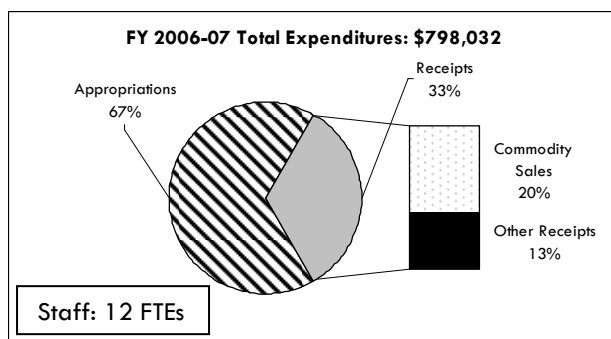
Research Projects:	72
Extension Projects:	0
Academic Projects:	0

Major Commodities

- Soybeans
- Corn
- Wheat



Fiscal Information



Property Assessment²

Tax value of the property:	\$7,956,122
Tax value per acre:	\$8,300
Buildings:	\$385,822
Equipment:	\$1,338,989
Total station value:	\$9,680,933

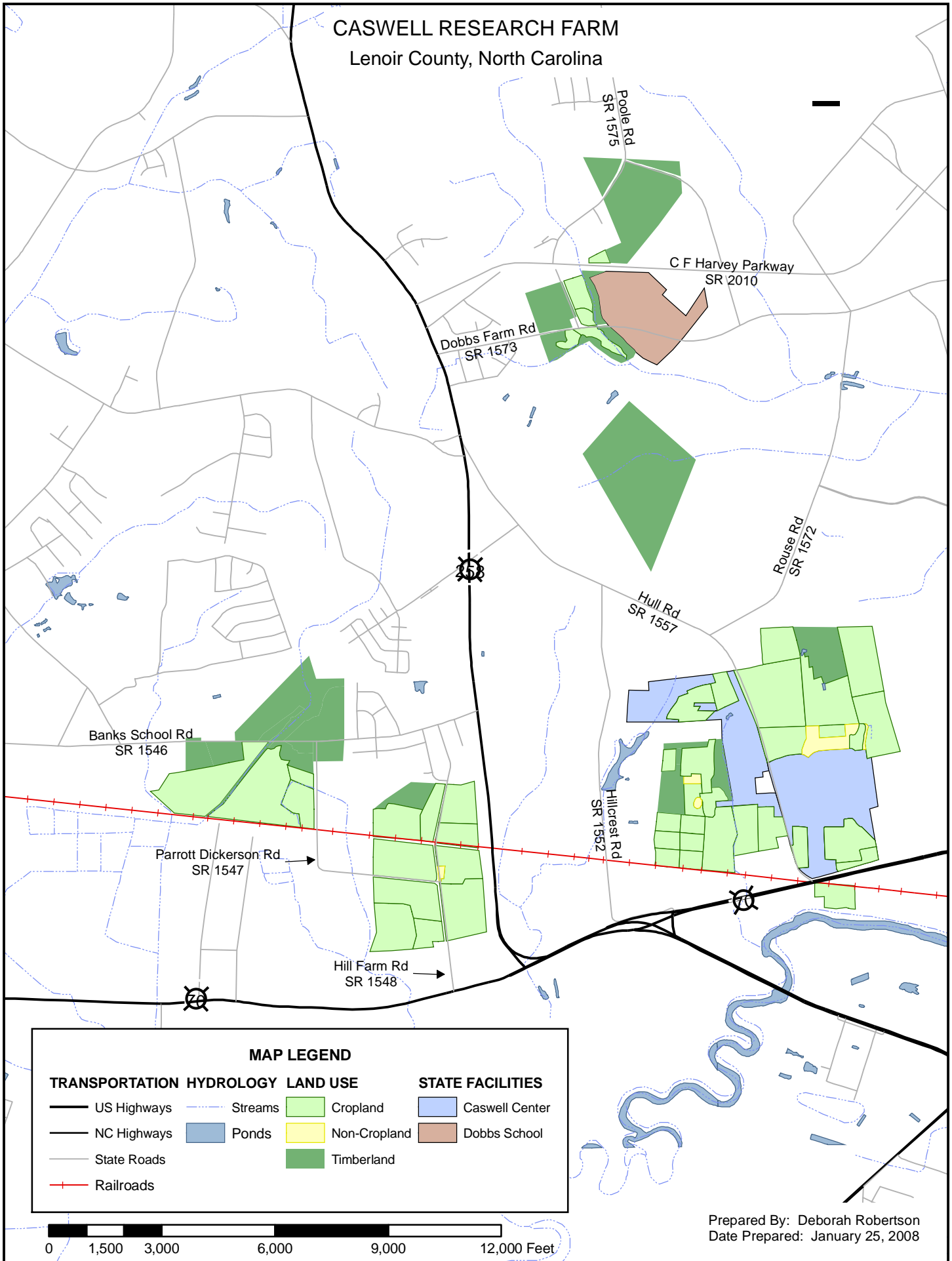
¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

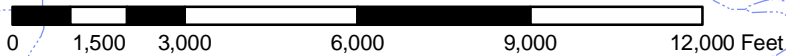
CASWELL RESEARCH FARM

Lenoir County, North Carolina



MAP LEGEND

TRANSPORTATION	HYDROLOGY	LAND USE	STATE FACILITIES
— US Highways	- - - Streams	Light Green Cropland	Blue Caswell Center
— NC Highways	Blue Ponds	Yellow Non-Cropland	Brown Dobbs School
— State Roads	Green Timberland		
- - - Railroads			



Prepared By: Deborah Robertson
Date Prepared: January 25, 2008

Central Crops Research Station

Clayton, Johnston County



Background

Land purchased in 1953 to replace McCullers Branch station

Ownership

NC State University

Distance from Raleigh: 13 miles

Unique Features

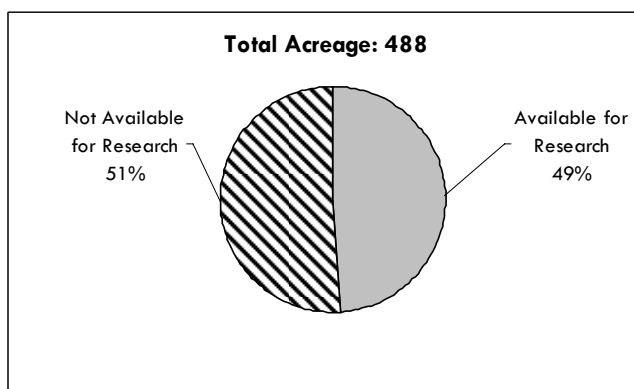
- Half of station resources devoted to plant breeding and genetic studies
- Researchers have released more than 100 inbred corn lines from this site
- First soybean variety with resistance to soybean cyst nematodes studied here
- Microplots for nematode research led to North Carolina becoming first state to offer a Nematode Advisory Program
- Closest station to NCSU campus

2007 Research and Land Use¹

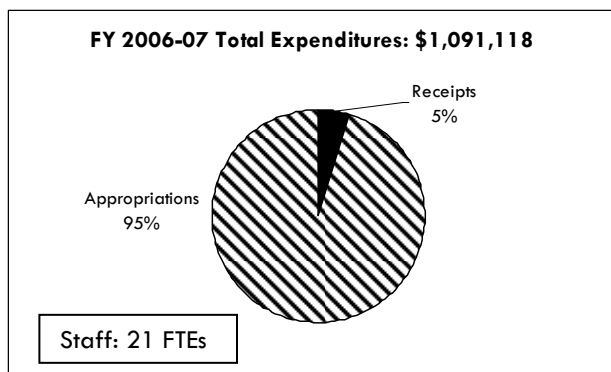
Research Projects:	135
Extension Projects:	1
Academic Projects:	8

Major Commodities

- Swine
- Corn
- Soybeans
- Tobacco
- Cotton
- Fruits



Fiscal Information



Property Assessment²

Tax value of the property:	\$6,704,268
Tax value per acre:	\$13,732
Buildings:	\$62,440
Equipment:	\$816,442
Total station value:	\$7,583,150

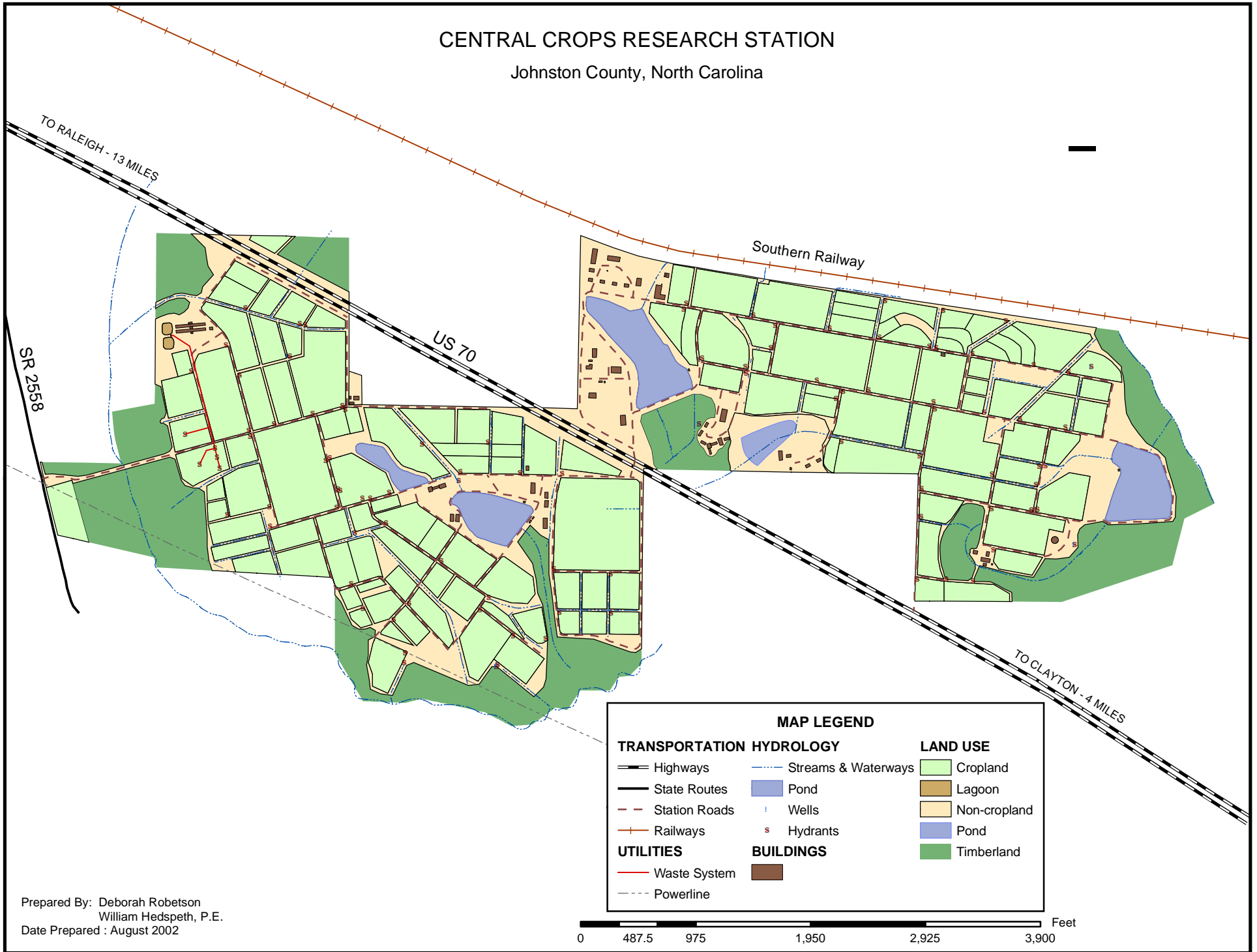
¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

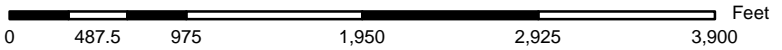
CENTRAL CROPS RESEARCH STATION

Johnston County, North Carolina



Prepared By: Deborah Robetson
 William Hedspeth, P.E.
 Date Prepared : August 2002

MAP LEGEND		LAND USE
TRANSPORTATION	HYDROLOGY	Cropland
Highways	Streams & Waterways	Lagoon
State Routes	Pond	Non-cropland
Station Roads	Wells	Pond
Railways	Hydrants	Timberland
UTILITIES	BUILDINGS	
Waste System	Buildings	
Powerline		



Cherry Research Farm

Goldsboro, Wayne County



Background

Created in 1974 as production farm for Cherry Mental Hospital; transferred to NCDA&CS Research Station Division in the mid-1980s

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 70 miles

Unique Features

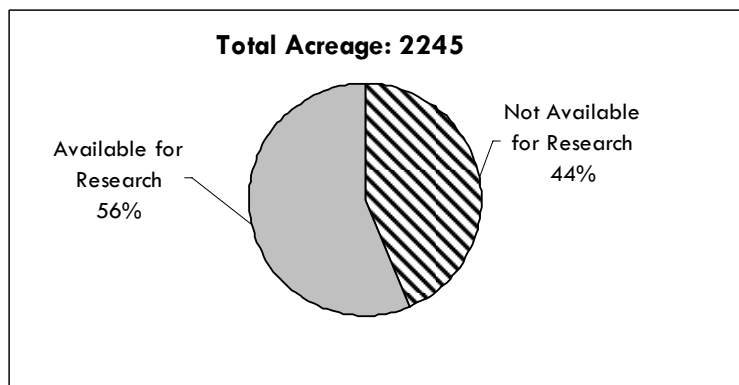
- Home of the Center for Environmental Farming Systems, fostering development of environmentally, economically, and socially sustainable agriculture
- Testing best management practices, crop-animal systems, organic cropping systems, plantation forestry, and successional ecosystems
- Alternative hoop structures for housing swine

2007 Research and Land Use¹

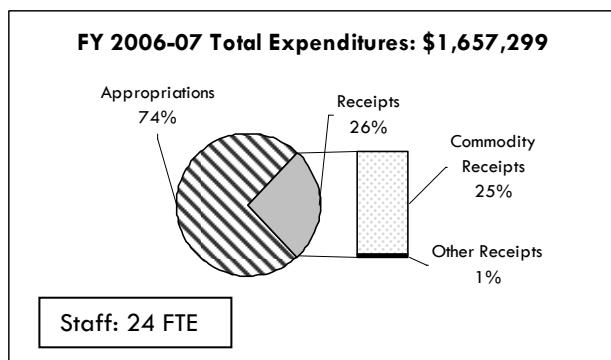
Research Projects:	25
Extension Projects:	52
Academic Projects:	29

Major Commodities

- Dairy
- Swine
- Beef
- Goats
- Field crops: corn, soybeans, wheat



Fiscal Information



Property Assessment²

Tax value of the property:	\$4,639,897
Tax value per acre:	\$2,067
Buildings:	\$1,056,248
Equipment:	\$2,652,676
Total station value:	\$8,348,821

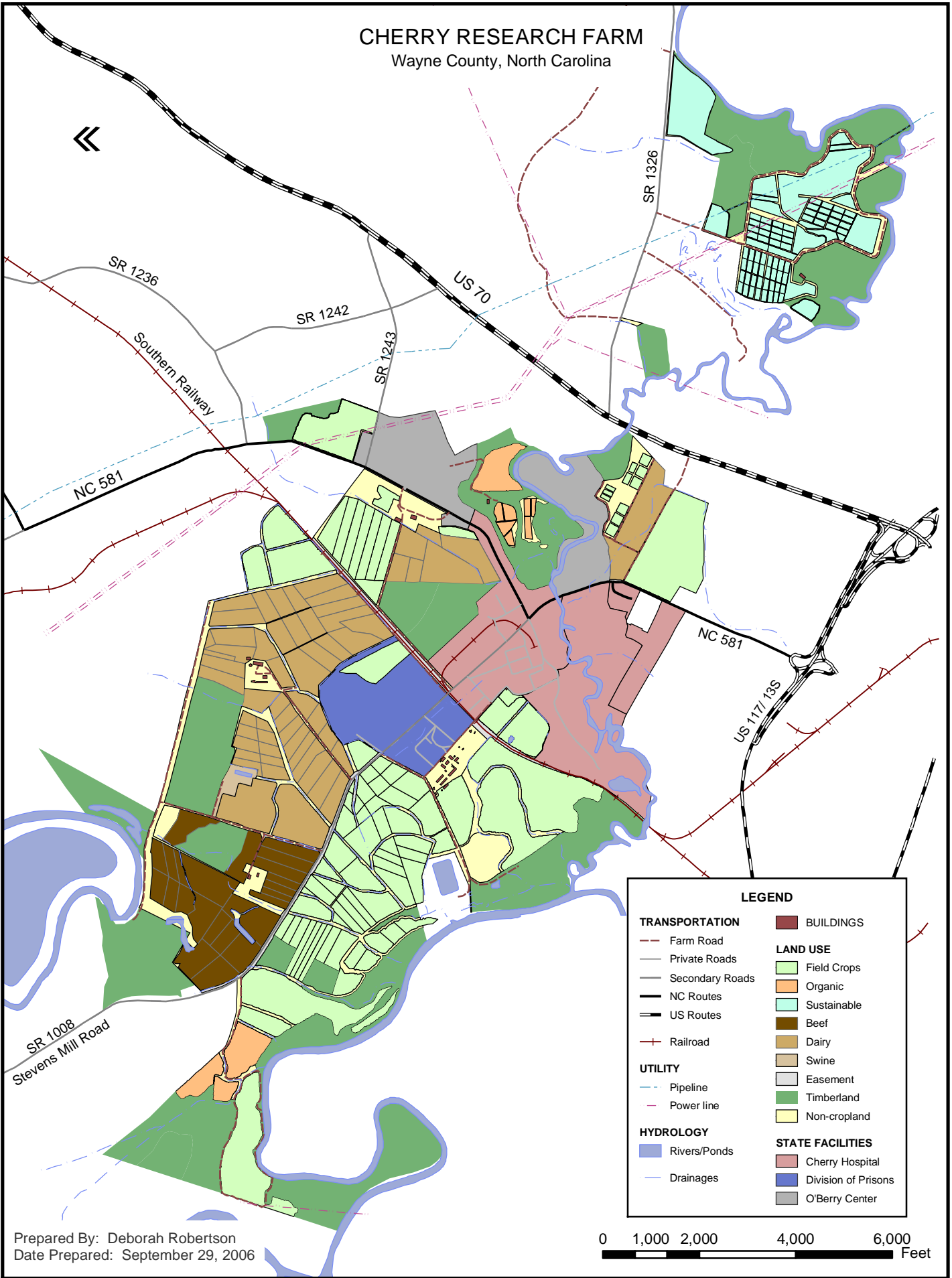
¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

CHERRY RESEARCH FARM

Wayne County, North Carolina



LEGEND	
TRANSPORTATION	BUILDINGS
— Farm Road	■ Buildings
— Private Roads	LAND USE
— Secondary Roads	■ Field Crops
— NC Routes	■ Organic
— US Routes	■ Sustainable
— Railroad	■ Beef
UTILITY	■ Dairy
— Pipeline	■ Swine
— Power line	■ Easement
HYDROLOGY	■ Timberland
■ Rivers/Ponds	■ Non-cropland
— Drainages	STATE FACILITIES
	■ Cherry Hospital
	■ Division of Prisons
	■ O'Berry Center

Prepared By: Deborah Robertson
 Date Prepared: September 29, 2006

0 1,000 2,000 4,000 6,000 Feet

Cunningham/Lower Coastal Plain Tobacco Research Station

Kinston, Lenoir County

Background

Lower Coastal Plain Tobacco Research Station established in 1948 in Pitt County and moved to current site in 1967; Cunningham Research Station established in 1987; management shared with Caswell Research Farm



Ownership

NC State University

Distance from Raleigh: 90 miles

Unique Features

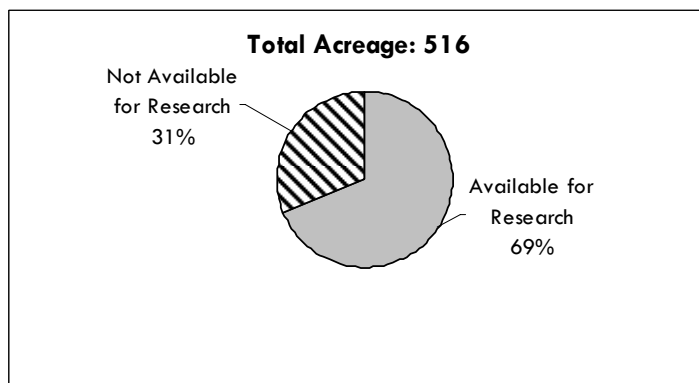
- Research conducted here generated new varieties of NC Neuse wheat, Covington sweet potato, Sprite melon, lettuce, and tobacco
- 60 shallow wells quantify nitrate levels in groundwater
- Home of Raymond Cunningham Conference Center

2007 Research and Land Use¹

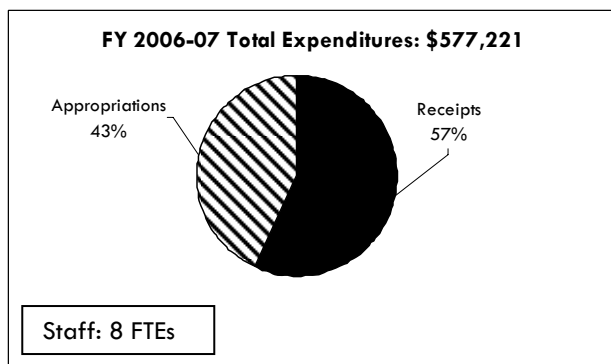
Research Projects:	90
Extension Projects:	4
Academic Projects:	1

Major Commodities

- Tobacco
- Sweet potatoes
- Brambles
- Horticultural crops



Fiscal Information



Property Assessment²

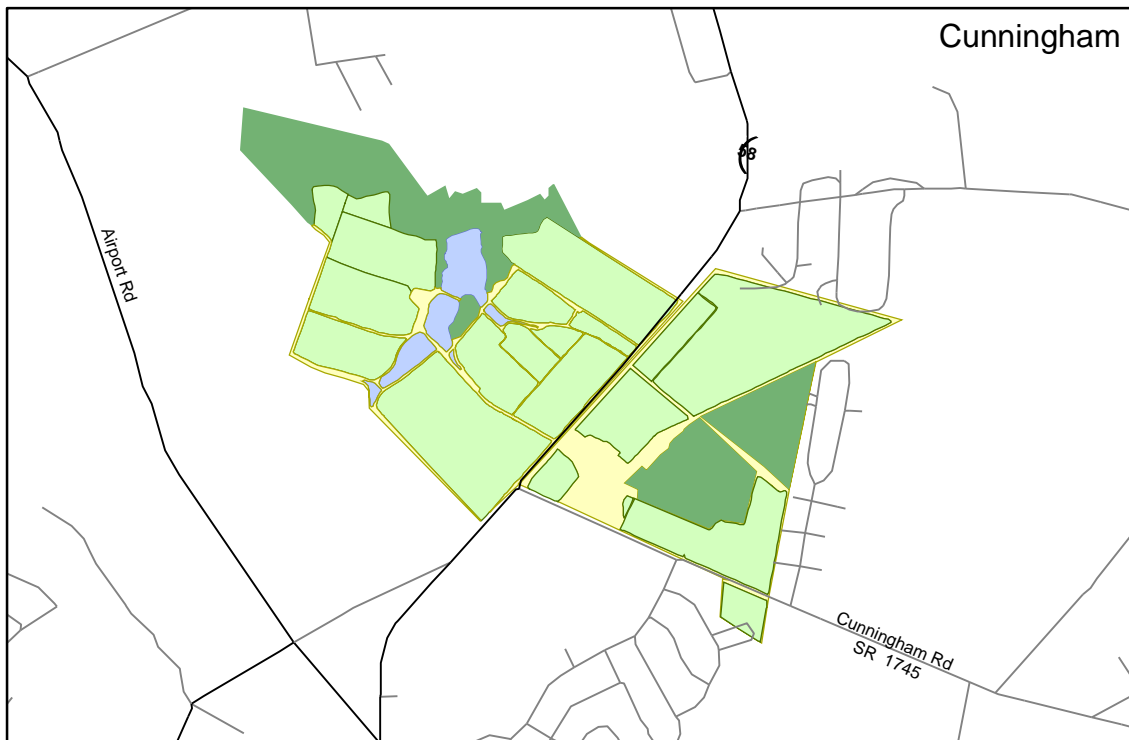
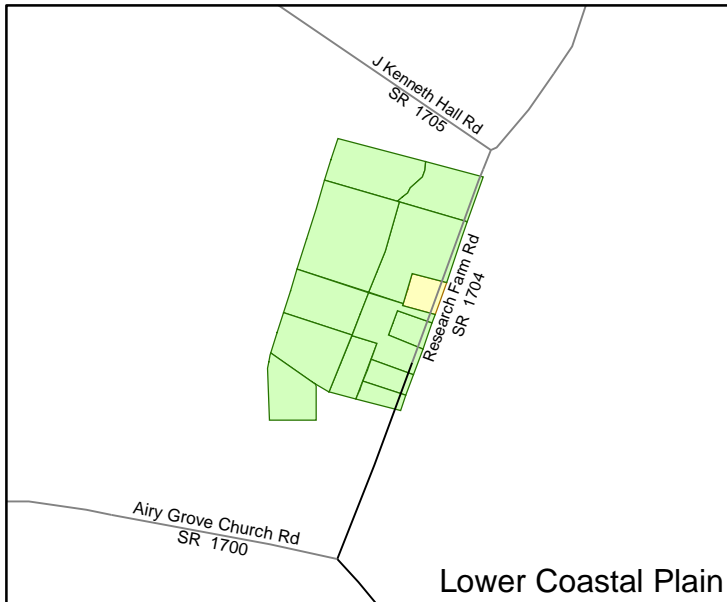
Tax value of the property:	\$6,840,312
Tax value per acre:	\$13,269
Buildings:	\$3,025,962
Equipment:	\$1,177,567
Total station value:	\$11,043,841

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

CUNNINGHAM
 LOWER COASTAL PLAIN
 RESEARCH STATION
 Lenoir County, North Carolina



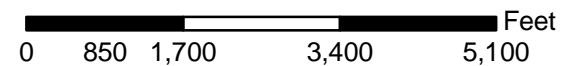
MAP LEGEND

TRANSPORTATION

- Highways
- State Roads

LAND USE

- Cropland
- Non-cropland
- Pond
- Timberland



Prepared By: Deborah Robertson
 Date Prepared: January 23, 2008

Horticultural Crops Research Station

Castle Hayne, New Hanover County



Background

Established in 1947 on two tracts of land north of Wilmington

Ownership

NC State University

Distance from Raleigh: 120 miles

Unique Features

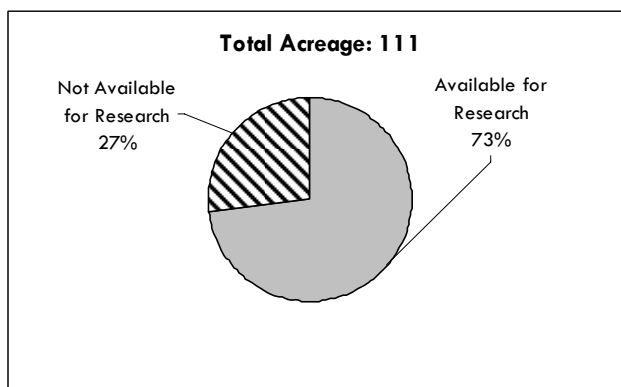
- 90% of the blueberry varieties grown in North Carolina were developed by NCSU researchers at Castle Hayne
- Provides blueberries, grapes, and strawberries for researchers who are investigating health benefits of antioxidants at NCSU and other institutions
- Populations of beach grass and sea oats evaluated for use in beach-stabilizing efforts
- 2.5 acres devoted to NC Certified Plantsman training courses
- State-of-the-art chemical mixing facility used to train extension agents, students, and general public

2007 Research and Land Use¹

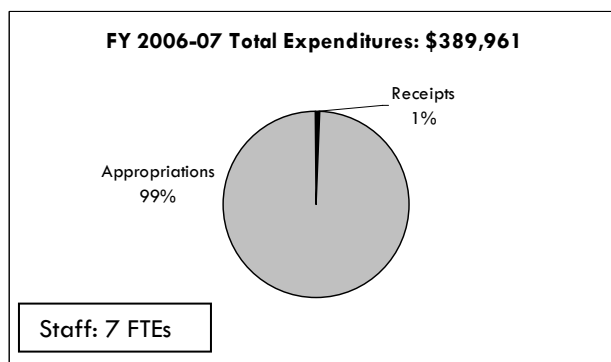
Research Projects:	20
Extension Projects:	0
Academic Projects:	0

Major Commodities

- Blueberries
- Muscadine grapes
- Strawberries
- Lettuce
- Cucumbers
- Ornamentals



Fiscal Information



Property Assessment²

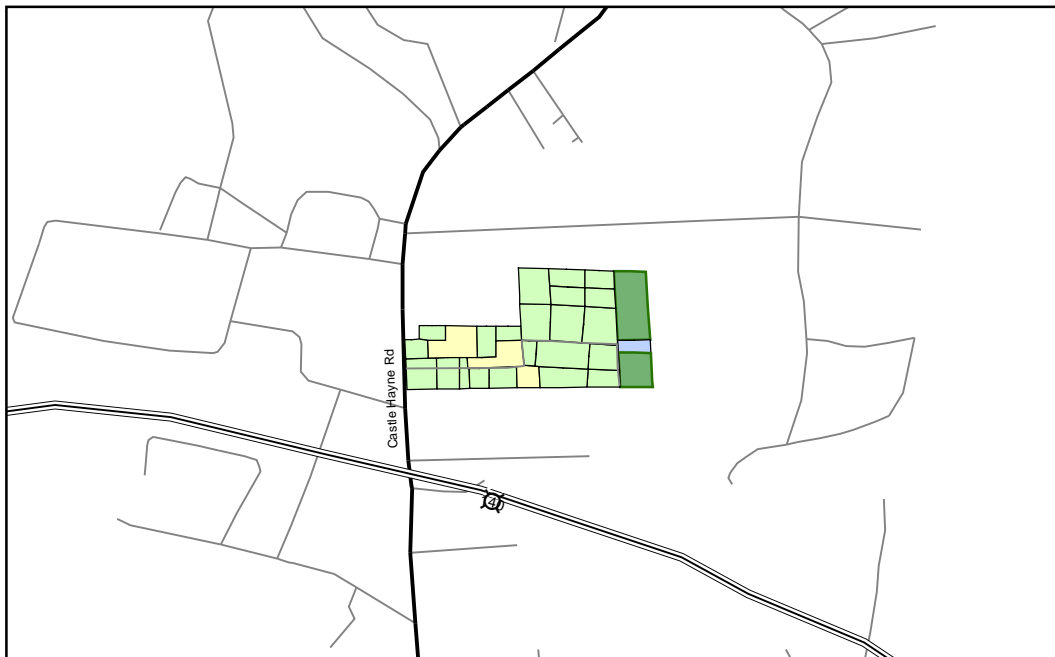
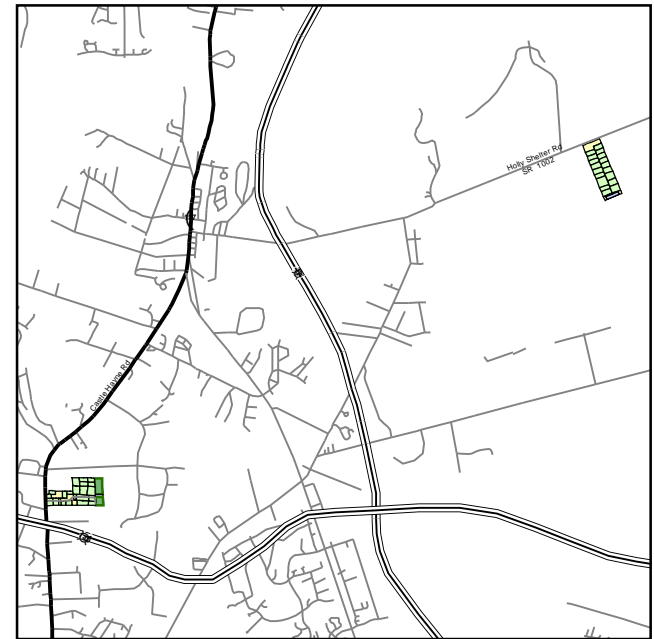
Tax value of the property:	\$1,060,540
Tax value per acre:	\$9,554
Buildings:	\$355,604
Equipment:	\$232,130
Total station value:	\$1,648,274

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

HORTICULTURAL CROPS
RESEARCH STATION
CASTLE HAYNE
New Hanover County, North Carolina



MAP LEGEND

TRANSPORTATION

- US Highways
- NC Highways
- State Roads

LAND USE

- Cropland
- Non-cropland
- Pond
- Timberland



Prepared By: Deborah Robertson
Date Prepared: January 25, 2008

Horticultural Crops Research Station

Clinton, Sampson County



Background

Established in 1970

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 67 miles

Unique Features

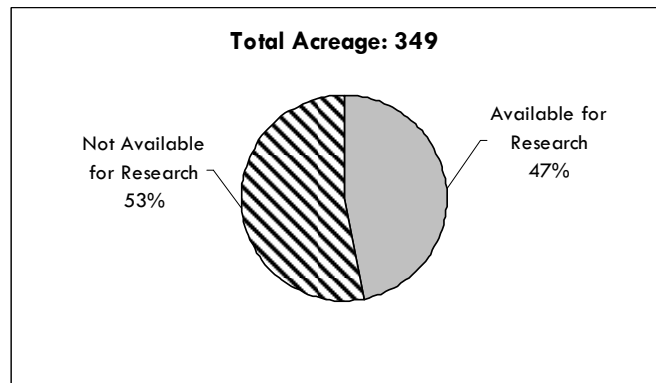
- Extensive sweet potato curing facilities
- Conduct EPA pesticide screenings on minor acreage vegetable crops
- Research on environmentally sound disease and pest management practices for vegetable crops

2007 Research and Land Use¹

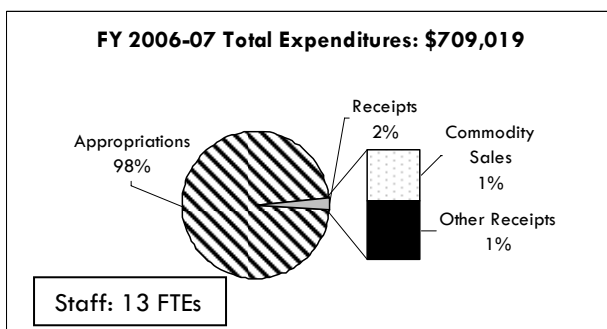
Research Projects:	89
Extension Projects:	2
Academic Projects:	1

Major Commodities

- Sweet potatoes
- Cole crops
- Cucumbers
- Watermelon
- Tomatoes
- Squash



Fiscal Information



Property Assessment²

Tax value of the property:	\$468,344
Tax value per acre:	\$1,341
Buildings:	\$619,399
Equipment:	\$938,645
Total station value:	\$2,026,388

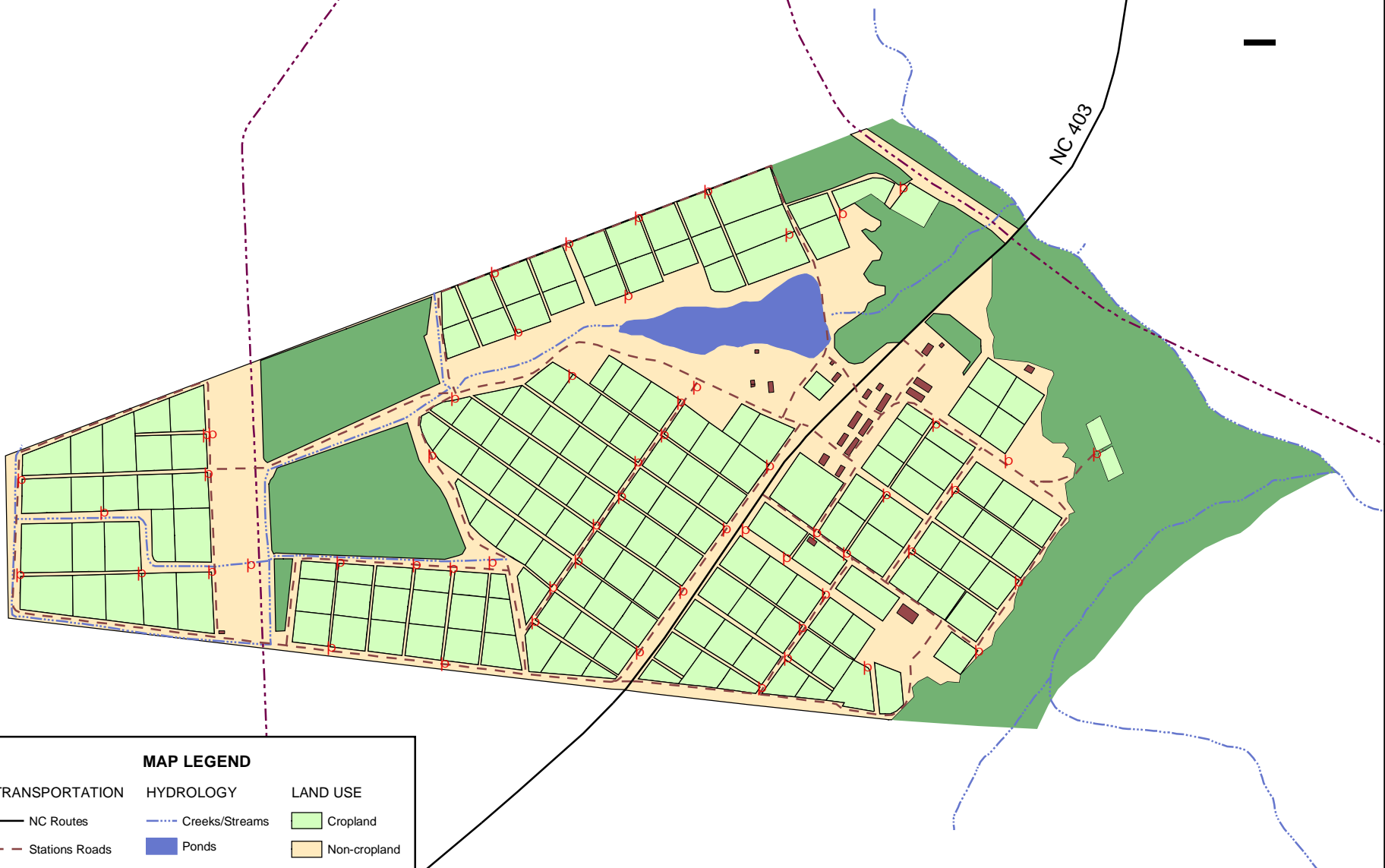
¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

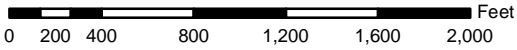
Map on reverse courtesy of NCDA&CS

HORTICULTURAL CROPS RESEARCH STATION

Sampson County, North Carolina



MAP LEGEND		
TRANSPORTATION	HYDROLOGY	LAND USE
— NC Routes	— Creeks/Streams	■ Cropland
- - Stations Roads	■ Ponds	■ Non-cropland
- - - Utilities	■ Buildings	■ Timberland
p Hydrants		



Prepared By: Deborah Robertson
Date Prepared: January 23, 2008

Mountain Horticultural Crops Research Station

Fletcher, Henderson County



Background

Established in 1949 with 14 acres; now over 374 acres; Research and Extension Center built in 1987 houses researchers and Western and Southwestern Extension staff

Ownership

NC State University

Distance from Raleigh: 260 miles

Unique Features

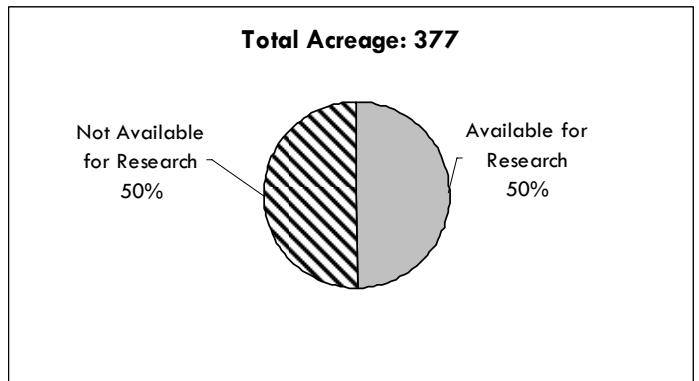
- Most vine-ripe tomato varieties grown in the eastern United States were developed here
- Apple research led to new technology for high-density orchard production systems
- Mountainous terrain is ideal for conservation-tilled vegetable crops research

2007 Research and Land Use¹

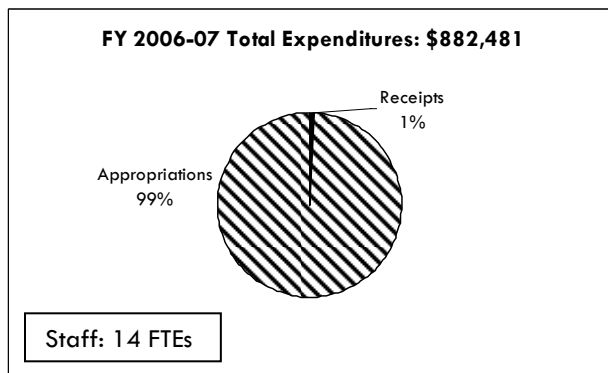
Research Projects:	67
Extension Projects:	43
Academic Projects:	7

Major Commodities

- Apples
- Vegetable crops
- Ornamentals
- Organics
- Aquaculture



Fiscal Information



Property Assessment²

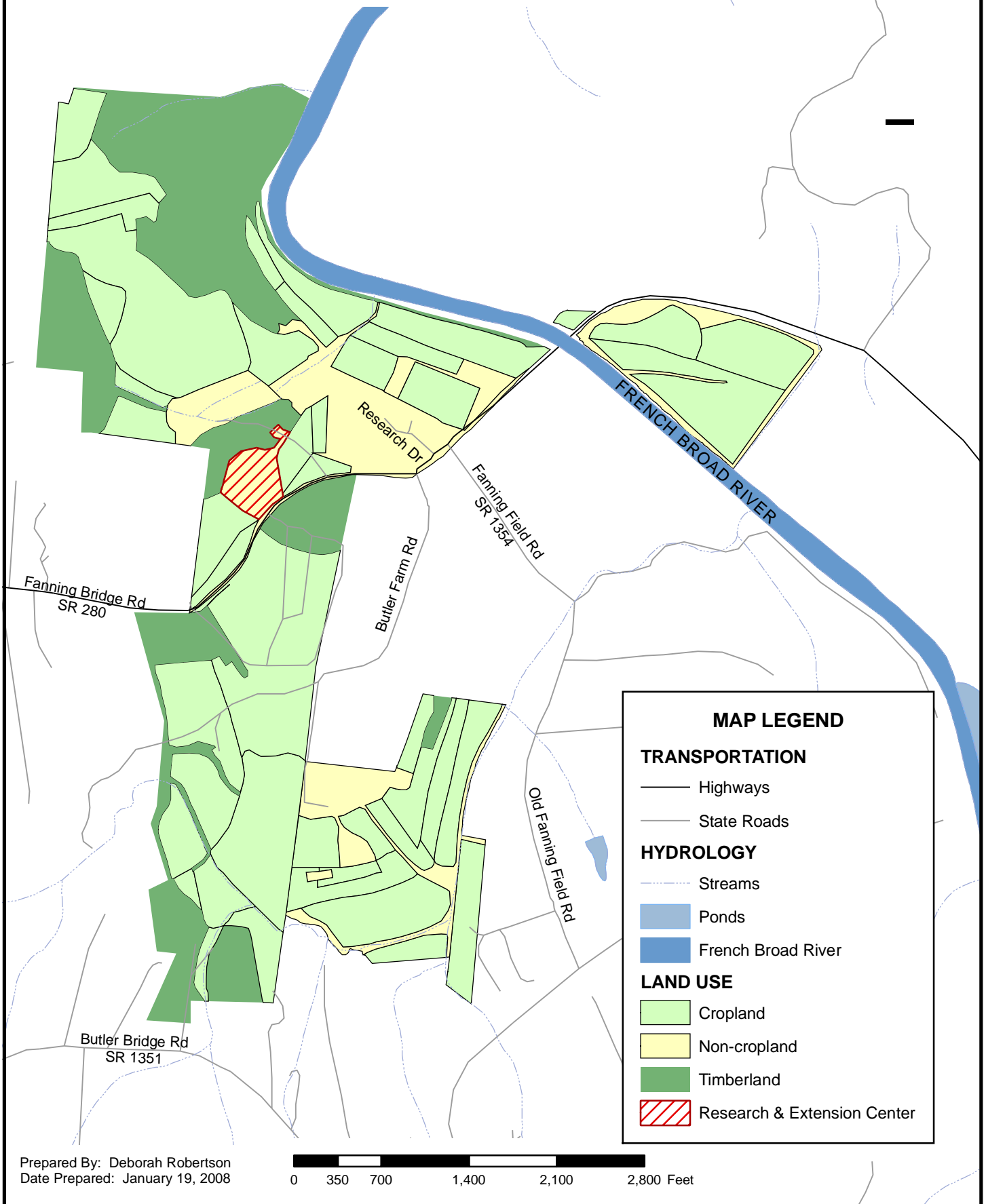
Tax value of the property:	\$3,816,511
Tax value per acre:	\$10,122
Buildings:	\$1,938,900
Equipment:	\$357,208
Total station value:	\$6,112,619

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

MOUNTAIN HORTICULTURAL
CROPS RESEARCH STATION
Henderson County, North Carolina



MAP LEGEND

TRANSPORTATION

- Highways
- State Roads

HYDROLOGY

- Streams
- Ponds
- French Broad River

LAND USE

- Cropland
- Non-cropland
- Timberland
- Research & Extension Center

Prepared By: Deborah Robertson
Date Prepared: January 19, 2008

0 350 700 1,400 2,100 2,800 Feet

Mountain Research Station

Waynesville, Haywood County



Background

Established in Buncombe County in 1908; moved to current location in 1944; additional satellite acreage purchased in 1996

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 278 miles

Unique Features

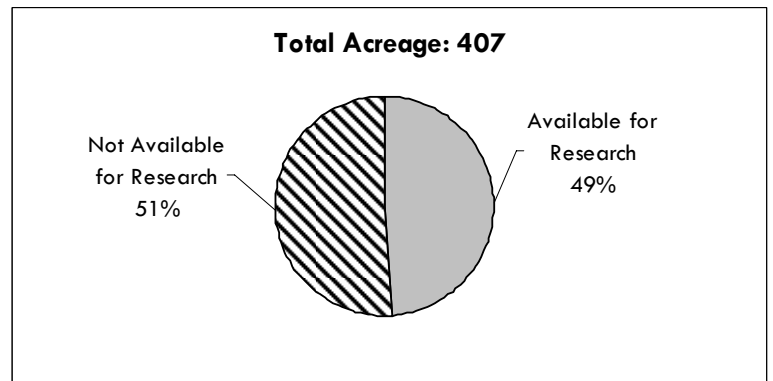
- Many popular varieties of tomatoes grown in western North Carolina and southeastern United States developed here
- First three burley tobacco varieties released in North Carolina were bred and developed here
- Sale of bulls from performance trials test facility have improved quality of cattle produced across North Carolina

2007 Research and Land Use¹

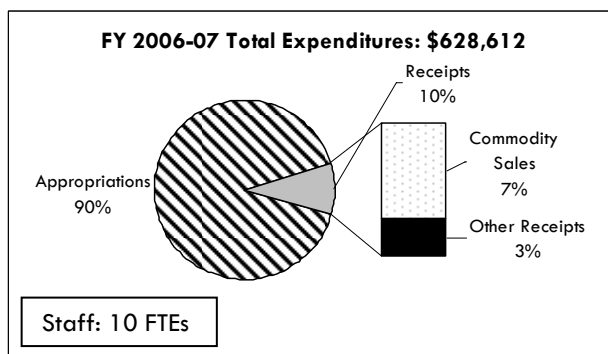
Research Projects: 24
 Extension Projects: 9
 Academic Projects: 0

Major Commodities

- Cattle
- Horticultural crops
- Christmas trees
- Burley tobacco
- Meat goats



Fiscal Information



Property Assessment²

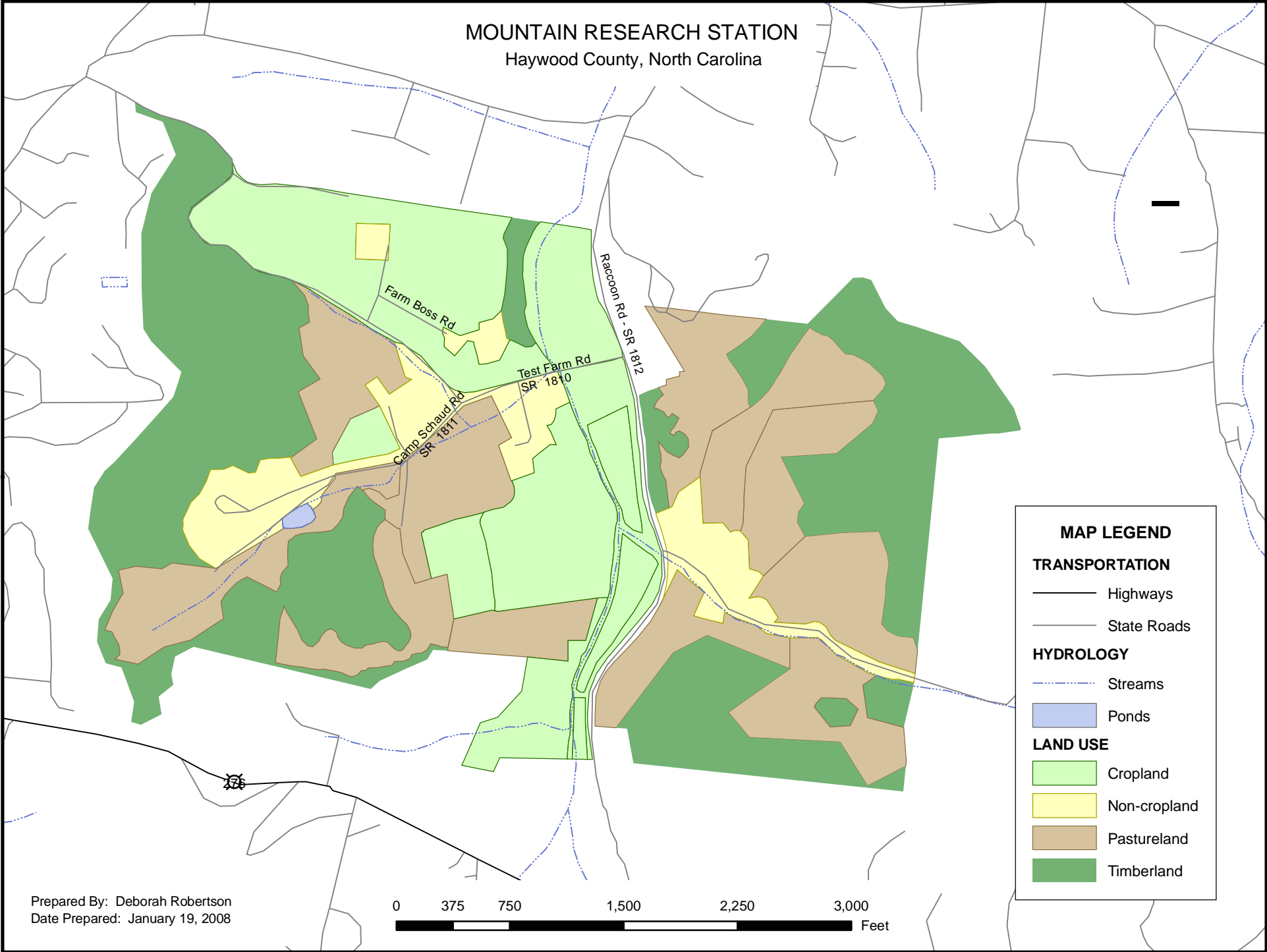
Tax value of the property:	\$2,455,927
Tax value per acre:	\$6,038
Buildings:	\$858,178
Equipment:	\$774,055
Total station value:	\$4,088,160

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

MOUNTAIN RESEARCH STATION
Haywood County, North Carolina



MAP LEGEND

TRANSPORTATION

- Highways
- State Roads

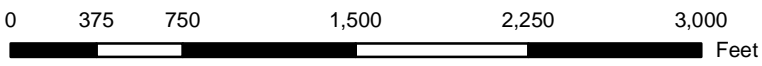
HYDROLOGY

- Streams
- Ponds

LAND USE

- Cropland
- Non-cropland
- Pastureland
- Timberland

Prepared By: Deborah Robertson
Date Prepared: January 19, 2008



Oxford Tobacco Research Station

Oxford, Granville County



Background

Established by NCDA&CS and USDA in 1910; USDA transferred their facilities to NCDA&CS in 2005

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 56 miles

Unique Features

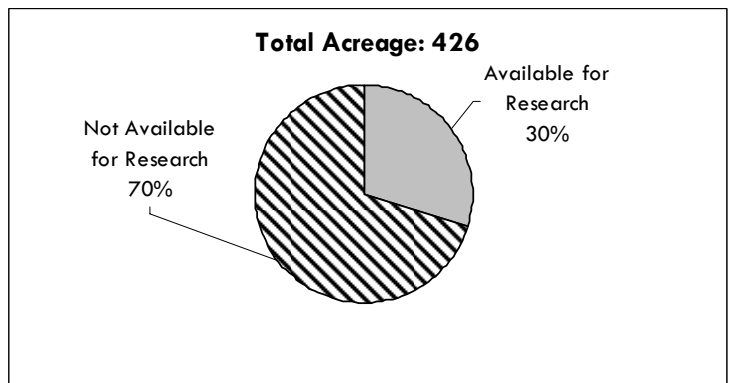
- First flue-cured tobacco varieties with resistance to bacterial wilt, black shank, and root-knot nematode developed here
- Site for germplasm production, storage, and preservation for most of the known lines of tobacco grown in the United States
- Location for future NC Biofuels Campus

2007 Research and Land Use¹

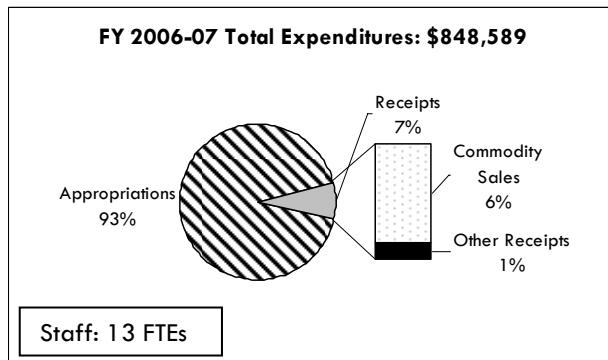
Research Projects:	34
Extension Projects:	2
Academic Projects:	0

Major Commodities

- Tobacco
- Brambles
- Blueberries



Fiscal Information



Property Assessment²

Tax value of the property:	\$745,820
Tax value per acre:	\$1,749
Buildings:	\$457,137
Equipment:	\$624,233
Total station value:	\$1,827,190

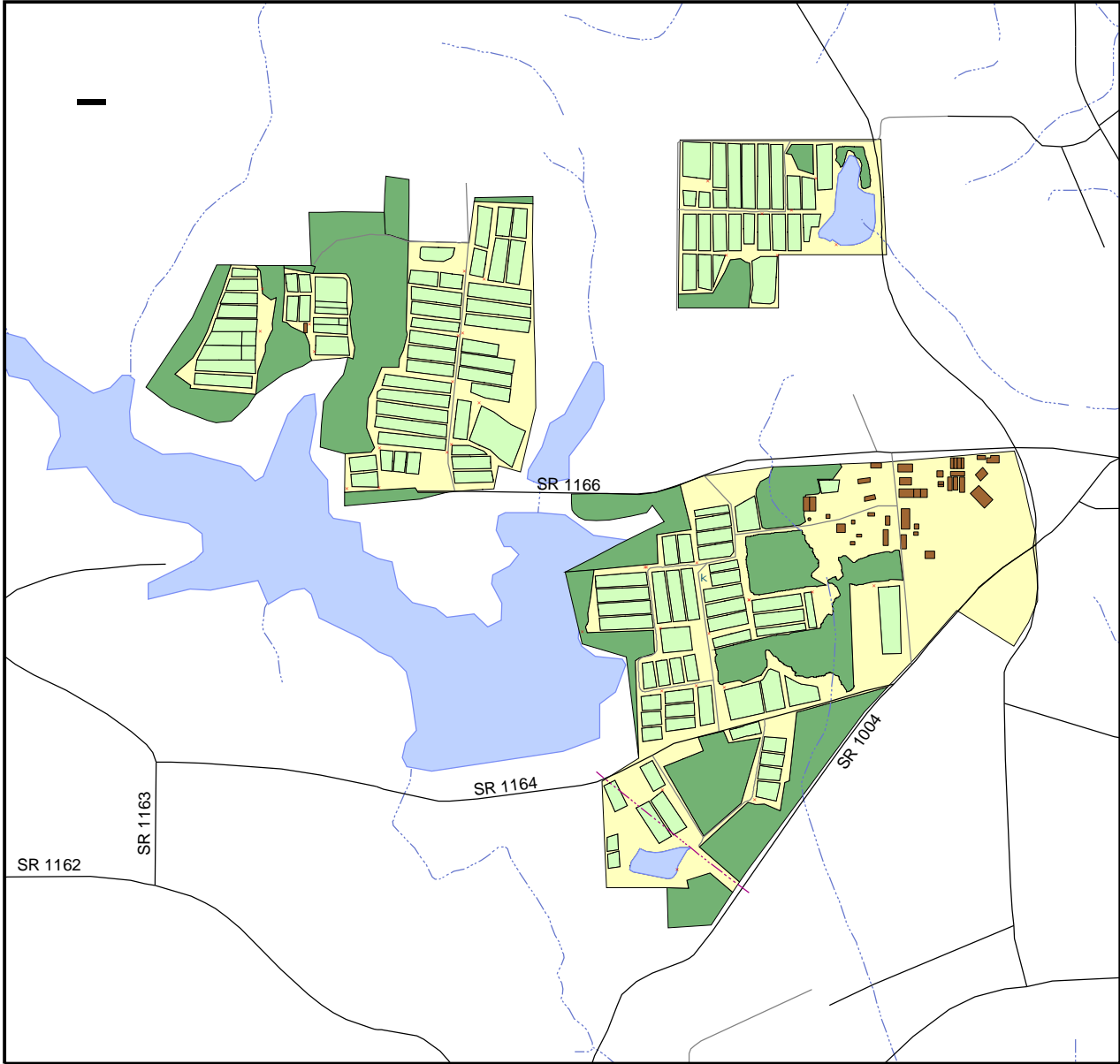
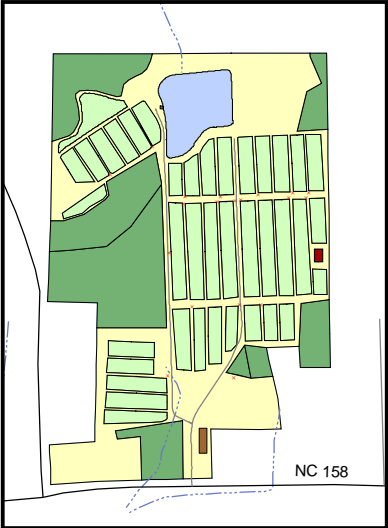
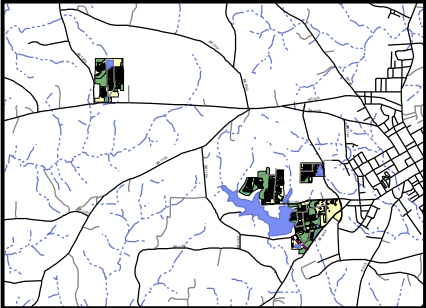
¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

OXFORD TOBACCO RESEARCH STATION

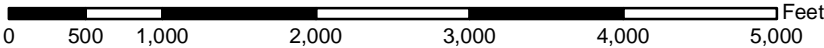
Granville County, North Carolina



LEGEND

TRANSPORTATION	— Utilities
— State Routes	■ Structures
— Unimproved Roads	■ Cemetary
⋈ Weather Station	■ Cropland
• Hydrants	■ Non-cropland
HYDROLOGY	■ Timberland
— Streams	
■ Lakes & Ponds	

Prepared By: Deborah Robertson
 Date Prepared: December 3, 2007



Peanut Belt Research Station

Lewiston-Woodville, Bertie County



Background

Established in 1952 as peanut test farm

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 109 miles

Unique Features

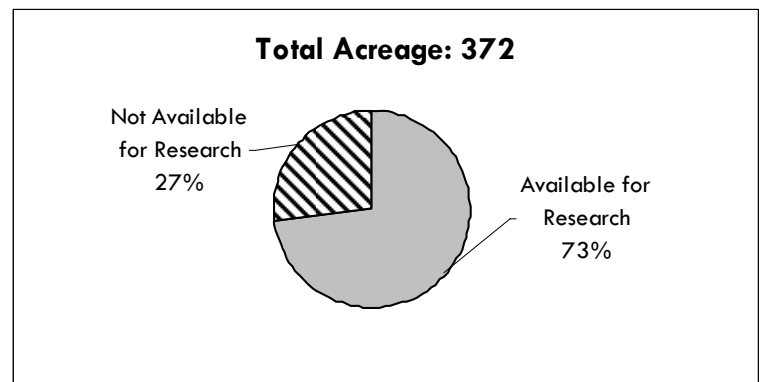
- Research conducted here and at Border Belt generated peanut cultivars now grown on over 70% of North Carolina's seed peanut acreage
- 60% of all peanuts grown in North Carolina are within a 60-mile radius of the station
- One of few locations in North Carolina for testing phosphorus and potassium soil requirements

2007 Research and Land Use¹

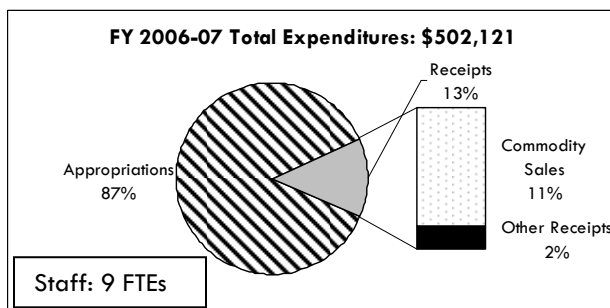
Research Projects:	165
Extension Projects:	13
Academic Projects:	4

Major Commodities

- Peanuts
- Soybeans
- Corn
- Cotton



Fiscal Information



Property Assessment²

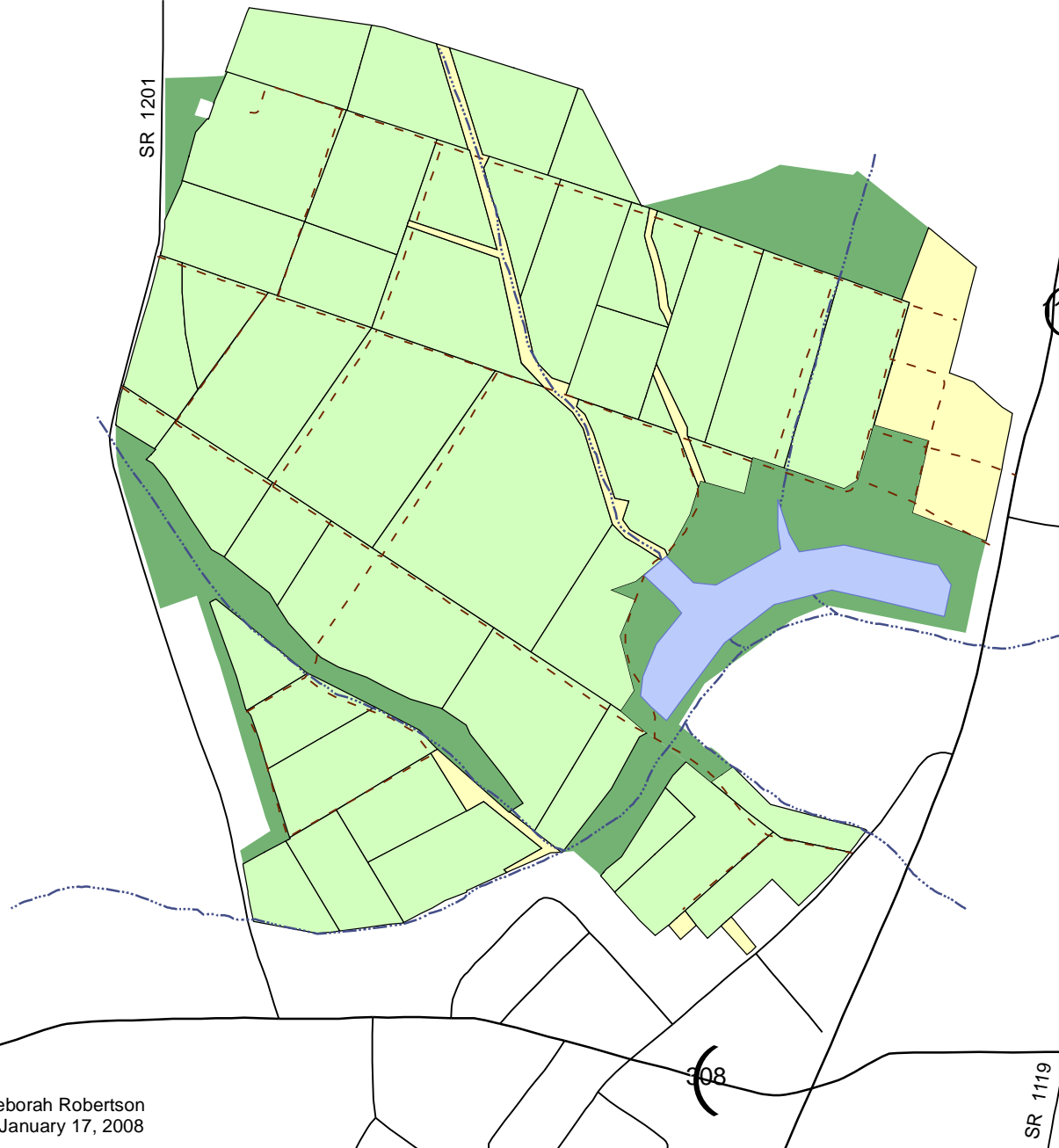
Tax value of the property:	\$603,124
Tax value per acre:	\$1,621
Buildings:	\$263,641
Equipment:	\$977,906
Total station value:	\$1,844,671

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

PEANUT BELT RESEARCH STATION
Bertie County, North Carolina



MAP LEGEND

HYDROLOGY

- Streams
- Irrigation Pond

TRANSPORTATION

- NC Highways
- State Roads
- Station Roads

LAND USE

- Cropland
- Non-cropland
- Timberland

Prepared By: Deborah Robertson
Date Prepared: January 17, 2008



Piedmont Research Station

Salisbury, Rowan County



Background

Established in 1903 in Statesville; moved to present location in 1954

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 141 miles

Unique Features

- Research on chickens explores prevention of and cure for human ovarian cancer
- Only North American site for the Layer Performance Management Test for poultry management
- Growing canola and pyrethrum, crops new to Southern Piedmont

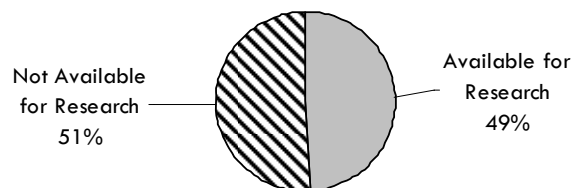
2007 Research and Land Use¹

Research Projects:	52
Extension Projects:	14
Academic Projects:	6

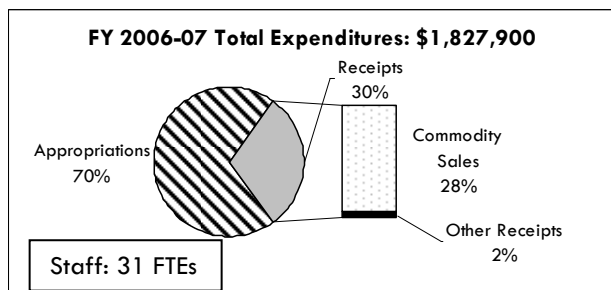
Major Commodities

- Cattle
- Dairy
- Poultry
- Small fruits
- Corn
- Soybeans
- Small grains

Total Acreage: 1036



Fiscal Information



Property Assessment²

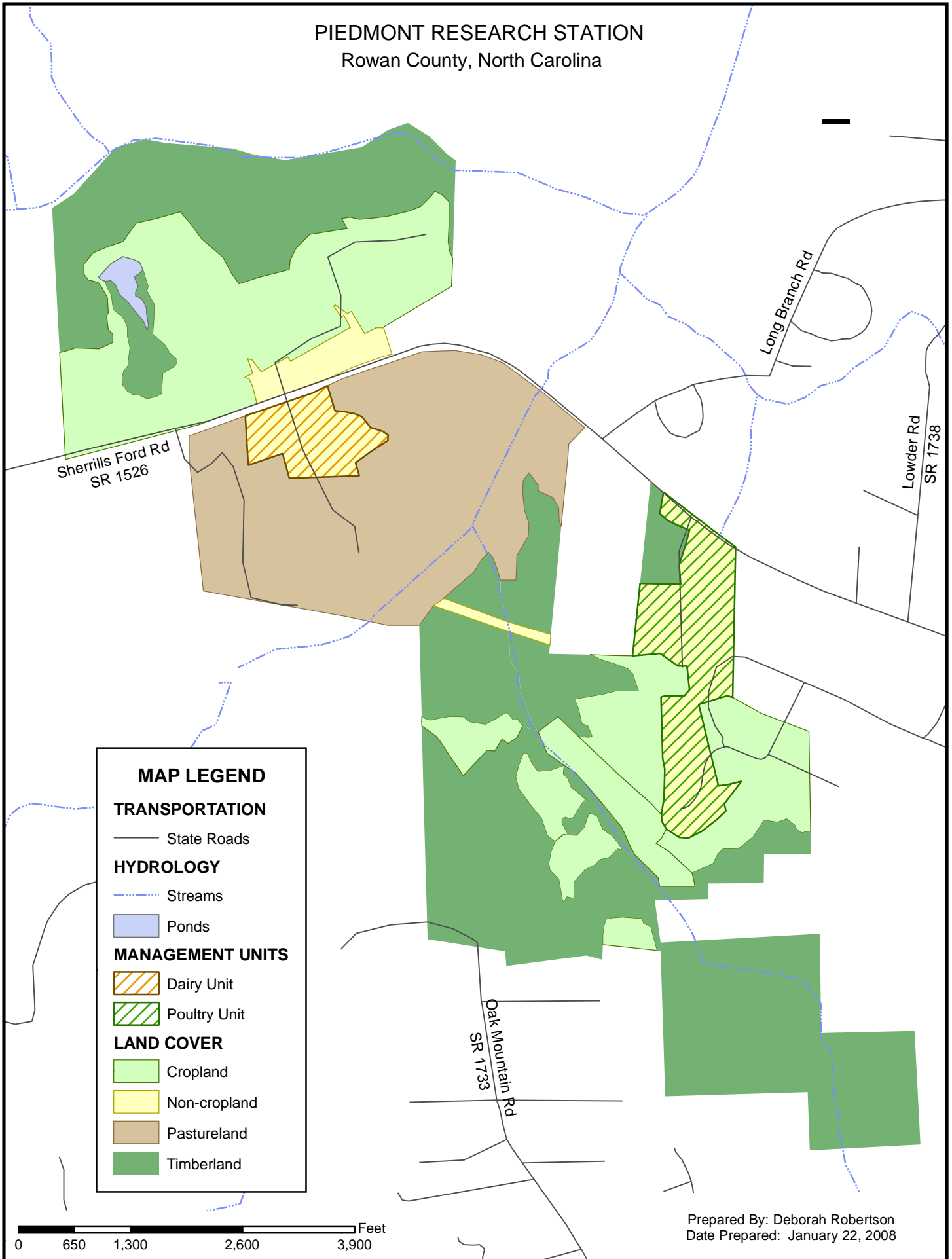
Tax value of the property:	\$5,999,988
Tax value per acre:	\$5,790
Buildings:	\$2,068,081
Equipment:	\$1,446,543
Total station value:	\$9,514,612

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

PIEDMONT RESEARCH STATION
Rowan County, North Carolina



Prepared By: Deborah Robertson
Date Prepared: January 22, 2008

Sandhills Research Station

Jackson Springs, Montgomery County



Background

Established in 1940 as a site for peach research; moved to current site in 1951

Ownership

NC State University

Distance from Raleigh: 81 miles

Unique Features

- More than 20 varieties of peaches developed here
- Deep sandy soils ideal for evaluating drought resistance in many field crops
- One of only two sites in the system conducting turfgrass research

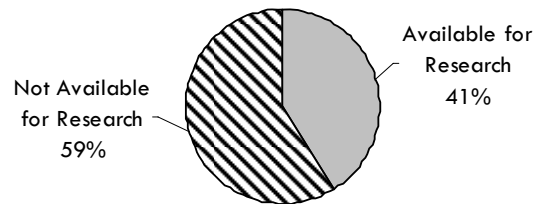
2007 Research and Land Use¹

Research Projects:	85
Extension Projects:	0
Academic Projects:	3

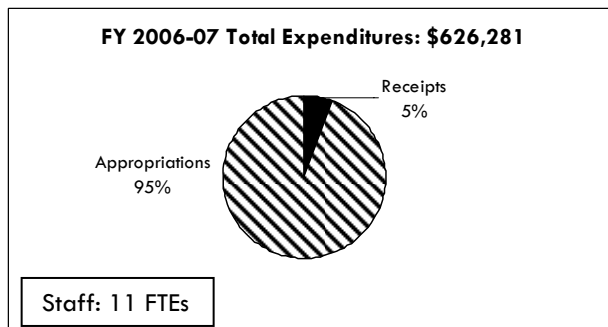
Major Commodities

- Small fruits
- Peaches
- Turfgrass
- Ornamentals
- Brambles
- Soybeans

Total Acreage: 517



Fiscal Information



Property Assessment²

Tax value of the property:	\$498,887
Tax value per acre:	\$965
Buildings:	\$253,133
Equipment:	\$714,276
Total station value:	\$1,466,296

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

SANDHILLS RESEARCH STATION
Montgomery County, North Carolina



MAP LEGEND

TRANSPORTATION

- State Raods
- - - Station Roads

LAND USE

- Cropland
- Non-cropland
- Pond
- Timberland
- Orchard
- Turf Grass

Prepared By: Deborah Robertson
Date Prepared: January 25, 2008



Tidewater Research Station

Plymouth, Washington County



Background

Established in 1943; replaced Blackland Test Farm (established in 1912)

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 125 miles

Unique Features

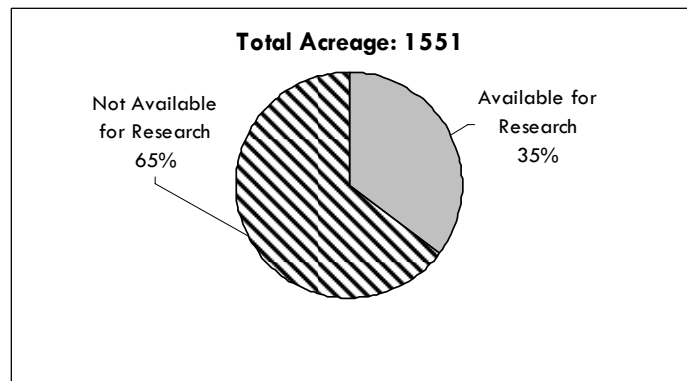
- The Covington sweet potato, grown on 50% of North Carolina's sweet potato acreage, was developed here and at Cunningham.
- Home of Vernon G. James Research and Extension Center, housing research and extension specialists, research labs, and conference center
- System of canals, open ditches, and drainage tile provide a pattern for area landowners, demonstrating methods for making low-lying land productive

2007 Research and Land Use¹

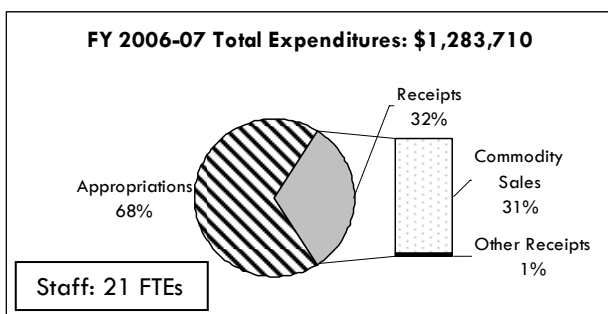
Research Projects:	87
Extension Projects:	18
Academic Projects:	7

Major Commodities

- Cattle
- Swine
- Aquaculture
- Soybeans
- Corn
- Irish potatoes



Fiscal Information



Property Assessment²

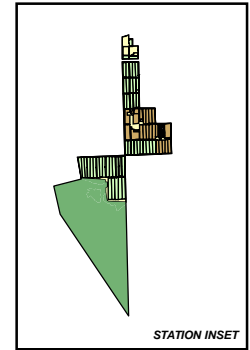
Tax value of the property:	\$1,646,828
Tax value per acre:	\$1,062
Buildings:	\$6,458,612
Equipment:	\$2,178,487
Total station value:	\$10,283,927

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

**TIDEWATER
RESEARCH STATION**
Washington County
North Carolina



LEGEND

TRANSPORTATION

- NC Highways
- State Routes
- Stations Roads

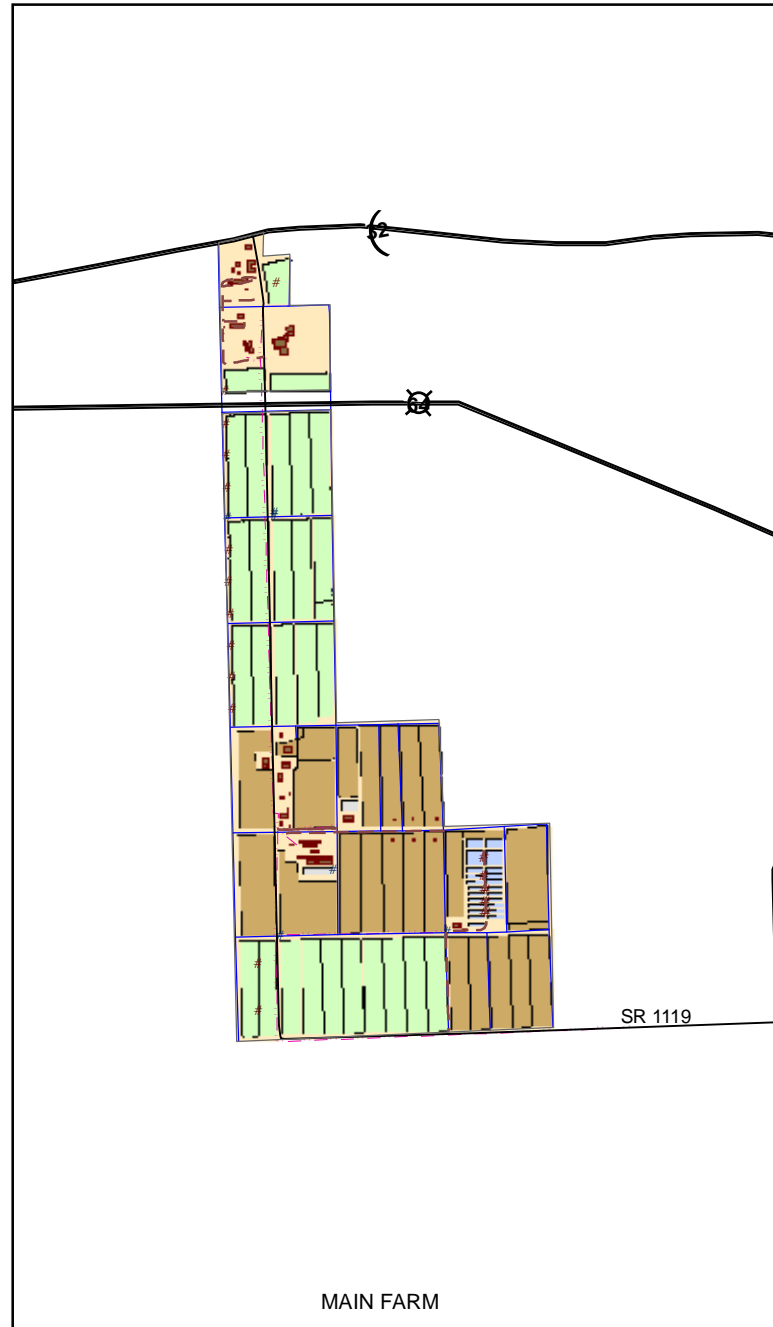
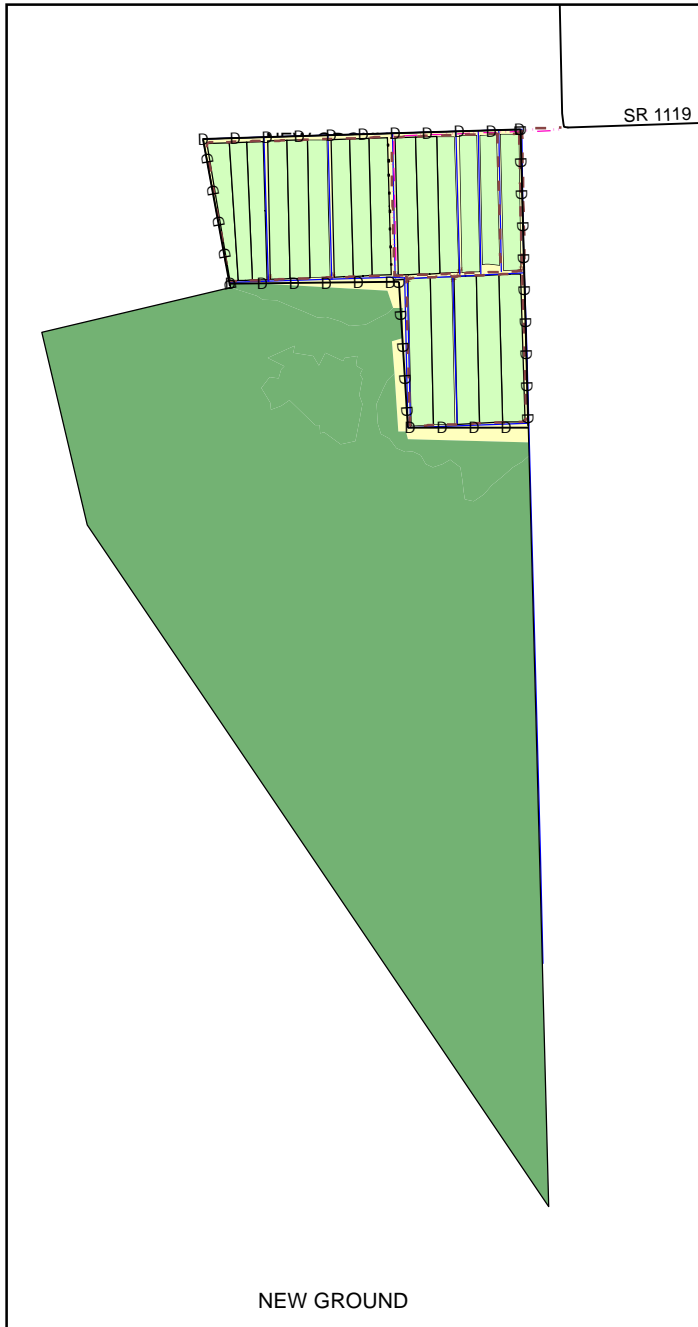
IRRIGATION

- Hydrants
- Pumps
- Drainage Ditches
- Power Line

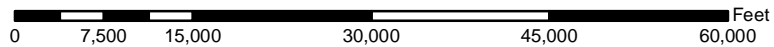
- Buildings

LAND USE

- Cropland
- Pastureland
- Aquaculture
- Non-cropland
- Lagoon
- Timberland



Prepared By: Deborah Robertson
Date Prepared: January 18, 2008



Umstead Research Farm

Butner, Granville County



Background

Established in 1940s as part of a state hospital; 8,985 acres transferred to NCDA&CS in 1974; under same management as Oxford Research Station; no longer actively used for research

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 42 miles

Unique Features

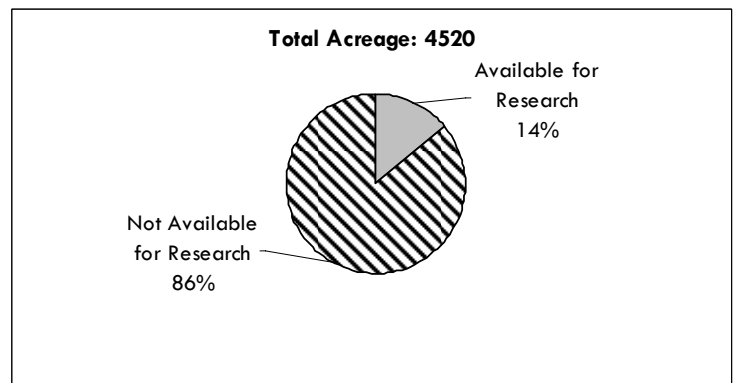
- Pastureland used to produce hay for outlying research stations and NCSU College of Veterinary Medicine
- Two woodland areas are under protective agreements
- Approximately 245 acres proposed for use by the National Bio and Agro-Defense Facility
- Former site for dairy and beef research

2007 Research and Land Use¹

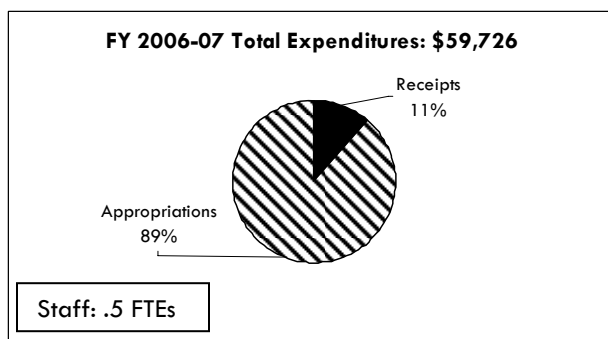
Research Projects:	4
Extension Projects:	0
Academic Projects:	0

Major Commodities

- Hay
- Forestry



Fiscal Information



Property Assessment²

Tax value of the property:	\$28,822,841
Tax value per acre:	\$5,271
Buildings:	\$1,049,182
Equipment:	\$525,221
Total station value:	\$25,397,244

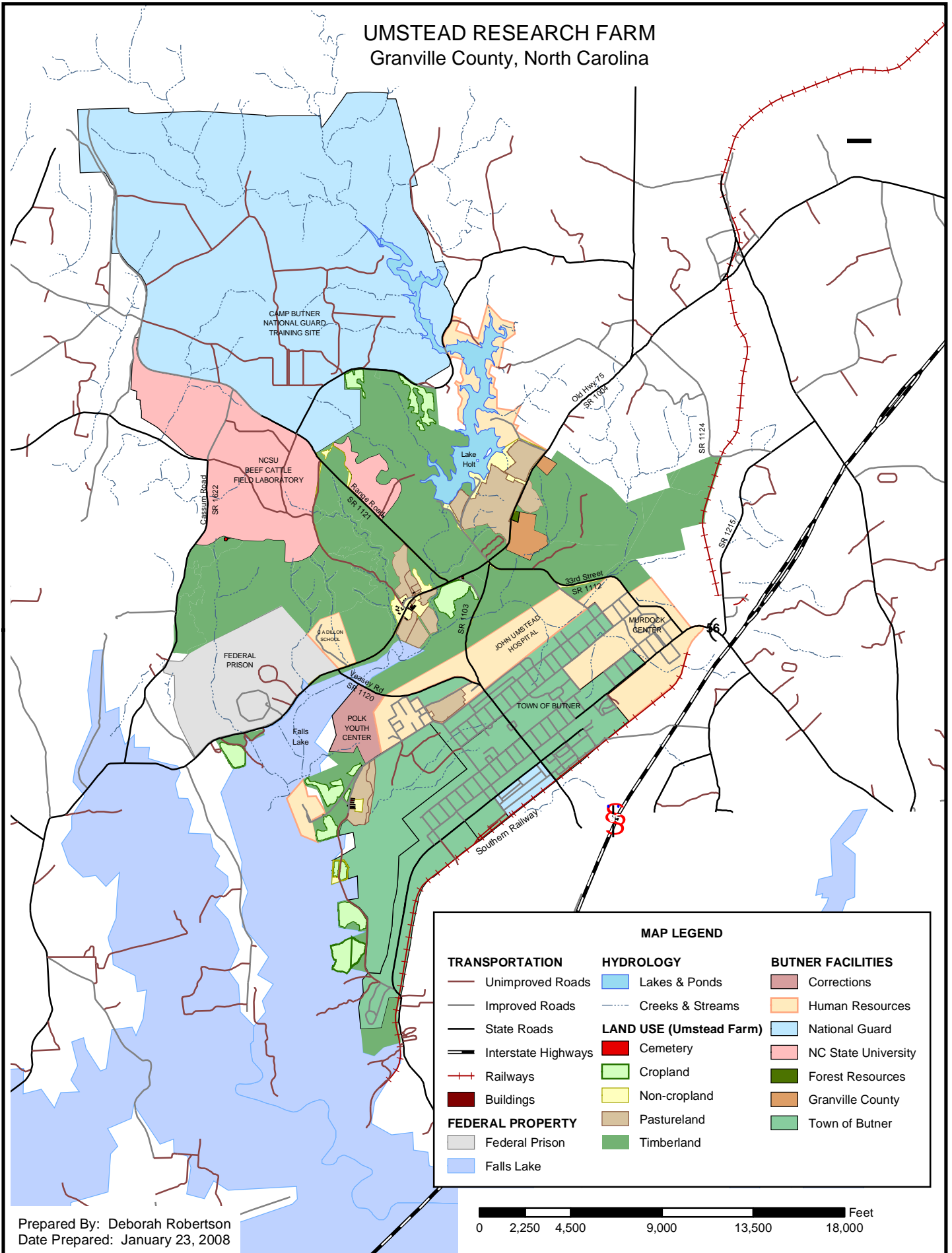
¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

UMSTEAD RESEARCH FARM

Granville County, North Carolina



Prepared By: Deborah Robertson
Date Prepared: January 23, 2008

Upper Coastal Plain Research Station

Rocky Mount, Edgecombe County



Background

Oldest station; land was optioned in 1902; station established in 1903; adjacent tract purchased in 1937; Fountain Farm, a state farm ten miles north, was added in 1990

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 64 miles

Unique Features

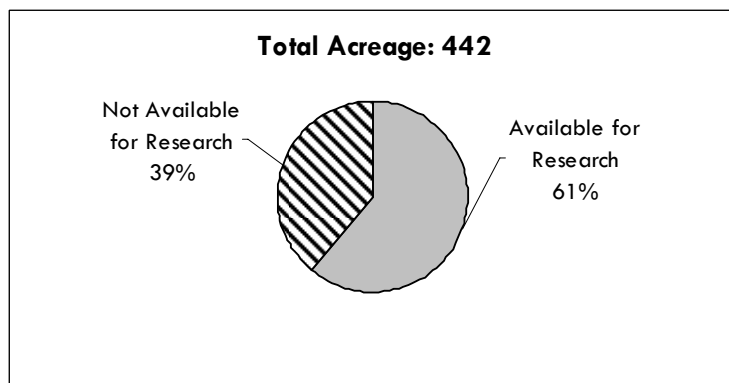
- Most Black Shank-resistant tobacco plant varieties grown in North Carolina and Virginia originated here
- First Round-Up-resistant cotton studied and developed here

2007 Research and Land Use¹

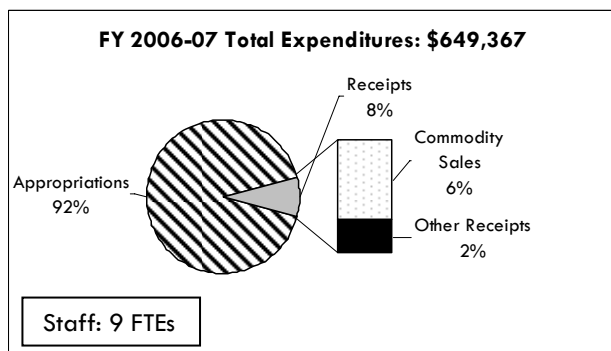
Research Projects:	133
Extension Projects:	3
Academic Projects:	1

Major Commodities

- Tobacco
- Peanuts
- Soybeans
- Corn
- Cotton



Fiscal Information



Property Assessment²

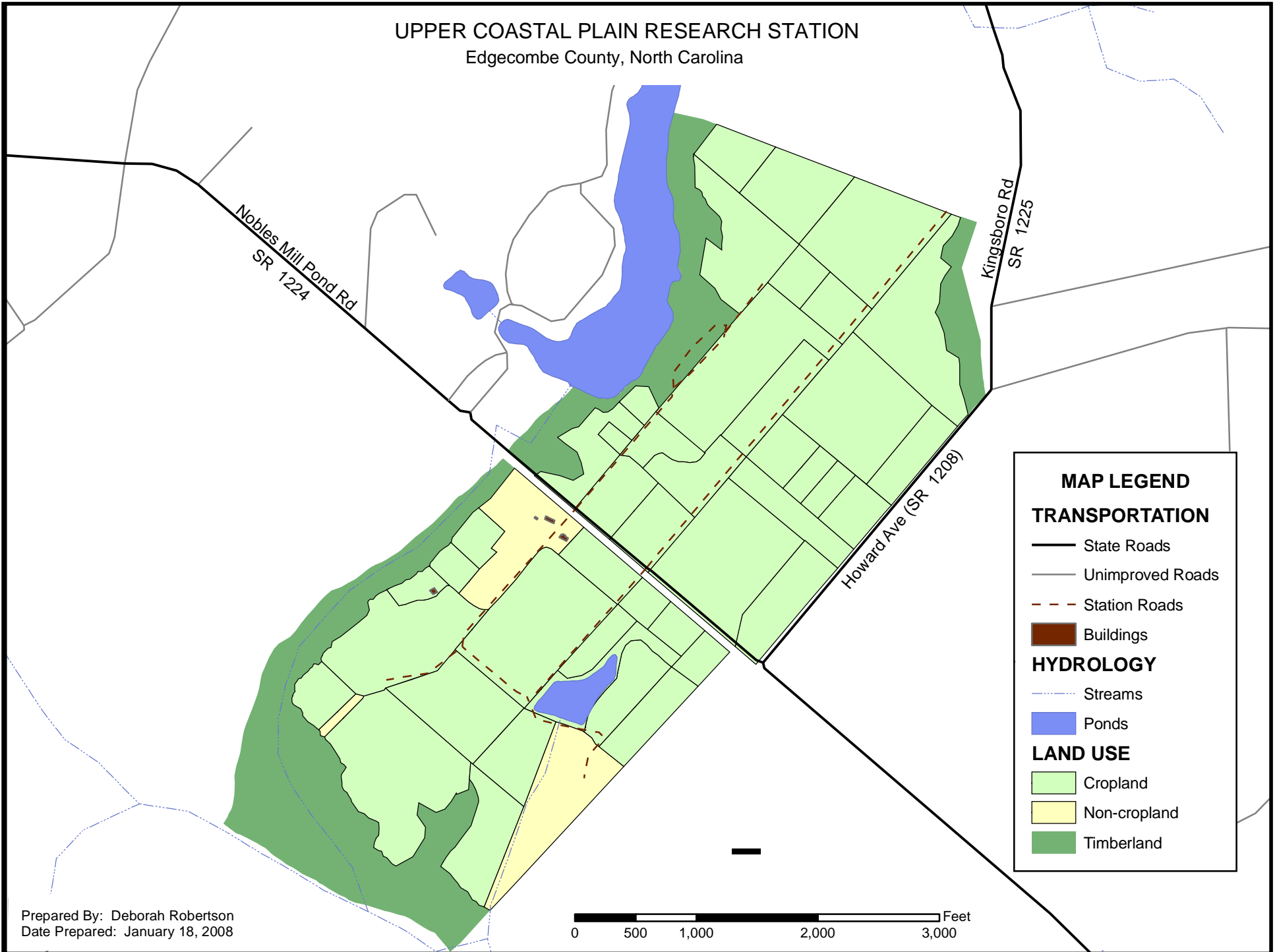
Tax value of the property:	\$462,718
Tax value per acre:	\$1,047
Buildings:	\$341,660
Equipment:	\$1,235,743
Total station value:	\$2,040,121

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

UPPER COASTAL PLAIN RESEARCH STATION
Edgecombe County, North Carolina



MAP LEGEND

TRANSPORTATION

- State Roads
- Unimproved Roads
- - - Station Roads
- Buildings

HYDROLOGY

- ⋯ Streams
- Ponds

LAND USE

- Cropland
- Non-cropland
- Timberland

Prepared By: Deborah Robertson
Date Prepared: January 18, 2008

0 500 1,000 2,000 3,000 Feet

Upper Mountain Research Station

Laurel Springs, Ashe County

Background

Established in 1944; elevation is 3200 feet

Ownership

NC Department of Agriculture and Consumer Services

Distance from Raleigh: 186 miles



Unique Features

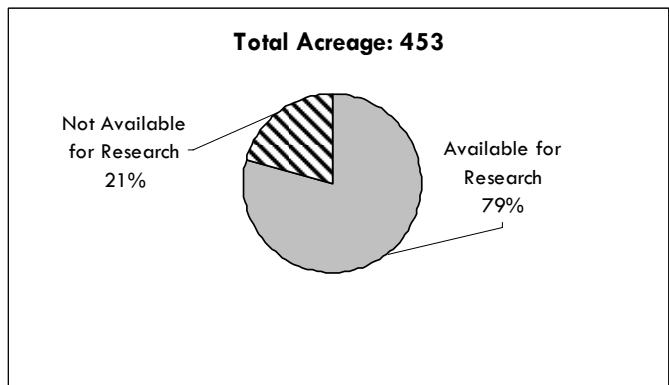
- Only location in the United States with planted range-wide seed source for Carolina Hemlock
- Host yearly Agricultural Rescue Safety Training program for Emergency Management Service and First Responders
- Developed structure that will decrease hoof-trimming labor for goat farmers
- Planning alternative energy demonstration with the installation of a small farm wind turbine
- Only station with adequate elevation for Christmas tree research

2007 Research and Land Use¹

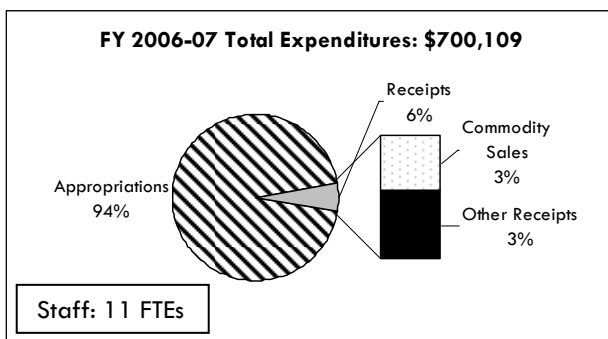
Research Projects:	20
Extension Projects:	6
Academic Projects:	3

Major Commodities

- Goats
- Small fruit
- Christmas trees
- Forage
- Burley tobacco



Fiscal Information



Property Assessment²

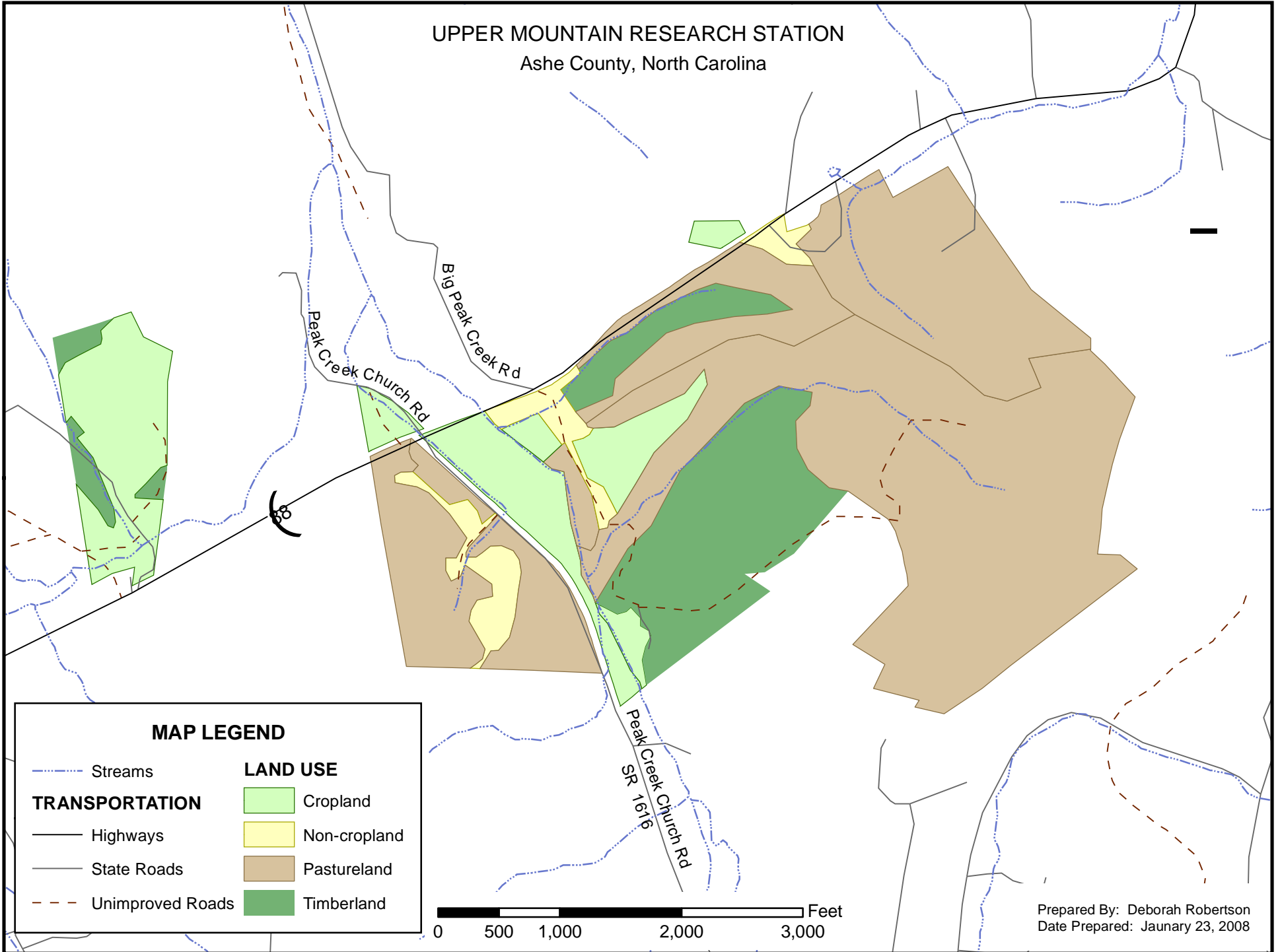
Tax value of the property:	\$2,990,944
Tax value per acre:	\$6,605
Buildings:	\$456,109
Equipment:	\$699,783
Total station value:	\$4,146,836

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

UPPER MOUNTAIN RESEARCH STATION
Ashe County, North Carolina



MAP LEGEND

- | | |
|-----------------------|-----------------|
| Streams | LAND USE |
| TRANSPORTATION | Cropland |
| Highways | Non-cropland |
| State Roads | Pastureland |
| Unimproved Roads | Timberland |

0 500 1,000 2,000 3,000 Feet

Prepared By: Deborah Robertson
Date Prepared: January 23, 2008

Upper Piedmont Research Station

Reidsville, Rockingham County

Background

Established in 1948 on leased land in Rural Hall; moved to current location in 1954 when land was donated by Betsy Penn

Ownership

NC State University

Distance from Raleigh: 92 miles



Unique Features

- Host of Rockingham County farmer's market
- Maintain Chinqua-Penn education and nature trail
- Growing over 56 varieties of canola for use in biofuel production experiments
- Largest variety of wine grapes in the state
- Endowed herd of registered Black Angus cattle

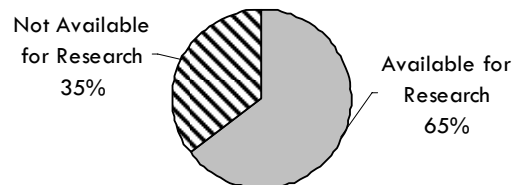
2007 Research and Land Use¹

Research Projects:	17
Extension Projects:	2
Academic Projects:	5

Major Commodities

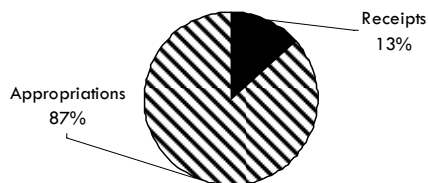
- Cattle
- Tobacco
- Grapes

Total Acreage: 707



Fiscal Information

FY 2006-07 Total Expenditures: \$502,896



Staff: 9 FTEs

Property Assessment²

Tax value of the property:	\$691,016
Tax value per acre:	\$847
Buildings:	\$796,015
Equipment:	\$547,111
Total station value:	\$2,034,142

¹ Data source: NCSU

² Data source: Current county tax assessments and NCDA&CS Fiscal Asset System; total station value is the sum of land, buildings, and equipment

Map on reverse courtesy of NCDA&CS

UPPER PIEDMONT RESEARCH STATION
Rockingham County, North Carolina

MAP LEGEND

TRANSPORTATION LAND USE

- Highways
- State Roads
- - - Trails

HYDROLOGY

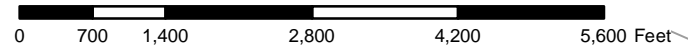
- Streams
- Pond
- Buildings
- Fences

LAND USE

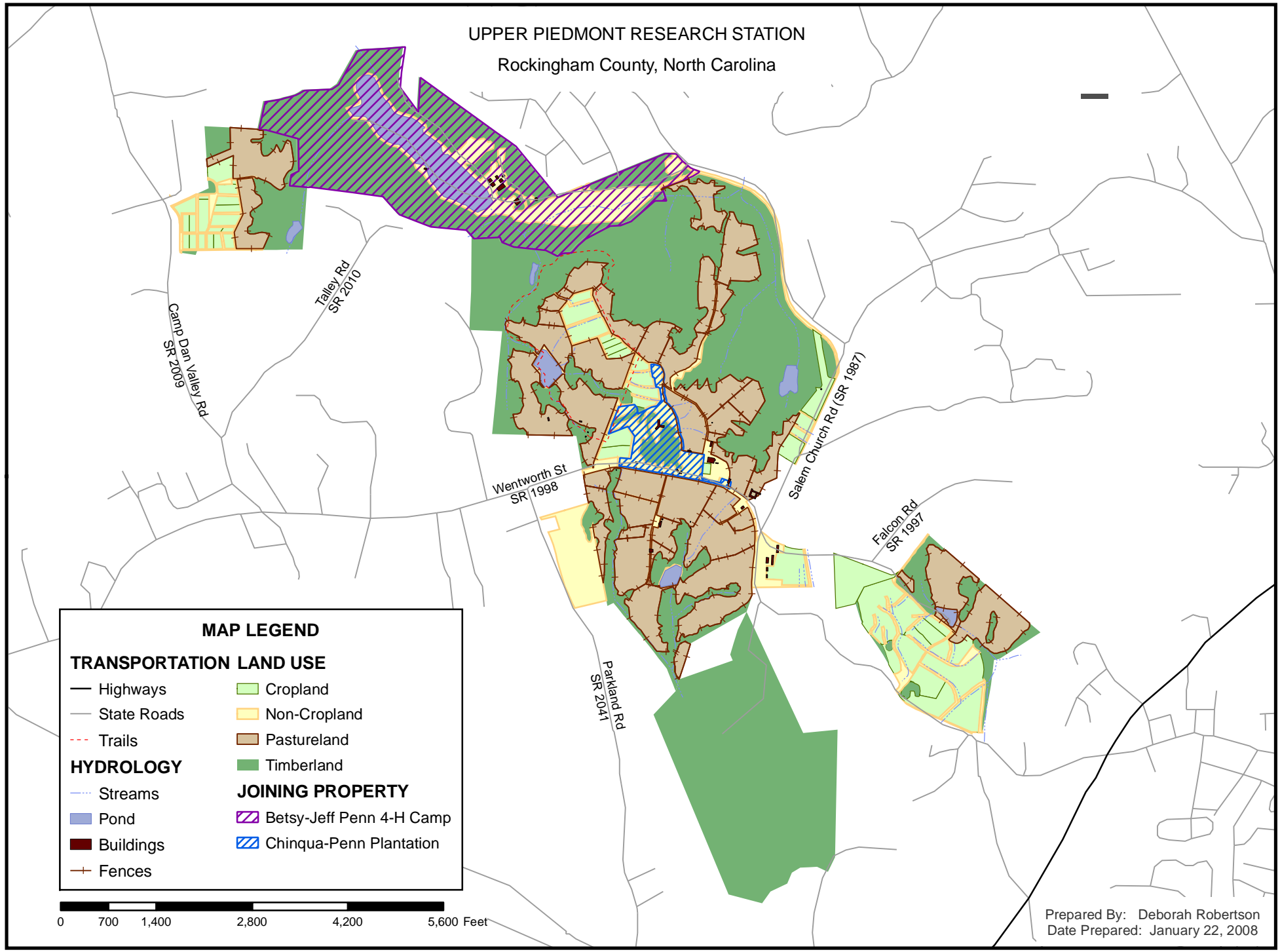
- Cropland
- Non-Cropland
- Pastureland
- Timberland

JOINING PROPERTY

- Betsy-Jeff Penn 4-H Camp
- Chinqua-Penn Plantation



Prepared By: Deborah Robertson
Date Prepared: January 22, 2008



NCA&T State University Farm

Greensboro, Guilford County



Background

NCA&T State University was established in 1891 by an act of Congress and by the NC General Assembly as the Negro counterpart to the state's historically white land-grant college, NCSU; by 1904, the university owned a 100-acre farm

Ownership

NCA&T State University

Distance from Raleigh: 75 miles

Unique Features

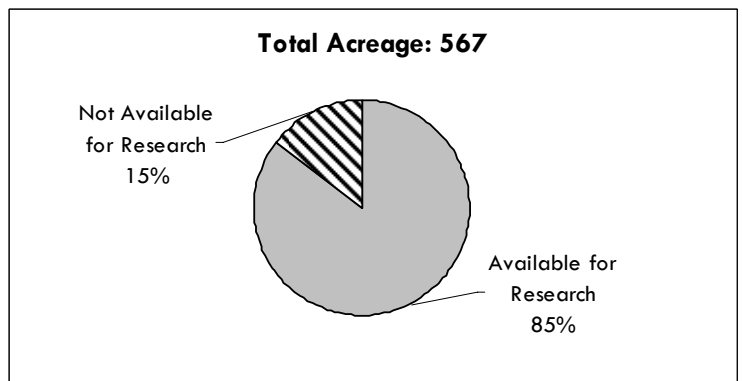
- NCA&T began receiving federal funding as a land-grant university in Fiscal Year 1978, but the required 100% state match began in Fiscal Year 2007
- Research areas include food safety, agromedicine, wetlands, water quality, biotechnology, biofuels and renewable, energy, international trade, rural development, animal sciences, plant science, specialty crops, landscape architecture and design, human nutrition, child development, housing, food science, and animal health

2007 Research Projects and Land Use¹

Research Projects: 24
Extension Projects: 179
Academic Projects: 46

Major Commodities

- Beef
- Poultry
- Dairy
- Small ruminants
- Swine
- Horticultural and field crops



Fiscal Information²

Total Revenue/Expenditures: \$980,684
Staff: 15 FTEs

Note: This farm is supported entirely by state funds, including appropriations and matching funds for the Evans-Allen Program

Property Assessment

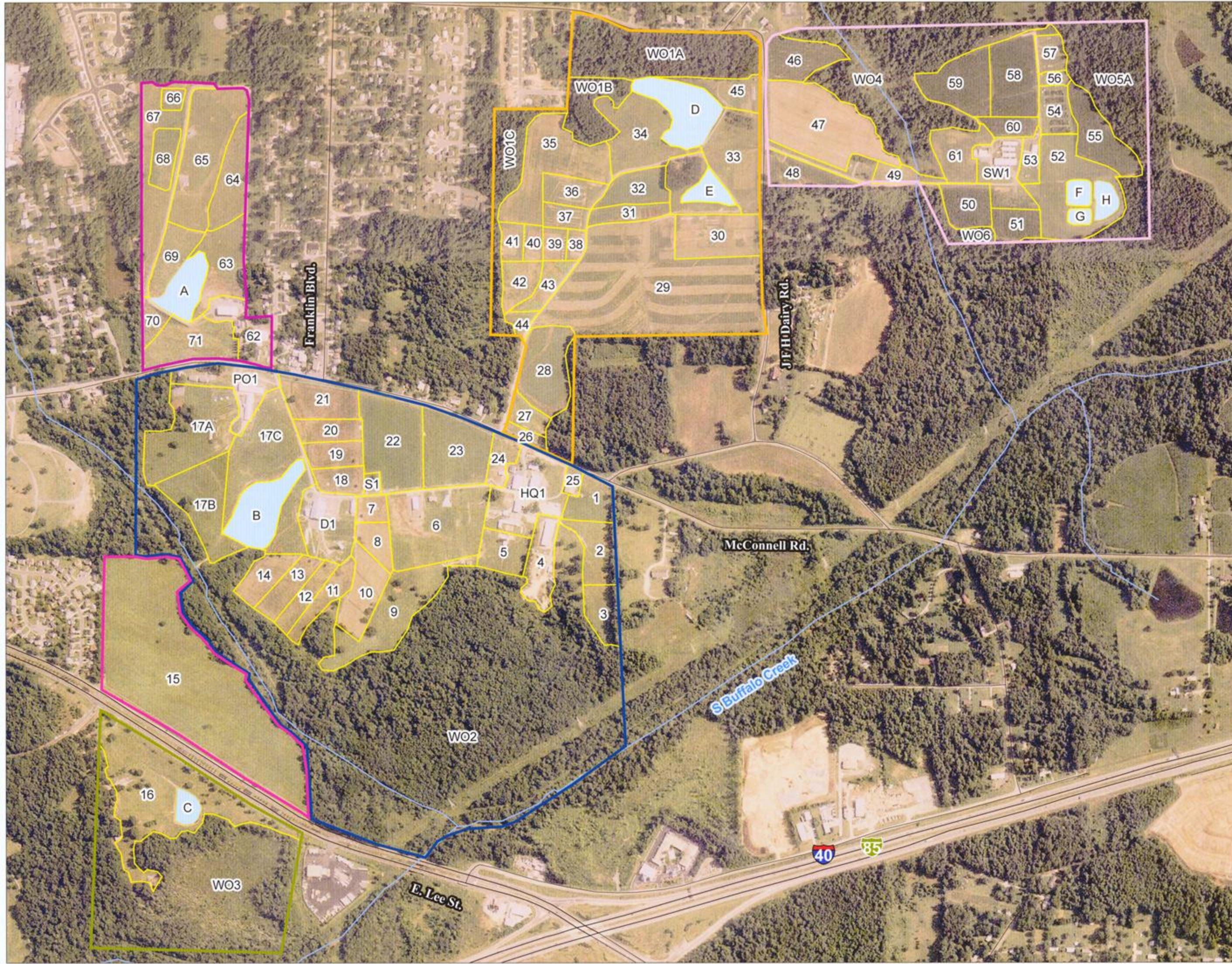
Tax value of the property: \$2,019,700
Tax value per acre: \$3,562
Buildings and equipment: \$10,500,000
Total station value: \$12,519,700

¹ Data source: NCA&T

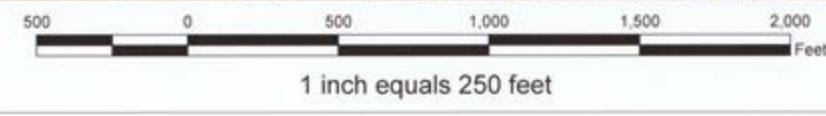
² Data source: NCA&T

Map on reverse courtesy of NCA&T

North Carolina A&T Farm



- A&T Farm Areas**
- Enviro. Studies Lab
 - Fountain Park
 - Lee St. Pasture
 - Main Farm Unit
 - Research Plot Area
 - Swine Unit
 - Ponds / Lagoons



NC State University Field Laboratories

Background

The College of Agriculture and Life Sciences at NCSU owns and operates ten field laboratories. In addition to faculty research, the field laboratories host undergraduate and graduate courses, as well as cooperative extension activities including training and community outreach. Six of the labs are in Raleigh; the other four labs are between 40 and 130 miles from the main campus. Research pursuits at the different sites include swine, aquaculture, cattle, poultry, small ruminants, and turfgrass.

Total Acreage: 4145

Breeze Farm Extension and Research Facility

Location: Hurdle Mills
Acreage: 164

Butner Beef Field Laboratory

Location: Bahama
Acreage: 1260

Feed Mill Field Laboratory

Location: Raleigh
Acreage: 33

Lake Wheeler Road Field Laboratory

Location: Raleigh
Acreage: 1500

Lake Wheeler Road Poultry Field Laboratory

Location: Raleigh
Acreage: 67

Lake Wheeler Road Turfgrass Field Laboratory

Location: Raleigh
Acreage: 132

Method Road Greenhouse Field Laboratory

Location: Raleigh
Acreage: 10

Pamlico Aquaculture Field Laboratory

Location: Aurora
Acreage: 169

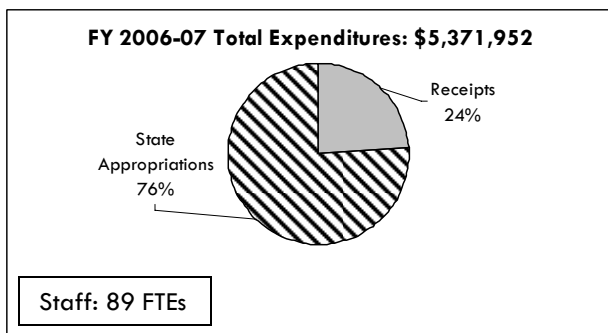
Trenton Road Field Laboratory

Location: Raleigh
Acreage: 283

Williamsdale Farm Extension and Research Facility

Location: Wallace
Acreage: 612

Fiscal Information¹

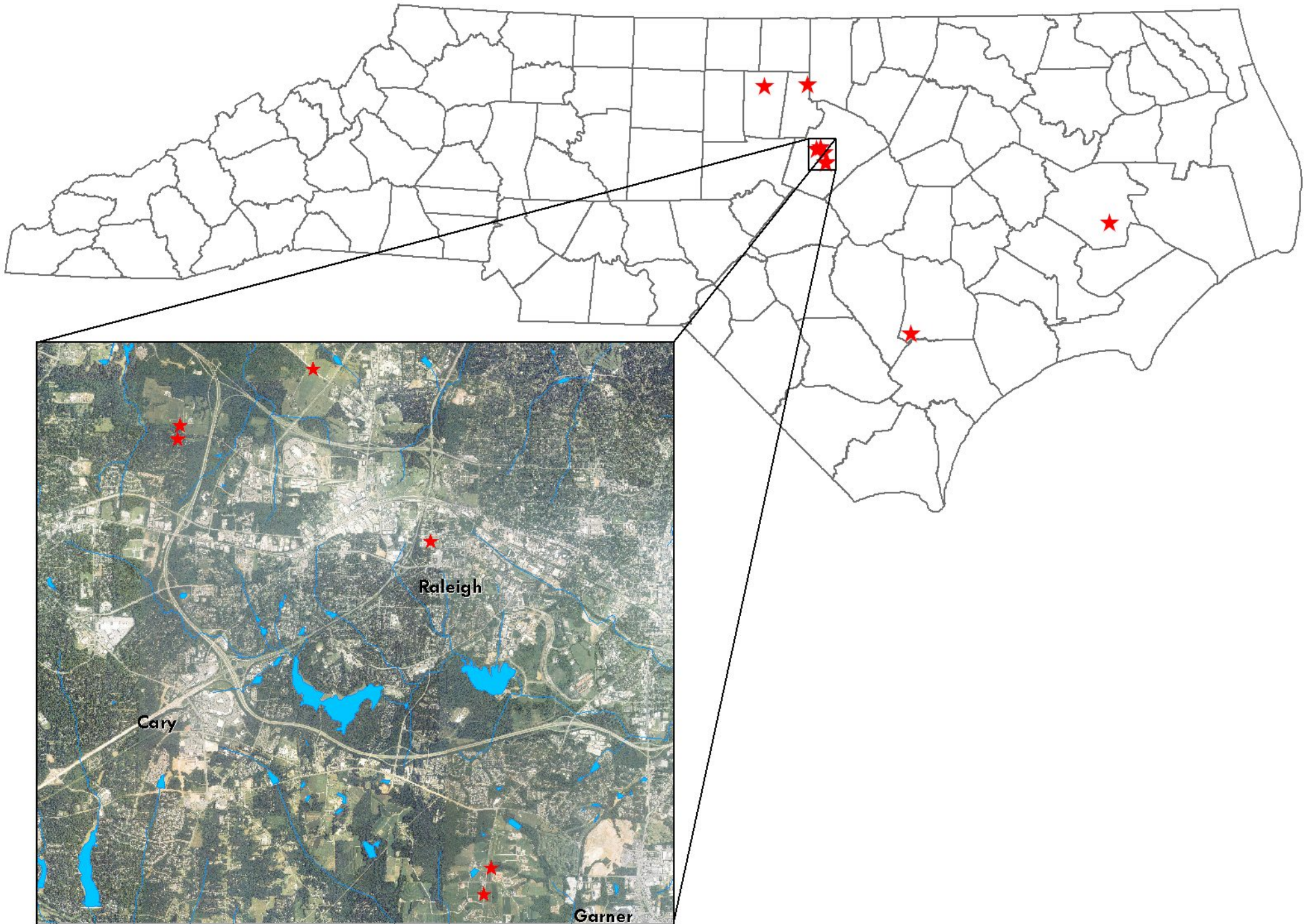


Property Assessment

Tax value of the properties: \$114,988,652
(includes land, buildings, and equipment)

¹Data source: NCSU
Map on reverse courtesy of NCSU

North Carolina State University Field Laboratories and Educational Units





NORTH CAROLINA GENERAL ASSEMBLY
Legislative Services Office

George R. Hall, Legislative Services Officer

Program Evaluation Division
300 N. Salisbury Street, Suite 100
Raleigh, NC 27603-5925
Tel. 919-301-1404 Fax 919-301-1406

John W. Turcotte
Director

February 12, 2008

Dear Commodity Association Leader:

The Performance Evaluation Division of the General Assembly has been charged with studying the structure and management practices of the 18 agricultural research stations managed by the Department of Agriculture and Consumer Services. Of these 18 stations, 12 are owned by the Department of Agriculture and Consumer Services and 6 are owned by North Carolina State University.

We are contacting you as leader of one of NC commodity associations to solicit your input on this important study. Please respond to the following questions by returning this page in the enclosed envelope postmarked no later than Friday, February 29, 2008. We are under a strict reporting deadline and cannot accept responses after this date.

Thank you very much for your response,

Carol H. Ripple, PhD
Principal Program Evaluator

For the two questions below, please show your response by circling ONE of the options following each item. If you do not have an opinion or you are unsure, please check the box to indicate No Opinion.

1. Does the research that is conducted at the stations support North Carolina farmers?
NO, Not at All Not Much Neutral Somewhat YES, a Great Deal
[] No Opinion

2. How satisfied are you with the current management of research stations in North Carolina?
Very Dissatisfied Somewhat Dissatisfied Neutral Somewhat Satisfied Very Satisfied
[] No Opinion

If you would like to tell us more about your response these questions, please do on the back of this page. Thank you very much.

Agricultural Research Station Project Leaders Survey

1. Welcome and Instructions

WELCOME

As mandated by the North Carolina General Assembly, the Program Evaluation Division is evaluating the structure and management practices of the 18 agricultural research stations in North Carolina. As part of our study, we are contacting investigators who conduct or have conducted research projects at the agricultural research stations, North Carolina State University (NCSU) field laboratories, or North Carolina Agricultural and Technical State University (NC A&T) Farm.

Your input is important to us: the results of this study may affect the management structure and continued funding of these facilities. Your responses will remain anonymous. Evaluation results will be available in May, 2008, at www.ncleg.net.

If you have any questions about the survey, please contact Carol Ripple, PhD, Principal Evaluator, at carolr@ncleg.net or 919-301-1413.

Please respond no later than JANUARY 31, 2008.

Thank you for your participation.

INSTRUCTIONS

This survey is divided into three main sections, one for each of the three types of research facilities: agricultural research stations, NCSU field labs, the NC A&T University Farm. Please complete a section if you have conducted any phase of research at that type of facility in the 2005, 2006, or 2007 growing seasons. If you have not conducted any phase of research at that type of facility in the 2005, 2006, or 2007 growing seasons, you should skip that section. Each section should take 5-15 minutes to complete.

PLEASE NOTE: A portion of the survey asks you to report the number of projects you have conducted during the 2005, 2006, and 2007 growing seasons at specific facilities. You may want to have this information on hand before beginning the survey.

* 1. Please check here to indicate your academic affiliation:

- Other
- NCSU
- NC A&T
- Other

If you selected OTHER, please specify:

* 2. Have you conducted any research in the 2005, 2006, or 2007 growing seasons at agricultural research stations, NCSU field labs, or the NC A&T University Farm?

- Yes
- No

Agricultural Research Station Project Leaders Survey

2. Location of Research

1. At which facilities have you conducted research in the 2005, 2006, or 2007 growing seasons? Please place a check next to each type of facility that applies.

- Agricultural research stations (Complete Section I)
- NCSU field labs (Complete Section II)
- NC A&T University Farm (Complete Section III)

Agricultural Research Station Project Leaders Survey

3. Section I: Agricultural Research Stations

If you have NOT conducted research at a station during the 2005, 2006, or 2007 growing season, skip to Section II by clicking NEXT at the bottom of this page.

1. Please indicate the NUMBER of research projects you have conducted at the following agricultural research stations in the 2005, 2006, or 2007 growing seasons, including those that you have completed, begun, or were ongoing over this time period.

Border Belt Tobacco	<input type="text"/>
Caswell	<input type="text"/>
Central Crops	<input type="text"/>
Cherry	<input type="text"/>
Cunningham/Lower Coastal Plain	<input type="text"/>
Horticultural Crops (Castle Hayne)	<input type="text"/>
Horticultural Crops (Clinton)	<input type="text"/>
Mountain	<input type="text"/>
Mountain Horticultural Crops	<input type="text"/>
Oxford Tobacco	<input type="text"/>
Peanut Belt	<input type="text"/>
Piedmont	<input type="text"/>
Sandhills	<input type="text"/>
Tidewater	<input type="text"/>
Umstead	<input type="text"/>
Upper Coastal Plain	<input type="text"/>
Upper Mountain	<input type="text"/>
Upper Piedmont	<input type="text"/>

Agricultural Research Station Project Leaders Survey

2. Please respond to the following statements about the agricultural research stations:

	1 Strongly Disagree	2	3	4	5 Strongly Agree
A variety of station locations is critical to my research.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Station facilities meet my research needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Station staff follows my research project protocols.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Department of Agriculture should continue to manage the Stations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The stations are well managed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Station staff has worked well with me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Station facilities are poorly maintained.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Station staff believes research is important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Station facilities have been modernized.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Station staff prioritizes commodity crops over research.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My research depends heavily on access to and use of one or more stations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. In the 2005, 2006, or 2007 growing seasons, have you had significant problems conducting research at any of the research stations?

Yes

No

If yes, at which station(s)?

4. (Optional) If you responded YES to Question 3, please explain the problems you experienced.

5. In the 2005, 2006, or 2007 growing seasons, have you had a particularly positive experience at any of the research stations?

Yes

No

If yes, at which station(s)?

Agricultural Research Station Project Leaders Survey

6. (Optional) If you responded YES to Question 5, please explain the experience.

7. In the 2005, 2006, or 2007 growing seasons, have the practices of research station staff ever compromised your research?

Yes

No

If yes, at which station(s)?

↑

↓

8. (Optional) If you responded YES to Question 7, please explain the problems you experienced.

Agricultural Research Station Project Leaders Survey

4. Section II: NCSU Field Labs

If you have NOT conducted research at a NCSU field lab in the 2005, 2006, or 2007 growing seasons, skip to Section III by clicking NEXT at the bottom of this page.

1. Please indicate the NUMBER of research projects you have conducted at the following NCSU field labs in the 2005, 2006, or 2007 growing seasons, including those that you have completed, begun, or were ongoing over this time period.

Butner Beef Cattle	<input type="text"/>
Lake Wheeler Road	<input type="text"/>
Lake Wheeler Road Poultry	<input type="text"/>
Lake Wheeler Road Turf	<input type="text"/>
Method Rd Greenhouse/Horticulture	<input type="text"/>
Pamlico Aquaculture	<input type="text"/>
Trenton Road	<input type="text"/>

2. Please respond to the following statements about the NCSU field labs:

	1 Strongly Disagree	2	3	4	5 Strongly Agree
The labs are well managed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A variety of lab locations is critical to my research.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My research depends heavily on access to and use of one or more labs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lab facilities meet my research needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lab staff believes research is important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lab staff follows my research project protocols.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lab staff has worked well with me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lab facilities are poorly maintained.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lab facilities have been modernized.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. In the 2005, 2006, or 2007 growing seasons, have you had significant problems conducting research at any of the labs?

Yes

No

If yes, at which lab(s)?

Agricultural Research Station Project Leaders Survey

4. (Optional) If you responded YES to Question 3, please explain the problems you experienced.

5. In the 2005, 2006, or 2007 growing seasons, have you had a particularly positive experience at any of the labs?

Yes

No

If yes, at which lab(s)?

▲

▼

6. (Optional) If you responded YES to Question 5, please explain the experience.

7. In the 2005, 2006, or 2007 growing seasons, have the practices of lab station staff ever compromised your research?

Yes

No

If yes, at which lab(s)?

▲

▼

8. (Optional) If you responded YES to Question 7, please explain the problems you experienced.

Agricultural Research Station Project Leaders Survey

5. Section III: NC A&T University Farm

If you have NOT conducted research at the NC A&T University Farm in the 2005, 2006, or 2007 growing seasons, skip to the next page by clicking NEXT at the bottom of this page.

1. Please indicate the NUMBER of research projects you have conducted at the NC A&T University Farm in the 2005, 2006, or 2007 growing seasons, including those that you have completed, begun, or were ongoing over this time period.

2. Please respond to the following statements about the NC A&T Farm:

	1 Strongly Disagree	2	3	4	5 Strongly Agree
The Farm staff believes research is important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Farm facilities have been modernized.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My research depends heavily on access to and use of the Farm.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Farm is well managed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Farm staff has worked well with me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Farm staff follows my research project protocols.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Farm facilities are poorly maintained.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Farm facilities meet my research needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. In the 2005, 2006, or 2007 growing seasons, have you had significant problems conducting research at the NC A&T Farm?

Yes

No

(Optional) Please explain:

Agricultural Research Station Project Leaders Survey

4. In the 2005, 2006, or 2007 growing seasons, have you had a particularly positive experience at the NC A&T Farm?

Yes

No

(Optional) Please explain:

5. In the 2005, 2006, or 2007 growing seasons, have the practices of the NC A&T Farm staff ever compromised your research?

Yes

No

(Optional) Please explain:

Agricultural Research Station Project Leaders Survey

6. Additional Questions

1. Please indicate the NUMBER of research projects you have conducted at private farms in the 2005, 2006, or 2007 growing seasons, including those that you have completed, begun, or were ongoing over this time period.

2. If you have conducted any phase of research at a private farm in the 2005, 2006, or 2007 growing seasons, please explain why.

3. Please use the space below to address any concerns this survey has not addressed:

Agricultural Research Station Project Leaders Survey

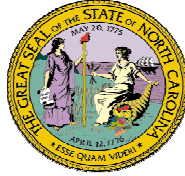
7. Thank You!

Thank you for your participation!

If you have any questions about the survey, please contact Carol Ripple, PhD, Principal Evaluator, at carolr@ncleg.net or 919-301-1413.

Evaluation results will be available in May, 2008, at www.ncleg.net.

STEVE TROXLER
COMMISSIONER



State of North Carolina
Department of Agriculture and Consumer Services
Raleigh

April 29, 2008

Mr. John Turcotte, Director
Program Evaluation Division
Legislative Office Building
Raleigh, NC 27603-5925

Re: **NCDA&CS Formal Response to Report No. 2008-05-01**

Dear Mr. Turcotte:

With much consternation and disappointment, we are responding to the draft report provided by the Program Evaluation Division (PED). We are concerned that we have been asked to give our formal response without having the benefit of reviewing a final draft. The draft report makes recommendations that would, if implemented, cause irreparable harm to our State's number one industry, agriculture and agribusiness. I am hopeful that members of the General Assembly will have the foresight and wisdom to look beyond the notions set forth in the draft report, and that they will continue to invest in a system that has served North Carolinians so well for over 90 years.

We strongly oppose the proposed legislative actions of transferring ownership and management of the State's agricultural research stations to North Carolina State University (NCSU) and the PED's recommendation that the State "cash in" and walk away from investments in farms and forestland that were made by generations of North Carolina taxpayers. The drastic actions proposed by your Division will eliminate jobs for 59 dedicated State employees, reduce budget accountability, and forfeit State assets that should be preserved for current and future generations.

The Department was open and transparent with all information requests and communication with the PED, and was hopeful that a balanced report would present a fair assessment of our system. Unfortunately, the draft report confounds the issue of our managed stations by expanding its scope beyond the legislative mandate, arbitrarily introducing additional facilities into a purported comparative analysis. The evaluation itself presents very little of the information provided by our Department. Rather, it echoes the university system's data and previous recommendations. Additionally, our own analysis and rebuttal have been hindered by the PED's refusal to grant access to the same information from which conclusions and recommendations were supposedly drawn.

Management of the Agricultural Research Stations Should Remain with NCDA&CS

The Department of Agriculture and Consumer Services has owned and managed research stations since 1912, providing a management team to tend the State's agricultural facilities. Farmers, farm organizations, and the agricultural community support our current management system. Surveys from your evaluation noted that "most researchers and commodity association leaders" said research stations were well managed by NCDA&CS. The draft further notes that other states recognize our dual-management system as one of the best in the country, and that states were envious of our ability to leverage state dollars across two agencies. Unfortunately, this study did very little to support the majority opinion – that a dual-management system is desirable.

Instead of acknowledging the Department's management successes, evidenced by its reputation and PED surveys, the evaluation recommends whisking ownership and management of all but one of the stations to NCSU. What you will not read in this evaluation however, is that by spending beyond their means, NCSU has overstretched its flexible budget. The North Carolina Agricultural Research Service, that houses NCSU's field laboratories and research stations, is currently experiencing a \$2.4 million budget deficit and has instituted a hiring freeze for research personnel as of March 1, 2008. This current deficit is not an anomaly. The report states that: "Funding for equipment replacement at NCSU-owned stations lagged behind NCDA&CS stations during the last five years ... One superintendent ... juggled to meet the equipment needs of the NCSU station by borrowing equipment from the NCDA&CS-owned station." During this same time of budgetary overruns, NCSU is increasing its expenditures in new agricultural research facilities to the detriment of existing research stations, operating under a separate accounting system that receives less oversight and scrutiny than other State agencies. Somehow this lack of accountability was disregarded in the PED's recommendation.

Additionally, I am disappointed with the PED's conclusion that the "best and likely only way to achieve an optimally effective and efficient" research structure is to destroy the dual-management system. Unfortunately the evaluators, or our colleagues at NCSU, failed to consider a more collaborative approach to wider and more beneficial use of the stations. Such an approach would, in my view, include increased communication, open reporting, and opportunities for researchers at public and private entities other than NCSU to utilize our state's investment in agricultural research land. North Carolina A&T State University (NCA&T) has been a cooperating partner in various projects at several research stations, and should continue to be an equal partner, not just relegated to one farm. To date, NCSU has rebuffed requests from this Department for information concerning this evaluation and, in fact, some NCSU employees have reported being specifically instructed to refrain from supplying any information regarding projects to employees of the Department.

Moreover, even the PED staff has stated that they could not access budgetary information from NCSU that they "had confidence in," that they did not have a certified budget for NCSU's research facilities, and that they had to "pull data from several sources" to produce a budget. With regard to the perceived lack of a "strategic plan," NCSU began participating in strategic planning sessions with NCDA&CS regarding the research stations during 2005, only to abruptly quit doing so in early 2007. The Department also noted a shift of research projects away from NCDA&CS-owned stations during this same period. Ironically, these changes occurred at about the same time NCSU staff recommended to the legislature that all stations be transferred to NCSU. It is very clear, as one NCSU administrator reported, that NCSU wants complete "control over current and future activities, thereby enhancing operational flexibility." Despite their awareness of this information, the PED comes to the conclusion that all stations, except for the one owned by NCA&T, should be transferred to NCSU.

Failure to Link the Closure and Sale of Research Stations with Real "Efficiency" Savings

Despite the bold assertion that consolidation "would improve efficiency and effectiveness," PED staff has merely demonstrated that a smaller agricultural research system would cost less. Astonishingly, PED staff failed to research or document how the closure and sale of seven stations would affect agricultural research in North Carolina. Their report merely concludes that the closure of seven research stations and the consolidation of "central management" will result in a savings of \$3.67 million when 59 State employees are terminated and a one-time windfall of \$54.7 million when research property is sold off.

It is difficult for me to understand how such drastic recommendations can be made without more thorough consideration of the scientific merit and economic impact of research occurring at the seven relevant sites. Closure recommendations were apparently based on "project" information generated by NCSU department heads and administrators, not from information in their own project tracking system or from the research stations' superintendents. Although researchers were surveyed over a three-year period, "projects" were only tracked for one year. Thus, the PED report is devoid of any credible trend information regarding use of any station. Interestingly, the evaluators also collected "project" data on the field labs, but they chose not to report the number of projects at these individual sites. By not reporting field lab projects, they side-stepped the application of the

same criteria used to urge the closure of seven research stations – namely an arbitrary threshold of projects per site. Had the PED fairly applied their analysis to all sites for which they had project data, they would have faced the conclusion that several undeveloped NCSU-owned sites were, in their own words, “less essential to the system than others with more activity.”

Preserve NCDA&CS Forest Tracts for Research

Five Forest Management Tracts are currently owned and managed by NCDA&CS. These land resources are available for research but are primarily managed for harvest of timber and pine straw. Authorization from the General Assembly is required prior to the expenditure of any timber and pine straw receipts, and those receipts are used for capital improvements at Research Stations. Additionally, several of these tracts are involved in the conservation of endangered plants and animals, and one serves to buffer a military installation. It is beyond me why the State should sell off land that it already owns while it simultaneously debt-finances hundreds of millions of dollars worth of property for various conservation initiatives.

In summary, the report makes clear that the majority of researchers, along with commodity groups and agricultural leaders are supportive of maintaining the current dual-management system. The Department’s involvement brings public accountability through an elected official, and budgetary transparency in the accounting of expenditures and receipts through a certified budget. The Department also provides neutral ground for agricultural research partners, across academic institutions. Most importantly, the Department’s focus is agriculture – and agricultural research deserves to be managed by an entity that will not lose sight or shift this priority among other academic pursuits.

I respect and share the legislature’s interest in ensuring that taxpayer funded programs accomplish their objectives. I agree that the public deserves an accounting of every dollar spent on agricultural research, and that establishing an oversight advisory board has merit. I am also grateful for the lasting relationship the Department has with NCA&T and NCSU. Nonetheless, I have a statutory duty to steer the policy for agriculture in this state, and to lead an agency whose primary mission is the provision of agricultural and consumer services. I intend to fight for the preservation of resources that are vital to our farmers and agricultural sector, and on behalf of the employees who have had to suffer the uncertainty of job loss while this debate has continued behind closed doors. Unfortunately, I do not have space enough to voice my entire opposition to the sweeping recommendations set forth in the PED’s report. My opposition to the PED’s recommendations is not personal. It is based on a reasoned consideration of the draft report and the PED’s failure to document that their recommendations truly are in the best interests of agriculture in this State.

Sincerely,



Steven W. Troxler
Commissioner

Cc: President Pro Tempore Marc Basnight
Speaker Joe Hackney
NCSU Chancellor Jim Oblinger
NCSU CALS Dean Johnny Wynne
NCA&T Chancellor Stanley Battle
NCA&T Dean Alton Thompson

NC STATE UNIVERSITY

Campus Box 7601
Raleigh, NC 27695-7601

919.515.2668
919.515.6980 (fax)
cals_dean@ncsu.edu

April 29, 2008

Director John Turcotte
Program Evaluation Division
NC General Assembly
300 N. Salisbury Street, Suite 100
Raleigh, NC 27603-5925

Dear Director Turcotte:

I appreciate and acknowledge the efforts of the Program Evaluation Division (PED) in examining the management, operation and efficiency of North Carolina's agricultural research stations. The task was difficult and complex, but the team delivered a comprehensive and logical report.

North Carolina State University (NCSU) and the College of Agriculture and Life Sciences (CALs) agree with most of the report's finding and recommendations. According to one of your significant findings, the system has several under-utilized stations. While I agree with this finding, I do not support your recommendation to close seven research stations based on activity. As you recommended, I support an advisory committee and a review panel to develop a strategy to establish an efficient, up-to-date and well-managed research station system. I also recommend that any savings from gains in efficiency be reinvested into the research station system. Budgets, already inadequate as acknowledged in the report, are continuing to be eroded by rising costs of fuel, feed, fertilizer and other inputs.

I agree that placing the state's agricultural research stations under management of our land-grant system (NCSU/CALs and North Carolina A&T State University – School of Agriculture and Environmental Sciences – NCA&T/SAES) management will enhance the quantity and quality of agricultural research by ensuring direct management that will greatly improve efficiency and operations. Research programs and projects designed and conducted by faculty, consistent with the mission of CALs and SAES, will have improved outcomes and more efficient delivery to stakeholders. In short, I believe that it is logical and most desirable for North Carolina's two land-grant universities to manage their research stations.

Specific comments about each recommendation follow:

Recommendation 1

I agree with Recommendation 1.

Recommendation 2

I agree with the composition of the Committee with the following changes. It currently shows that the Director of Research and Cooperative Extension is one person when, in fact they are two

Director John Turcotte

Page 2

April 29, 2008

different people. I would like to see both the Director of the North Carolina Agricultural Research Service and the Director of the North Carolina Cooperative Extension Service on this Board. The same change is recommended for North Carolina A&T State University.

Recommendation 3

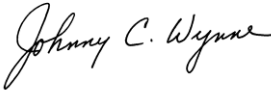
As stated earlier, the report contains a provision for a process of reviewing station efficiencies with thorough evaluation of their unique benefits to scientific research and to the agricultural industry, with input from agricultural stakeholders (Growers: NCDA&CS, NCSU/CALS and NC A&T State University/SAES). Overall, I believe that closure of stations before strategic planning and thorough reviews could be very damaging. Furthermore, I concur with the PED that the number of projects on a station may not be the appropriate indicator of its value to science.

Recommendation 4

I agree with Recommendation 4.

I would like to close by again expressing my sincere appreciation to the Program Evaluation Division for its hard work in considering the best future for our agricultural research stations.

Sincerely,



Johnny C. Wynne

Dean and Executive Director for Agricultural Programs

C. Chancellor James L. Oblinger
Chancellor Stanley F. Battle
Dean Alton Thompson



NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

OFFICE OF THE DEAN

April 11, 2008

Dr. John Turcotte, Director
Program Evaluation Division
North Carolina General Assembly
212 Legislative Office Building
300 N. Salisbury Street
Raleigh, NC 27603

Dear Dr. Turcotte:

The evaluation study, "Consolidating Agricultural Research Facility Management Would Improve Efficiency and Effectiveness," conducted by the Program Evaluation Division of the North Carolina General Assembly is comprehensive, thorough and cogently written. The structure, scope and focus of this study are developed in a logical fashion, are clearly stated and appropriately incorporate the background and contextual information. The data and methods are sufficiently detailed to justify the analysis and examine the data. The graphs and tables are instructive and well-done.

All of the findings and statements related to the University Farm at North Carolina A&T State University (A&T) are factual and accurate.

The administrators in the School of Agriculture and Environmental Sciences (SAES) at A&T agree with the three central findings reported in this evaluation study. Specifically, we endorse the statements that: (1) a strategic plan is needed to create an optimal system to support academic, research and Extension projects; (2) reducing the number of facilities will allow limited funds to be allocated more strategically; and (3) an effective and efficient system for agricultural research is important to North Carolina's agricultural industry and citizenry.

The SAES administrators are also of the opinion that the four recommendations flow logically from the findings, and are therefore, feasible. That is, we support the creation of a system of agricultural research facilities managed by the two land-grant universities; we support the creation of an advisory board, including representatives from the North Carolina Department of Agriculture and Consumer Services (NCDA&CS), North Carolina State University (NCSU) and A&T; we support the recommendation to conduct a comprehensive review to ensure that the system meets current and future research needs efficiently and effectively; and we support implementing an accountability system. Perhaps it is evident to

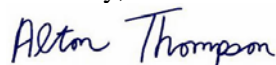
point out that we support the recommendation that “A&T should retain ownership and management of the A&T farm.”

Relative to the proposed closing of the Upper Piedmont Research Station located in Rockingham County near Reidsville (Finding #2 and Recommendation #3), we would like the “strategic planning review panel” to consider very vigilantly the continuance of this station under a share management plan between A&T and NCSU. Although only 24 projects were conducted at this station in 2007, it could prove very strategic to future university outreach and engagement plans for the Piedmont Triad region of North Carolina.

Over the last two years, A&T and the University of North Carolina Greensboro have collaborated in the development of the Gateway Research Park in Greensboro. The State of North Carolina transferred 80 acres of A&T’s University Farm, to develop this research park, further reducing land available for SAES agricultural research, Extension and outreach. Given the proximity of the Upper Piedmont Research Station to Greensboro together with the objectives of UNC Tomorrow, the maintenance of this facility would allow A&T and SAES to strengthen and expand its research, Extension and outreach capabilities and capacities. With both A&T and NCSU research, Extension and outreach efforts located and managed at this facility, the Piedmont region would be afforded the same benefits as this partnership has brought to Eastern North Carolina via the Center for Environmental Farming Systems (CEFS) at Cherry Farms. The continuance of this facility under a joint leadership, management, and fiscal (budget and resource utilization) model will prove to be a win-win situation for our land-grant universities and the North Carolina citizenry.

Finally, as previously stated, this evaluation study is well written and shows considerable thought and insight. All of the findings and statements related to the A&T University Farm are factual and accurate. The four recommendations are feasible. Implementation of these recommendations in a fair and objective manner will result in a more effective and efficient system for research in the food and agricultural sciences. The citizens of North Carolina deserve nothing less.

Sincerely,



Alton Thompson, Ph.D.
Professor and Dean

cc: Dr. Stanley F. Battle, Chancellor
Dr. Janice G. Brewington, Provost and Vice Chancellor for Academic Affairs