

ACADEMIC PROGRAM REVIEW

**DEPARTMENT OF AGRICULTURAL ECONOMICS
THE UNIVERSITY OF TENNESSEE, KNOXVILLE**

Coordinated by:

Dr. Todd Diacon
Vice Provost for Academic Operations

Review Panel:

External Reviewers

Dr. Wallace Tyner, Purdue University
Dr. Lynn Robbins, University of Kentucky

Internal Reviewers

Dr. Don Hodges, Forestry, Wildlife and Fisheries
Dr. Neal Eash, Engineering and Soil Science
Dr. Sherry Cable, Sociology

October 27-29, 2008

**ACADEMIC PROGRAM REVIEW SCHEDULE
DEPARTMENT OF AGRICULTURAL ECONOMICS
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Internal Reviewers: Dr. Don Hodges, Forestry, Wildlife and Fisheries
Dr. Neal Eash, Engineering and Soil Science
Dr. Sherry Cable, Sociology

Sunday, October 26

Pick up external reviewers at airport.

Hotel accommodations at the Crowne Plaza Hotel

Monday, October 27

8:30 Pick up external reviewers at the hotel

9:00 a.m. Orientation Meeting, (301 Morgan Hall)
Review Team
Department Head (Dr. Delton Gerloff, Interim Head)
Dean of the College (Dr. Caula Beyl)
Dean of Ag Research (Dr. William Brown)
Dean of Extension (Dr. Tim Cross, Dean; Dr. George Smith, Interim Assistant
Dean)
Dr. Todd Diacon, Program Review Coordinator

9:30 a.m. Tour and Overview of the Department
Review Team
Department Head (Dr. Delton Gerloff, Interim Head)

10:45 a.m. Faculty Interviews, (301 Morgan Hall)
Review Team
Individual or group meetings as time permits

12:00 noon Lunch (Calhoun's on the River)

- 1:30 p.m. Undergraduate Program Overview, (301 Morgan Hall)
 Review Team
 Department Head (Dr. Delton Gerloff, Interim Head)
 Departmental Faculty
 College Director of Advising (Dr. Mary Albrecht)
 Dean of Ag Research (Dr. William Brown)
- 2:15 p.m. Interviews with Undergraduate Students, (301 Morgan Hall)
 Review Team
 Undergraduate students in individual or group meetings
- 3:00 p.m. Break
- 3:15 p.m. Graduate Program Overview (301 Morgan Hall)
 Review Team
 Department Head (Dr. Delton C. Gerloff, Interim Head)
 College Graduate Dean (Dr. Mary Albrecht)
 Dean of Ag Research (Dr. William Brown)
 Vice Provost and Dean of Graduate School (Dr. Carolyn Hodges)
 Departmental Faculty
- 4:00 p.m. Interviews with Graduate Students (301 Morgan Hall)
 Review Team
 Graduate students in individual or group meetings
- 4:45 p.m. Summary Session (301 Morgan Hall)
 Review Team
- 6:30 p.m. Dinner (Chesapeake's, 500 Henley St.)
 Review Team (only)

Tuesday, October 28

- 8:10 a.m. Pick up external reviewers at the hotel
- 8:30 a.m. College Meeting (301 Morgan Hall)
 Review Team
 College Office Representatives
 Dean of Ag Research (Dr. William Brown)
 Dean of Extension (Dr. George Smith, Interim Assistant Dean)
- 9:30 a.m. Break
- 9:45 a.m. Central Administration 4th floor Conference Room, Andy Holt Tower

- Review Team
Program Review Coordinator, Dr. Todd Diacon
- 10:45 Break
- 11:00 a.m. Faculty Interviews (301 Morgan Hall)
Review Team
Individual or group meetings as time permits
- 12:00 noon Lunch (Wok Hay, 5018 Kingston Pike)
- 1:30 p.m. Faculty Interviews (301 Morgan Hall)
Review Team
Individual or group meetings as time permits
- 2:45 p.m. Heads of Related Departments (301 Morgan Hall)
Review Team
Department Heads
- 3:45 p.m. Break
- 4:00 p.m. Department Head Exit Interview (302 Morgan Hall)
- 5:00 p.m. Summary Session (302 Morgan Hall)
Review Team
- 6:30 p.m. Dinner (Copper Cellar West, 7316 Kingston Pike)
Review Team (Only)

Wednesday, October 29

- 8:10 a.m. Pick up external reviewers at the hotel
- 8:30 a.m. Work Session, 4th floor Conference Room, Andy Holt Tower
- 11:00 a.m. Concluding Session, 4th floor Conference Room, Andy Holt Tower
Review Team
Central Administration
Dean (Dr. Caula Beyl)
Dean of Ag Research (Dr. William Brown)
Dean of Extension (Dr. Tim Cross, Dean; Dr. George Smith, Interim Assistant
Dean)
Dr. Todd Diacon, Program Review Coordinator
- 12:00 noon Adjourn

References:

Deans

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Delton C. Gerloff, Interim Head; 2621 Morgan Circle; 302 Morgan Hall, 37996-4518; Phone 865.974.74622

Program Review Coordinator

Dr. Todd Diacon, Program Review Coordinator, 521 Andy Holt Tower, Campus 0152; 974-3265

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I. DESCRIPTION OF THE ACADEMIC UNIT

A. Vision and Mission

A vision can be defined as an image of the future we wish to create. The department's vision is to have the United States' best prepared graduates, in answering relevant and important applied economic challenges that contribute to societal and their personal well being; to have significant, measurable, and lasting impact on important research topics; and to positively impact the quality of life for Tennessee agricultural producers and citizens through Extension educational programs.

Our mission statement is to be nationally recognized as an outstanding academic unit that provides: a) research to expand economic knowledge that can be used by individuals, businesses, and public officials in decisions regarding allocation of resources for production, distribution, and consumption of goods and services related to agriculture and natural resources and improvement of standards of living in rural areas, b) extension educational programs that develop and deliver current relevant information to decision makers involved in these areas, and c) resident and nonresident instruction programs that provide students with thorough understanding of economic and business aspects of agriculture, food, natural resources, and rural economies and that lead to acquisition of problem-solving skills commensurate with B.S., M.S. and Ph.D. degrees.

B. Scope and Emphasis

The Department of Agricultural Economics has responsibilities in teaching, research, and Extension consistent with the Land Grant mission of The University of Tennessee. These three functions are co-located in a single disciplinary unit in order to take advantage of the natural symbiotic relationship between resident instruction, discovery of new knowledge, and informal, off-campus education. While faculty members have specific budgetary assignments with regard to teaching, research, and Extension, there is substantial sharing of expertise to apply to current needs without regard for formal responsibilities.

Faculty members usually are employed to work primarily in sub-disciplines within agricultural economics. However, there may be some migration and the work of faculty members crosses the very blurred sub-disciplinary lines. The major sub-disciplines that are represented among the faculty are: economics of production and farm management, markets and prices (including consumer economics), rural economic development, natural resource economics, and policy. These sub-disciplines are represented across the teaching, research, and Extension programs. In addition, some faculty members are viewed as specializing further in specific commodities, industries, technologies, subjects, or levels in the economic system. In the Department currently, a list would include: livestock, bio-energy, organic agriculture, row crops, land use, cotton, precision farming, tobacco, consumer demand, water resources, international trade, agricultural policy, logistics, environmental issues, and others. The content of this list is determined in part by administration as it approves position searches, by interests of individual faculty, by availability of extramural funding, and by the

conscious hiring decisions of the faculty as a group. As one would expect, these tend to change some over time as emerging issues develop and others wane in importance. These also cut across research, Extension, and teaching functions.

The **resident instruction program** consists of course work and curricula that focus on the development of economic and business skills that are applicable particularly to the agricultural, food, and fiber industries, to efficient management of natural resources, and to improvement in quality of life in rural areas. However, these same skills are applicable in many additional areas of private and public life.

The Department currently offers a **B.S. in Agriculture** encompassing two majors: a) Food and Agricultural Business and b) Natural Resource and Environmental Economics (yet to be approved by THEC). Both of these were initiated in fall 2008 after the Department had operated since 1988 with a single major titled Agricultural Economics and Business. The development of the new majors followed a strategic planning process in which this need was clearly identified. Under the Food and Agricultural Business major, students may choose to concentrate in Agricultural Equipment Systems Management. This concentration combines course work in Agricultural Economics and Business with courses in Biosystems Engineering Technology.

The **graduate program** in the Department consists of thesis and non-thesis programs in Agricultural Economics. Within the thesis program, students may choose a concentration in Agricultural Economics or Natural Resource Economics. Within the non-thesis program students may choose to concentrate in Agricultural Economics or in Agribusiness. The Department also participates in the interdepartmental Ph.D. program in Natural Resources with a concentration in Natural Resource Economics. The program is housed in the Department of Forestry, Wildlife, and Fisheries.

The **research activities** of the Department account for the largest share of funding and faculty FTEs. Emphasis in the research program is on developing knowledge applicable to practical economic problems of importance to the agricultural and food industries, the development of rural areas, and the allocation of natural resources. These areas are viewed as encompassing a broad spectrum of related activities and issues. Research faculty work closely with faculty in other departments to seek inter-disciplinary solutions to issues and problems. Faculty members also participate in regional and national research efforts in cooperation with faculty from other universities and research institutes across the country.

The measurements of success in the research programs of individual faculty consist of the value of publications in the refereed literature, presentations to professional and industry groups, the contributions of research results to solution of practical problems, writings in popular outlets, and interpretation of results to those who can utilize them. That is, usefulness of research results is considered very important. Clientele of research programs include other scholars, industry professionals, public agencies, policy makers, granting organizations, Extension educators, and lay individuals.

Extramural funding sources for research are emphasized as a necessary supplement to state and federal funding as inputs into the research program. Funding sources influence the subjects and types of research conducted. Extramural funding is especially important to employment of graduate research assistants and, therefore, to the viability of the graduate program.

Extension programs emphasize support for county and regional Extension efforts as well as programs that are statewide in scope. In addition, Extension faculty members are active in multi-state educational projects that answer problems of significance common to more than one state. Extension programs include all of the sub-disciplines within agricultural economics mentioned above. In general, typical educational methods include in-person presentations at county/regional/state/multi-state-level meetings and conferences, development and dissemination of information through print and electronic media, and, to a lesser extent, one-on-one consultations with clientele.

Because of the nature and traditions of county Extension programs, some activities are aimed at assisting individual producers of agricultural products. That is, improvement of firm-level decision-making is important. This theme affects the educational programs of Extension faculty in that most programs are targeted eventually at the firm. A portion of the total effort of Extension faculty is responding to requests for assistance from individuals or small groups of producers through county Extension offices.

As with the research program, extramural funding for Extension is very important as a supplement to state and federal funding. This source of funding is especially important to multi-state educational programs and to proactive state-level programming. Extramural funding is less important to efforts to respond to the requests for assistance from specific individual producers and county personnel.

Extension efforts of the faculty in Knoxville are supplemented and extended in the area of farm management and marketing by ten Area Farm Management Specialists strategically located across the State. These are M.S.-level positions that emphasize knowledge of farm operations and familiarity with area conditions. These positions are administratively responsible to regional Extension administration.

C. Special Programs

Unique components and distinctive innovations of the Department's programming include:

- The Agricultural Equipment Systems Management concentration, a unique interdisciplinary program that combines courses from the Food and Agricultural Business major with courses from Biosystems Engineering Technology. Students develop a high degree of technical expertise with respect to agricultural equipment, as well as the ability to apply sound business and economic principles to management of a business. Graduates are particularly well prepared for career opportunities in the agricultural machinery industry as dealership managers, as well as with agribusiness

firms in operations management. Completion of this concentration also qualifies the student to receive a minor in Biosystems Engineering Technology.

- A minor in Food and Agricultural Business that students from any major can complete thus adding a complementary strength to their academic program and increasing their competitiveness for some types of careers in the business world. Building on introductory courses in economics and accounting, the remaining required courses in our Department provide students with exposure to the areas of management, marketing, finance, and one additional area of the student's choice.
- The Department is recognized as a national leader in economic research related to the cutting edge field of bioenergy, especially through participation in the Bio-based Energy Analysis Group and the University's Office of Bioenergy Programs. This research, conducted in partnership with an array of governmental and academic institutions, provides decision makers in government and industry with the most up-to-date economic and environmental analysis of the bio-based industry at the state, region, and national levels. Focus areas include supply and demand, costs of production, market opportunities, feasibility analyses, and regional and national economic impacts, along with environmental impact analysis. This research is being directly transmitted to the classroom through the new undergraduate Bioenergy Concentration, offered by the Department of Plant Sciences starting in the fall of 2008. For instance, Ag Econ 212 is part of the required course listing and Ag Econ 355 and Ag Econ 470 are included as part of the Bioenergy Business Specialty Area. In addition, the specialization of faculty in research and outreach in bioenergy affords graduate students the opportunity to participate in thesis and dissertation research projects in this field area, most of which are extramurally funded.
- The Department is actively engaged in enhancing the sustainability of Tennessee's economy and environment through research-based educational activities that focus on land use and rural development. Educational efforts directed at business/land owners and decision makers have spotlighted the policy and practice of land conservation and economic development. As part of this effort, 10 area farm management specialists are working across the state teaching farm families and rural business owners how to improve their decision making skills and achieve their goals. Additionally, the Sustainable Tennessee Extension program is targeting community leaders to assist them with entrepreneurship development.
- The Department involves partners who volunteer to teach Federal Income Tax Seminars across Tennessee. A total of 832 tax professionals received training in 2007. As a result, tax professionals receive 8 credit hours toward certification as enrolled agents with IRS and/ or CPE credits from Tennessee Board of Accountancy.
- The Department is engaged in the development and dissemination of information about precision farming to agricultural producers, agribusiness firms, crop consultants, government officials and others with a particular interest in precision

agriculture technologies. In addition, a precision farming course is offered (Ag Econ 444 Economics of Precision Farming Technologies).

- The Agricultural Policy Analysis Center is a nationally recognized research center focused on timely analysis of how commodity, environmental, energy, trade, and other policies may impact U.S. and Tennessee agriculture. Personnel from the center participate in instruction of the undergraduate and graduate policy courses (AGEC 430 and AGEC 530) as well as other courses on an as needed basis. In addition, by working with graduate students, they provide students with a unique opportunity to participate in research projects impacting agricultural policy decisions at both the state, national, and international level arena.
- The Agri-Industry Modeling and Analysis Group is a working group in the Department from a cross-section of specializations (farm management/production, marketing, economic development) who function as a team to conduct agribusiness feasibility analysis and economic impact analysis. Studies are performed for a variety of clients including federal and state agencies, commodity organizations, and the Institute of Agriculture. Graduate research assistants may participate in these studies, with some adopted as their thesis projects, using tools such as economic feasibility analysis or economic impact modeling. Economic impact modeling methods are incorporated in AGEC 525 Operations Research Methods, while market feasibility methods are incorporated in AGEC 550 Advanced Agribusiness Marketing.
- The Department has four faculty specializing in natural resource economics. Several natural resource economics faculty participate in the Natural Resource Policy Center (multidisciplinary center to help address natural resource issues in the southeastern United States). Analytical tools employed used by these faculty include GIS, non-market valuation, and spatial econometrics. Graduate students working with these faculty have adopted these analytical tools to address natural resource issues in their research. Methods for using these tools are reinforced in AGEC 570 Advanced Natural Resource Economics, AGEC 670 Advanced Topics in Natural Resource Economics, and AGEC 550 Advanced Agribusiness Marketing.

D. Diversity Initiatives

The Department encourages diversity at all levels and strives to make programs and opportunities available to all individuals and groups. The Department strives to have a mixture of students in its programs from various race, gender, domestic in-state and out-of-state, and international groups. In addition, the Department strives to have a diverse faculty to serve the needs of its students and other clients.

A good example is the Department's commitment to diversity in our M.S. degree program. Since 2003 the number of international students admitted into the M.S. program has been increasing. The percentage of students accepted into the M.S. program that were international students increased from 0% in the 2003-2004 academic year to 33.3% in the 2007-2008 academic year. The mixture of male and female students has averaged 52.1%

female during that same time period. These trends are reflected in Table 1.1. At the undergraduate level, the share of students who are female is about 26%.

In keeping with the Department's commitment to diversity, the faculty is from a diverse background. The faculty of the Department includes two white females, one international female, 15 white males, and four international males. The international female and one international male faculty members are of Hispanic/Latino origin. Three of the international male faculty members are of Asian origin. One Agricultural Economics faculty is co – Coordinator for Tennessee of the Southern Region Sustainable Agriculture Research and Education (SARE), group that places a heavy emphasis on minority issues.

E. Curricula

The Department's B.S. degree program contains majors in Food and Agricultural Business and in Natural Resource and Environmental Economics (pending THEC approval). At the graduate level, the Department conducts an M.S. program in Agricultural Economics. In addition, the Department offers the opportunity to pursue a Ph.D. in Natural Resource Economics within the Natural Resources doctoral program administratively housed in the Department of Forestry, Wildlife, and Fisheries.

Undergraduate

The **Food and Agricultural Business** major focuses on the functioning of the agri-food sector of the global economic system and economic principles for decision-making by business managers, consumers, policymakers, and others within that sector.¹ Students complete a curriculum designed to provide them with a broad-based education and the specialized skills necessary for a successful career in the agri-food industry or with a related organization or public agency. The curriculum for the major is shown in Exhibit 1.1.

Within this major, a concentration in Agricultural Equipment Systems Management is offered. This is a unique interdisciplinary program that combines courses from the Food and Agricultural Business major with courses from Biosystems Engineering Technology. Students develop technical expertise with respect to agricultural equipment, as well as the ability to apply sound business and economic principles to management. Completion of this concentration also qualifies the student to receive a minor in Biosystems Engineering Technology. The curriculum for the concentration is shown in Exhibit 1.2.

The **Natural Resource and Environmental Economics** major was created in 2008 pursuant to the Department's 2007 Strategic Plan. It has been approved by the UT Undergraduate Council and Faculty Senate. Approval by the TN Higher Education Commission is expected during Fall, 2008. The goal of this program is to provide students

¹ The Food and Agricultural Business major was established in 2008. It replaced the Agricultural Economics and Business major which had been the mainstay of the Department's undergraduate program since 1988. The change was compliant with the Department's 2007 Strategic Plan and was intended to better align the program with the perceived market among undergraduates.

with the knowledge base and tools to deal intelligently with tradeoffs associated with increasing competition for limited land, water, and other natural resources, as well as growing concern about environmental degradation of various sorts. The curriculum for the major is shown in Exhibit 1.3.

Graduate

The **Master of Science** degree in **Agricultural Economics** contains concentrations in Agricultural Economics (thesis and non-thesis), Agribusiness (non-thesis), and Natural Resource Economics (thesis). The **Agricultural Economics Concentration** is targeted to students wishing to enter careers in the public and private sectors of agriculture and those wishing to pursue a Ph.D. degree in Agricultural Economics, Natural Resources, Economics, or related fields. Thirty-one hours of graduate credit (including six hours of thesis research) plus oral defense of the thesis are required for the thesis option. Thirty-six hours of course work plus written and oral comprehensive examinations are required for the non-thesis option. Curriculum requirements for the thesis and non-thesis options are shown in Exhibits 1.4 and 1.5, respectively.

The **Agribusiness Concentration** is targeted at students wishing to enter careers in the private and public sectors of agriculture and the food industry including marketing/procurement, manufacturing, finance, insurance, and farm management. To provide students with agribusiness management and decision-making skills, the program integrates course work in agricultural economics, business, and statistics with a professional agribusiness internship. The program consists of 31 semester hours of course work, including 3 hours of internship and written and oral comprehensive examinations. The program is designed to allow students to graduate within 18 months of initial enrollment. Curriculum requirements are given in Exhibit 1.6.

The **Natural Resource Economics Concentration** is designed for students who are interested in working in public and private organizations that manage natural resources and those that impact allocation of natural resources. The curriculum combines courses in economic theory, quantitative methods, and natural resource economics with a research thesis for a total of 31 hours of graduate credit. Directed electives are available in a wide variety of fields that relate to natural resource allocation. Curriculum requirements are given in Exhibit 1.7.

The Department offers students the opportunity to pursue a **Ph.D. in Natural Resources** with a concentration in Natural Resource Economics. The program is intended for students who wish to pursue a career in academics, research, or a related field. Course work for the degree (72 hours including 24 hours of dissertation) draws heavily from both the Department of Agricultural Economics and the Department of Economics. Successful completion of a written qualifying examination in microeconomics, a written comprehensive examination in natural resource economics, and an oral comprehensive exam over all coursework are required in addition to successful defense of the dissertation. A majority of the faculty members on the student's doctoral committee are from the Department of Agricultural Economics, including the major professor. Course requirements are shown in Exhibit 1.8.

F. Enrichment Opportunities

Student enrichment opportunities include participation in the local chapter of NAMA (National Agribusiness Marketing Association) for undergraduates, an undergraduate agricultural policy discussion meet, student internships (both undergraduate and graduate), international study tours to Thailand in cooperation with Kasetsart University and to Jamaica, the agricultural economics departmental graduate student organization, and presentations and attendance at professional organization meetings. Students also hold leadership positions in their living groups and other campus organizations. Some provide leadership at the state and national levels.

Members of the NAMA chapter form a team each year to develop a marketing plan for a product. This marketing plan is entered into a national competition each year. The Department has sponsored a NAMA Marketing Team each of the last nine years. The team was national runner-up in 2002 and this past year, placed third out of 31 teams from leading agricultural schools in the U.S and Canada. An agricultural policy discussion meet is co-hosted by the Department and the Tennessee Farm Bureau. This meet is open to students from all majors, including agricultural economics. The meet offers the opportunity for students to research and discuss issues of current importance in agricultural and food policy. Winners from each of the ag schools in the state progress to compete in a state level meet with the winner continuing to a national level competition. This year, a student from the Department won the local and state level meets. Two years ago, one of our students placed second at the national level.

Internship programs are available at both the undergraduate and graduate levels. These internships afford students the opportunity to gain professional experience with an agribusiness or agricultural agency. The undergraduate internship requires the student complete a special project for the sponsoring organization while the graduate internship encompasses a larger research component.

Outside the Department, students may hold positions in fraternities or provide leadership to other departmental clubs, sports organizations, university-wide philanthropy event. Two years ago, one of our students won the top award given a university undergraduate when she was named a Torchbearer in recognition of the combination of leadership and academics. Several of our students either currently or in pervious years have served as state officer of FFA. Several have also pursued national FFA officer positions.

Recently, a graduate student organization was re-established. This organization helps relay issues and concerns of the graduate students to the Department and provides a means for students to organize social events.

Graduate students are also offered the opportunity to present papers and posters at professional meetings. If grant or departmental funds are unavailable for travel for the student, the Department may use Development Fund monies to assist students with travel expenses. Faculty, alumni, and others contribute to this fund. Students may present papers or posters at meetings such as the Southern Agricultural Economics Association or American

Agricultural Association annual meetings. As appropriate, graduate students may accompany a faculty member to client meetings to discuss current research efforts or may assist faculty members with Experiment Station Field Day presentations or other presentations to clientele groups in the state.

The Department periodically hosts seminars. These seminars are delivered by faculty in the Department or by faculty or industry professionals from outside the Department. Graduate students have also presented seminars.

G. General Education

The Department currently has no courses approved for General Education credit. A new course—AGEC 201: Economics of the Global Food and Fiber System—was included in a package of curricular changes approved last year (effective with Fall 2008 Catalog). Approval as a General Education Social Science elective was requested in January 2008, but the UTK Social Science Subcommittee did not recommend approval at that time. The Department's Undergraduate Coordinator has requested feedback from the Subcommittee as to why the course was not approved and guidance as to how the General Education proposal or the course itself might be revised to enhance the prospects for approval, but unfortunately has received very little.

The catalog description for the course is as follows: "Introduction to microeconomic and macroeconomic principles and their application to the global food and fiber system. Specific topics include consumer and producer behavior, market equilibrium, monetary and fiscal policy, and international trade."

This course is designed to introduce students to basic terminology, concepts, and principles of economics as a social science. Students will learn how simple economic models are used to explain behavior on the part of consumers and producers within the realm of market institutions. Models that seek to explain how various factors cause changes in macro-economic variables will also be explored. Substantial attention will also be given to the topic of international trade and debates about globalization, and thereby contribute toward the objectives of the Ready for the World initiative. While this course is intended to provide general coverage of micro-economic and macro-economic principles at an introductory level, this will be done with emphasis on examples and illustrations from the food and fiber sectors of the economy. Attention will also be given to ways in which the food and fiber sectors differ from other sectors of the economy with regard to economic considerations.

In addition, the Department of Agricultural Economics contributes to university-wide undergraduate education through the delivery of courses open to non-majors that have significant non-major and across-campus enrollment (for example AGEC 342 Agribusiness Firm Management, AGEC 350 The Agricultural Marketing System, and AGEC 355 Agribusiness Marketing and Professional Selling).

H. Connections

Connections with industry, alumni, businesses, agencies, and other organization are critical to effectiveness of the Department's academic programs. These connections help enrich the students' classroom experience, foster internship opportunities, often result in funding for assistantships and graduate students' research, and encourage employment opportunities for graduates.

The Department's graduate programs are heavily reliant on extramural funding from a variety of sources. Much of the Department's graduate assistantship funding is derived from grant or contract funding. In addition, many of the research opportunities for students to participate in as part of their thesis projects are extramurally funded. Connections with funding agencies and organizations are critical to the funding of research by graduate students. Faculty have obtained extramural funding from a variety of sources, including federal agencies such as USDA, Forest Service, EPA, DOE, DOD, NASA, ORNL, state agencies, such as Tennessee Department of Agriculture and Tennessee Department of Economic and Community Development, and groups such as Tennessee Farm Bureau, commodity organizations, Tennessee Valley Authority, private companies, and the Farm Foundation. In addition, the Department includes two adjunct faculty who are now or were previously employed with ORNL.

Internships with agribusinesses, agricultural organizations, or government agencies are important components of both the undergraduate and graduate programs. The Department's connections assist with identifying internship opportunities. Students have interned with a variety of businesses, organizations, and agencies both in Tennessee and out-of-state.

Several classes in the undergraduate and graduate programs incorporate projects with agribusinesses, with a focus on small business assistance. Students work with the business to identify a problem or issue and then conduct research on that issue, with reports provided to the business. Periodically, industry professionals are also invited as guest lectures in classes or as speakers at the NAMA Agribusiness Club meetings. Connections are also critical to employment opportunities for undergraduate and graduate students.

The Department also maintains a newsletter called the *AgEconogram*. This newsletter goes to alumni and other individuals across the state and United States. Alumni news is one of the features in the newsletter.

The Department has a strong academic tie with the Department of Forestry, Wildlife, and Fisheries through its participation in the Natural Resources Doctoral Program. The PhD program in Natural Resources is located administratively within the Department of Forestry, Wildlife and Fisheries. In the Natural Resource Economics concentration, the coursework for the degree draws heavily from both the Department of Agricultural Economics and the Department of Economics. Hence, the Department also has an important academic tie with the Department of Economics.

The Department maintains connections with clientele throughout the state through its Extension outreach programs. These connections include those with county Extension office personnel, Area Farm Management Specialists, and the Center for Profitable Agriculture in Spring Hill. These connections are important to academic programs in a variety of ways through student recruiting, identifying student projects, internship opportunities, and potential employment by the Extension Service.

I. Non-traditional Instruction

The Department's academic programming is intended to give students a foundation upon which they can build successful careers in agricultural economics or related fields. This foundation is constructed through classroom instruction and experiential learning opportunities that occur in a variety of settings. Emphasis is placed on mastering economic concepts and tools and how these can be applied to solving problems and analyzing situations at the household, firm or government level. To accomplish this, several classes are offered by the Department using non-traditional instructional methods:

- Available as independent study courses through UT's Department of Distance Education and Independent Study are:
 - AGEC 212 The Agribusiness Firm (3 credits) is an introduction to agribusiness firm characteristics and decision-making. It provides an overview of economic principles and the basic functions of management: planning, organizing, controlling and directing. Specific topics include firm structure, forecasting, marketing and selling, budgeting, break-even analysis, use of financial statements, capital investment, supervision, staffing, and evaluation.
 - AGEC 470 Natural Resource Economics (3 credits) which explores the nature of natural resources; economic efficiency as a basis for natural resource use; externalities in natural resource use; factors influencing environmental quality; alternative public policy tools for influencing natural resource use or improving environmental quality

Both classes allow assignments to be submitted electronically and the final exam can be taken at an off-campus location subject to arrangements for a proctor. Students can sign up at any time and have nine months to complete the course. This offers flexibility for UT students who have a scheduling conflict or are located at some distance from campus for some reason. These courses are also available to non-UT students.

- Available web-based courses include:
 - AGEC 315 Agricultural and Environmental Law (3 credits) provides a survey of legal topics related to agriculture and the natural environment. Topics include introduction to legal system, torts, property, contracts, farm and business organization, environmental and natural resource regulation,

estate planning and effective utilization of legal counsel. All aspects of this course, including instruction and assessment, occur online.

- AGEC 550 Advanced Agribusiness Marketing (3 credits) examines the use of economic concepts in agribusiness marketing decisions. Topics include: analysis of agricultural markets; buyer behavior in food and fiber markets; competitive environment; Profitability analysis of marketing and distribution decisions; market planning and strategy; product evaluation and new product introduction; and pricing decisions. This course uses online video/audio lectures in an asynchronous context. Homework and exams are also conducted through Blackboard-based platform.
- AGEC 570 Advanced Natural Resource Economics (3 credits) offers a graduate-level analysis of natural resource allocation issues; applied welfare economics, external effects and evaluation of public policy and is taught entirely online.

Much of the Department's non-traditional instruction takes place in the form of Extension programming which occurs at the local, state, and regional level. Examples include:

- Chairing an interdisciplinary team that provides leadership for water resource outreach education. This team has developed a number of publications and other materials including a farmstead self-assessment program and a home self-assessment program . The Department also provided leadership for the Extension portion of the Beaver Creek hydrologic unit area program.
- Collaborating with county Extension offices to assist individuals and communities make better informed land use decisions.
- Providing up-to-date market information to Tennessee's crop and livestock producers through weekly and monthly publications such as: Tennessee Market Highlights, Milk Market News and the Monthly Crop Outlook. The Extension faculty members are also actively involved with county Extension Agents, Area Farm Management Specialists and other state specialists in teaching producers what is taking place in the marketplace and how that impacts their operations.
- Offering financial planning, marketing and stress management help through The MANAGE Program. MANAGE was specifically to help Tennessee farm families evaluate their individual situation and assist them in improving their quality of life. Over 15,000 Tennessee farm families have participated in the MANAGE program.
- Working closely with County Extension offices to develop, conduct, and evaluate educational programming on rural development issues. This educational support is used to: enhance the knowledge and skills of community leaders and entrepreneurs, build rural community decision making capacity and identify key factors affecting the

J. Faculty

The Department is composed of 22 Agricultural Economics faculty (Table 1.2). Since May of 2003, five faculty positions have been filled (including the hiring of an agricultural marketing/biofuels logistics researcher who will join the faculty in January 2009); a search is currently underway to fill a Nursery/ Greenhouse and Fruit/ Vegetable Marketing and Management position. These five positions comprise nearly twenty-five percent of the faculty. Of these five positions, one was filled in the academic year 2007-2008 (Production Economics position), and one is going to be filled in the academic year 2008-2009 (Marketing position). These most recently two filled positions are consistent with the strategic plan objectives written by faculty members in 2007. According to the strategic plan the need for new hires in the areas of production economics and marketing respond to dramatic decline in Departmental FTE's in marketing, production, and farm management, core areas to the Department of Agricultural Economics.

The positions were filled after national searches were conducted. During each search, minorities and women were encouraged to apply. Position announcements were published on-line and/or in print with the American Agricultural Economics Association (AAEA) and other agricultural economics associations at the regional level. Mailings of announcements were also sent to members of the Committee on Women Agricultural Economists and the Committee on the Opportunities and Status of Blacks in Agricultural Economics.

New faculty members have received startup packages to assist them in setting up their programs. All untenured faculty members are assigned a mentor from the senior faculty. Funding has been available for all faculty members to attend at least one professional conference each year. The Department has faculty development funds available to provide travel funds for new faculty members, and for established faculty members to attend conferences and workshops to acquire new knowledge or skills, or to enhance existing expertise.

Undergraduate and Graduate Instruction

The courses taught and graduate students advised by faculty members in the Department of Agricultural Economics are listed in Table 1.3. The teaching faculty in Agricultural Economics comprises a total of 3.9 FTE's distributed among 14 individuals (see Table 1.2). All of these faculty members, except for one, have joint appointments in the College of Agricultural Sciences and Natural Resources and the Tennessee Agricultural Experiment Station. The teaching faculty members in Agricultural Economics also advise undergraduate students and/or graduate students and teach courses for the master's and doctoral degrees in Agricultural Economics and Natural Resources, respectively. In addition, as shown in Table 1.3 several faculty without formal teaching appointments participate in the Department's academic programs by advising graduate students.

K. Admissions/Retention

Undergraduate Admissions

The Department currently follows general UT admission requirements for undergraduates. A section of the Undergraduate Catalog states that UT strives to “admit a freshman class that reflects the University's mission as the state's leading public teaching and research university; represents the unique strengths and characteristics of the students from across the state; and incorporates the Enrollment Guidelines established by the Board of Trustees.” The following criteria are used in making admission decisions:

1. Grade point average
2. ACT/SAT score
3. Academic courses
4. Class rank (if applicable)
5. Student statement
6. Extracurricular activities
7. Leadership activities, and
8. Life experiences

[For more information, <http://admissions.utk.edu/undergraduate/apply/requirements.shtml>]

Undergraduate Retention

At the undergraduate level, retention is improved through departmental advisors meeting with their advisees regularly. Faculty advisors work closely with the CASNR College Coordinator for Retention to assist and encourage students with academic performance problems by providing support and resources to enhance their academic success. Several faculty members hold extra study sessions for students prior to exams. All faculty have office hours for students but in effect have an open door policy for students needing extra assistance with class work. Several of the basic classes have graduate student teaching assistants that are also available to assist students with homework or other class needs. A room in the Department is set aside for student use. It is often used for group study sessions or other opportunities for students to obtain help from their colleagues. Advisers print out grade reports for all advisees each semester so those who need some extra counseling or class adjustments for the following semester can be contacted.

Exceptional students (3.5 GPA in the major and 3.25 GPA cumulative) may be enrolled in the CASNR Honors program. Faculty mentors meet regularly with honors students to guide student progress. At the Department level, faculty advisors work closely with students in providing guidance on course planning, extracurricular activities, internship opportunities, and career placement.

In addition to The Hope Scholarship and any guaranteed UT scholarships a student may be receiving, Agricultural Economics majors are eligible to receive scholarships from the Department and the College of Agricultural Sciences and Natural Resources. Approximately half of the agricultural economics majors receive scholarships from departmental or college sources, averaging about \$2,000 per year. Currently, criteria for an

outstanding undergraduate award in agricultural economics are being developed by the Department's Honors and Awards Committee.

Along with Department-CASNR retention efforts, the Department supports undergraduate members of the National Agri-Marketing Association (NAMA) marketing team, which competes against other undergraduate students nationally. The Department holds spring and fall semester picnics where faculty, undergraduate, and graduate students participate. Undergraduate students are also provided opportunities to participate in international programs, including studies abroad in Thailand and Jamaica. Additional undergraduate retention efforts focus on maintaining contact with students who successfully completed AGEC110 in the fall of each year throughout the remainder of the academic year.

Graduate Admissions

Admission to the M.S. and Ph.D. graduate programs follows the standards outlined in the "2007 – 2008 Graduate Catalogue" of UT-Knoxville (p. 19). Students are required to have a bachelor's degree with a satisfactory grade point average from a college or university accredited by the appropriate regional accrediting agency or foreign equivalent. A minimum grade point average of 2.70 out of a possible 4.00, or a 3.00 during the senior year of undergraduate study is required. Applicants with previous graduate work must have a grade point average (GPA) of 3.00 on a 4.00 scale or equivalent on all graduate work. Some flexibility is granted to applicants with work experience or who are entering graduate study after a number of years away from an educational institution with respect to GPA. International students graduating from an institution in the United States must meet the same requirements as domestic students.

Applicants whose GPA falls between 2.50 and 2.70 may be admitted on probation, with recommendation of an academic unit. The probationary status is removed after completion of 9 or more hours of graduate credit with a minimum GPA of 3.00. Failure to maintain a 3.00 while in this status results in dismissal. International students may not be admitted on probation.

[For more information: <http://gradschool.utk.edu/GraduatePolicies.shtml>.]

The Department has a standing Graduate Committee that evaluates student applications and forwards its recommendations to the Department Head. Evaluations are based on transcripts of prior coursework, Graduate Record Exam (GRE) scores, Test of English as a Foreign Language (TOEFL) scores for applicants whose first language is not English, and recommendation forms completed by individuals familiar with the applicant's ability to succeed in graduate school. This committee provides the Department Head with a recommendation regarding acceptance into the agricultural economics M.S. or Ph.D. programs and a recommendation regarding an assistantship.

Applicants who have not successfully completed the prerequisites for admission to the MS program may be required by the Departmental Graduate Committee to take these courses in addition to the regular requirements for the degree. These courses must be taken before entering the program or as soon as possible after entrance and the student must earn a grade of C or better (or S, for S/NC grading) in each prerequisite course.

Applicants to the natural resources Ph.D. program have normally completed a master's degree prior to beginning the doctoral program. Specific admission requirements include: (1) A minimum grade point average of 3.0 on a 4.0 scale; (2) A minimum composite score from the general GRE on the verbal, quantitative, and analytical sections of 1650, with a combined minimum of 1100 on the verbal and quantitative sections; (3) Submission of a statement of professional goals, philosophy of natural resource management, interest in natural resource economics, and reasons for applying to the program; and (4) Submission of three letters of reference (Graduate School Rating Forms) from individuals capable of evaluating the applicant's potential for graduate work in natural resource economics.

Admission to the natural resource economics concentration of the natural resources Ph.D. program is determined jointly by the Department of Agricultural Economics and the Department of Forestry, Wildlife and Fisheries. Admission is recommended by the Departmental Graduate Committee and the Graduate Coordinator for the Department of Forestry, Wildlife and Fisheries after the student has met the minimum requirements for admission to the Graduate School. More information is available in the Department's "Graduate Program Requirements" handbook.

Assistantships are allocated on a competitive basis, yet decisions are made as soon as possible for each applicant. The allocation of new assistantships is impacted by the availability of funds from the Experiment Station, the College of Agricultural Sciences and Natural Resources, and research-based grants and contracts secured by faculty. In some instances, applicants are admitted without an assistantship offer; however, if funds later become available, these students may be granted an assistantship at that time. This may occur before the student arrives on campus, or in some cases, after the student completes a semester of coursework in the graduate program.

Graduate Retention

Graduate student retention is enhanced by graduate students meeting regularly with faculty to ensure that (1) administrative deadlines are met in a timely fashion, (2) work goals are achieved, and (3) classroom progress is maintained. The Department recognizes the Graduate Student Organization (GSO), which serves as a liaison between faculty and graduate students for addressing concerns or needs of graduate students. Students are encouraged to participate in Gamma Sigma Delta, an honorary society for graduate students in agriculture. This past year, one of our master's students won an outstanding student award.

Graduate students are encouraged to participate in profession meetings. The Graduate School provides a limited amount of funds for travel to professional conferences, and the Department usually matches the amount awarded. Typically, over 90 percent of the Department's graduate students receive assistantships." In addition, criteria for an outstanding M.S. student in agricultural economics award are under development by the Honors and Awards Committee.

L. Accreditation

The American Agricultural Economics Association does not offer accreditation of academic programs.

M. History and Background

Teaching/Research Functions

While records are sketchy, apparently teaching/research activities in agricultural economics were formally organized into a department in 1919 with one faculty member. A second member was added in 1928. The name of the Department became Agricultural Economics and Rural Sociology at some point prior to 1950 in recognition of faculty in rural sociology. The number of teaching/research faculty increased to 11 by 1948, 19 by 1975, and to a high of 22 tenure-track positions in 1989. At the time of the last Academic Program Review in 1999, there were 18 faculty positions in teaching/research. There are currently a total of 17 teaching/research faculty.

The beginnings of the teaching program are not well documented, but apparently an undergraduate curriculum in Agricultural Business was initiated in 1926 - administered jointly by the College of Agriculture and the College of Business. A separate curriculum in Agricultural Economics and Rural Sociology was initiated then or at a later date. These two curricula were merged into a single curriculum called Agricultural Economics and Business in 1988 when the University converted to the semester system. The name of the major was changed to Food and Agricultural Business in 2008 and a second major in Natural Resource and Environmental Economics was added. The second major is currently awaiting THEC approval. The number of undergraduate majors reached a peak of 143 in 1977, declined to 72 in 1988, and 73 in 1999. For fall 2007, the Department had 66 undergraduate majors.

The first Master of Science degree was awarded in 1926. A non-thesis option in the master's program was introduced in the 1970's with an agribusiness concentration added to the non-thesis option in 1997. A concentration in rural sociology was available within the thesis program in Agricultural Economics but was discontinued in the late 1990s. A concentration in natural resource economics was added in the thesis option in 2007. A Ph.D. program was established in 1962 and discontinued in 1998 at the initiative of the faculty. Approximately 100 students received Ph.D.'s during the life of the Department's program. The Department currently participates in an interdepartmental Ph.D. program in Natural Resources with a concentration in Natural Resource Economics. The program is administered by the Department of Forestry, Wildlife, and Fisheries. There are currently three students in that concentration working with major professors in this department.

Total graduate enrollment reached a peak of 65 in 1975, had declined to 34 by 1989, and to 12 (M.S. students) in 1998. The number of M.S. students subsequently increased to the 20-25 range and was at 22 for fall 2007.

In 1991, the Blasingame Chair in Agricultural policy was established, leading to the development of the Agricultural Policy Analysis Center within the Department. APAC has

grown to include three tenure-track research faculty and a number of support staff based primarily on grant and contract funding.

Extension Functions

Until 2000, the Extension outreach activities in agricultural economics were organized under a separate department, Agricultural Economics and Resource Development. In July, 2000, the research/teaching unit and the Extension unit were merged into one administrative and program unit. The *rural sociology* and *resource development* nomenclature was dropped from the names at that time, and the merged unit became the Department of Agricultural Economics. The Extension unit had been formed from the combination of the Agricultural Economics faculty “section” (seven faculty) and the Resource Development faculty “section” (two faculty) in 1979. At the time of the merger with the teaching/research department in 2000, the Extension unit contained eight tenure-track faculty positions. Currently, there are seven full-time tenure-track Extension faculty positions plus one joint research/Extension appointment. Two of those positions are vacant as of August, 2008.

Various units containing Extension specialists in agricultural economics and in resource development evolved after the establishment of Cooperative Extension activities in 1914. In 1950, records show six specialists in agricultural economics. Major subject matter areas included basic farm management, marketing, leadership, and community development. In 1986, Tennessee’s legislative leaders, working with state agricultural leaders and UT Extension, established the MANAGE program. Funding was provided for 12 area farm management positions. Currently, 10 of those positions are filled. The Department provides subject matter support and leadership for those positions. They provide educational programming in management and economics for farm families in all Tennessee counties.

By the 1980s, emphasis in Extension programming in agricultural economics was on whole-farm management demonstration programs in cooperation with the Tennessee Valley Authority. By the late 1990s, focus in programming had shifted to the development and use of computerized systems analysis tools to aid decision making in dairy, beef, and row crop enterprises. Currently, there is substantial effort in bio-energy economics. Throughout its history, the Extension program has placed priority on answering requests for assistance and information from county Extension personnel and on providing training for agents in priority subject matter areas

Agricultural and Extension Education

In 2003, the Department of Agricultural Economics took on administrative responsibilities for the Agricultural and Extension Education teaching program and for the two faculty in that area. The program consisted of two undergraduate majors, Agricultural Education and Agricultural Extension Education, and thesis and non-thesis M.S. programs. Subsequently, the two undergraduate majors were moved to concentrations within the College’s Agricultural Science major. In 2008, a major in Agricultural and Natural Resource Leadership, Education, and Communications was established with concentrations in Agricultural Leadership, Agricultural Education, and Agricultural Extension Education. A third faculty member was added in 2008 to strengthen the leadership emphasis in the

program. Since 2003, the M.S. program has been transformed to largely depend on distance-delivered course work.

N. Demand for the Program

The Department faces stiff competition from other Tennessee public universities with respect to recruiting students. Because of the geographic location of UT-Knoxville, potential students in Central and West Tennessee often choose to attend Middle Tennessee State University, UT-Martin, The University of Kentucky, Mississippi State University, and other public institutions. One of the objectives in the Faculty Strategic Plan (2006) is to increase undergraduate enrollment to 100–120 by 2012 through stronger recruiting and retention effort.

Undergraduate Demand

Over the last 20 years, the Department has averaged 76.5 undergraduate majors, with a high of 112 in 1990-91 and a low of 56 in 2005-2006. The number of majors exceeded 100 in only two years (1990-91 and 1991-92). This spike was “related to the transfer of a substantial number of students from the College of Business Administration after departments there raised their minimum GPA requirements for upper-division association with a major in 1989” (Department of Agricultural Economics and Rural Sociology, 1999). Over the last ten years, the average has been 73.6 majors with a high of 93 in 2002-03. Overall, one might characterize enrollment as hovering in the 60-80 range with a pair of notable spikes between 1990–1993 and 2000–2003. In the past two years (2005–2007), the proportion of CASNR students that were declared agricultural economics majors has increased slightly to about 8% in 2007–2008 (66 students of 858). See Table 1.4 and Figures 1.1 and 1.2.

Graduate Demand

High quality graduate students are attracted to a department because of its reputation for having superior programs designed to prepare them for future employment opportunities. Simultaneously, enrolling high quality graduate students is an essential element for improving the reputation of a department’s teaching, research, and Extension programs.

Historical data are available for 2001-2007 on enrollment in the M.S. program (Tables 1.5 and 1.6 and Figure 1.3) and the Natural Resource Economics option of the Natural Resources Ph.D. program administered by the Department of Forestry, Wildlife and Fisheries. Enrollment in the M.S. program averaged 19 students, with a high of 28 students in 2004 and a low of 13 students in 2001 (Figure 1.1). New enrollment (Table 1.5) averaged 9 students per year, with a range of 11 students in 2004-05 to 5 students in 2001-02. Undergraduate GPAs for entering students ranged between 3.40 in 2005-06 and 3.00 in 2001-02 with an average of 3.33. Among the historical data collected, the undergraduate GPA is the most reliable measure of potential success in the M.S. program because all students who enter the program must submit academic histories. Scores for the GRE are less reliable because undergraduate students from within the Department typically have not been required to submit GRE scores. Thus, average GRE scores for the base period include the scores of many international students who tend to have higher quantitative and lower verbal scores, unrepresentative of the average new enrollee.

Table 1.1. Demographics of Students Admitted to Graduate Programs in Agricultural Economics, 2003-2008

Academic Year	<u>International:</u>		<u>U.S. citizens:</u>			
	Female	Male	<i>White</i>		<i>Minority</i>	
			Female	Male	Female	Male
			<u>M.S. Program</u>			
2007-2008	25%	8.3%	33.3%	33.3%	0.0%	0.0%
2006-2007	9.1%	9.1%	27.3%	54.6%	0.0%	0.0%
2005-2006	4.3%	14.3%	42.9%	14.3%	14.3%	0.0%
2004-2005	11.1%	11.1%	33.3%	44.4%	0.0%	0.0%
2003-2004	0.0%	0.0%	50.0%	50%	0.0%	0.0%
			<u>Ph D Program (Natural Resources)</u>			
2007-2008	50%	50%	0.0%	0.0%	0.0%	0.0%
2006-2007	0.0%	0.0%	100%	0.0%	0.0%	0.0%

Table 1.2. Rank, Appointment, and Highest Degree of Faculty Members in Agricultural Economics.

Faculty Member*	Academic Rank	Appointment			Highest Degree/Granting Institution
		Research,	Teaching,	Extension	
1) Bazen, Ernest	Asst. Prof.	80%	20%		Ph.D. Univ. of Kentucky, 2002
2) Cho, Seong-Hoon	Asst. Prof.	88%	12%		Ph.D. Oregon State Univ., 2001
3) Clark, Chris	Asst. Prof.	75%	25%		Ph.D. Vanderbilt Univ., 2001
4) De La Torre Ugarte, Daniel G.	Assoc. Prof.	90%	10%		Ph.D. Oklahoma State Univ., 1992
5) English, Burton	Prof. & Research Coord.	82%	18%		Ph.D. Iowa State Univ., 1981
6) Garland, Clark	Prof. & Extension Coord.			100%	Ph.D. Univ. of Tennessee 1971
7) Gerloff, Delton	Prof. & Interim Department Head	25%	25%	50%	Ph.D. Texas A&M Univ., 1992
8) Jensen, Kimberly	Prof.	78%	22%		Ph.D. Oklahoma State Univ. 1986
9) Lambert, Dayton	Asst. Prof.	90%	10%		Ph.D. Purdue Univ., 2005
10) Larson, James	Assoc. Prof.	80%	20%		Ph.D. Oklahoma State Univ., 1992
11) McLemore, Dan	Prof.	75%	25%		Ph.D. Clemson Univ., 1971
12) Park, Bill	Prof. & Undergraduate Coordinator	20%	80%		Ph.D. Virginia Tech, 1980
13) Rawls, Emmit	Prof.			100%	Ph.D. Virginia Tech 1969
14) Ray, Daryll	Prof.	100%			Ph.D. Iowa State Univ., 1965
15) Riley, John	Prof.		100%		Ph.D. Oklahoma State Univ., 1974
16) Roberts, Roland	Prof. & Graduate Coordinator	82%	18%		Ph.D. Iowa State Univ., 1979
17) Smith, George	Prof. & Interim Asst. Dean			100%	Ph.D. Univ. of Tennessee, 1974
18) Tiller, Kelly	Asst. Prof. & Director	100%			Ph.D. Univ. of Tennessee, 1996
19) Velandia, Margarita	Asst. Prof.	75%		25%	Ph.D. Texas Tech Univ., 2007
20) Wilcox, Michael Jr,	Asst. Prof.			100%	Ph.D. Purdue Univ., 2006
21) Yen, Steven	Assoc. Prof.	90%	10%		Ph.D. Univ. of Minnesota, 1987
	Total FTEs (21.0)	12.3	3.9	4.8	

An additional assistant professor, Dr. Edward Yu, (100% research) has been hired, but has not yet arrived from his current position at Iowa State University.

Table 1.3. Courses, Undergraduate and Graduate Students Advised by Faculty, Fall 2007-Fall 2008.

Faculty Member	College Appointment	Course Number and Title	Hrs	Advisees ^b		
				UG	MS	Ph.D.
Bazen, Ernest	Y	212 The Agribusiness Firm	3		1	
		342 Farm Business Management I	3			
Cho, Seong-Hoon	Y	320 Agricultural Microeconomics	3		2	1
		670 Advanced Topics in Natural Resource Economics ^a	3			
Clark, Chris	Y	315 Agricultural Law	3			
		570 Advanced Natural Resource Economics	3		2	1
		670 Topics in Natural Resource Economics ^a	3			
De La Torre Ugarte Daniel	Y	420 International Agricultural Trade and Marketing	3		2	
English, Burton	Y	444 Economics of Precision Farming Technologies	3			
		503 Managerial Economics for Agribusiness ^a	3		1.5 ^c	1
		525 Agribusiness Operations Research methods	3			
Jensen, Kimberly	Y	350 Agricultural Marketing System	3			
		550 Advanced Agribusiness Marketing	3		2	
		503 Managerial Economics for Agribusiness ^a	3			
Lambert, Dayton	Y	360 Rural Economic Development	3		1.5 ^c	.5 ^c
Larson, James	Y	512 Advanced Agribusiness Finance	3		4	
		542 Advanced Agribusiness Production Decisions	3			
McLemore, Dan	Y	324 Quantitative Methods	3			
		552 Seminar in Agribusiness Management	3	10	2	
Park, Bill	Y	110 Opportunities in Food and Agricultural Business	1	35		

Table 1.3. Courses, Undergraduate and Graduate Students Advised by Faculty, Fall 2007-Fall 2008.

Faculty Member	College Appointment	Course Number and Title	Hrs	Advisees ^b		
				UG	MS	Ph.D.
		212 The Agribusiness Firm	3			
		330 Economics of Agricultural Biotechnology	3			
		410 Seminar in Agricultural Economics and Business	1			
		470 Natural Resource Economics	3			
Rawls, Emmit	N				2	
Ray, Daryll	N	530 Agricultural Policy Analysis	3		1	
Riley, John		310 The Job Search Process	1			
		355 Agribusiness Marketing and Professional Selling	3	30	1	
	Y	412 Agricultural finance	3			
		442 Agribusiness Management	3			
		503 Managerial Economics for Agribusiness ^a	3			
Roberts, Roland	Y	505 Microeconomic Analysis	3		1.5 ^c	.5 ^c
		520 Research Methods in Agricultural Economics	3			
Tiller, Kelly	N				.5 ^c	
Velandia, Margarita	N				1.5 ^c	
Wilcox, Michael	N				1	
Yen, Steven	Y	524 Econometric Methods in Agricultural Economics	3		1	

^a Course is team taught.

^b Graduate advising numbers are from Fall 2007 to Fall 2008.

^c A value of .5 indicates that faculty member is a co-chair on one or more graduate committees.

Table 1.4. Undergraduate Majors: 1988-89 through 2007-08.

Year*	Undergraduate Majors	Number of Graduates			CASNR
		Total	Female	Black	
1988-89	72	18	6	0	
1989-90	79	15	3	0	
1990-91	112	22	3	0	
1991-92	111	35	6	1	
1992-93	81	28	4	0	
1993-94	69	23	6	0	
1994-95	67	21	6	0	
1995-96	68	20	2	1	1127
1996-97	58	21	3	1	1066
1997-98	62	14	2	1	1035
1998-99	73	20	9	5	1047
1999-00	72	16	6	4	1038
2000-01	73	22	6	0	1000
2001-02	92	15	4	0	951
2002-03	93	13	0	0	877
2003-04	82	26	1	0	778
2004-05	70	22	4	0	816
2005-06	56	14	2	0	789
2006-07	63	15	3	0	841
2007-08	66	11	3	0	858

Data on number of undergraduate majors for academic years 1988-89 through 1994-95 taken from Department of Agricultural Economics and Rural Sociology, 1999. Data on number of undergraduate majors for academic years 1995-96 through 2007-08 taken from CASNR, 2006.

Table 1.5. Students Who Applied, Were Admitted, and Were Enrolled in the M.S. Program During the Year, with Undergraduate GPAs and GRE Scores, 2001-2002 through 2006-07.

Year*	Applied	Admitted	Enrolled During Year	Mean UG GPA	Mean GRE Verbal	Mean GRE Quant.	Mean GRE Anal.
2001-02			5	3.00(5)	463(4)	595(4)	555(4)
2002-03			8	3.23(8)	443(4)	665(4)	630(4)
2003-04			10	3.27(10)	442(6)	585(6)	3.7(6)
2004-05		13	11	3.31(11)	449(8)	651(8)	4.5(8)
2005-06	23	14	7	3.40(7)	403(4)	640(4)	4(4)
2006-07	16	11	9	3.33(9)	413(4)	633(4)	4(4)
2007-08	21	17	12	3.8	430	642	3.5
Mean			9	3.33	435	630	3.9

*Data are from Departmental graduate student files.

Table 1.6. Undergraduate Institution and Major and Numbers of M.S. Students in Ag Econ and Agribusiness Options: 2001-2002 through 2006-07.

Year*	Undergraduate Institution	Ag Econ	Ag Bus	Undergraduate Majors
2001-02	UTK(2), China, NC State, UTM	4	1	AgEcon, Econ, AgBusMgmt, Ag, AnSci
2002-03	UTK(4), Univ Belgrano, UTC, UTM, Carson Newman	5	3	AgEcon(2), Econ(3), AgEconBus (3)
2003-04	UTK(5), Tenn Tech, Murray State, UTM (3)	5	5	AgEconBus(3), LanWldBus, Ag/AgMgmt, AnSci(2), Ag/Bus, Ag(2)
2004-05	UTK(4), Visayas St Coll-Pilip, Cal State-Fres, Natl Taiwan U, K. State, Univ AL-Birm, Purdue, Purdue-Univ South	9	2	AgEcon(3), AgEconBus(4), FoodTech, Sociology, MBA(2)
2005-06	UTK(3), Ukraine FeconNat Ag, UTM, LSU, Keora Univ	4	3	AgEcon (2), AgEconBus, AgSciBus, Finance, Ag, FdResEcon
2006-07	UTK(3), NC State, CO State, Tenn Tech, MTSU, U Recife, Carson Newman	7	2	AgEcon(2), AgBusMgmt(2), Econ (2), AgComm, MusicEd

Data are from Departmental graduate student files.

Figure 1.1. Number of Undergraduate Majors: 1988-89 through 2007-08.

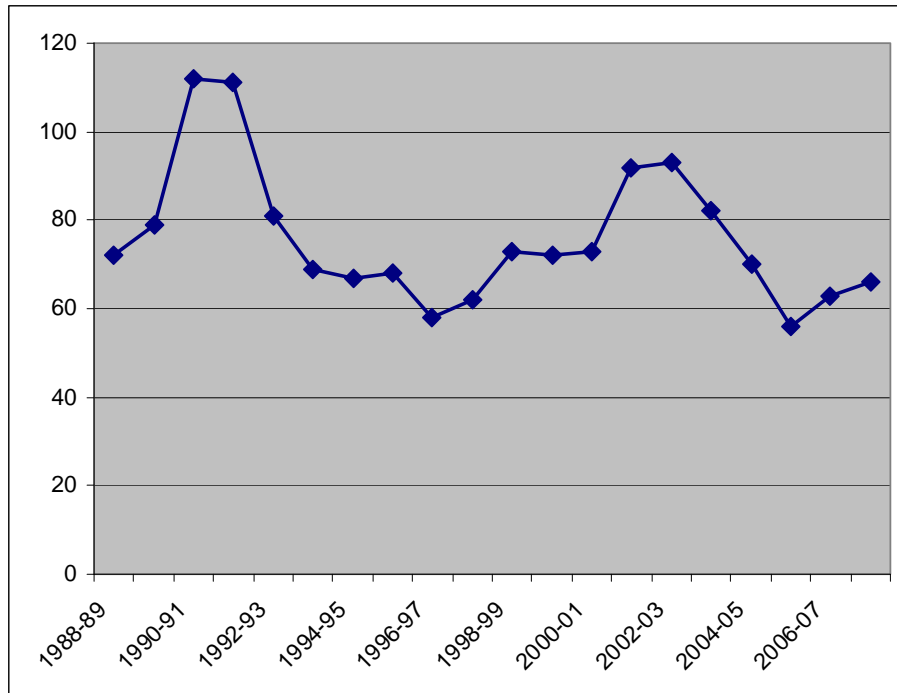


Figure 1.2. Undergraduate Agricultural Economics Majors as a Percentage of CASNR Enrollment: 1995-96 through 2007-08.

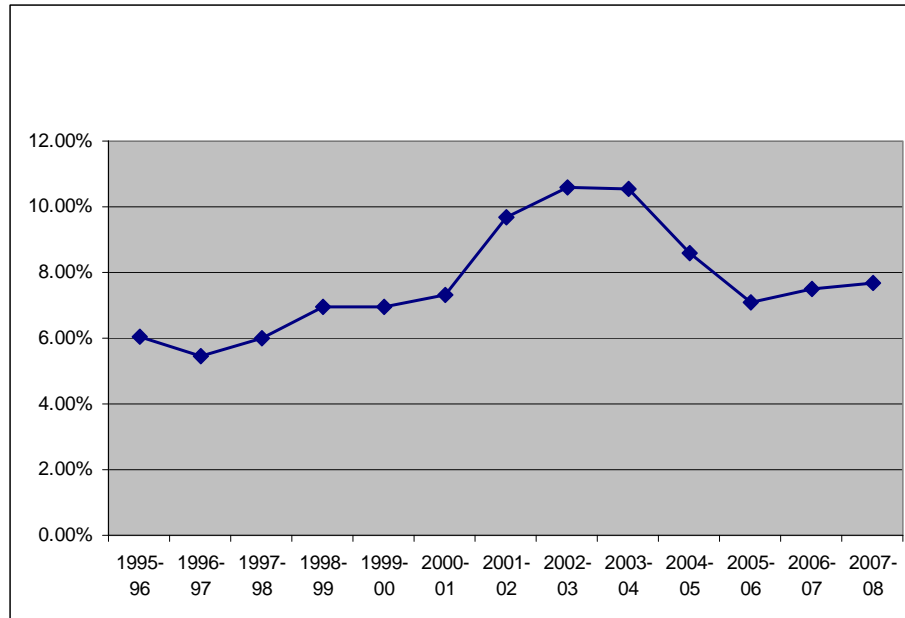
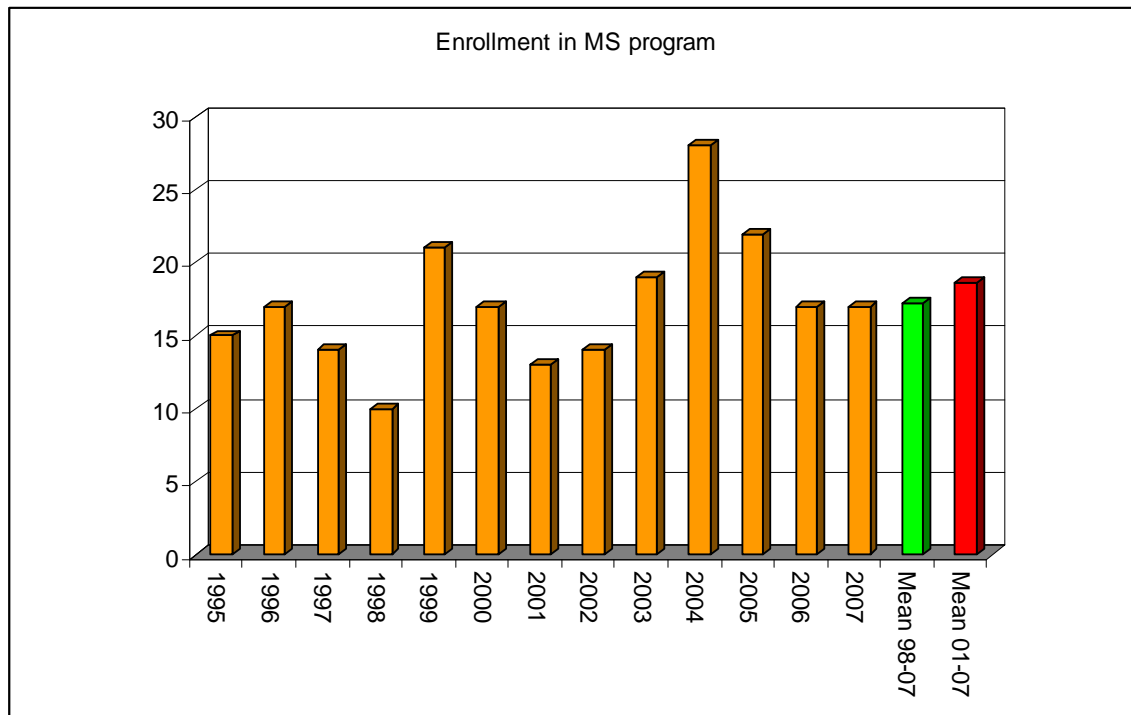


Figure 1.3. Total Annual Enrollment in the M.S. Program of the Department of Agricultural Economics, 1998 through 2007 and Means for 1998-07 and 2001-07.



Source: CASNR, 2008. Graduate Student Enrollment: 1995-2007. Dean's Office, College of Agricultural Sciences and Natural Resources, University of Tennessee Institute of Agriculture, Knoxville, Tennessee.

**Exhibit 1.1. Curriculum for Major in Food and Agricultural Business, Effective
Fall, 2008**

	<u>Hours Credit</u>
<u>Freshman</u>	
Agricultural Economics 110	1
Nutrition 100*	3
¹ Biological Science Elective*	4
² Cultures and Civilizations Electives*	6
English 101*, 102*	6
Mathematics 123*, 125*	6
Psychology 110* or Political Science 102* or Sociology 120*	3
	29
<u>Sophomore</u>	
Accounting 200	3
Agricultural Economics 212	3
Economics 201*	4
Food Science and Technology 101 or 150	3
Agricultural and Natural Resources 290	3
Philosophy 243*	3
³ Physical Sciences Electives*	8
Statistics 201*	3
	30
<u>Junior</u>	
Agricultural Economics 310, 320, 324, 342, 350, 412	16
Agricultural Extension Education 440* or English 360* or Journalism and Electronic Media 201*	3
⁴ Nondepartmental CASNR Electives	9
Communication Studies 210* or 240*	3
	31
<u>Senior</u>	
Agricultural Economics 410, 442	4
⁵ Agricultural Economics Electives	12
Any 300-level Economics course	3
² Arts and Humanities Elective*	3
Electives	8
	30
	Total: 120

*Meets University General Education Requirement.

¹Selected from Biology 101, 102, 130, 140.

²Selected from any course on the University General Education list.

³Selected from Chemistry 100, 110, 120, 130, Geography 131, 132, Geology 101, 102, 103, Environmental and Soil Science 210.

⁴Selected from any CASNR course with the following exceptions: 1) if Environmental and Soil Science 120 or 220 or Agricultural and Extension Education 440 are used to meet other requirements, they may not be used to meet this requirement; and 2) no more than three credit hours can be used from Animal Science 360 and 461.

⁵A maximum of 3 credit hours can be used from each of the following courses: Agricultural Economics 356, 492 and 493.

**Exhibit 1.2. Curriculum for Major in Food and Agricultural Business, Concentration
in Agricultural Equipment Systems Management, Effective Fall, 2008**

	<u>Hours Credit</u>
<u>Freshman</u>	
Agricultural Economics 110	1
Biology 111*, 112*	8
¹ Cultures and Civilizations*	6
English 101*, 102*	6
Mathematics 123*, 125*	6
Agricultural and Natural Resources 290	3
	30
<u>Sophomore</u>	
Accounting 200	3
Agricultural Economics 212	3
Economics 201*	4
Biosystems Engineering Technology 202	3
Chemistry 120*	4
Philosophy 243*	3
Physics 161*	3
Environmental and Soil Sciences 210	4
Statistics 201*	3
	30
<u>Junior</u>	
Agricultural Economics 310, 320, 324, 342, 350, 412	16
Environmental and Soil Sciences 324	3
Biosystems Engineering Technology 326	3
Agricultural Extension Education 440* or English 360* or Journalism and Electronic Media 201*	3
Communication Studies 210* or 240*	3
Psychology 110* or Political Science 102* or Sociology 120*	3
	31
<u>Senior</u>	
Agricultural Economics 410, 442	4
² Agricultural Economics Electives	9
Biosystems Engineering Technology 432, 442, 452, 462	12
Any 300-level Economics course	3
¹ Arts and Humanities Elective*	3
	31
	Total: 122

*Meets University General Education Requirement.

¹Choose any course from University General Education list.

²A maximum of three credit hours can be used from each of the following courses: Agricultural Economics 356, 492 and 493.

**Exhibit 1.3. Curriculum for Major in Natural Resource and Environmental
Economics, Effective Fall, 2008**

	<u>Hours Credit</u>
<u>Freshman</u>	
Agricultural Economics 110	1
Forestry, Wildlife and Fisheries 250*	3
¹ Biological Science Elective*	4
Environmental and Soil Science 120* and 220*	6
English 101*, 102*	6
Mathematics 123*, 125*	6
Psychology 110* or Political Science 102* or Sociology 120*	3
	29
<u>Sophomore</u>	
Accounting 200	3
Agricultural Economics 212	3
Economics 201*	4
² Arts and Humanities Elective*	3
Agricultural and Natural Resources 290	3
Philosophy 245*	3
³ Physical Sciences Elective*	4
Environmental and Soil Sciences 210	4
Statistics 201*	3
	30
<u>Junior</u>	
Agricultural Economics 310, 315, 320, 342 or 350, 430	13
Economics 362	3
Biosystems Engineering Technology 326	3
⁴ Nondepartmental CASNR Electives	6
Communication Studies 210* or 240*	3
Agricultural Economics 324	3
	31
<u>Senior</u>	
Agricultural Economics 410, 470, 471	7
Economics 463	3
⁵ Agricultural Economics Electives	6
Agricultural Extension Education 440* or English 360* or Journalism and Electronic Media 201*	3
Economics 361 or 371, or Geography 340 or 346 or 436, or Sociology 360	3
Electives	8
	30
	Total: 120

*Meets University General Education Requirement.

¹Selected from Biology 101, 102, 111, 112, 130.

²Selected from any course on the University General Education list.

³Selected from Chemistry 100, 110, 120, 130, Geography 131, 132, Geology 101, 102, 103.

⁴Selected from Environmental and Soil Science 324, 462; Forestry 314, 321, 420, 422; Forestry, Wildlife and Fisheries 420.

⁵A maximum of 3 credit hours can be used from each of the following: Agricultural Economics 356, 492, 493.

**Exhibit 1.4. Course Requirements for Master of Science, Agricultural Economics
Concentration-Thesis Option**

(31 hours)

Name: _____ Date: _____

	Hours	Semester Completed or Scheduled	Grade
Mandatory courses: Total of 19 hours			
Microeconomic Theory: Ag Ec 505 or EC 511	3	_____	_____
Research Methods in Ag Economics: Ag Ec 520	1	_____	_____
Econometric Methods: Ag Ec 524	3	_____	_____
Operations Research Methods: Ag Ec 525	3	_____	_____
Policy Analysis: Ag Ec 530	3	_____	_____
Thesis: Ag Ec 500	6	_____	_____

Directed Electives: Nine hours of electives at the 500-level, six of which must be in agricultural economics.

_____	3	_____	_____
_____	3	_____	_____
_____	3	_____	_____

Electives: Minimum of three hours*

_____	3	_____	_____
_____	3	_____	_____

Oral Comprehensive Exam (Date passed): _____

Prerequisites: Three hours each of intermediate undergraduate macroeconomics and microeconomics, six hours of statistics, and three hours of calculus.

*Students interested in pursuing a Ph.D. should take Econ 513 or 514 (macroeconomics).

**Exhibit 1.5. Course Requirements for Master of Science, Agricultural Economics
Concentration- Non-Thesis Option
(36 hours)**

Name: _____ Date: _____

	Hours	Semester Completed or Scheduled	Grade
Mandatory Agricultural Economics Courses: 24 hours			
Microeconomic Theory: Ag Ec 505 or Ec 511	3	_____	_____
Research Methodology in Ag Econ: Ag Ec 520	1	_____	_____
Econometric Methods: Ag Ec 524	3	_____	_____
Operations Research Methods: Ag Ec 525	3	_____	_____
Policy Analysis: Ag Ec 530	3	_____	_____
Advanced Agribusiness Production Decisions: Ag Ec 542	3	_____	_____
Advanced Agribusiness Marketing: Ag Ec 550	3	_____	_____
Advanced Natural Resource Economics: Ag Ec 570	3	_____	_____
Special Topics in Agricultural Economics: Ag Ec 593	2	_____	_____
Directed Electives: Twelve hours from the following list of approved courses. Only one 3-hour, 400-level course may be counted.			
_____	3	_____	_____
_____	3	_____	_____
_____	3	_____	_____
_____	3	_____	_____

Directed electives include the following courses:

Advertising 530, 540; Agricultural Economics 412, 420, 512, 552; Economics 512, 513, 514, 515, 537, 577, 581, 582, 583; Forestry 530; Management 571; Management Science 531, 532; Statistics 531, 532, 537, 538, 561, 571, 572, 578.

Prerequisites: Three hours each of intermediate undergraduate macroeconomics and microeconomics, six hours of statistics, and three hours of calculus.

Exhibit 1.6. Course Requirements for Master of Science, Agribusiness Concentration - Non-Thesis Option

(31 hours)

Name: _____ Date: _____

Mandatory Courses: Total of 19 hours	Hours	Semester Completed or Scheduled	Grade
Microeconomic Theory: Ag Ec 505 or EC 511	3	_____	_____
Advanced Agribusiness Finance: Ag Ec 512	3	_____	_____
Research Methodology in Ag. Econ.: Ag Ec 520	1	_____	_____
Econometric Methods: Ag Ec 524	3	_____	_____
Operations Research Methods: Ag Ec 525	3	_____	_____
Agribusiness Production Decisions: Ag Ec 542	3	_____	_____
Agribusiness Marketing: Ag Ec 550	3	_____	_____

Directed Electives: Nine hours of electives, six of which must be at the 500-level (See list of recommended courses shown below); must include Ag Ec 412, if equivalent was not completed prior to entering the program.

Directed elective _____	3	_____	_____
Directed elective _____	3	_____	_____
Directed elective _____	3	_____	_____
Professional Internship: Ag Ec 595	3	_____	_____

Written Comprehensive Exam (Date passed) _____

Oral Comprehensive Exam (Date passed) _____

Recommended Courses: (this list is not exhaustive and changes each year as departments add and remove courses)

Ag Ec 412 (3 hrs)	Ag Ec 530 (3 hrs)	Management 511 (3hrs)	Advertising 540(3 hrs)
Ag Ec 420 (3 hrs)	Ag Ec 552 (3 hrs)	Management 531 (3 hrs)	
Ag Ec 442 (3 hrs)	Ag Ec 570 (3 hrs)	Management 541 (3 hrs)	
Ag Ec 444 (3 hrs)	Statistics 566 (3 hrs)	Management 551 (3 hrs)	
Ag Ec 450 (3 hrs)	Finance 532 (3 hrs)	Advertising 530 (3 hrs)	

Other Requirements: At least 28 hours at the 500-600 level.

Prerequisites: Three hours of accounting, three hours each of intermediate undergraduate macroeconomics and microeconomics, six hours of statistics, and three hours of calculus.

**Exhibit 1.7. Course Requirements for Master of Science, Natural Resource Economics
Concentration Thesis Option**

(31 hours)

Name: _____ Date: _____

Mandatory courses: Total of 19 hours

	Hours	Semester Completed or Scheduled	Grade
Microeconomic Theory: Ag Ec 505 or EC 511	3	_____	_____
Research Methodology Ag Econ.: Ag Ec 520	1	_____	_____
Econometric Methods: Ag Ec 524	3	_____	_____
Operations Research Methods: Ag Ec 525	3	_____	_____
Natural Resource Economics: Ag Ec 570	3	_____	_____
Thesis: Ag Ec 500	6	_____	_____

Directed Electives: Total of 12 credits with six hours of electives at the 500-level or above, three of which must be in either agricultural economics or economics.*

_____	3	_____	_____
_____	3	_____	_____
_____	3	_____	_____
_____	3	_____	_____

Directed electives include the following courses:

Economics 577, 579, 677; Ag Econ 530, 542, 670; Geography 411, 414; Political Science 549, 584; Biosystems Engineering 416, 525; Forestry 422; Forestry, Wildlife and Fisheries 520, 570; Wildlife and Fisheries Science 525; Sociology 560.

Oral Comprehensive Exam (Date passed): _____

Prerequisites: Three hours each of intermediate undergraduate macroeconomics and microeconomics, six hours of statistics, and three hours of calculus.

*Students interested in pursuing a Ph.D. should take Econ. 513 or 514 (macroeconomics).

**Exhibit 1.8. Course Requirements for Natural Resources Ph.D., Natural Resource
Economics Concentration
(72 hours)**

Mandatory courses: Total of 55 hours	Hours	Semester Completed or Scheduled	Grade
ECON 511: Microeconomic Theory	3	_____	_____
ECON 512: Microeconomic Theory	3	_____	_____
ECON 513: Macroeconomic Theory (or equivalent)	3	_____	_____
ECON 581: Mathematical Methods in Economics	3	_____	_____
ECON 582: Elements of Econometrics I	3	_____	_____
ECON 583: Elements of Econometrics II	3	_____	_____
AGEC 520: Research Methods in Agricultural Economics	1	_____	_____
FWF: 601: Teaching Methods in Natural Resources	3	_____	_____
FWF 610: Seminar in Natural Resources	2	_____	_____
FWF 612: Seminar in Forestry, Wildlife and Fisheries	1	_____	_____
AGEC 570: Adv. Natural Resource Econ (or equivalent)	3	_____	_____
AGEC 670: Advanced Topics in Natural Resource Economics	3	_____	_____
FWF or AGECE 600: Dissertation	24	_____	_____
Environmental Economics or Other Field Courses:			
_____	3	_____	_____
_____	3	_____	_____
Electives: Minimum of 11 hours at the 500-level or above (at least 3 of which must be in economics or agricultural economics)			
_____	—	_____	_____
_____	—	_____	_____
_____	—	_____	_____
_____	—	_____	_____

II. CENTRALITY OF THE ACADEMIC UNIT TO UNIVERSITY MISSION

A. Teaching

Nature and Assessment of Quality

A core component of the Department's Mission Statement is to deliver "outstanding instruction programs that provide students with thorough understanding of economic and business aspects of agriculture, food, natural resources and rural economies and that lead to acquisition of problem-solving skills commensurate with B.S., M.S. and Ph.D. degrees." The Department seeks to accomplish this by allocating its limited number of teaching FTEs among courses in such a way as to take advantage of faculty members' relative strengths with regard to subject matter, student level (lower division, upper division, graduate) and communication skills. While most courses rely heavily on lecture methods, faculty members have increasingly sought to incorporate discussion, role-playing and simulation approaches where appropriate. Several courses in the areas of farm and agribusiness management and finance regularly employ a mobile bank of laptop computers for in-class exercises. Two faculty members experimented with the use of "clickers" in their classes and published an article in a teaching journal.

The quality of teaching in the Department is assessed in a number of ways. Instructors give students an opportunity for assessment in every course through the University-wide Student Assessment of Instruction System (SAIS). A summary of SAIS results for several key questions for the past five years is presented in Table 2.1 in which Departmental means are compared to College and University means. As can be seen, departmental means for three key questions just slightly below means for the College and University.

In addition, the Department Head attempts to sit in on a class session for every course near the end of the semester and informally visit with students (in the absence of the instructor) during the last 15 minutes. The Department Head then discusses the student feedback with the instructor after grades have been turned in. Discussion of SAIS results also takes place during each faculty member's annual review with the Department Head.

Untenured faculty members are subjected to two peer review assessments by a faculty committee of three members, one early in their teaching career and one just before they are to go up for tenure and promotion. Committee members visit classes, review course materials (syllabus, assignments, exams, etc.) and provide a joint report to the Department Head for inclusion in the instructor's dossier. These peer reviews are taken very seriously by committee members and instructors and provide constructive criticism and practical suggestions for teaching improvement. Mentors to untenured faculty also play an important role in helping untenured faculty members improve their teaching effectiveness. Untenured faculty receive strong encouragement and financial support to attend teaching conferences within the discipline or general field of study.

Periodically, alumni surveys are conducted to obtain graduates' assessments of teaching and other types of feedback. Such a survey was conducted in August 2008. Results for all alumni responding to the survey as well as the subset that completed their B.S. and M.S. degrees between 2000-2008 are presented in Table 2.2.

Learning Outcomes

The Department uses a mix of data and feedback to evaluate whether learning outcomes are being satisfactorily achieved and assess whether adjustments in course content or approach are needed. A major field exam and a University-wide critical thinking skills test are given in the required Senior Seminar class each fall semester. Results are reported in Section 3.h, along with discussion why the former exam has not been very useful to date for evaluation of learning outcomes. One clear indicator of effectiveness has been the success of our National Agri-Marketing Association (NAMA) Marketing Team, which has placed in the top five nationally (among 30+ teams) in three of the nine years the Department has competed. With regard to placement of graduates, data collected in group Senior exit interviews and reported in Section 3.g indicate that approximately two-thirds of our 2003-2008 B.S. graduates obtained employment by the time of graduation or very soon thereafter, with a high percentage of the jobs being closely related to the major field. Findings from the alumni survey provide further evidence on these points. Of the 30 B.S. graduates from 2000-2008 who responded, 19 obtained their first employment by graduation, 12 more within three months. Twenty-two of these graduates indicated their first employment was somewhat or closely related to their field of study. Of the 20 M.S. graduates from 2000-2008, 14 obtained their first employment by graduation, four more within three months. Nineteen of these graduates indicated their first employment was somewhat or closely related to their field of study.

Results from the recent alumni survey also shed light on the question of learning outcomes, from the perspective of graduates who have been employed and had time to reflect on what they learned and how it relates to their career. Table 2.3 summarizes ratings by B.S. and M.S. graduates as to how well their experience equipped them with regard to various skills.

Nature of Graduate Theses and Dissertations

Students enrolled in the thesis option in the Department's M.S. program are required to prepare a written proposal that outlines their thesis research plans. The proposal includes a problem statement and identification, description of objectives, preliminary review of the literature, overview of the conceptual framework, description of the methods and procedures to be employed, tentative time schedule for completing the research, and description of related resource needs, if any. Failure to have a completed proposal approved by all members of the student's Faculty Committee within 12 months of beginning the program exposes the student to possible loss of financial support. After the thesis has been prepared in acceptable form, students are required to pass a final oral comprehensive examination. Over the last five years, 24 students within the Department's M.S. program have completed a thesis and passed the final oral comprehensive examination. A list of these students, the year and title of the thesis, along with the student's Major Professor(s) is provided in Exhibit 2.1.

Students in the Nonthesis Agribusiness Concentration are required to complete a ten-to twelve-week professional internship with an agribusiness firm or agency, a paper and presentation on their internship work experience, and additional coursework in lieu of a thesis. Students in the Nonthesis Agricultural Economics Concentration are required to complete a Non-thesis Agricultural Economics Concentration Research Project and additional coursework in lieu of a thesis. Students pursuing either of the Nonthesis Concentrations are also required to pass both an Ag Econ Written Non-thesis Comprehensive Examination (WNCE) and an oral comprehensive examination.

Students pursuing the Natural Resource Economics Concentration in the Natural Resources PhD program are required to complete a dissertation. However, as the Department's participation in the Natural Resources PhD program only dates to the 2006 Fall semester (initial student enrollment), there have not been any dissertations completed within the last five years.

B. Advising

Nature of Undergraduate Student Advising

All advising of undergraduate students is done by a selected set of faculty members within the Department. Advisors are selected by the Department Head in consultation with the Undergraduate Program Coordinator, who also serves as the Advising Coordinator. Selection is based upon faculty interest in advising and current involvement as an instructor in one or more undergraduate courses. There is no formal mechanism in place for evaluating the quality of advising, though the department has participated in a University-wide pilot evaluation program. Graduating seniors are asked about their advising experience in a group exit interview conducted by the Department Head. Informal mentoring of new advisors is provided by veteran advisors. All advisors are expected to participate in College-sponsored training and professional development programs. An attempt is made to limit the number of advisees per advisor to 35.

A faculty advisor is assigned to a student at the point in time he/she declares a major in the department. This is normally the advisor who had the initial advising contact with a student. This advisor normally works with that student through graduation. Upon request, students can be reassigned to a different advisor. Faculty advisors provide guidance and referral on a variety of subjects including:

- course scheduling for upcoming semesters.
- selection of courses from directed electives lists.
- graduation requirements (DARS).
- academic policies.
- personal problems.
- scholarships and other forms of financial aid.
- career planning and placement.
- extracurricular activities.

Faculty advisors are often called on to assist students (and alumni) in their search for employment by critiquing résumés/cover letters and writing letters of reference. Faculty advisors also commonly provide guidance to non-majors who are pursuing a minor in the department and other students who are exploring the idea of declaring a major in our department.

Faculty advisors' contribution is acknowledged as part of their teaching appointment and considered in annual performance reviews, as well as merit raise and tenure/promotion decisions, though typically the percentage of a 12-month appointment represented by advising of 35 students would be considered to be about 5%.

Over the course of a student's academic program, students are expected to gradually take more ownership of their academic decisions and career planning. Specific points of emphasis by year include:

Freshman/Transfer Orientation

- How to register for courses.
- Drop/add/withdrawal policies.
- Importance of practicing good study skills.

Freshman Year

- Availability of academic support services.
- Extracurricular opportunities.
- Academic policies and procedures

Sophomore Year

- Importance of using directed electives wisely.
- Value of a minor or specialization.

Junior Year

- Range of career opportunities.
- How to pursue internship opportunities.
- How to use the Degree Audit Reporting System (DARS).

Senior Year

- How to pursue permanent employment opportunities.
- Opportunities for graduate studies (if appropriate).
- Graduation application.

Though students in good academic standing are required to meet with their advisor only once per year after the complete 30 hours, faculty advisors strongly encourage their advisees to meet at least one time per semester and more often as needed. In addition to what takes place in personal advising sessions, students have access to information in hard-copy form - the Student Advising Handbook (to be provided as supplemental material), which is distributed in AGEC 110 and to new majors who transfer in after their freshman year, as

well as through the newly redesigned undergraduate program section of the department's website (<http://economics.ag.utk.edu/>).

There were also enough responses on the recent alumni survey from B.S. graduates to gauge how well they believe their experience in the Department prepared them for advanced degree programs. Based on a four-point scale (1 = poorly, 2 = fairly well, 3 = well, 4 = very well), the mean rating for the 51 B.S. graduates who went on for advanced degrees was 3.10. For the 10 who graduated during the 2000-2008 period, the mean rating was 2.90.

Nature of Graduate Student Advising

The foundation for graduate student advising is provided by the University's Graduate Catalog (available online at <http://diglib.lib.utk.edu/dlc/catalog/index.html>), the Department's excerpt in the Graduate Catalog (Exhibit 2.2) and the Department's Graduate Program Requirements (to be provided as supplemental material). The Department's website provides links to electronic copies of both the Graduate Catalog and the Department's Graduate Program Requirements. The Graduate Catalog outlines Graduate School policies and program-specific requirements and provides a list of all graduate courses offered. Graduate Program Requirements booklet sets forth the requirements, policies and procedures pertaining to the Department's graduate programs and contains copies of the various forms graduate students are required to complete as they progress through the programs.

Each semester the Graduate Coordinator and Department Head conduct an orientation session for incoming graduate students. This session welcomes students with a thorough overview of Department expectations and program requirements, policies and procedures. In addition, students are assigned initial Work Supervisors and Major Professors (typically the same individual(s)) at this orientation session. New graduate students are also encouraged to take the Graduate School's New Graduate Student Orientation, available online at <http://gradschool.utk.edu/orientation/>.

M.S. students are expected to select an M.S. Faculty Committee with a permanent Major Professor and identify a tentative thesis topic by the end of their first semester. PhD students are expected to select a Doctoral Committee with a permanent Major Professor and identify a tentative dissertation topic by the end of their second semester. Selection of the students Committee and identification of a thesis or dissertation topic is accomplished through the completion of the Department's Form A (a blank copy of which is attached to the Graduate Program Requirements booklet) and approval by the Department Head. The student's plan of study must be agreed upon by the student's Faculty Committee and by the Department Head. Forms B-1 through B-5 (each form is specific to each graduate program and concentration) are used to identify the student's graduate program and concentration (if applicable), set forth the student's plan of study and evidence consent to such plan by the student's Committee and the Department Head (blank copies of Forms B-1 through B-5 are attached to the Graduate Program Requirements booklet). M.S. students are required to submit a completed Form B to the Graduate Coordinator prior to the end of the student's first semester, while Ph.D. students are required to do so by the end of the student's second semester. Responsibility for completion and filing of these forms rests with the student and his or her Major Professor.

Thus, the student's Major Professor serves as his or her principal advisor and advising is generally accomplished through regular one-on-contact between the student and his or her Major Professor. However, the student's Committee is expected to consult with the student in developing the student's plan of study and help guide the student's research. In addition, students and Major Professors frequently consult the Graduate Coordinator and Department Head for guidance and interpretation of Department rules and requirements.

The initial assignment of a Major Professor by the Graduate Coordinator is designed to assist the student in registration for the first semester of graduate work and to provide a supervisor for the student's first semester of work related to his or her assistantship. Despite this initial assignment, selection of a Major Professor is made by the student with the consent of the Major Professor and approval of the Department Head. The student is required to complete the first semester's assistantship work responsibility with the initial advisor. Changes in Committee membership may be made in keeping with the student's research plan with the approval of the Department Head.

Effectiveness of Advising

The department has long had a reputation for providing dedicated, high quality advising to undergraduate students. The two faculty members who have been advisers to approximately 80% of the undergraduate majors over the past five years have received numerous advising awards at the college and university levels, as well as from professional and student organizations. Student comments in senior exit interviews consistently note advising as a strength of the department. The recently conducted alumni survey provides additional insight regarding the effectiveness of advising at both the B.S. and the M.S. levels, as shown in Table 2.4.

C. Service

Faculty members actively participate in providing service to the Institute of Agriculture, University of Tennessee, agricultural economics profession, community and Tennessee citizens. Faculty serve on the Faculty Senate, Vice Presidents Advisory Committee and other University activities related to the Department. A faculty member served on the committee charged with combining and revising the Institute of Agriculture and University of Tennessee Handbook into a single document. Faculty are extremely active and provide leadership in agricultural economics related associations. For example, faculty have served as president, director and other officer positions in the Southern Agricultural Economics Association. They also frequently serve as reviewers for various grant programs and journals. Institute of Agriculture leadership encourage and provide support for faculty to be active in the American Agricultural and Applied Economics Association.

Faculty, staff and students participate in various service activities in the community. Activities range from Habitat for Humanity to providing assistance to county mayors about economic implications of alternative strategies for growth. Research in the Department often relates directly to issues faced by citizens in the state. Subject matter ranges from farm and financial management to the impact of retirement communities on a region.

The Department has eight faculty and three Extension assistant/ specialist positions conducting outreach educational programs in various subject matter areas including water quality, economic development, management and marketing. These educational programs are designed to help people think and make informed decisions about their future. Program delivery methods range from farm visits and presentations to web-based computerized decision tools. Faculty members without formal appointments in Extension are also actively involved in the application of research findings with students and the general public.

D. Quality Enhancement Plan

In support of the Ready for the World Initiative, the Department has strengthened its efforts in four areas: 1) increasing student exposure to international and intercultural knowledge and issues within the undergraduate curriculum and issues within the undergraduate curriculum; 2) facilitating student participation in study abroad programs; 3) recruiting international graduate students; and 4) recruiting faculty and staff who add to the diversity of backgrounds and perspectives represented in the Department.

With regard to curricular initiatives, in the freshman course (AGEC 110: Opportunities in Agricultural Economics and Business) students are encouraged to consider a study abroad experience within their academic program, in part by having majors who have done so in the past year or two speak in class about their experience. Students in AGEC 100 are also exposed to a current issue in the field with international dimensions. For the past three years, the primary subject matter focus of the required capstone course (AGEC 410: Seminar in Agricultural Economics and Business) has been on the globalization of the food and fiber system. One elective course in the Department is dedicated wholly to international subject matter (AGEC 420: International Agricultural Trade and Marketing), while two others incorporate substantial treatment of international and intercultural perspectives (AGEC 430: Food and Agricultural Policy; AGEC 470: Natural Resource Economics).

With regard to study abroad participation, over the past five years, three undergraduates completed semester-long study abroad programs (Australia – two; Semester at Sea – one), and four completed a month-long study tour to Thailand. The latter four students were supported in part with a \$400 grant from the Department's Development Account. These seven students represent approximately 10% of the majors in the Department over that period. In addition, eight graduate students participated in the Thailand study tour over the past five years, representing nearly 20% of the students enrolled in our M.S. program over that period.

With regard to graduate student recruitment, efforts to enroll additional international students resulted in over 35% (8 of 22) during the 2007-2008 academic year. These students represent several different countries.

With regard to faculty and staff recruitment, three of the last five open tenure-track positions have been filled by individuals of non-U.S. origin. This brings the total number of such individuals to five (from three different Asian countries and two different South

American countries) out of a total of 22 tenure-track positions. Several post-docs and research associates have also been added to the departmental staff over the past few years.

E. Diversity Plan

The University's diversity plan – *Diversity and the University of Tennessee: A Framework for Action, 2005-2010* – is available online from the Office of Equity and Diversity (OED) at <http://oed.admin.utk.edu/docs/diversityactionplan.pdf>. The joint TAES/CASNR diversity plan is also available online from OED at <http://web.utk.edu/~oed/docs/diversityplans/CASNR-TAES.pdf>. The actions taken (and being taken) by the Department that support the goals and objectives of the TAES/CASNR joint diversity plan are summarized in Exhibit 2.3.

Table 2.1. Summary of SAIS Results (2003-2007)

<u>Question</u>	<u>Department</u>	<u>College</u>	<u>University</u>
#1 – Course as a whole	3.70	3.88	3.78
#3 – Instructor's contribution	3.94	4.04	4.03
#8 – Amount learned	3.70	3.87	3.72

*Mean for 58 undergraduate and 24 graduate courses using Form A.

Table 2.2. Summary of Alumni Ratings* of Quality of Teaching

	<u>All (N=113)</u>	<u>2000-2008 (N=30)</u>
B.S. Graduates		
Agricultural Economics classes	3.42	3.63
Other classes	2.99	3.00
M.S. Graduates		
Agricultural Economics classes	3.41	3.38
Other classes	2.81	2.67

*Mean ratings based on following scale: Poor = 1, Fair = 2, Good = 3, Excellent = 4.

Table 2.3. Alumni Ratings of Skill Development

	B.S.		M.S.	
	All	2000-2008	All	2000-2008
Analytical/problem solving	3.38	3.43	3.69	3.61
Business management	3.35	3.56	3.18	3.05
Financial decision making	3.33	3.60	3.20	3.19
Quantitative	3.06	3.31	3.34	3.42
Computer	1.91	2.67	2.60	3.33
Research	--	--	3.39	3.38
Writing	2.74	2.76	3.24	3.43
Public speaking	2.80	2.90	2.47	2.71
Leadership	3.04	3.10	2.69	2.95
Teamwork	3.10	3.53	2.98	3.52
Overall preparation for career	3.29	3.30	3.43	3.43

*Scale: 1 = poorly, 2 = fairly well, 3 = well, 4 = very well.

Table 2.4. Summary of Alumni Assessment of the Effectiveness of Advising

	<u>Poor</u>	<u>Fair</u>	<u>Good</u>	<u>Excellent</u>	<u>DK</u>
<u>B.S. Graduates</u>					
Academic advising					
All (N=113)	0.9	8.0	38.9	52.2	0.0
2000-2008 (N=30)	0.0	0.0	23.3	76.7	0.0
Career guidance					
All (N=113)	2.7	15.0	41.6	35.8	5.3
2000-2008 (N=30)	0.0	0.7	33.3	56.7	0.3
<u>M.S. Graduates</u>					
Course guidance from major professor					
All (N=59)	0.2	8.5	20.3	67.8	0.2
2000-2008 (N=21)	4.8	9.5	14.3	71.4	0.0
Career guidance from major professor					
All (N=60)	5.0	20.0	25.0	46.7	3.3
2000-2008 (N=21)	14.3	23.8	19.0	42.9	0.0

**Exhibit 2.1. List of Completed Theses (2003 – 2008) Department of Agricultural
Economics 2008 Academic Program Review**

2008

Brown, Matthew, 2008. Estimating the Economic Feasibility Heating Tennessee Broiler Houses with Solar Energy: A Two County Analysis. (Major Professor: E. Bazen).

English, Alicia, 2008. Determinants of Liberian Farmgate Cocoa Prices. (Major Professors: M.D. Wilcox and R.K. Roberts).

2007

Goychuk, Kateryna, 2007. Potential Impacts of Meeting Renewable Portfolio and Fuel Standards on the Economy of Tennessee. (Major Professor: K. Jensen).

Jones, Janet, 2007. Factors Influencing Desire for Increased Wildlife Habitat Among Tennessee Farmers and the Economics of Switchgrass Production. (Major Professor: C. D. Clark).

Jones, LeKeya N, 2007. Two Stage Investigation of Post-Buyout Burley Tobacco Production & Trends in the Traditional burley Regions of Tennessee. (Major Professor: K. Tiller).

Kim, Seung-Gyu, 2007. Measuring The Value of Air Quality: Application of Spatial-Hedonic Model. (Major Professor: S-H. Cho).

Lindborg, Chris, 2007. An Analysis of Tennessee Agri-Tourism Visitors' Preferences and Expenditures (Major Professor: K. Jensen).

Walton, Jonathan Core, 2007 Technology Adoption and Abandonment in Precision Cotton Production. (Major Professors: R. K. Roberts and J. A. Larson).

2006

Avila, Gerry Solano, 2006. Tennessee's Kenaf Market Potential as a Feedstock in the Production of Paper. (Major Professor: B. C. English).

Barrowclough, Michael, 2006. BMP Adoption Criteria in Two East Tennessee Watersheds. (Major Professor: E. Bazen).

Dawson-Boyd, Eugenia, 2006 The Agri-Tourism Industry and Its Needs for Assistance in Tennessee. (Major Professor: K. Jensen).

Ellis, Pamela, 2006. Evaluation of the Factors that Influence Farmers to Adopt New Crops and the Effect of Farmer Characteristics on Choice of Producing Switchgrass. (Major Professor: B.C. English).

Lin, Yu-ling, 2006. Dietary Inequality Among Children in the United States: Decomposing the health eating index. (Major Professor: S.T. Yen).

Robbins, Brad, 2006. Defining the American Farm. (Major Professor: K. Tiller).

Roberts, David Carlos, 2006. Identifying and Analyzing Potential Watershed-Based Water Quality Trading Programs. (Major Professor: C. D. Clark).

Schaffer, Harwood, 2006. Viability of the Economy of Oromia: a point of departure. (Major Professor: D. Ray).

Torbet, John Colby, 2006. Perceived Importance of Precision Farming Technologies in Improving the Efficiency of Phosphorous, Potassium, and Nitrogen in Southeastern Cotton Production. (Major Professor: R.K. Roberts)

Young, Alexander, 2006. Measuring Effects of Housing Densities on Property Values Using Locally Weighted Regression. (Major Professor: S-H. Cho).

2005

Dellachiesa, Alejandro Enrique, 2005 Feasibility of Production and Marketing Blueberries in Tennessee. (Major Professor: C. Hall).

Sanders, Benjamin Paul, 2005. Targeted Economic Development in Tennessee: An Industrial Cluster Analysis of a Multi-County Upper-Cumberland Region. (Major Professor: C. D. Clark).

Travis, John, 2005. Tennessee Hay Supply and Demand Response to Prices and Other Factors. (Major Professor: R.K. Roberts).

2004

Gao, Qi, 2004. Relationship between No Tillage Production Practice and Herbicide-Tolerant Crops and Factors Affecting No Tillage Adoption. (Major Professor: B.C. English).

Takeshima, Hiroyuki, 2004. Identification of the effective policy for the improvement of food security: the comparison of the impacts of domestic food production, economic growth and trade liberalization. (Major Professor: D. de la Torre Ugarte).

Zhang, Yu, 2004. Comparison of potential business structures for a biodiesel production facility and analysis of Tennessee soybean producers' willingness to join a New Generation Cooperative to produce biodiesel (Major Professor: K. Jensen).

2003

No theses for this year. Only non-thesis graduates.

Exhibit 2.2. Agricultural Economics Graduate Catalog Excerpt.

DEPARTMENT OF AGRICULTURAL ECONOMICS

<http://economics.ag.utk.edu>

Delton C. Gerloff, Interim, Head

Roland K. Roberts, Graduate Committee Chairman

Professors

Cross, T.L., PhDOregon State
English, B.C., PhDIowa State
Garland, C.D., PhDTennessee
Gerloff, D.G., PhDTexas A&M
Jensen, K.L., PhDOklahoma State
Klindt, T.H., PhDKentucky
McLemore, D.L., PhDClemson
Orr, R.H., PhDIllinois
Park, W.M., PhDVirginia Tech
Rawls, E.L., PhDVirginia Tech
Ray, D.E., PhDIowa State
Riley, J.B., PhDOklahoma State
Roberts, R.K., PhDIowa State
Smith, G.F., PhDTennessee

Associate Professors

De La Torre Ugarte, D.G., PhDOklahoma State
Larson, J.A., PhDOklahoma State
Yen, S.T., PhDMinnesota

Assistant Professors

Bazen, E.F., PhDKentucky
Cho, S.H., PhDOregon State
Clark, C.D., PhDVanderbilt
Lambert, D.M., PhDPurdue
Tiller, K.H., PhDTennessee
Velandia, M., PhDTexas Tech
Wilcox, M.D., PhDPurdue

MAJOR DEGREE

Agricultural Economics MS

Agribusiness concentration

Agricultural economics concentration

Natural Resource Economics concentration

MASTER OF SCIENCE

AGRICULTURAL ECONOMICS MAJOR

Requirements

The master's program may be completed under a thesis option with a concentration in agricultural economics or natural resource economics. A non-thesis option is available with concentrations in agribusiness or agricultural economics. For specific information, contact the department head.

AGRIBUSINESS CONCENTRATION

The agribusiness concentration is designed to prepare students to succeed in the public or private sectors of agriculture, including product manufacturing and marketing, natural resource management, farm management, and financial analysis. A candidate must complete a minimum of 31 hours of graduate credit in courses approved by the student's master's committee. At least 28 hours must be earned in courses numbered at or above

the 500 level. Sixteen hours of agricultural economics; 3 hours of economic theory; 6 hours of quantitative methods; 6 hours of business, statistics, or communications electives; and 3 hours of internship are required. Each student must pass both written and oral comprehensive examinations.

AGRICULTURAL ECONOMICS CONCENTRATION

Thesis Option

The thesis option in agricultural economics is designed to prepare students for analytical and research careers in the public and private sectors and to prepare students interested in entering a PhD program. A candidate must complete a minimum of 31 hours of graduate credit in courses approved by the student's master's committee. At least 28 hours must be earned in courses numbered at or above the 500 level. In the thesis option, 16 hours of agricultural economics, 3 hours of economic theory, 6 hours of quantitative methods, and 6 hours of thesis are required. Each student must pass a final oral examination.

Non-Thesis Option

The non-thesis option in agricultural economics is designed to prepare students for analytical and research careers in the public and private sectors. A candidate must complete a minimum of 36 hours of graduate credit in courses approved by the student's master's committee. At least 33 hours must be earned in courses numbered at or above the 500 level. In the non-thesis option, 27 hours of agricultural economics courses and 9 hours of directed electives are required. Each student must pass both written and oral comprehensive examinations.

NATURAL RESOURCE ECONOMICS CONCENTRATION

The natural resource economics concentration is designed to prepare students for analytical and research careers in the public and private sectors with emphasis on natural resource economics and to prepare students interested in entering a PhD program.

A candidate must complete a minimum of 31 hours of graduate credit in courses approved by the student's master's committee. At least 25 hours of graduate credit must be earned at or above the 500 level. Thirteen hours of agricultural economics, 3 hours of economic theory, 6 hours of quantitative methods, 38 COLLEGE OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES and 6 hours of thesis are required. Twelve hours of coursework must come from a set of directed electives designed to enhance skills in natural resource economics and/or spatial analysis.

Each student must pass a final oral examination.

Agricultural Economics Minor

A minor requires 6 hours of coursework in the department with at least 3 hours in 500-level courses. The student's committee must include a member of the faculty from the department who will be responsible for designating courses required for the minor.

Environmental Policy Minor

The department participates in a program designed to give graduate students an opportunity to develop an interdisciplinary specialization in environmental policy. See Department of Political Science for program description.

DOCTOR OF PHILOSOPHY NATURAL RESOURCES MAJOR NATURAL RESOURCE ECONOMICS CONCENTRATION

Students interested in pursuing doctoral studies in the area of natural resource economics may do so with a concentration in natural resource economics under the natural resources PhD major located administratively within the Department of Forestry, Wildlife and Fisheries (see Department of Forestry, Wildlife and Fisheries catalog entry for detailed information).

The student's doctoral committee will assist the student in developing a program of graduate coursework that will meet the requirements for the natural resource economics concentration under the natural resources PhD major while drawing heavily from the Department of Agricultural Economics and the Department of Economics.

Requirements

Complete 72 semester hours of graduate coursework beyond the bachelor's degree. Forty-eight hours must be in graduate coursework approved by the student's doctoral committee. Up to 24 hours of coursework completed for a master's degree may be applied to the 48-hour requirement. A minimum of 12 of the remaining 24 (or 30 of the 48 if no master's degree) hours must be graded A-F. A minimum of 6 hours must be taken in UT courses at the 600-level, exclusive of dissertation hours. Students are required to complete a minimum of 24 hours of Agricultural Economics 600, Doctoral Research and Dissertation. Successfully complete Forestry, Wildlife, and Fisheries 601 (3 hours), 610 (2 hours), 612 (1 hour); and Agricultural Economics 520 (1 hour) or similar graduate-level course.

Demonstrate competence in:

- Microeconomic Theory by qualifying examination. Students must take this examination in the summer prior to their second year of study. Prior to taking the examination students must complete Economics 511 and Economics 512 for graduate credit or petition the Agricultural Economics faculty for exemption from these courses.

- Macroeconomic Theory by the completion of a three or more hour graduate-level course in Macroeconomics with a grade of B or better.
- Quantitative Methods by completion of Economics 581, Economics 582 and Economics 583 with grades of B or better, or by qualifying examination.
- Natural Resource Economics by comprehensive examination.

Preparation for this comprehensive examination will require completion of Agricultural Economics 570, or equivalent, and Agricultural Economics 670.

- Environmental Economics by comprehensive examination or by comprehensive examination in another field related to natural resources, economics or agricultural economics approved by the student's doctoral committee.

Preparation for this comprehensive examination will normally require completion of a sequence of two or more courses in the field of specialization.

- All coursework by oral comprehensive examination. The examination is scheduled by the student and administered by the student's doctoral committee when the student has completed all or nearly all of the coursework.

Written qualifying and comprehensive examinations will be given in August (during the week prior to the start of fall semester classes) and in January (during the week prior to the start of spring semester classes). Students must take the oral comprehensive examination during the first semester after passing all written qualifying and comprehensive examinations.

Students are expected to take the required courses that prepare them for the written examinations and must take these examinations on their first offering after completing the recommended coursework. Students failing any qualifying or comprehensive examination must retake the examination the next time it is offered or they will receive a failing grade. Failing a qualifying or comprehensive examination for the second time will ordinarily result in dismissal from the program. A qualifying or comprehensive examination may be taken a third time with approval of the Agricultural Economics faculty. Students must file a petition with the Graduate Coordinator who will submit the petition to the faculty. Generally, extenuating circumstances are needed to warrant approval to take an examination a third time. Failing a qualifying or comprehensive examination for a third time will result in dismissal from the doctoral program.

Following formation of the student's doctoral committee, submit a written dissertation proposal to all members of the committee. The student's major professor will then arrange an oral defense of the proposal. The proposal should be submitted and defended no later than one semester after the student takes the Microeconomic Theory qualifying examination. Complete a doctoral dissertation and pass an oral examination on the dissertation. The dissertation, in the form approved by the major professor, must be distributed to the committee at

least two weeks before the examination. The examination must be scheduled through the Graduate School at least one week prior to the examination and must be conducted in university-approved facilities. The examination is announced publicly and is open to all faculty members. The defense of dissertation will be administered by all members of the doctoral committee after completion of the dissertation and all course requirements.

This examination must be passed at least two weeks before the date of submission and acceptance of the dissertation by the Graduate School. The major professor must submit the results of the defense by the dissertation deadline

Exhibit 2.3. Actions Taken by the Department of Agricultural Economics to Support the Goals and Objectives of the Joint TAES/CASNR Diversity Plan

<u>Goals</u>	<u>Objectives</u>	<u>Actions Taken by Department of Agricultural Economics to Support Goals and Objectives of the Joint TAES/CASNR Diversity Plan</u>
Create and sustain a welcoming, supportive and inclusive campus climate	<p>Promote a "welcoming" environment for those visiting administrative office, employment web pages, and other public access points</p> <p>Assure staff understand the importance of diversity in pursuit of our mission so they can be informed advocates of our commitment</p> <p>Promote a "welcoming" environment for faculty, staff and students</p> <p>Increase the dialogue amongst administrators, faculty, staff and students assuring a "welcoming" environment and reinforcing the importance of and commitment to diversity in our programs</p>	<p>The Department's web pages provide a link to the UTIA diversity statement.</p> <p>The UTIA diversity statement is included in all of the Department's exempt position announcements</p> <p>Annual evaluation sessions provide the Department Head the opportunity to discuss with individual staff members their performance related to a diverse workplace</p>
Attract and retain greater numbers of individuals from under-represented populations into faculty, staff, and	<p>Reinforce with the department heads, center directors, and faculty the importance of promoting and supporting diversity within units and programs</p> <p>Seek a diverse candidate pool for exempt searches and actively seek qualified faculty and staff candidates from under-represented populations</p>	<p>The Department hosts a back-to-school picnic in the UT Trial Gardens each Fall semester for all students, faculty and staff. In addition, Departmental faculty host a Friday morning coffee each week for all students, faculty and staff.</p> <p>Faculty members have attended the annual Understanding through Unity Dinner for UTIA administrators, faculty, staff, and students</p> <p>Faculty members participate in events sponsored by, and support the fundraising efforts of, the Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) organization.</p> <p>During its most recent strategic planning process, the Department discussed the importance of maintaining and increasing diversity in a variety of contexts. The Strategic Plan adopted by the Department on June 15, 2007, listed the lack of faculty and staff diversity as a Departmental weakness (page 45), stressed the importance of maintaining student diversity in the M.S. program (page 15), and adopted two specific goals to improve diversity: Have 25% or more of our undergraduate majors participate in an international study program by Fall 2012 and increase international content in existing courses (pages 27-28, 52).</p> <p>The Department carefully follows OED guidelines for searches.</p> <p>The Department targets under-represented populations with position advertisements by including targeted contacts at predominantly minority institutions.</p> <p>The Department strives to construct diverse search committees for all faculty openings. Faculty and staff discussions related to searches, interviews, and employment of faculty and staff are a high priority during search committee meetings and deliberations.</p>

Goals

administrative positions.

Objectives

Retain faculty and staff from under-represented groups

Attract, retain, and graduate increasing numbers of students from historically under-represented populations and international students.

Increase under-represented student enrollment

Enhance recruitment of under-represented populations of students

Develop and strengthen partnerships with diverse communities in Tennessee and globally.

Enhance collaborative relationships with Tennessee State University and other Historically Black Colleges and Universities (HBCU) as appropriate

Actions Taken by Department of Agricultural Economics to Support Goals and Objectives of the Joint TAES/CASNR Diversity Plan

The Department utilizes a faculty mentoring programs to provide guidance to new hires so that they have the opportunity to meet expectations and succeed in their respective programs. The role of mentors in the annual review of tenure-track faculty is discussed in Section 3.3 of the Department's By-Laws.

Faculty and staff evaluations based on faculty and staff performance in light of position description. High performing individuals rewarded with merit salary increases to the maximum extent allowed by the Department's budget.

The annual performance review of faculty includes consideration and discussion of professional development objectives and plans. The Department supports the professional development activities of faculty and staff with departmental and other development funds, when possible.

Faculty regularly participate in activities to support STARS (Students Training in Agriculture and Related Sciences) for high ability rising sophomore and junior under-represented students from Tennessee high schools to explore educational opportunities in CASNR.

Faculty members have conducted cooperative Extension programs with Tennessee State University faculty members. One faculty member has served as Co-Coordinator for Tennessee Southern Sustainable Agriculture Research and Education program with Tennessee State University. In addition, faculty members have submitted several NRI grant proposals with Tennessee State University faculty over the last few years.

<u>Goals</u>	<u>Objectives</u>	Actions Taken by Department of Agricultural Economics to Support Goals and Objectives of the Joint TAES/CASNR Diversity Plan
	Enhance student participation in study and exchange programs	<p>The Department provides encouragement, scholarships, and departmental assistance to undergraduate students to participate in international education opportunities. In addition, the Department works with the Center for International Education, UTIA International Programs, and departmental faculty to develop and enhance opportunities for students to study abroad</p> <p>The Department continuously works with development to increase funds for student and faculty support to participate in international study</p> <p>The Department has provided support for faculty to participate in international travel, exchange and study programs.</p>
	Enhance relationships, collaborative activities, and formal linkages with external organizations and foreign institutions	<p>Faculty members are working with foreign universities to foster relationships and build exchange/study programs.</p> <p>Faculty members are engaged in external and international collaborative agreements of an informal nature.</p>
	Aligned with mission, strengthen relationships with diverse populations and examine strategies to accomplish these goals	<p>While the Department does not currently utilize a departmental advisory group, the 2008 Strategic Plan adopted the formation of such a group as a goal. The Department is currently conducting an alumni survey that is, in part, designed to identify alumni interested in serving in this capacity.</p>
Ensure that curricular requirements include significant intercultural perspectives.	Ensure that the academic curriculum adequately prepares students for a diverse nation and world	<p>The Department routinely provides support for less-experienced faculty members to attend teaching improvement programs.</p> <p>The Department reviews the curricula continuously to assess how well they meet the needs of current students. As a result, the Department has recently revised courses and course offerings in an attempt to insure that the curriculum reflects an infusion of intercultural and international issues. For example, the Senior Seminar (AGEC 410) now focuses on globalization in the food and fiber system. In addition, students who have participated in study abroad or foreign study tour programs are invited to make a presentation in AGEC 110 about their experience, with the hope this will encourage freshman majors to consider participate in international activities.</p>
Prepare graduate students to become teachers and researchers in a diverse world.	<p>Better prepare graduate students for instruction before a diverse audiences</p> <p>Support graduate students in efforts to become more familiar with other cultures and customs both nationally and internationally</p>	<p>The Department requires participation of graduate teaching assistants in the UT Graduate School's Best-Practices Teaching Workshop.</p> <p>The Department provides encouragement, scholarships, and departmental assistance to graduate students to participate in international education opportunities.</p>

III. QUALITY (BASED ON EVIDENCE FROM THE PAST 5 YEARS)

A. National Recognition

A ranking of agricultural economics departments in the United States produced by Perry (2004) did not find the University of Tennessee Agricultural Economics Department in the top 15 departments that offered Master's degrees. His ranking was based on a survey of agricultural economists who were asked to rank the top ten M.S. programs in the United States. In earlier rankings by pages published in peer reviewed journals and citations of authors, the Department's ranking was close to 40th. A ranking by Beilock, Polopolus and Correal (1986) based on author citations ranked the Department 36th in total citations and 44th in citations per capita. A follow-up article by Beilock and Polopolus (1988) ranked the Department between 40th and 42nd in the United States, depending on different journal classifications. Kinnucan and Traxler (1994) did not place the Department in the top 25 U.S. departments of agricultural economics in terms of pages published in the *American Journal of Agricultural Economics*, but their raw data showed that the Department was ranked close to 40th.

Although more current rankings are not available, the Department's ranking in terms of publications in peer reviewed journals and recognition for presentations at professional meetings has likely improved in the last two years with the addition of new faculty who have been actively publishing and participating in professional meetings (See vitae and Table 3.1). In addition, the Department has several faculty members who are nationally and internationally recognized for their research and Extension work in the areas international trade, bioenergy production, farm management, livestock and crop marketing, and agricultural policy (Table 3.2).

B. Faculty Productivity

Productivity in publishing and creating other intellectual outputs, and disseminating them to peers and stakeholders provides evidence of faculty quality within the Department. Examples of creative achievements produced by Departmental faculty during the 2003-07 period include 114 peer-reviewed journal articles; 24 book chapters; 204 bulletins, circulars, pamphlets and fact sheets; 188 abstract from scientific or disciplinary meetings and papers from conference proceedings; 306 Extension presentations and workshops; 41 educational tools; and 85 reports written to granting agencies, among others (Table 3.1).

National, University and College awards and recognitions received by faculty for teaching, advising, research, Extension and public service provide evidence that the creative achievements and service of faculty members (Table 3.1) were well received by peers and stakeholders, and recognized for high quality. From 2003 through 2007, 14 Departmental faculty members received the 47 awards and recognitions listed in Table 3.2.

Measures of faculty success in obtaining external funding to support the production of the creative achievements in Table 3.1 are presented in Table 3.3 and Figure 3.1. Table 3.3

presents annual grant and contract proposals and awards for the Department by number of proposals submitted, total funds awarded, number of awards, mean award amount, and federal grant and contract funds awarded. Figure 1 summarizes by functional unit (UT Extension, CASNR, and UT AgResearch) the dollar amounts of grant and contract awards for which Departmental faculty were principal investigators. The data show a slight upward trend in total dollars awarded, but no discernable trend can be seen in mean award amounts. Grant and contract awards for teaching (CASNR) have not been received during the 2003-07 period (Figure 1). External funding for Extension activities has remained fairly constant, with slightly more than average received in 2007.

C. Faculty Profile

All faculty members with tenure-track appointments in the Department hold terminal degrees in their field (100%); the degrees were awarded by 13 different institutions. Since Fall Semester 2001, the University has followed the policy that “Courses at the 600 level are taught by faculty who have been approved by the college or by departments, where the college has given them that responsibility. All departments/colleges have a statement of criteria used in determining eligibility to teach at the 600 level.” Six faculty members are currently approved to direct doctoral research, and 15 requests are expect to be approved.

Most Departmental faculty are members of the Agricultural and Applied Economics Association (AAEA) and Southern Agricultural Economics Association (SAEA) (75%).² All faculty participate in professional activities, such as presenting scientific papers at national and regional meetings; attending business meetings; acting as reviewers for journal publications; and serving on various organizational committees. Dr. Gerloff currently serves as the Chair of PRIDE Award, Tennessee Association of Agricultural Agents and Specialists (2007-2008); Dr. Jenson was elected President of the SAEA in 2005; Dr. Larson currently serves as Chair of the SAEA Outstanding Dissertation Award Committee; Dr. Ray was a member of the Editorial Council of the *Journal of Agricultural and Applied Economics (JAAE)* (2005-2007); Dr. Roberts currently serves on the Editorial Council of the *JAAE* (2008-2011); Dr. Wilcox currently serves as a member of National Outreach Committee of AAEA (2007-2009); Dr. Tiller currently serves on the Advisory Board of *Tobacco Farm Quarterly* (2007-2008); and Dr. Rawls served as the Chair of Technical Advisory Committee of the Livestock Marketing Information Center (2005-2006).

² Cho (AAEA, SAEA, RSAI, The Chinese Economists Society); Clark (AAEA, SAEA, AERE); De La Torre Ugarte (AAEA, SAEA, AAAS, IAEA); English (AAEA, SAEA, NAREA, WAEA, SWCS); Garland (AAEA, SAEA); Gerloff (AAEA, SAEA, TAAA&S); Jensen (AAEA, SAEA, Food Distribution Research Society); Lambert (AAEA, SAEA, RSAI); Larson (AAEA, SAEA, WAEA, American Economic Association, and Soil and Water Conservation Society); McLemore (AAEA, SAEA); Park (AAEA, SAEA, ACE—Association of Christian Economists); Ray (AAEA, SAEA); Riley (National AgriMarketing Association); Roberts (AAEA, SAEA, WAEA); Rawls (TAAA&S); Tiller (AAEA, SAEA); Velandia (AAEA, SAEA); Wilcox (AAEA, SAEA, NACDEP); Yen (The Chinese Economists Society, Econometric Society, IAEA).

International activities expose faculty to alternative cultures and economic environments, allowing them to identify better with the global economy. Since 2003, ten faculty members have participated in international conferences, seminars, and/or consulting in 31 countries (Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Columbia, Dominican Republic, Egypt, El Salvador, England, France, Germany, Guatemala, Hong Kong, Italy, Liberia, Luxembourg, Mexico, Netherlands, Nicaragua, Peru, Senegal, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand and Yemen) (Table 3.4).

D. Student Profile

Undergraduate Students

Table 3.5 indicates the quality of the Department's undergraduate program in terms of student numbers, diversity and success in attracting undergraduate students. The percentage of matriculated students who were female ranged from 57% in 2005 to a low of 0% in 2003. Minorities were not matriculated into the Department's undergraduate program, although 7% and 12% of accepted applicants were minorities in 2005 and 2006.

Table 3.6 supplies information about the quality of entering undergraduate students with reference to ACT scores, high school GPAs and retention rates, and compares students from the Agricultural Economics Department with entering students for the entire University of Tennessee, Knoxville Campus. With the introduction of Tennessee Education Lottery scholarships in 2004, ACT scores and high school GPAs increased more for the Department than for the University, suggesting that the Department was able to attract more of the higher quality students who earlier tended to favor other educational institutions. Table 3.6 also shows that Departmental retention rates were high relative to the entire University.

Figure 2 gives a visual representation of the number of undergraduate students enrolled in the Department. Enrollment declined from a high of 82 students in 2003 to a low of 56 students in 2005. Thereafter, enrollment increased to 66 students in 2007.

Graduate Students

The quality of the Department's M.S. program is shown in Table 3.7 in terms of student numbers, diversity, undergraduate GPAs, and GRE scores. Average undergraduate GPAs have trended upward from 3.3 in 2003 and 2004 to 3.6 and 3.5 in 2006 and 2007, respectively. However, no discernable trend can be detected in average GRE scores.

Table 3.8 expresses the numbers of matriculated students by M.S. concentration and undergraduate major and institution. This information indicates the quality of the M.S. program in terms of trends in student interest in the M.S. concentrations and diversity of backgrounds. The numbers of M.S. students in the Agribusiness Concentration have been steady at 2 or 3 students between 2004 and 2007, with most students choosing the Agricultural Economics Concentration thesis option.

Total annual enrollment in the Department's M.S. program is visually portrayed in Figure 3. Enrollment in the M.S. program peaked in 2004 with 28 students. Thereafter, enrollment decreased to 17 students in 2006 and 2007, but increased to 21 students by the fall of 2008.

E. Student Support

Undergraduate Students

The Department's undergraduate students received scholarship funding of \$206,900 in 2007, almost double the \$107,500 received in 2003 (Table 3.9). With the establishment of the Tennessee Education Lottery, funding from institutional contributors declined from \$122,200 in 2004 to \$92,200 in 2007. This decline was more than offset by increases in Lottery scholarship funding from \$48,000 in 2004 to \$114,800 in 2007. Numbers of students receiving institutional and Lottery scholarships followed the same trends as funding from those sources. The net result, however, was a fairly consistent number of students receiving scholarships, with 47 receiving them in 2003 and 45 receiving them in 2007. On average 70 percent of Departmental undergraduate majors received scholarships during the 2003-07 period. The average scholarship amount was \$3,729 per student per year, increasing from \$2,287 in 2003 to \$4,598 in 2007.

Graduate Students

In 2007, assistantship funding for the Department's 24 graduate students came from the Tennessee Agricultural Experiment Station (\$108,000) for four Graduate Research Assistants, the College of Agricultural Sciences and Natural Resources for two Teaching Assistants (**\$50,000**), with the remainder written directly into grants and contracts or from salary savings from grant and contract activity. Assistantship stipends increased from \$13,200 per year in 2003 to \$14,400 in 2006. In 2006, the Department began offering performance supplements to applicants who showed excellent potential. These supplements were \$100 and \$200 per month depending on Departmental Graduate Committee ratings of the applicants. Thus, beginning in 2006, M.S. assistantship stipends ranged from \$14,400 to \$16,800 per year. As of this writing, four M.S. students were receiving \$100/month supplements and five were receiving \$200/month supplements. These supplements are discontinued if the recipient earns grades below the minimum standard in any one semester of 3.3 for the \$100 supplement and 3.6 for the \$200 supplement. At the discretion of the Principal Investigator, stipends of up to 25% higher than the \$14,400 base level were allowed for Graduate Research Assistants on external funding. The addition of the performance supplements was mostly responsible for increasing the average GPA of entering M.S. students in 2006 and 2007.

F. Student Recognition

Numbers of Refereed Articles and Presentations

Graduate students have been actively involved in publishing and presenting their research, especially since 2005. The increasing numbers of presentations at professional meetings since 2005 and the subsequent uptick in peer reviewed journal articles by graduate students in 2007 is evidence that the Department is seriously encouraging high quality

research and professionalism from graduate students in fulfillment of thesis requirements (Table 3.10).

State and National Awards and Recognitions

Several students received or won State or National awards, competitive scholarships, other competitions, or other recognitions between 2003 and 2007. They are listed below.

2006—Drew Petty placed second in the National competition of the Farm Bureau Discussion Meet, and another student (Chris Hicks, M.S. student) placed second in the State Discussion Meet.

2007—The National Agribusiness Marketing Association (NAMA) Marketing Team place third out of 31 teams in the national marketing competition.

2008—Brick Veirs was awarded the American Cotton Shippers Association full scholarship valued at \$10,000 to attend the 15th Annual ACSA International Cotton Institute at The University of Memphis' Fogleman Executive Business Center.

2008—Jessica Jerrell won the Tennessee Farm Bureau Discussion Meet at the University and State levels, and will proceed to the National competition.

2008—Jessica Jarrell won the undergraduate Syngenta/Delta Farm Press Cotton Essay Competition, "The Future of Delta Cotton," and received of a \$1,000 scholarship.

College and University Awards and Recognitions

Agricultural Economics students have received College or University awards and recognitions since 2003. They are listed below.

2005—Alee Lynch was the College of Agricultural Sciences and Natural Resources (CASNR) Outstanding Junior.

2006—Alee Lynch was a University of Tennessee Torchbearer; the top award given a University of Tennessee student.

2007—Alicia English was the Gamma Sigma Delta Outstanding M.S. Graduate Research Assistant.

The Arch E. McClanahan Agricultural Memorial Scholarship is the premier full tuition scholarship for CASNR. Eight Agricultural Economics students have won this scholarship in the past five years: **2007—Jessica Fox, Maggie Keele, David Lane, Elizabeth Martin, Sarah McDonald, Laura Teague; 2004—Alee Lynch; 2003—Jane Howell.**

Being selected to participate on the Executive Committee of the CASNR Student Council recognizes the quality and interest of our students in participating in governance. In the past five years, three Agricultural Economics students have filled positions on the

Executive Committee: **2005—Ryan Hensley (Vice President); 2004—Amy Willis (President); and Jane Howell (Secretary).**

The College Ambassadors are a team of students focused on public relations. Ambassadors work to recruit good prospective students, involve the student body in reaching their goals, and stimulate community interest in agricultural sciences and natural resources. The following Agricultural Economics students were selected as College Ambassadors in the following years: **2008—Ryan Hensley; 2007—Ryan Hensley; 2005—Adam Hensley; 2004—Josh Anderson, Devin Gilliam, Jocelyn Griggs, Alee Lynch, Amy Willis; and 2003—Alee Lynch, Josh Anderson, Devin Gilliam, Jocelyn Griggs, Amy Willis.**

Fellowships

Two M.S. students have received Access and Diversity Funding to support their Assistantships: **2008-present—Mladen Grbovic (Serbian) and 2004-06—LaKeya Jones (minority).**

G. Graduate Placement

Placement of graduates from Departmental degree programs in gainful employment provides insight into the quality of the Department's academic programs. The following subsections indicate the initial employment of the Department's graduates following graduation.

Undergraduate Students

Table 3.11 contains information about the placement of Departmental BS graduates. Of the five categories of employment listed in Table 3.11, most graduates were placed in graduate or professional schools (25%) or management positions (25%). The remainder of graduates found employment in marketing/sales (9%), finance (6%), or University of Tennessee Research and Extension (3%), with the employment of 31% being unknown.

Graduate Students

Placement of Departmental M.S. graduates is shown in Table 3.12. Graduates are being placed in business and financial operations such as John Deere, ACE Hardware, and AGCO; in government entities such as the USDA Farm Services Agency, USDA Rural Development, UT Extension, and the National Agricultural Statistics Service; in Ph.D. programs in other departments within the University of Tennessee such as the Economics, Finance, Sociology and Forestry, Wildlife and Fisheries Departments; or in Ph.D. programs at other universities such as Purdue, Illinois, Oklahoma State and Texas A&M Universities.

H. Student Performance

Undergraduate students in their final year are periodically required to take the California Critical Thinking Skills test. This test was last administered in the 2007-2008 academic year (Table 3.13).

Students graduating with a major in Agricultural Economics and Business take a major field exam each fall semester as a required component of AGE 410 (Senior Seminar).

Student performance on the exam in the academic years the exam was officially required (as part of the THEC Performance Funding Program) is reported in Table 3.14. No clear trend is evident from these data or from performance in the intervening years. This is not surprising given the relatively small number of students who take the exam each year. Another factor is that the exam covers material from the full set of upper division courses from which students select only a subset. To date, results from the exam have not been used as feedback to inform discussions of courses or curriculum revisions or teaching effectiveness. However, consideration is being given to a major revision of the exam in preparation for the next academic year in which its administration is officially required—2010-2011. Such a revision would likely involve narrowing the focus of its coverage to material in core required courses and restructuring it in a way that would allow it to be used more effectively in gauging trends and areas of weakness in student learning outcomes.

I. Other Graduate Program Indicators

In 2006, the Department entered into an agreement with the Department of Forestry, Wildlife and Fisheries (FWF) to establish a Natural Resources PhD program. The program is administered through FWF. In 2007, a Natural Resource Economics Concentration was established within the Natural Resources PhD program. Both the concentration and the PhD program will appear on the academic histories of PhD graduates. Funding for two, three-year assistantships was originally from the Natural Resources Policy Center (<http://nrpc.ag.utk.edu/>), a Cooperative effort between the Agricultural Economics, FWF and Civil and Environmental Engineering faculties. More recently, internal funding has supported two additional assistantships. Assistantship stipends are \$20,000 per year, with potentially excellent students receiving \$100 or \$200/month performance supplements. Currently, four students are in the program. Two have passed qualifying exams and two entered the program in 2008 and are on schedule to take qualifying exams during the 2009 Summer Semester.

J. References

Beilock, Richard, Leo Polopolus, and Mario Correal. 1986. "Ranking of Agricultural Economics Departments by Citations." *American Journal of Agricultural Economics* 68:595-604.

Beilock, Richard, and Leo Polopolus. 1988. "Ranking of Agricultural Economics Departments: Influence of Regional Journals, Joint Authorship, and Self-Citations." *American Journal of Agricultural Economics* 70:403-409.

Kinnucan, Henry W., and Greg Traxler. 1994. "Ranking Agricultural Economics Departments by AJAE Page Counts: A Reappraisal." *Agricultural and Resource Economics Review* 23:194-199.

Perry, Gregory M. 2004. "Ranking M.S. and Ph.D. Programs in Agricultural Economics—Spring 2004." On-line at: <http://arec.oregonstate.edu/Ranking2004.pdf> (Accessed September 9, 2008).

Table 3.1. Creative Achievements of Faculty in Agricultural Economics, 2003-07.

Creative Achievement Category	2003	2004	2005	2006	2007	Total
Peer-reviewed professional journals	13	28	26	10	37	114
Book chapters or books	2	4	7	5	6	24
Bulletins, reports, circulars, pamphlets, fact sheets	43	63	50	5	43	204
Popular press, trade, UTIA magazine or newsletter articles	16	93	107	85	74	375
Presentations—abstracts from scientific or disciplinary meetings and papers from conference proceedings	39	64	36	28	21	188
Presentations—Extension presentations and workshops	61	114	44	37	50	306
Presentations—Public addresses to lay audiences	7	13	51	41	38	150
Presentations to academic/professional peers	38	61	32	104	105	340
Other instructional and teaching activities	6	9	9	7	6	37
Technological advances			1	2	1	4
Computer software	2	6	3	9	8	28
Educational tools	13	9	6	7	6	41
Internet activities	20	18	11	12	20	81
Other creative products and activities	11	34	18	15	42	120
Theses	1	3	6	8	7	25
Other publications	1	36	26	29	49	141
Reports written to granting agencies	10	2	23	22	28	85

Table 3.2. Teaching, Advising, Research and Service Awards and Recognitions Received by Departmental Faculty Members, 2003-07.

Year	Person	Sponsor	Award
2003	de la Torre Ugarte, D.	E. TN Ch. Soc. for Tech. Com.	Achievement Award for publication
2003	Eastwood, D.	Food Dist. Research Society	Frank Panyko Award for Dist. Service
2003	Gerloff, D.C.	American Ag. Econ. Assoc.	Premier Forecaster Award
2003	Gerloff, D.C.	Gamma Sigma Delta	Institute of Agriculture Team Award
2003	Jensen, K.L.	College of Ag. Sci. & Nat. Res.	Neal and Tacie Peacock Teaching Cert.
2003	Hall, C.	Nat. Alpha Gamma Rho Frat.	Grand Pres. Award for Prof. Achiev.
2003	Hall, C.	American Society of Hort. Sci.	Extension Materials Award
2003	Hall, C.	UT Institute of Agriculture	Dutch & Marilee Cavender Outst. Pub.
2003	Ray, D.E.	Nebraska Farmer's Union	2003 Pres. Award for Outst. Service
2003	Ray, D.E.	American Corn Gro. Assoc.	Appreciation Award
2003	Riley, J.B.	College of Ag. Sci. & Nat. Res.	Outstanding Faculty Advisor Award
2003	Riley, J.B.	UT InterFraternity Council	Outstanding Chapter Advisor
2003	Riley, J.B.	National AgriMarketing Assoc.	Outstanding Chapter Advisor
2003	Riley, J.B.	UT Block & Bridle Club	Honorary Member
2003	Riley, J.B.	The University of Tennessee	Nom. Chancellor's Outst. Teaching Cit.
2003	Smith, G.F.	Tennessee RC&D Council	Apprec. Plaque 10+ yrs service to youth
2003	Smith, G.F.	Gamma Sigma Delta	Institute of Agriculture Team Award
2004	de la Torre Ugarte, D.	E. TN Ch. Soc. for Tech. Com.	Award of Excellence
2004	de la Torre Ugarte	American Corn Gro. Assoc.	Appreciation Award
2004	Garland, C.	UT Institute of Agriculture	B. Ray Thompson Outst. Fac. Perform.
2004	Jensen, K.L.	Southern Ag Econ Association	President Elect
2004	Hall, C.	TN Assoc. Ag. Agents & Spec.	Outstanding Specialist Award
2004	Hall, C.	Nat. Alpha Gamma Rho Frat.	One of 718 Brothers of the Century

Year	Person	Sponsor	Award
2004	Tiller, K.	E. TN Ch. Soc. for Tech. Com.	Award of Excellence
2004	Park, W.M.	The University of Tennessee	Chancellor's Excellence in Advising
2004	Rawls, E.L.	Nat. Assoc. Ag. Agents & Spec.	Distinguished Service Award
2004	Rawls, E.L.	TN Assoc. Ag. Agents & Spec.	Distinguished Service Award
2004	Ray, D.E.	Iowa State University	Floyd Andre Award for Outst. Service
2004	Ray, D.E.	E. TN Ch. Soc. for Tech. Com.	Award of Excellence
2004	Ray, D.E.	American Corn Gro. Assoc.	Carl L. King Award for Dist. Service
2004	Ray, D.E.	John Pesek Sust. Ag. Colloq.	Pesek Scholar
2004	Riley, J.B.	UT Institute of Ag.	Lidval Outstanding Teaching Award
2004	Tiller, K.	E. TN Ch. Soc. for Tech. Com.	Award of Excellence
2005	Gerloff, D.C.	Nat. Assoc. County Ag Agents	Distinguished Service Award
2005	Hall, C.	TN Assoc. Ag Agents & Spec.	Outstanding Specialist Award
2005	Hall, C.	UT Extension	Outstanding New Extension Worker
2005	Jensen, K.L.	Southern Ag Econ Association	President
2005	Rawls, E.L.	Gamma Sigma Delta	Team Award TN Mast. Beef Prod. P
2006	Jensen, K.L.	Southern Ag Econ Association	Past President
2006	Tiller, K.	TN Ag. Experiment Station	Research Impact Award
2006	Tiller, K.	American Ag. Econ. Assoc.	Dist. Extension/Outreach Prog.: Group
2006	Tiller, K.	Southern Ag Econ Association	Outstanding Extension Program Award
2007	Bazen, E.F.	Gamma Sigma Delta	UT Chapter President
2007	Bazen, E.F.	Gamma Sigma Delta	2006-07 Gold Chapter Award
2007	Smith, G.F.	Southern Rural Dev. Center	Bonnie Teater Com. Development Educator Lifetime Achievement Award
2007	Velandia, M.	AAEA Extension Competition	Finalist

Table 3.3. Summary of Grant and Contract Proposals Submitted and Awards, 2003-07.

Item	2003	2004	2005	2006	2007
Number of proposals	36	36	26	28	34
Total awards (\$1,000)	\$700	\$1,623	\$720	\$755	\$1,698
Number of awards ^a	31	32	31	30	37
Mean award (\$1,000)	\$23	\$51	\$23	\$25	\$46
Federal awards (\$1,000)	\$110	\$1,078	\$249	\$202	\$420

^a The number of awards may be larger than the number of proposals because proposals are not required for all awards received by the Department (eg., gifts).

Table 3.4. International Activities of Faculty Members in the Department, 2003-07.

Name	Country	Year
Christopher Clark	Brazil	2003, 2004, 2005
Christopher Clark	Egypt	2007
Christopher Clark	Yemen	2006
Seong-Hoon Cho	China	2008
Seong-Hoon Cho	South Korea	2007
Daniel de la Torre Ugarte	Austria	2008
Daniel de la Torre Ugarte	Belgium	2003, 2004
Daniel de la Torre Ugarte	Brazil	2006, 2007
Daniel de la Torre Ugarte	Canada	2007
Daniel de la Torre Ugarte	Dominican Republic	2006
Daniel de la Torre Ugarte	El Salvador	2007
Daniel de la Torre Ugarte	England	2003
Daniel de la Torre Ugarte	France	2003, 2005
Daniel de la Torre Ugarte	Germany	2005, 2006, 2007
Daniel de la Torre Ugarte	Guatemala	2003, 2006, 2007
Daniel de la Torre Ugarte	Hong Kong	2005
Daniel de la Torre Ugarte	Italy	2004, 2006, 2007, 2008
Daniel de la Torre Ugarte	Luxembourg	2005
Daniel de la Torre Ugarte	Mexico	2003, 2004, 2005, 2006, 2007
Daniel de la Torre Ugarte	Netherlands	2005, 2007
Daniel de la Torre Ugarte	Nicaragua	2007
Daniel de la Torre Ugarte	Peru	2004
Daniel de la Torre Ugarte	Senegal	2003, 2005, 2006
Daniel de la Torre Ugarte	Spain	2005
Daniel de la Torre Ugarte	Switzerland	2003, 2004, 2005, 2006, 2007, 2008
Burton C. English	Sweden	2004
Dayton Lambert	England	2007
Dayton Lambert	Germany	2004
Emmit Rawls	Argentina	2007
Daryll Ray	Canada	2003, 2005, 2007, 2008
Daryll Ray	China	2008
Daryll Ray	Belgium	2004
Daryll Ray	Brazil	2003, 2004, 2005, 2006
Daryll Ray	Columbia	2007
Daryll Ray	France	2003
Daryll Ray	Mexico	2003, 2007
Daryll Ray	Netherlands	2005, 2008
Daryll Ray	Switzerland	2005
Roland Roberts	Canada	2003
Roland Roberts	Germany	2004
Roland Roberts	Thailand	2004
Kelly Tiller	Brazil	2006
Kelly Tiller	Canada	2004, 2005
Kelly Tiller	France	2004
Kelly Tiller	Germany	2003
Michel Wilcox	Liberia	2006, 2007, 2008

Name	Country	Year
Steven Yen	Australia	2006
Steven Yen	China	2005, 2008
Steven Yen	Taiwan	2003, 2004, 2005, 2006, 2007

Table 3.5. Undergraduate Students Who Applied and Were Admitted, Matriculated, Enrolled, and Graduated, with Percentages of Female and Minority Students Who Applied and Were Admitted and Matriculated, 2003-07.

Academic Year	Applied	Female	Minority	Accepted	Female	Minority	Matriculated	Female	Minority	Number Enrolled	Number of Graduates
2003	15	20%	0	9	22%	0	3	0	0	82	13
2004	14	7%	0	12	8%	0	8	13%	0	70	26
2005	27	48%	4%	15	73%	7%	7	57%	0	56	22
2006	22	27%	9%	17	29%	12%	10	20%	0	63	14
2007	17	29%	6%	11	27%	0	9	33%	0	66	15

Table 3.6. Average GPAs, ACT Scores, and Retention Rates for Entering Undergraduate Students in Agricultural Economics and the University of Tennessee Knoxville (UTK), 2003-07.

Item	2003	2004	2005	2006	2007
ACT Ag Econ	20.8	23.6	24.3	24.6	23.3
ACT UTK	24.2	24.7	25.6	25.8	25.9
HS GPA Ag Econ	2.93	3.06	3.95	3.57	3.52
HS GPA UTK	3.40	3.45	3.56	3.60	3.62
Retention Ag Econ	100%	50%	100%	90%	NA
Retention UTK	77.9%	79.4%	81.6	83.7	NA

Table 3.7. M.S. Students Who Applied and Were Accepted, Admitted, Matriculated and Graduated, with Percentages of Female, International and Minority Students Matriculated, Average Undergraduate GPAs and GRE Scores of Matriculated Students, 2003-07.

Academic Year	Applied	Accepted	Matriculated	Females Matriculated	Internationals Matriculated	Minorities Matriculated	Average GPA of Matriculated	Average GRE Scores of Matriculated V/Q/A	Number of Graduates
2003	10	10	10	20%	10%	10%	3.3	442/585/3.7	6
2004	13	13	11	27%	18%	18%	3.3	429/637/4.6	11
2005	23	14	7	43%	29%	29%	3.4	403/640/4.0	12
2006	18	13	9	18%	27%	18%	3.6	440/638/3.3	10
2007	21	18	11	36%	45%	36%	3.5	471/660/3.9	5

Table 3.8. M.S. Students Matriculated in the Agricultural Economics and Agribusiness Concentrations, Undergraduate Institutions and Majors, and Numbers of Graduates, 2003-07.

Academic Year	Matriculated				Graduated	
	Ag Econ	Ag-Bus	Undergraduate Major	Undergraduate Institution	Ag Econ	Ag-Bus
2003	5	5	AgEconBus(3), LanWldBus, Ag/AgMgmt, AnSci(2), Ag/Bus, Ag(2)	UTK(5) ^a , TN Tech, Murray State, UTM (3)	3	3
2004	9	2	AgEcon(3), AgEconBus(4), FoodTech, Sociology, MBA(2)	UTK(4), Visayas St Coll-Pilip, Cal State-Fres, Natl Taiwan U, K. State, U AL-Birm, Purdue, Purdue-U So	6	5
2005	4	3	AgEcon (2), AgEconBus, AgSciBus, Finance, Ag, FdResEcon	UTK(3),Ukraine FeconNat Ag, UTM, LSU, Keora U	10	2
2006	7	2	AgEcon(2), AgBusMgmt(2), Econ (2), AgComm, MusicEd	UTK(3), NC State, CO State, Tenn Tech, MTSU, U Recife, Carson Newman	7	3
2007	8	3	An Sci, Bio Sci, Econ, Food Res Econ, Ag, Ag Econ (3), Ag Bus (3)	UTK(2), Murray St U(3), Maryville Col, UTC, TN Tech, Korea U, Beijing Foreign Stud U, China NE Ag U	3	2

^a Numbers in parentheses are the numbers of students from the same undergraduate institution or major.

Table 3.9. Undergraduate Students Receiving Scholarships and Total Scholarship Funds Received from Institutional, Tennessee Education Lottery, and Total Contributors, 2003-07.

Academic Year	Institutional		TN Ed. Lottery		Total		% Enrolled with Scholarship
	Number Students	Funds (\$1000)	Number Students	Funds (\$1000)	Number Students	Funds (\$1000)	
2003	47	107.5	NA	NA	47	107.5	57
2004	44	122.2	18	48.0	49	170.2	70
2005	37	103.4	21	62.6	44	166.0	79
2006	34	95.6	31	112.1	46	207.7	73
2007	33	92.2	33	114.8	45	206.9	68

Table 3.10. Graduate Student Refereed Journals Articles and Presentations, 2003-07.

Year	Refereed Journals	Presentations
2003	3	0
2004	2	0
2005	3	5
2006	2	9
2007	7	15

Table 3.11. Placement of Agricultural Economics and Business B.S. Graduates, 2003-07.

Employment Category	Employer
Graduate and Professional School (22)	UT-Agricultural Economics M.S. (12); UT-Other M.S. (5); Purdue Agricultural Economics M.S. (3); Jackson St. Precision Ag. Program; Law School
Management (22)	Ace Hardware; Enterprise Rent-A-Car; Family farm (4); Guards Mark; Hydes Electric; Maddox Construction; NASA Space Camp; Norris Lake Marina; OnTime Operations (lawn maintenance); ORNL; Target; Tennessee Farmers Cooperative (6); Tru-green; USDA Farm Services Agency; Walgreens
Marketing/Sales (8)	McCormick Seasonings; Pepsi Corporation; Rocky Top Realty; Rubbermaid Corporation; Ryan/NVR Homes; Syngenta (Agchemicals); Tennessee Tractor; Turfgrass America
Finance (5)	Farm Credit Services (5)
Research and Extension (3)	UT-Research and Extension (3)
Unknown (27)	

Table 3.12. Placement of Agricultural Economics M.S. Graduates, 2003-07.

Employment Category	2003	2004	2005	2006	2007
Business and Financial Operations	3	3	4	3	
Communication and Education Specialists			1		
Foreign	1		1	1	
Government		5	2	3	4
Graduate Study	2	3	3	3	1
No Information			1		
Total	6	11	12	10	5

Table 3.13. California Critical Thinking Skills Test Results for Academic Year 2007-08.

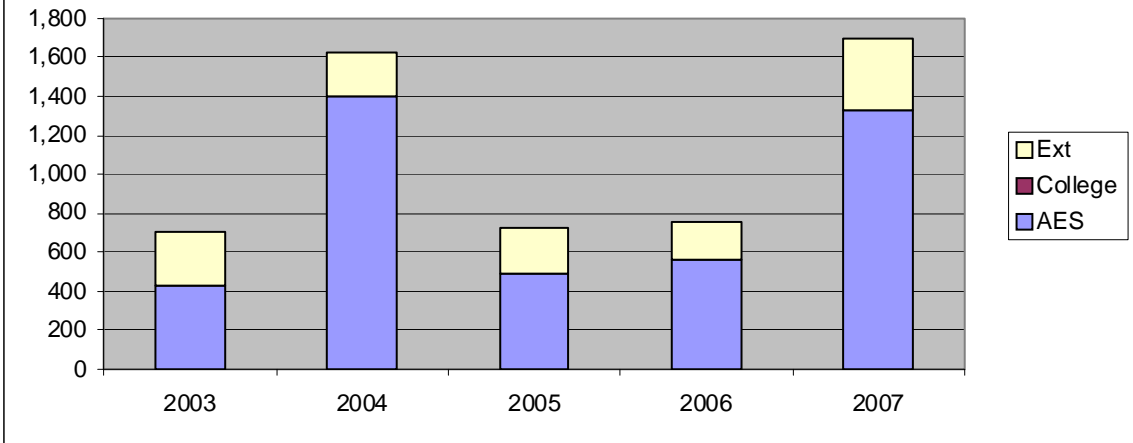
Entity	N	Mean	Pct	Med.	Tr Mean	Std Dev	SE Mean	Min	Max	Q1	Q3
University	1133	19.91	68-74	20	19.97	5.02	0.15	0	34	17	23
College	88	18.83	61-67	20	18.87	5.52	0.59	6	33	15	22
Agricultural Economics	12	17.83	54-61	17	17.70	5.65	1.63	9	29	13	20
Animal Science	55	18.02	61-67	18	18.10	5.24	0.71	6	29	15	21
Biosystems Eng.	5	24.20	91-93	23	24.22	2.68	1.20	21	27	21	27
Environmental & Soil sciences	5	23.00	87-91	24	23.11	4.84	3.51	11	33	11	24
Forestry	8	18.5	61-67	17	18.56	5.48	1.94	9	27	15	22
Wildlife & Fisheries	3	22.67	83-87	24	†	2.31	1.33	20	24	20	24

† Not enough cases to compute.

Table 3.14. Major Field Exam Scores for Graduating Seniors in Years When the Exam was Administered.

Academic Year	Mean Score	Number of Students
1990	63%	NA
1995	74%	18
2000	67%	17
2005	52%	11

Figure 3.1: Grant and Contract Awards, 2003-07 (\$1,000)



**Figure 3.2. Total Annual Enrollment in the B.S. Major, 2003-07,
Mean 2003-07.**

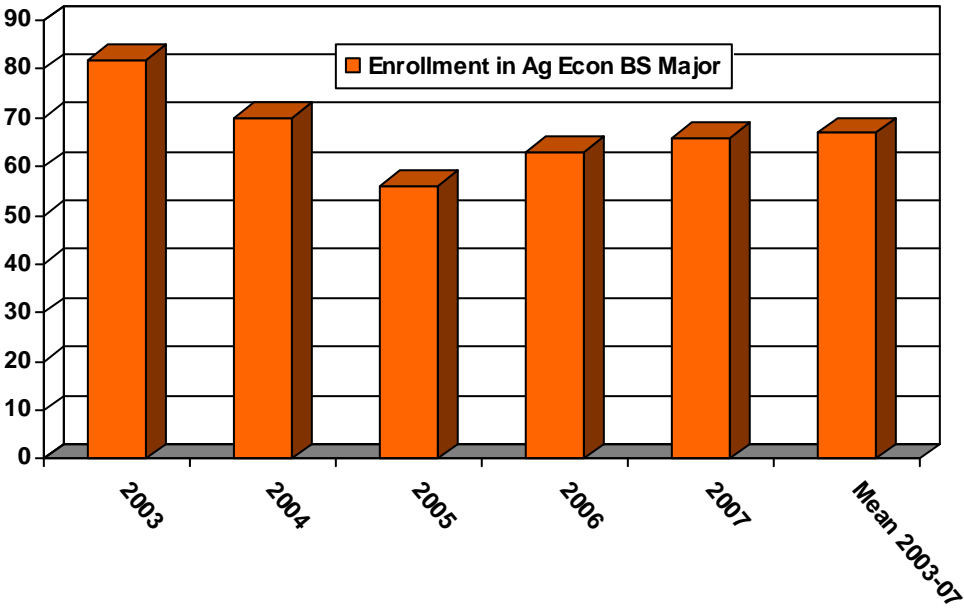
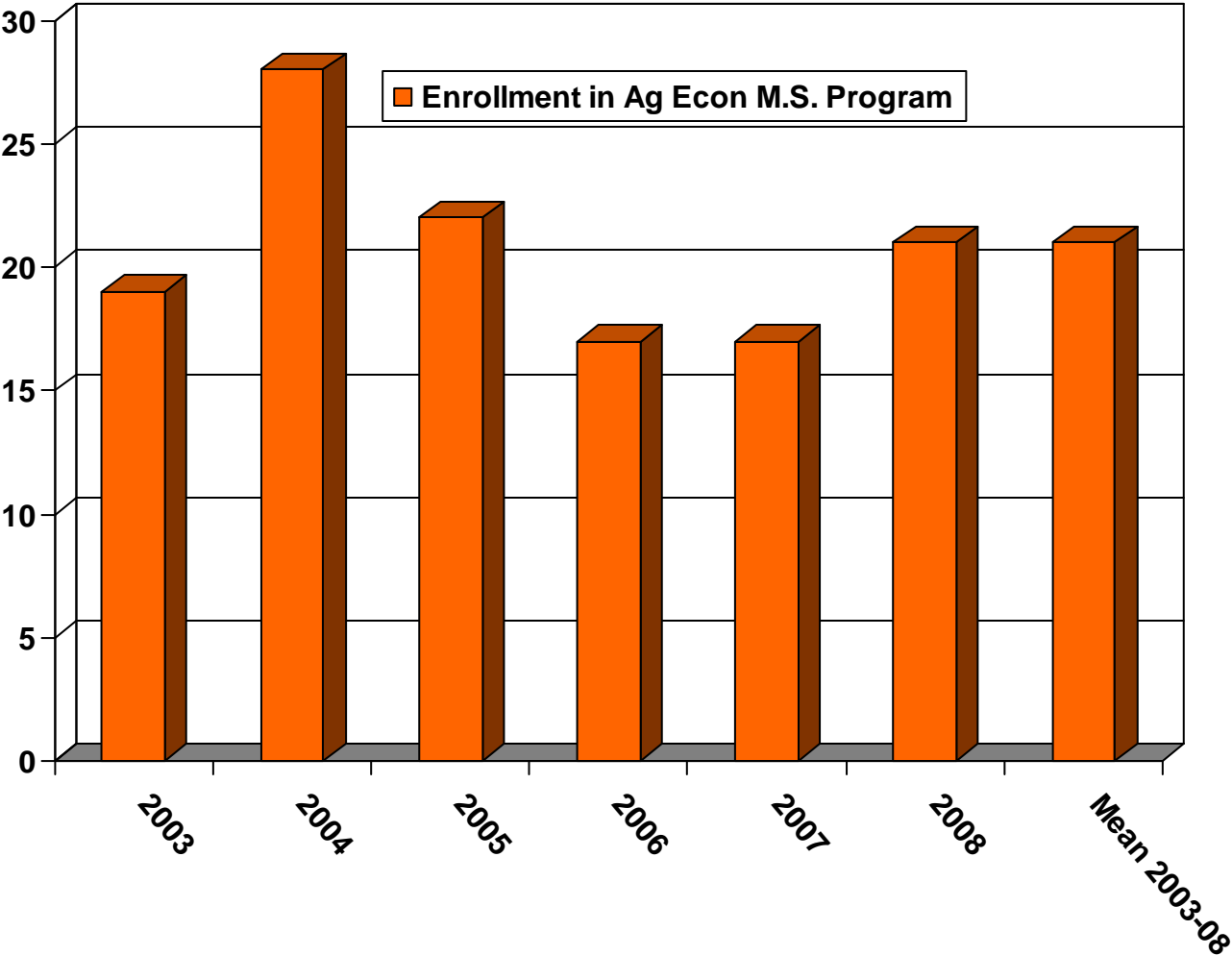


Figure 3.3. Total Annual Enrollment in the M.S. Program, 2003-08, Mean 2003-08.



IV. RESOURCES (BASED ON FINANCIAL AND ENROLLMENT DATA FROM THE PAST FOUR YEARS)

A. Budget Data For The Department Of Agricultural Economics

Extension, research (TAES), and teaching (CASNR) budgeted funds and the Department's extramural expenditures for FY 03 through FY 07 are shown in Figure 4.1 with full time equivalent data by administrative unit displayed in Table 4.1 and expenditures per FTE in Table 4.2. Budgeted and actual non extramural expenditures by category are displayed in Tables 4.3 and 4.4.

B. Space, Technical, and Clerical Support

Space

The Department is housed in approximately 9,700 square feet of space on the second, third, and fourth floors of Morgan Hall (Figures 4.2, 4.3, and 4.4). Approximately 1,900 square feet of this space is currently used for graduate research assistant and graduate teaching assistant office space divided into modular work stations. Current arrangements provide for 22 private faculty offices plus private offices for five research associates/assistants, the business manager, the bookkeeper, and three private offices for the IT personnel. The Administrative Assistant has a semi private office and four secretarial staff members are provided modular work stations in common areas near faculty to whom they are assigned. Two of these modular work stations are in located in areas that were formerly hallways and, as a result, are not well shaped. A conference/library room that comfortably seats approximately 24 people is available and adequate for faculty and committee meetings. Two smaller training rooms are also available which seat approximate 8 people each.

While Morgan Hall is more than 80 years old, the Department's office space was renovated approximately eighteen years ago and is reasonably adequate for current faculty both in size and style. Graduate student offices are formed using modular work stations that are about 25 to 40 square feet in size. Graduate student space is not in ideal locations especially those on the fourth floor and those in high traffic areas. Rest room facilities have been remodeled during the past year. However, heating and cooling systems do not distribute air evenly, and some offices are quite uncomfortable during extreme outside temperatures.

Classroom Space

All three classrooms were renovated and re-equipped during the last year with modern computer and audiovisual equipment facilities and are adequate both in size and style for our needs. No computers are located for student use in these rooms; however, portable computer labs are available for use in the classrooms. These computers are stored on carts that can be rolled into the classroom. Capacities of the three rooms are roughly 50, 30, and 20 students.

Technical and Clerical Support

There are 11 economic support personnel, 3 IT personnel, 8 administrative and clerical support personnel, 11 Extension Area Specialists, and 1 State Bioenergy Extension Specialist in the Department Tables 4.5 and 4.6. Economic support personnel are allocated to faculty based on need and external funding. The Department employs three computer support personnel. Morgan Gray, Information Technology Analyst, has a 60% time appointment in the Department and manages the computer hardware and software resources in the department. Michelle Wilson, Computer Information Specialist, has a 100% time appointment and manages the department's website. The Department's website has received recognition as a top agricultural economics website in terms of usefulness of information and ease of use. The website has become an important tool for student recruitment and for disseminating Extension educational programs and Department research publications. Brad Wilson, Computer Programmer/Analyst, has a 100% time appointment in the Agricultural Policy Analysis Center, manages computer hardware and software resources in the Center, and provides programming, GIS, and database management expertise for the Center and the Department.

There are also 13 Extension personnel that provide support to the department, but are not directly administratively tied to the department. Figure 4.5 notes 10 Area Specialists-Farm Management and their assigned territories. They work primarily in farm and financial management, with associated duties in marketing and computerized record-keeping. They provide a significant state-wide resource for departmental Extension faculty. Recently two additional Extension employees with departmental ties were added – Ken Goddard, Extension Specialist, and John Walton Extension Area Specialist. Their work focuses on bioenergy and they help educate landowners and Extension Agents in converting lands from current use to dedicated energy crops and provide support to the State Bioenergy Extension Specialist. They are located in Vonore, TN. Tammy Algood, Assistant Area Specialist in Food Marketing also helps support departmental Extension faculty. She is located in Nashville.

C. Computing Support and Related Resources

In addition to the three IT personnel, the Department of Agricultural Economics has a variety of computing resources (Table 4.7). There are currently 161 desktop and laptop computers on inventory in the Department. Forty of those computers are laptops in two portable wireless classrooms used for instructional purposes. The present minimum PC computer standards for faculty are 3.2 gigahertz CPU, 4 gigabytes of RAM, a 100 gigabyte hard drive, and a flat screen monitor. Computers are on a four year replacement cycle and are partially funded (Up to \$1,800 per machine for faculty with teaching appointments) by the Faculty Upgrade Program administered by the Office of Information Technology, University of Tennessee, Knoxville. Each faculty and staff member has wireless access and a 100 megabyte ethernet connection for internet and email access. The Institute of Agriculture provides email access via Lotus Notes and supplies the web server that houses the department's website. Most faculty and staff have black and white laser printers in their offices or stations. In addition, the Department has five color laser jet printers, four black and white laser jet printers and one color laser jet poster printer for use by faculty and staff.

The Department also has three servers (one in APAC) for file storage and housing distance education courses.

In addition, each graduate student in Agricultural Economics has a desktop computer with access to the internet, email and a public printer. These computers are also on a four year replacement cycle and the present minimum PC computer standards are 3.2 gigahertz CPU, 4 gigabytes of RAM, a 500 gigabyte hard drive, and a flat screen monitor. The graduate student computers also were purchased under the technology fee program through the Office of Information Technology, University of Tennessee, Knoxville. Each graduate student has access to one of three black and white laser printers dedicated to their use. Agricultural Economics is one of only a few departments that provide individual PC computers to graduate students on the University of Tennessee, Knoxville and University of Tennessee Institute of Agriculture campuses.

The Department has access to three classrooms with multimedia capabilities used for instruction in Morgan Hall (212A, 212B, and 226). Each classroom has a Symposium Lectern, an LCD projector, a DVD and VCR Player, and a visualizer/document Camera. As stated above, the Department has two portable wireless classrooms and a server that is dedicated to housing distance education courses. Agricultural Economics currently does not have a computer laboratory for either undergraduate or graduate students.

D. Library Support

The department has one faculty member on the UTIA library funding committee. Expenditures for library materials campus-wide totaled \$8.64 million during the 2007-2008 year. Allocated funding for library serials is \$7.14 million for FY 2008–09 when most units are experiencing budget cuts. Funding for the Agriculture-Veterinary Medicine Library over the same time period was more than \$375,000. The Ag-Vet Med Library contains 131,657 volumes and 2,000 serials, and is the depository for all government depository documents from the U.S. Department of Agriculture. The John C. Hodges Library, the main campus library, houses most of the journals in economics and the Ag-Vet Med Library holds additional journals in agricultural economics. Materials in all of the UT Libraries' collections are accessible via the Libraries' homepage through the online catalog with express delivery service to faculty and graduate student offices. Weekly updates of new acquisitions are available electronically from the Libraries' homepage. Access to most materials not held by UT Libraries is free to users. Electronic indexes and searchable databases, such as *Agricola*, *EclnLit* and *Web of Science* are the methods used to search journal literature. Full-text access to articles in scientific and technical journals is provided through several online sources. Library collections in all formats are supported through yearly allocations.

E. Unit Structure

The organizational structure of University of Tennessee and the UT Institute of Agriculture is shown in Figure 4.6. The organizational structure and personnel of the Departments of Agricultural Economics and Agricultural & Extension Education is shown in Figure 4.7.

F. Program Administration

The department head makes budget, personnel, and space decisions in consultation with the faculty, and, when appropriate, with the staff; decisions related to programs, program structure, curricula, courses, and departmental direction are made by faculty discussions until a consensus is reached. Standing committees maintained by the department are Ag Business/NAMA Club Advisors, Ag Econ Development Fund, Ag Econogram Newsletter, Assistant Heads, Bylaws, Computer Tools, Extension Development Fund, Graduate Program, Graduate Recruiting, Human Resources, Mentoring, Non-thesis M.S. Written Comprehensive Exam, Picnic, Seminar, Student/Faculty Awards, Undergraduate Advisors, Undergraduate Program, Web Site. Ad hoc committees are formed as needed for faculty searches and for other faculty and curricular matters.

Table 4.1 Full Time Equivalent's in the Department of Agricultural Economics by Administrative Unit, Fiscal Years 2003-2007.

Administrative Unit	Year				
	2003	2004	2005	2006	2007
TAES	11.7	11.5	11.8	11.5	11.5
Extension	6.3	4.7	4.7	6.1	6.0
CASNR	4.7	4.2	4.5	4.2	4.4
Total FTEs	22.7	20.4	21.0	21.8	21.9

Table 4.2 Expenditures per Full Time Equivalent in the Department of Agricultural Economics by Administrative Unit, Fiscal Years 2003-2007.

Administrative Unit	Fiscal Year				
	2003	2004	2005	2006	2007
	Dollars per FTE				
TAES	\$143,284	\$145,014	\$167,061	\$169,501	\$161,681
Extension	\$145,404	\$191,917	\$201,837	\$148,044	\$146,653
CASNR	\$143,510	\$179,381	\$178,221	\$199,326	\$201,070
Average	\$143,920	\$162,860	\$177,201	\$169,272	\$165,410

Table 4.3. Budgeted Levels By Fiscal Year And Item, 2003-2007.

Item	Fiscal Year				
	2003	2004	2005	2006	2007
Academic Salary	\$1,728,902	\$1,856,383	\$2,062,044	\$2,017,053	\$1,842,040
Benefits	\$600,888	\$639,694	\$694,587	\$715,707	\$691,310
Communications	\$46,500	\$38,450	\$31,000	\$29,000	\$29,995
Computer Services	\$19,330	\$6,100	\$3,200	\$8,200	\$5,200
Contractual & Sp Services	\$20,000	\$3,700	\$4,500	\$4,000	\$47,339
Equipment	\$40,000	\$5,000			\$41,800
Grants & Subsidies	\$35,000	\$35,000	\$37,400	\$37,400	\$54,598
Insurance and Interest	\$0		\$0	\$0	\$764
Maint. & Repairs	\$500	\$500	\$500	\$1,500	\$500
Media Processing	\$31,000	\$23,000	\$20,100	\$20,100	\$18,263
Non- Acad Salary	\$532,056	\$494,289	\$572,086	\$573,842	\$608,685
Other Services		\$16,000	\$16,000	\$16,000	\$28,643
Prof Services & Memb	\$17,227	\$1,000	\$1,000	\$6,750	\$3,500
Student Employees	\$9,000	\$8,038	\$12,800	\$12,800	\$7,800
Supplies	\$109,616	\$132,944	\$197,737	\$161,198	\$151,389
Travel	\$76,959	\$65,500	\$66,500	\$81,500	\$90,655
Utilities	\$0	\$0	\$0	\$0	\$0
Total	\$3,266,978	\$3,325,598	\$3,719,454	\$3,685,050	\$3,622,481

Table 4.4. Actual Expenditures From Non Extramural Sources By Fiscal Year And Item, 2003-2007.

Item	Fiscal Year				
	2003	2004	2005	2006	2007
Academic Salary	\$1,731,158	\$1,763,358	\$1,891,424	\$1,847,524	\$1,722,386
Benefits	\$604,418	\$644,123	\$700,614	\$715,703	\$690,521
Communications	\$35,900	\$38,413	\$40,098	\$39,642	\$29,712
Computer Services	\$7,976	\$8,077	\$12,123	\$11,763	\$10,266
Contractual & Sp Services	\$30,581	-\$15,903	\$30,743	\$12,770	\$22,369
Equipment	\$6,210	\$0			\$0
Grants & Subsidies	\$34,027	\$71,104	\$83,953	\$72,047	\$61,357
Insurance and Interest	\$0		\$836	\$400	\$1,482
Maint. & Repairs	\$2,103	\$3,311	\$1,940	\$27,997	\$1,136
Media Processing	\$48,553	\$51,340	\$52,337	\$54,215	\$95,851
Non- Acad Salary	\$513,349	\$487,928	\$546,172	\$589,741	\$588,226
Other Services	\$6	\$61	\$77	\$0	\$142
Prof Services & Memb	\$20,223	\$15,881	\$4,123	\$5,458	\$8,446
Student Employees	\$8,253	\$2,254	\$1,853	\$165	\$2,277
Supplies	\$87,138	\$114,719	\$99,557	\$111,615	\$154,939
Travel	\$95,982	\$75,057	\$85,151	\$115,309	\$151,399
UT Direct Cost Share	\$7,590	\$77	\$11,148	\$5,052	\$42,045
Utilities	\$262	\$55	\$0	\$0	\$9,265
Total	\$3,233,729	\$3,259,855	\$3,562,149	\$3,609,401	\$3,591,819

Table 4.5. Economic Analysis Support Personnel.

Support Personnel	Most Recent Degree	Subject Matter	University	Position within the Department
Dan Mooney	MS	Agricultural Economics	Michigan State University	Research Associate
D. Anne Dalton	BS	Home Economics	The University of Tennessee	Extension Assistant
Tammy L. McKinley	MS	Agricultural Economics	The University of Tennessee	Extension Assistant
Tina Johnson	BA	English	Carson Newman	Extension Assistant
R. Jamey Menard	MS	Agricultural Economics	The University of Tennessee	Research Associate
Vickie Witcher	BS	Agricultural Economics	The University of Tennessee	Research Associate
Lixia Lambert	PhD	Agricultural Economics	Purdue University	Post Doc Research Associate
Chad Hellwinckel	MS	Agricultural Economics	The University of Tennessee	Research Associate
Harwood Schaffer	MS	Agricultural Economics	The University of Tennessee	Research Associate
Daniel Green	MS	Agricultural Economics	University of Kentucky	Research Associate
Shiferaw Feleke	PhD	Agricultural Economics	University of Florida	Post Doc Research Associate

Table 4.6. IT and Administrative Support Personnel.

Name	Position
Chris Rhodes	Business Manager
Bridgit Carpenter	Accounting Assistant
Patricia Hickman	Administrative Specialist
Sarah Boring	Administrative Support Assistant
Mary Gage	Administrative Support Assistant
Julie Goldman	Administrative Support Assistant
Renee Sharp	Administrative Support Assistant
Melita Stoutt	Administrative Support Assistant
Morgan Gray	IT Administrator
Bradley Wilson	IT Analyst
Michele Wilson	Computer Information Specialist

Table 4.7. Summary of Computing Support and Related Resource Inventory.

Personnel Resources:

Morgan Gray—Information Technology Analyst , 60% Dept, 40% UTIA

Michelle Wilson—Computer Information Specialist, 100% Dept

Bradley Wilson—Computer Programmer/Analyst, 100% APAC

Teaching Resources:

Morgan Hall Rooms 212A, 212B, 226

Symposium Lecturn

LCD Projector

DVD and VCR Player

Visualizer/document Camera

Two Portable Laptop Wireless Classrooms (40 Dell Latitude D610 laptops total)

14 Portable LCD Projectors

Software Resources:

Microsoft Office Suite (Individual Licenses)

WordPerfect Office Suite (Individual Licenses)

SAS (Site License through UTK)

SPCC (Site License through UTK)

Limdep (Site License through Dept)

Matlab (Site License through UTK)

STATA (Site License through UTK)

Palasade Decision Tools (Student site license through dept)

ArcView (Site License through UTK)

Antivirus Software (UTK)

Network Resources:

Common Use Printers:

Poster Printer (Morgan Hall Room 302H)

Five Color Laser Printers

Four Black and White Laser Printers

Network Access:

100 MB Wired Ethernet (each faculty, staff, and grad student provided by UTK)

11 MB Wireless (provided by UTK)

Servers::

Web Server (L Drive Distance Education)

File Server (S Drive File Storage—Three Terabyte Capacity)

APAC File Server

Email (Lotus Notes provided by UTIA)

Faculty and Staff Computers

Present Minimum PC Requirements—4 gig RAM 100 gig hard drive, flat screen monitor) –Desktop or laptop. Computers are on a four year replacement cycle.

Most Individuals have Black and White Printers

Graduate Students:

Each Student has a Desktop PC with Common Printer and Internet Access

Figure 4.1. Budgeted Data By Administrative Unit and Extramural Expenditures, Department Of Agricultural Economics, 2003-2007.

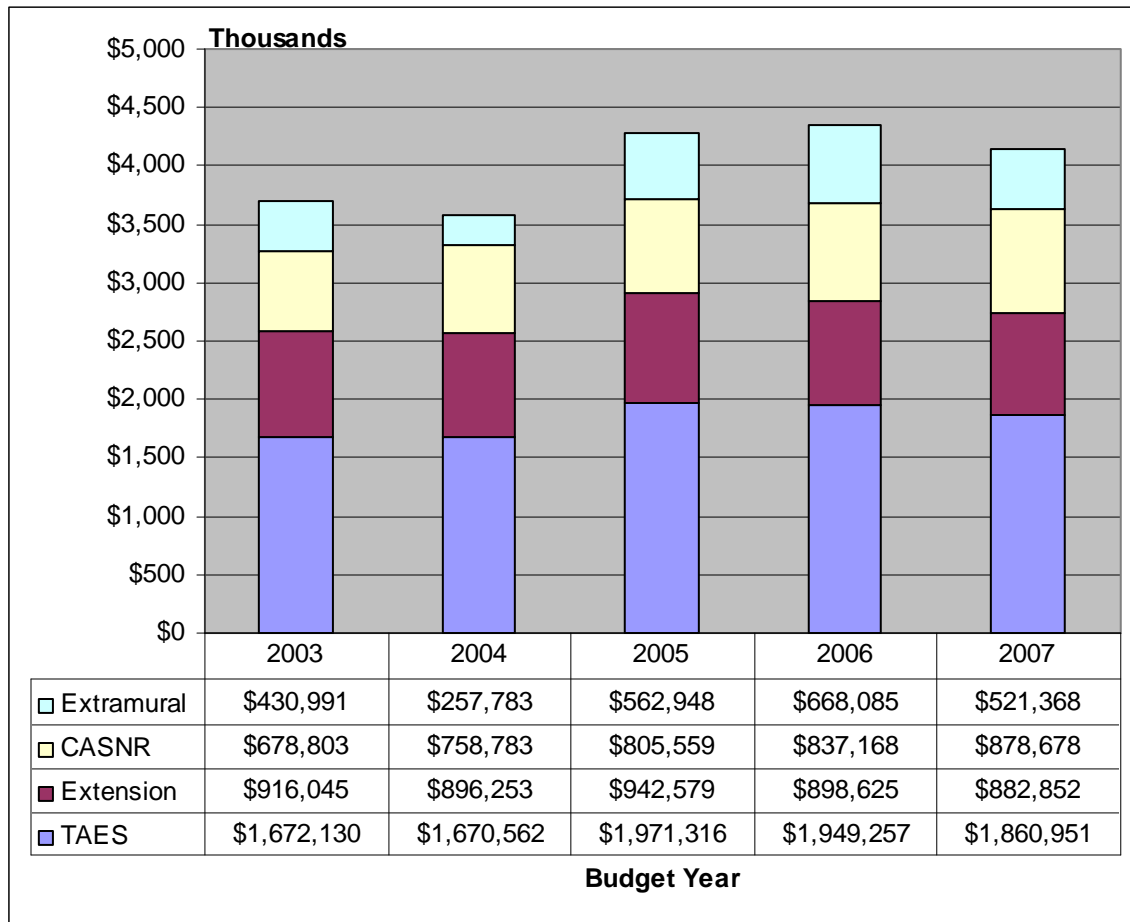
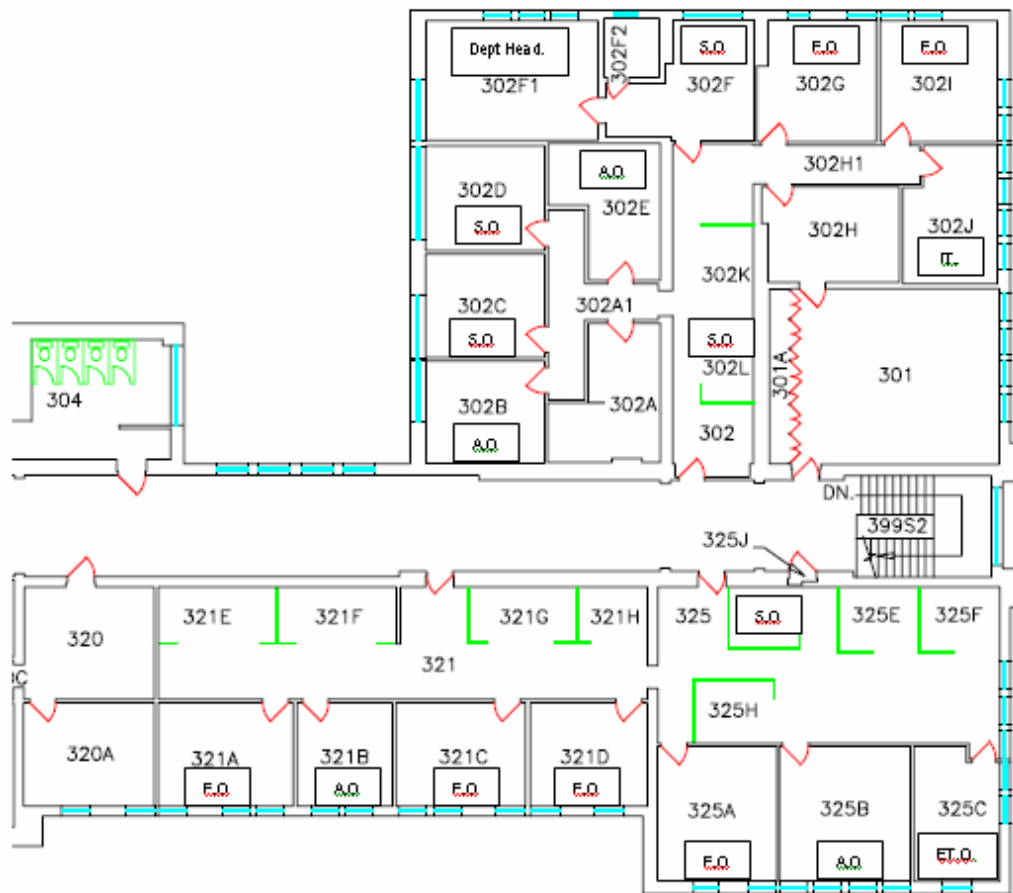
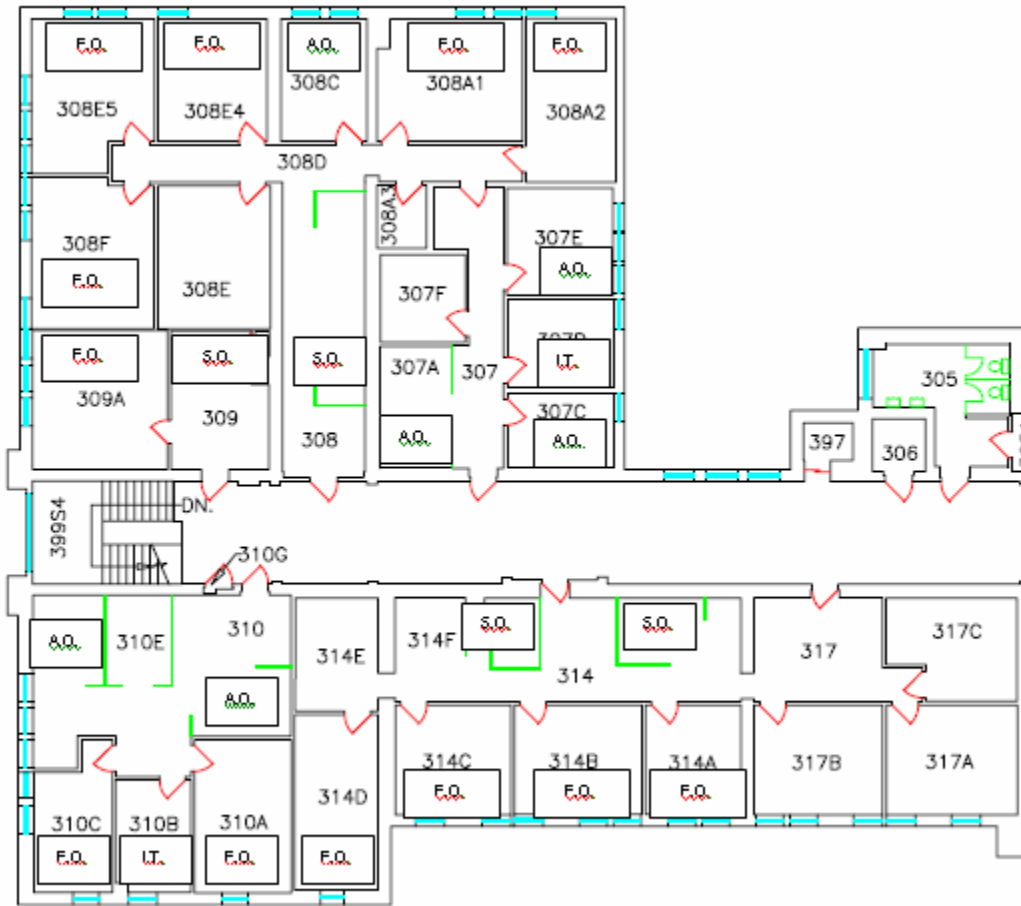


Figure 4.2. Morgan Hall 3rd Floor West



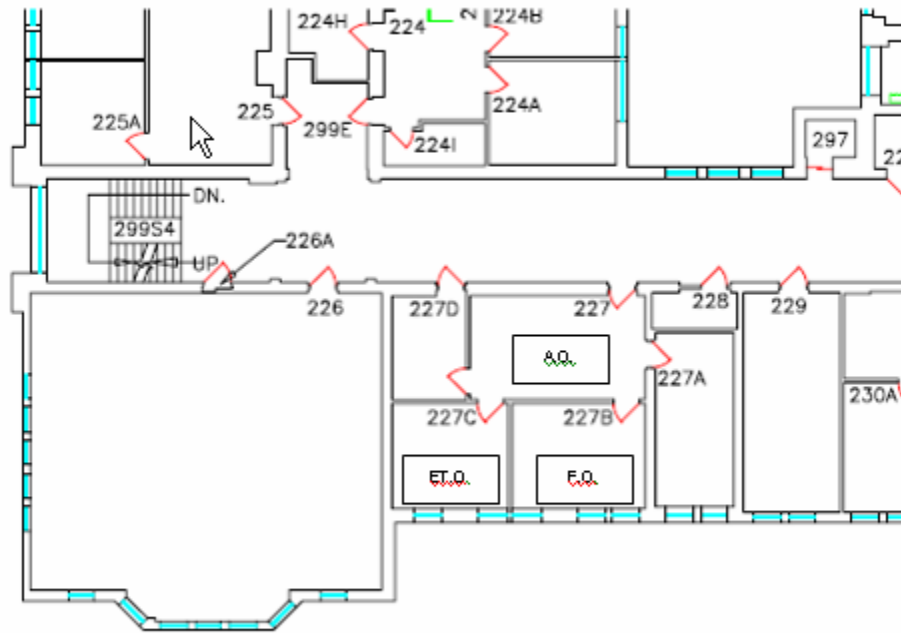
Note: F.O. indicates faculty office, A.O. indicates Research Associate/Post Doc Office, IT indicates IT staff, ET.O indicates Ext Education, and S.O. indicate Support Staff.

Figure 4.3. Morgan Hall 3rd Floor East.



Note: F.O. indicates faculty office, A.O. indicates Research/Extension Associate/Post Doc Office, IT indicates IT staff, and S.O. indicate Support Staff.

Figure 4.4. Morgan Hall 2nd Floor East.



Note: F.O. indicates faculty office, A.O. indicates Research/Extension Associate/Post Doc Office, IT indicates IT staff, ET.O indicates Ext Education, and S.O indicate Support Staff.

Figure 4.5. Area Specialist-Farm Management Territories

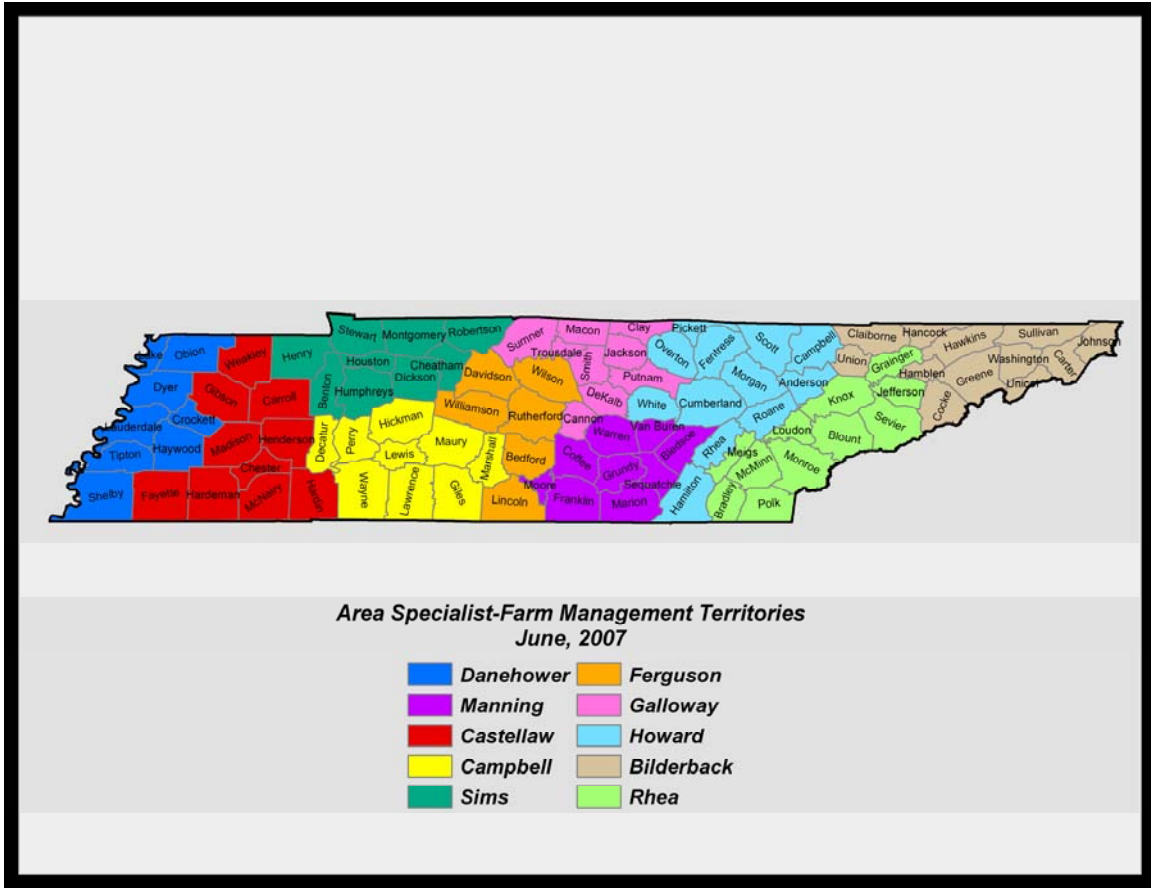


Figure 4.6 UT and UTIA Organizational Chart

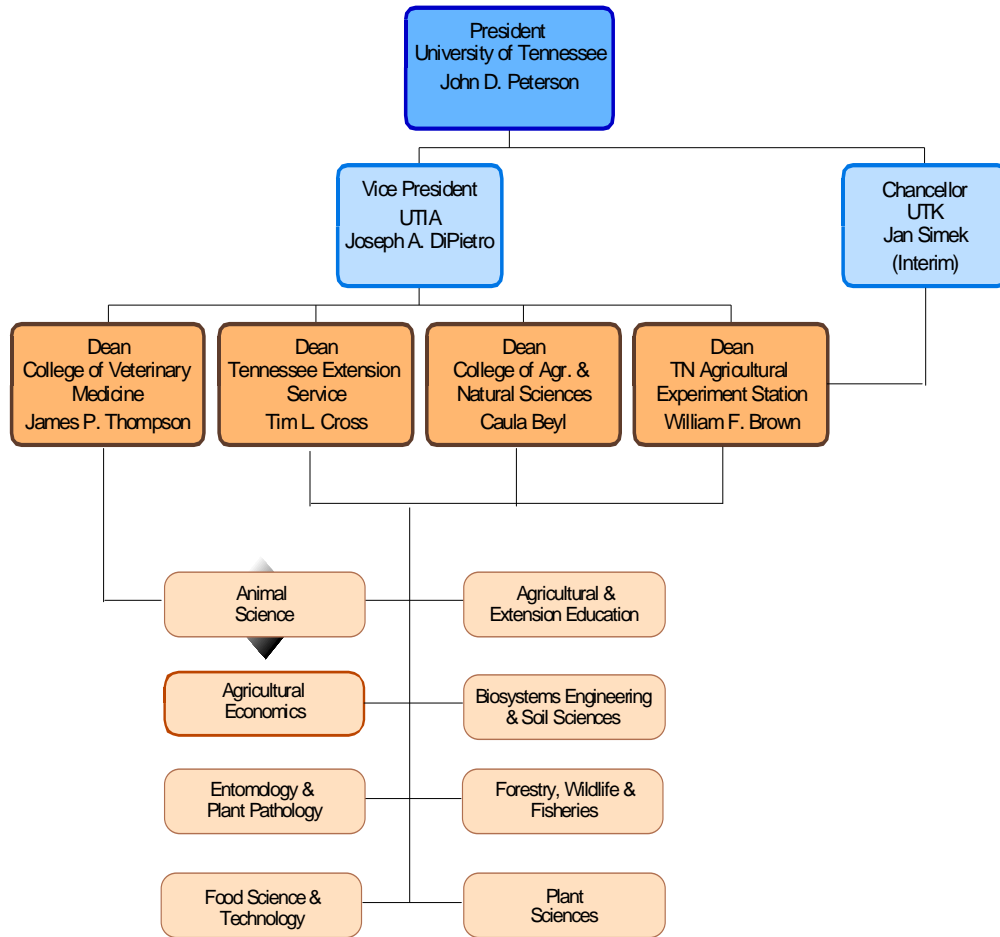
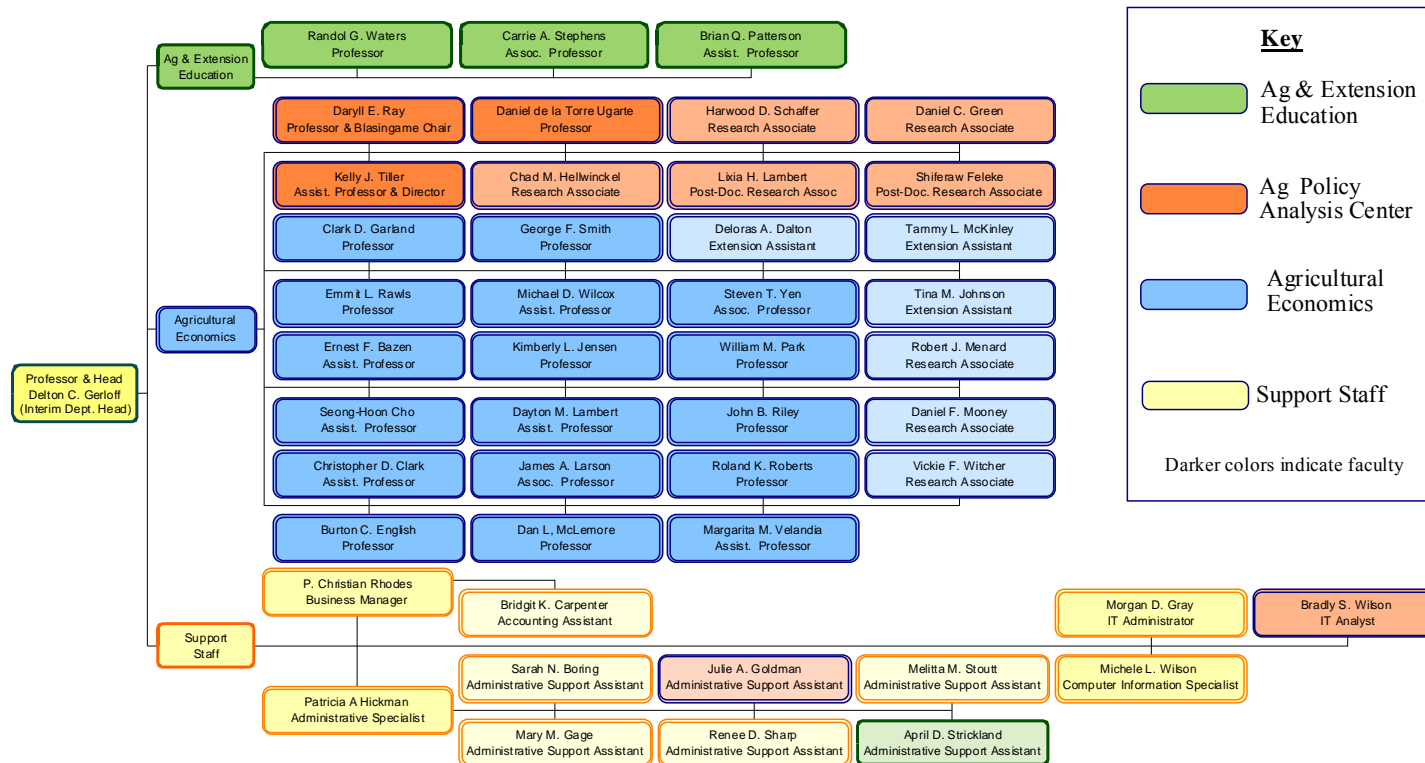


Figure 4.7. Schematic diagram reflecting Agricultural Economics and Agricultural and Extension Education Personnel



V. SUMMARY AND PERSPECTIVE

A. Speculations

The speculative nature of our department's future is reflective of our discipline. There are many and diverse factors associated with economics and they have a bearing on what we research and teach. Currently, there appears to be much interest in natural resource allocation and bio-fuel economics. That interest comes from the amount of both researchable topics and funding opportunities. But much of the interest also results from regulatory or policy enactment that could change in the short run. Therefore the department must be well grounded in the profession and keep a diverse portfolio of talent and skills. There is also a need to "tell our story". Being good and wise stewards of public support necessitates the reporting of impacts to citizens and taxpayers, and to public and private officials. The extent to which we research and teach relevant topics and report the impacts of our efforts will in a large part determine our success over the next ten years.

B. Strengths

In the department's recent strategic program planning, strengths were outlined in the following categories:

- *Faculty and Staff* – The department has an effective combination of experienced full professors and young junior faculty. This combination of knowledge, experience, and dedication are an important asset. The staff is dedicated and willing to support the faculty's projects.
- *Departmental Leadership* – The tenured faculty provide the service component of the department by chairing and serving on committees that make the department function. This leadership is evident in all three areas of Research, Teaching and Extension.
- *Emerging Areas* – There are several emerging areas in agricultural economics in which the department has a strategic advantage in resources and people. Those areas include Biomass/Energy, Policy, Natural Resources, and Rural Development.
- *External Funding* – Because the department is involved in relevant research and teaching topics, funding capabilities are significant.
- *Nationally Recognized Faculty* – Many of departmental faculty are looked upon on a regional and national level as experts.
- *Solid Academic Programs* – Graduates are well equipped to enter the workforce or continue their education.

- *Strong IT Support* – The department is blessed with dedicated and knowledgeable individuals who keep computers functioning and web sites effective.
- *Strong Stakeholder Orientation* – There is substantive contact between faculty and outside parties, including farmers, agribusiness representatives, and other private and public concerns.

C. Weaknesses

In the department's recent strategic program planning, weaknesses were outlined in the following categories:

- *PhD Program* – A joint PhD program has been added in coordination with the Department of Forestry and Wildlife Fisheries. But the lack of a departmental PhD program limits the department in some research areas and in national recognition.
- *Quantity and Quality of Students* – The number of undergraduate students is a concern. To increase departmental graduates, more resources will likely be required.
- *Physical Work Environment* – Improvements to facilities over the past decade have helped the work environment for faculty and staff. However, graduate student space is in need of updating. Moving graduate students off the 4th floor is a priority.
- *Potential Faculty Loss* – Several experienced and highly effective faculty are nearing retirement age.

D. Future Goals and Plans

The 2007 departmental strategic plan outlined seven goals. These goals represent the framework which is to be used to lead the department over the next decade. The goals are:

- *Strengthen our ability to address the needs of stakeholders in agriculture and the food/fiber industry in Tennessee and the United States by enhancing our marketing, production, and management expertise.* – Accomplishing this goal will likely require additional resources to replace faculty positions. A needs assessment plan should be conducted periodically to make sure the department is on track with its research, teaching, and Extension programs. Also, it is crucial that reports of departmental accomplishments be developed and distributed annually to former and prospective students, agribusiness leaders, key legislators, university administrators, and others. In the first year following the strategic plan, a faculty member has been hired, and a needs assessment committee has been impaneled.

- *Strengthen our ability to address high-priority issues in the areas of natural resource economics and rural development, especially those associated with bio-energy, land use and water quality.* – These high priority areas are opportunities for the department to expand its programming in research, teaching and Extension. Working groups were to be established in these four areas with action plans developed within each group to help accomplish the goal. Some of the groups have been established and are working. These groups are to strengthen linkages with private and public sector stakeholders, seek extramural funding, expand outreach efforts, enhance student learning experiences, and establish program identity and visibility. Resources needed to accomplish the goal include additional staff, PhD level research opportunities, and stable funding for the Natural Resource Policy Center.
- *Attract greater numbers of high quality graduate students and enhance their learning experience.* – This goal encompasses a fairly large effort on the part of the faculty. The effort includes expanding recruitment and engaging students both on the undergraduate and graduate levels to consider the benefits of the graduate program. The short term target of expanding the M.S. student base to 23 was met in the fall of 2008. The goal of increasing the GPA of enrolled students to 3.4 in 2008 was also met. Plans are already in place to add a joint MBA/M.S. program in the department that will begin in the fall of 2009.
- *Attract greater numbers of high quality undergraduate students and enhance their learning experience.* – Undergraduate enrollment has dropped by almost a third since 2002. While the Institute has also seen a drop in undergraduate enrollment, it is imperative that undergraduate enrollment increase. A goal of at least 100 undergraduate students by 2011 was established in the strategic plan. To reach this goal, recruitment efforts will be expanded. Departmental scholarship funds will be established, with a faculty committee in charge of directing fund development. An undergraduate departmental club will be established and supported with activities and accomplishments. This activity will require time and effort from departmental faculty and staff. Longer term, changes in curriculum may be needed to accomplish this goal.
- *Improve job satisfaction for administrative and professional staff.* – Enhanced recognition and communication are two departmental objectives under this goal. Monthly staff meetings will begin to allow staff to address any challenges with the department head. Also, a recognition program is planned through the awards committee. Professional development for staff will be encouraged and where possible, funds will be made available to help staff participate in such activities.
- *Enhance the Department's stature within the institute, university, state, region, nation, and world.* – The department will address this issue by a closer

working relationship between research and Extension faculty, to facilitate delivering results and program impact to stakeholders. Additionally, faculty will be encouraged to participate in professional organizations and meetings. Participating in these two functions will be evaluated positively on annual evaluations. Nominating and supporting faculty for awards will also help accomplish this goal.

- *Enhance faculty development and retention.* – Mentoring junior faculty is an important and significant responsibility for faculty and administration. A more focused mentoring program will be in place, with the department head holding quarterly planning sessions with all junior faculty and mentors.

E. Diversity

The department encourages diversity in its faculty, staff, and students. Programs and opportunities are made available to all individuals and groups. Making sure that minority individuals are given the opportunity in all hiring decisions is the standard in search committees for faculty and staff.

F. Special Concerns

A relatively small teaching FTE assignment is a concern for the department. With limited budget support, the concern may have to be addressed through extramural funding either through teaching grants and/or gifts/donations.

G. Special Information

Recently, several administrative changes have been made in the institute. New deans for Extension and the Experiment Station have been hired in 2008. The Vice President and college dean have been in place for less than 3 years. A new department head will likely be named this fall. Program direction, faculty evaluation and promotion, and overall funding will, to some extent, depend upon the vision and objectives of these new administrative appointments.

VI. VITAE

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Education

Ph.D. in Resource and Environmental Economics, Department of Agricultural and Resource Economics, Oregon State University, Corvallis, OR, December 2001

M.S. in Resource and Environmental Economics, Department of Agricultural and Resource Economics, Oregon State University, Corvallis, OR, December 1996

B.S. in Managerial Economics, Department of Economics, Radford University, Radford, VA *Summa Cum Laude* and Outstanding Graduate in Economics, May 1994

Areas of Professional Interest

Natural Resource and Environmental Economics, Land Economics, Spatial Econometrics

Academic Experience

Assistant Professor, Natural Resource/Environmental Economics and Policy
Department of Agricultural Economics
University of Tennessee, Knoxville, TN
July 2004 – present

Post-Doctoral Associate, Coweeta Long Term Ecological Research
Warnell School of Forest Resources
University of Georgia, Athens, GA
October 2001 – June 2004

Graduate Research Assistant
Department of Agricultural and Resource Economics
Oregon State University, Corvallis, OR
September 1994 – September 2001

Teaching

Agricultural Economics 670: Advanced Topics in Natural Resource Economics

Agricultural Economics 320: Agricultural Microeconomics

Most Recent Refereed Journal Articles / Book Chapters

Cho, S., D.M. Lambert, R.K. Roberts, and S. Kim. 2009. Demand for open space and urban sprawl: the case of Knox County, Tennessee, in *Progress in Spatial Analysis: Theory and Computation, and Thematic Applications* (Eds) A. Páez, J. Le Gallo, R. Buliung, S. Dall'Erba, Springer, Berlin, forthcoming.

Cho, S. S. Jung, and S. Kim. 2009. "Valuation of Spatial Configurations and Forest Types in the Southern Appalachian Highlands." *Environmental Management* 44.

Cho, S., D.M. Lambert, and Z. Chen. 2009. "Geographically Weighted Regression Bandwidth Selection and Spatial Autocorrelation: An Empirical Example Using Chinese Agriculture Data." *Applied Economics Letters* 16.

Poudyal, N.S., S. Cho, and D.G. Hodges. 2008. "Effects of Urban Sprawl on Hunting Participation in the Southeastern United States." *Southern Journal of Applied Forestry* 32.

Cho, S., Z. Chen, and S.T. Yen. 2008. "The Effects of Urban Growth Boundary on Housing Price at Knox County, Tennessee." *Review of Regional Studies* 38.

Poudyal, N.S., S. Cho, and J.M. Bowker. 2008. "Demand for Resident Hunting in the Southeastern United States." *Human Dimensions of Wildlife* 13:158-174.

Chen, Z., S. Cho, N.C. Poudyal, and R.K. Roberts. 2008. "Forecasting House Prices under Alternative Submarket Assumptions." *Urban Studies* 45.

Cho, S., Z. Chen, and N.C. Poudyal. 2008. "Spatial Structure of Agricultural Production in China." *Applied Economics* 40.

Cho, S., C.D. Clark, W.M. Park, and S. Kim. 2008. "Spatial and Temporal Variation in the Housing Market Values of Lot Size and Open Space." *Land Economics* 84.

Cho, S., N.C. Poudyal, and D.M. Lambert. 2008. "Estimating Spatially Varying Effects of Urban Growth Boundaries on Land Development and Land Value." *Land Use Policy* 25:320-329.

Cho, S., S.T. Yen, J.M. Bowker, and D.H. Newman. 2008. "Modeling Willingness to Pay for Land Conservation Easements: Treatment of Zero and Protest Bids with Application and Policy Implications." *Journal of Agricultural and Applied Economics* 40.

Poudyal, N.C., S. Cho, J.D. Strickland, and D.G. Hodges. 2008. "Socio-Demographic and Market Forces of Land Use Change in Northern Cumberland Plateau, Tennessee." *International Journal of Ecological Economics & Statistics* 10:53-62.

Cho, S., N.C. Poudyal, and R.K. Roberts. 2008. "Spatial Analysis of the Amenity Value of Green Open Space." *Ecological Economics* 66:403-416.

Cho, S., O.A. Omitaomu, N.C. Poudyal, and D.B. Eastwood. 2007. "The Impact of an Urban Growth Boundary on Land Development in Knox County, Tennessee: A Comparison of Two-Stage Probit Least Squares and Multilayer Neural Network Models." *Journal of Agricultural and Applied Economics* 39:701-717.

Cho, S. and R.K. Roberts. 2007. "Cure for Urban Sprawl: Measuring the Ratio of Marginal Implicit Prices of Density-to-Lot-Size." *Review of Agricultural Economics*, 29:572-579.

Christopher David Clark

Education

Ph.D. Economics, Vanderbilt University, Nashville, Tennessee (2001)

J.D. Tulane University, New Orleans, Louisiana (1989)

B.S. Business Administration, University of Tennessee, Knoxville (1986)

Professional Experience

Assistant Professor Dept. of Agricultural Economics, University of Tennessee (2002 – Present)

Assistant Professor Dept. of Economics, University of South Alabama, Mobile (2001 – 2002)

Instructor Dept. of Economics, University of South Alabama, Mobile (1999 – 2001)

Attorney Boulton, Cummings, Conners & Berry, Nashville, Tennessee (1989 – 1993)

Academic Publications (2004 - 2008)

Clark, C.D., & C.S. Russell, *forthcoming*. "Ecological Conservation: The Problems of Targeting Policies and Designing Instruments," *Journal of Natural Resources Policy Research*.

Cho, S-H., C.D. Clark, and W.M. Park, *forthcoming*. "Spatial and Temporal Variation in the Market Values of Lot Size and Public Open Space," *Land Economics*.

Roberts, D. C., C. D. Clark, W. M. Park and B. C. English, *forthcoming*. "A Spatial Assessment of Possible Water Quality Trading Markets in Tennessee," *Review of Agricultural Economics*.

Lambert, D.M., M.D. Wilcox, C.D. Clark, B. Murphy, & W.M. Park, *in press*. "Is Growth in the Health Sector Correlated With Migrating Retirees?" *Advances in Spatial Sciences*.

Lambert, D.M., C.D. Clark, M.D. Wilcox & W.M. Park, 2007. "Do Migrating Retirees Affect Economic Growth in the Rural South?: An Empirical Look at Economic Growth Across Sectors," *Review of Regional Science* 37(2): 251-278.

Russell, C. S., C. D. Clark and E. C. Schuck, 2007. "Economic Incentives for Water Management in the Middle East and North Africa," *International Journal of Water Resources Development* 23(4) (December): 653-71.

Epplin, F. M., C. D. Clark, R. K. Roberts, and S. Hwang, 2007. "Challenges to the Development of a Dedicated Energy Crop," *American Journal of Agricultural Economics* 89(5): 1296-1302.

Jensen, K., C.D. Clark, P. Ellis, B. English, J. Menard, M. Walsh & D. de la Torre Ugarte, 2007. "Farmer Willingness to Grow Switchgrass for Energy Production," *Biomass and Bioenergy* 31(11-12): 773-781.

Jensen, K., B. English & C.D. Clark, 2007. "Distance Education in Agricultural Economics: Perceptions of Department Heads," *Journal of Agricultural and Applied Economics* 39(2) (August): 253-64.

Cho, S-H., S-G. Kim, C. D. Clark, and W. M. Park, 2007. "Spatial Analysis of Rural Economic Development Using Locally Weighted Regression," *Agricultural and Resource Economics Review* 36(1) (April): 24-38.

Clark, C. D., B. English, and C. Garland, 2007. "Competitive Bidding as a Means of Extracting Farmer Willingness-to-Grow an Alternative Crop," *Journal of Extension* 45(2).

Clark, C. D., W. M. Park, and J. Howell, 2006. "Tracking Farmland Conversion and Fragmentation using Tax Parcel Data," *Journal of Soil and Water Conservation* 61(5): 243-9.

Cho, S-H., C. D. Clark, and W. M. Park, 2006. "Two Dimensions of the Spatial Distribution of Housing: Dependency and Heterogeneity across Tennessee's Six Metropolitan Statistical Areas," *Journal of Agricultural and Applied Economics* 38(2) (August): 299-316.

Russell, C. S., and C. D. Clark, 2006. "Using Economic Instruments to Control Nonpoint Source Pollution," in *Water Quality Management in the Americas*. A. K. Biswas, C. Tortajada, B. Braga and D. J. Rodriguez (Eds). Springer Verlag (November).

Bazen, E., and C. D. Clark, 2005. "Promoting Interactive Learning with an Electronic Student Response System," *NACTA Journal* (September): 11 - 16.

Russell, C. S., and C. D. Clark, 2005. "Public Information Provision as a Tool of Environmental Policy," in *Environment, Information and Consumer Behavior*. S. Krarup and C. S. Russell (Eds). Edward Elgar Publishing; Northampton, MA: pp. 1-29.

Russell, C. S., S. Krarup, and C. D. Clark, 2005. "Environment, Information and Consumer Behaviour: An Introduction," in *Environment, Information and Consumer Behavior*. S. Krarup and C. S. Russell (Eds). Edward Elgar Publishing; Northampton, MA: pp. 111-40.

Roberts, D., and C. D. Clark, 2005. "A Role for Geospatial Information Systems in Identifying Potential Tennessee Water Quality Trading Markets," *Proceedings of the Fifteenth Tennessee Water Resources Symposium*, Burns, Tennessee, April 13-15.

Cho, S-H., C. D. Clark, W. M. Park, and A. Young, 2005. "Spatial Dependency and Heterogeneity of Housing Density in Tennessee's Six Metropolitan Statistical Areas," *Proceedings of the Emerging Issues Along Urban/Rural Interfaces: Linking Science and Society Conference*, Atlanta, Georgia, March 13-16: 242-253.

Clark, C. D., 2004. Review of *Economy-Energy-Environment Simulation* by Kimio Uno (Ed), *American Journal of Agricultural Economics* 86(3): 854-5.

Clark, C. D., W. Park and E. Bazen, 2004. "Water Quality Trading: A Cost-Effective Way to Improve Water Quality in Tennessee?" *Proceedings of the Fourteenth Tennessee Water Resources Symposium*, Burns, Tennessee, March 31 - April 2: 2C-21 - 2C-26.

Grants and Contracts (2004 - 2008)

"Cellulosic to Biofuels Market Development: Producers' Feedstock Production and Consumers' Willingness to Pay for Cellulosic Ethanol," with K.L. Jensen, B. English, D. De La Torre Ugarte. National Research Initiative, United States Department of Agriculture, 2008-2009 (\$259,288).

"The Use of Market-Based Instruments to Cost-Effectively Improve Water Quality in Tennessee," with W. Park. University of Tennessee Natural Resources Policy Center, 2006-2009 (\$94,847).

"Consumer Labeling and Motivation Crowding-Out," with K. L. Jensen, and S. Yen. United States Environmental Protection Agency, Star Grant Program: Environmental Behavior and Decisionmaking: Determining the Effectiveness of Environmental Information Disclosure and Provision, 2006-2008 (\$309,171).

"Conservation Easement Education," with G. Smith. Southern Regional Water Program Coordination Project, 2005-2006 (\$5,200).

<i>M.S. Theses Supervised (2004 - 2008):</i>	3
<i>M.S. Theses Committee Membership (2004 - 2008)</i>	3
<i>Ph.D. Dissertation Committee Membership (2004 - 2008)</i>	1
<i>Undergraduate Honors Projects Supervised (2004 - 2008)</i>	2

Daniel G. De La Torre Ugarte

Education:

Ph.D., *Agricultural Economics, Oklahoma State University, 1992*

M.S., *Agricultural Economics, Oklahoma State University, 1987*

B.S., *Economics, Universidad del Pacifico, Lima, Peru. 1984*

Professional Experience:

<i>Professor</i>	Department of Agricultural Economics, The University of Tennessee; 2008-current
<i>Research Fellow</i>	United Nations Conference of Trade and Development, Biofuels Initiative, Geneva, Switzerland; 2006-present
<i>Associate Professor</i>	Department of Agricultural Economics, The University of Tennessee; 2005-2008
<i>Research Associate Professor</i>	Department of Agricultural Economics, The University of Tennessee; 2001-2005
<i>Research Assistant Professor</i>	Department of Agricultural Economics, The University of Tennessee; 1994-2001.
<i>Postdoctoral Research Associate</i>	Department of Agricultural Economics, The University of Tennessee; 1992-1994
<i>Chief Financial Officer</i>	Ralston Purina Co., Lima, Peru; 1988-1991

Courses Taught:

- Agribusiness Operations Research
- International Trade and Marketing, Agricultural Policy.

Primary Research Interests

- Agricultural sector modeling for policy analysis.
- Impacts of US agricultural policy, and its impacts in developing countries.
- Impacts of bioenergy in the agricultural sector and food security
- Integrated economic and environmental impacts of changes in agricultural policy.

Selected Refereed Publications

West, T., C. Brandt, B. Wilson, C. Hellwinckel, D. Tyler, D. De La Torre Ugarte, J. Larson, M. Mueller, G. Marland, R. Nelson. Estimating regional changes in soil carbon with high spatial resolution: integrating field measurements, inventory data, and remote sensing products. *Soil Science Society of America Journal*. 72(2): 1-10, March 2008.

De La Torre Ugarte, D. , B. English, and K. Jensen. Sixty Billion Gallons by 2030: Economic and Agricultural Impacts of Ethanol and Biodiesel Expansion. *AJAE*. 89(5): 1290-1295, December 2007.

De La Torre Ugarte, D. and A. Dellachiesa. Advancing The Agricultural Trade Agenda: Beyond Subsidies. *The Georgetown International Environmental Law Review*, 19: 775-796, 2007.

De La Torre Ugarte, D. and L. Is The Expansion of Biofuels at Odds with the Food Security of Developing Countries? *Biofuels, Bioproducts and Biorefining*, 1(2): 92-102, October 2007.

Walsh, M, D. De La Torre Ugarte, B. English, K. Jensen, C. Hellwinckel, R. Menard, and R. Nelson. Agricultural Impacts of Biofuels Production. *JAAE*, 39(2): 365-372, August 2007.

Jensen, K, C. Clark, P. Ellis, B. English, J. Menard, M. Walsh, and D. De La Torre Ugarte. Farmer Willingness to Grow Switchgrass for Energy Production. *Biomass and Bioenergy*, 31(2007):773-781.

English, B., D. De La Torre Ugarte, M. Walsh, C. Hellwinckel, and J. Menard. "Economic Competitiveness of Bioenergy Production and Effects on Agriculture of the Southern Region." *Journal of Agricultural and Applied Economics*, 38, 2:389-402, August 2006.

De La Torre Ugarte, D., B. English, R. Jamey Menard and M. Walsh. "Conditions that influence the economic viability of ethanol from corn stover in the Midwest of the USA." *International Sugar Journal*, Vol. 108, No.1287:152-156, February 2006.

McLaughlin, Samuel B., James R. Kiniry, Charles M. Taliaferro, and Daniel De La Torre Ugarte. "Projecting Yield Potential of Switchgrass as a Bioenergy Crop." *Advances in Agronomy*, Vol 90. pp267-297. 2006, Elsevier Inc.

De La Torre Ugarte, Daniel G. "The Contribution of Bioenergy to a New Energy Paradigm." *EuroChoices*, Vol. 4, Issue 3, November 2005. Blackwell Publishing.

De La Torre Ugarte, Daniel G, Hellwinckel, C.M., Larson, J.A. "Enhancing Agriculture's Potential to Sequester Carbon: A Framework to Estimate Incentive Levels for Reduced Tillage" *Environmental Management*, Volume 33, Supplement 1, Pages: S229 - S237, 2004. Springer-Verlag New York.

Walsh, M., D. De La Torre Ugarte, H. Shapouri, S. Slinsky. "The Economic Impacts of Bioenergy Crop Production on U.S. Agriculture." *J. Environmental and Resource Economics*, 24:313-333. 2003.

De La Torre Ugarte, D., M. Walsh, H. Shapouri, and S. Slinsky. "The Economic Impacts of Bioenergy Crop Production on U.S. Agriculture." USDA, Office of the Chief Economist, Office of Energy Policy and New Uses, Agric. Economic Report No. 816. February 2003.

McLaughlin, S., D. G. De La Torre Ugarte, C.T. Garten, L.R. Lynd, M.A. Sanderson, V.R. Tolbert, M.E. Walsh, D.D. Wolf. "High-Value Renewable Energy from Prairie Grasses." *Environmental Science and Technology*, 36 (10), 2122 -2129. 2002

De La Torre Ugarte, D. and D. Ray. "Biomass and Bioenergy Applications of the POLYSYS Modeling Framework." *Biomass and Bioenergy*. Vol. 4(3):118. May 2000.

Lin, W., B. Skinner, S. Sanford, and D. De La Torre Ugarte. "Supply Response under the 1996 Farm Act and Implications for the U.S. Field Crops Sector." Market and Trade Economics Division, Economic Research Service, USDA. Technical Bulletin No. 1888. July 2000.

International Activities

Visiting Fellow, Biofuels Initiative, United Nations Conference on Trade and Development, Geneva, Switzerland.

Member Expert Panel, EcoFair Trade Dialogue Project, Heinrich Boell Foundation, Misereor, and Wuppertal Institute of Climate and Energy, 8/05-6/07.

Trade adviser to several US and International agricultural producers organizations, and US and International Non-Government Organizations addressing the issues of agricultural trade, food security, WTO and FTA negotiations. These organizations are based in the US, Canada, Mexico, El Salvador, Peru, Brazil, Belgium, France, Switzerland, Great Britain, Germany, Spain, Senegal, South Korea, Indonesia, India, and the Philippines. In this capacity I have participated in several meetings of the WTO, FAO, UNCTAD, World Bank, and agencies from several governments.

Burton C. English

Education and Training

- 1981 Ph.D. Agricultural Economics, Iowa State University, Ames. IA
1976 M.S. Agricultural Economics, New Mexico State University, Las Cruces, NM
1974 B.S. Forestry, Iowa State University, Ames, Iowa

Professional Experience

1993-Present:

Professor: Department of Agricultural Economics, The University of Tennessee; Knoxville, TN.

Teaching Accomplishments:

Taught departmental courses, both undergraduate and graduate level, in Agricultural and Trade Policy, Agricultural Production, Agricultural Finance, Research Methods, Mathematical Programming, Agribusiness Operations Research, Advanced Quantitative Methods and Agricultural Supply Analysis, Managerial Economics for Agribusiness.

Directed dissertation and thesis students and chaired graduate committees

Research Accomplishments:

Developed and use simulation models to conduct analysis of production/environmental issues revolving around agricultural production.

- Analysis of alternative environmental policies and impacts on production agriculture.
- Examination of alternative proposed land use changes on net farm income.
- Impacts environmental policies have on small and medium-sized agricultural producers.
- Impacts of biomass feedstock production on the agricultural producers as well as the regional and national economies

Evaluated the economic potential of developing new crops for agricultural producers and the impacts these crops might have on net farm income with a current focus on bio-energy crops.

- Economics of producing herbaceous and short rotation woody feedstocks.
- Evaluation of whether sufficient resources exist at a regional level to sustain a bio-energy initiative.
- Development of long run biomass for energy supply curves.
- Impacts on the environment of switching from coal or other fossil-fuel-based energy to bio-energy.
- Examination of regional economic impacts of constructing and relying on bio-energy processing facilities
- Economic and quality evaluation of switchgrass storage methods
- Changes in carbon sequestration under a switchgrass perennial

Selected Journal Publications (2004-2006)

Jensen, K. C. Clark, P. Ellis, **B. English**, J. Menard, M. Walsh and D. de la Torre Ugarte Farmer willingness to grow switchgrass for energy production. *Biomass and Bioenergy* 31,11-12 (November-December 2007): 773-781.

Walsh, M., D. De La Torre Ugarte, **B. English**, K. Jensen, C. Hellwinckel, J. Menard, and R. Nelson. "Agricultural Impacts of Biofuels Production," *Journal of Agricultural and Applied Economics*, 39,2 (August 2007): 365-372.

Jensen, K., **B. English**, and C. Clark. "Distance Education in Agricultural Economics: Perceptions of Department Heads," *JAAE*, 39,2 (August 2007): 253-264.

De La Torre Ugarte, D. **Burton C. English**, and Kim Jensen. Sixty Billion Gallons by 2030: Economic and Agricultural Impacts of Ethanol and Biodiesel Expansion. *AJAE*, December, 2007.

Martin, S.W., S. Banerjee, R.K. Roberts, **B.C. English**, J.A. Larson, S.L. Larkin, K.W. Paxton, M.C. Marra, and J.M. Reeves. "Revealed Characteristics of Guidance Systems Adopters in Cotton Production." *Crop Management* (Nov. 16, 2007) doi:10.1094/CM-2007-1116-01-RV. Online at <http://www.plantmanagementnetwork.org/sub/cm/review/2007/guidance/>.

Torbett, J.C., R.K. Roberts, J.A. Larson, and **B.C. English**. "Perceived Importance of Precision Farming Technologies in Improving Phosphorus and Potassium Efficiency in Cotton Production." *Precision Agriculture* 9(2007):127-137.

Clark, C., **B. English**, C. Garland. "Competitive Bidding as a Means of Extracting and Demonstrating Farmer Willingness-to-Grow an Alternative Crop," *Journal of Extension*. 45:2, April 2007. Online at <http://www.joe.org/joe/2007april/iw5.shtml>

English, B., K. Jensen, J. Menard, M. Walsh, C. Brandt, J. Van Dyke, and S. Hadley. "Economic Impacts of Carbon Taxes and Biomass Feedstock Usage in Southeastern United States Coal Utilities," *Journal of Agricultural and Applied Economics*, 39:1 (April 2007), pp 103-119.

Larkin, S.L., L. Perruso, M.C. Marra, R.K. Roberts, **B.C. English**, J.A. Larson, R.L. Cochran and S.W. Martin. "Factors Affecting Perceived Improvements in Environmental Quality from Precision Farming." *Journal of Agricultural and Applied Economics* 37(2005): In Press.

De La Torre Ugarte, D., **B. English**, J. Menard, and M. Walsh, "Conditions that influence the economic viability of ethanol from corn stover in the Midwest of the USA". *International Sugar Journal*, Volume 108 Number 1287, pp 152-156.

Burton C. English, Daniel G. De La Torre Ugarte, Marie E. Walsh, Chad Hellwinckel, and Jamey Menard. The Economic Competitiveness of Bioenergy Production and Impacts on the Southern Region's Agriculture, *JAAE*, 38,2(Aug) pp 389-403.

English, B., K. Jensen, J. Menard, M. Walsh, C. Brandt, J. Van Dyke, and Stanton Hadley. "Economic Impacts of Carbon Taxes and Biomass Feedstock Usage in Southeastern United States Coal Utilities," *Journal of Agricultural and Applied Economics*, 39:1 (April 2007), pp 103-119.

Bazen, E.F., R.K. Roberts, and **B.C. English**. "Economic Feasibility of Kenaf Production in Three Tennessee Counties." *Journal of Agribusiness* Volume 24 Number 2 pp. 135-154.

Recent Grant and Contract Activities

Value of Grants and Contracts not listed \$4.4 million

"Opportunities and Challenges of the Expansion of the Production and the Utilization of Ethanol and Bio-diesel." National Commission on Energy Policy. (2006). \$55,000. Co-Principal Investigators-**B.English** and D.De La Torre Ugarte.

"An Economic Analysis of Agricultural Scenarios to Provide 25 Percent of America's Energy Needs with Renewable Energy by the Year 2025." 25x'25 Ag. Energy Work Group. (2006-2007). \$172,730. Co-Principal Investigators-**B.English** and D.de la Torre Ugarte.

"University of Tennessee Switchgrass Demonstration Project." Department of Energy, (2004-2009). \$980,500. Co-principal investigators-**B.English** and D.de la Torre Ugarte.

"Economic Impacts of TVA Meeting a Renewable Energy Portfolio Standard" UT Energy, Environment, and Resources Center. (2005-2006). \$20,796. Co-Principal Investigators-**B. English**, K. Jensen, and J.Menard.

"Economic Impacts from Increased Competing Demands for Agricultural Feedstocks to Produce Bioenergy and Bioproducts", USDA—NRI, (Oct 2003 – August 2006), \$136,000, Co-Principal Investigators **B. English**, D. De La Torre Ugarte, and M. Walsh

Vitae
Clark D. Garland

Address:

314 Morgan Hall
2621 Morgan Circle
Knoxville, TN 37996-4518

Phone: 865/ 974.7214
Fax: 865/ 974.9492
E-mail: cgarland@utk.edu

Date & Place of Birth: April 6, 1943. Gainesboro, Tennessee

Education:

Ph.D.	The University of Tennessee, Agricultural Economics	1971
M.S.	The University of Tennessee, Agricultural Economics	1967
B.S.	Tennessee Technological University, Agronomy	1965

Professional Experience:

- Professor, Coordinator of MANAGE and State Sustainable Agriculture Co-Coordinator (100% appointment in Extension), July 2000 - present
- Professor and Leader and Coordinator of MANAGE Program, August 1989 - June 2000
- Professor and Coordinator of MANAGE Program, October 1986 - July 1989
- Professor/Associate/Assistant Professor, The University of Tennessee, 1971 - 1986
- Graduate Research Assistant, Department of Agricultural Economics and Rural Sociology, University of Tennessee, Knoxville, 1967 - 1971
- Agricultural Credit Field Representative, Production Credit Association, June 1963 - Sept. 1965

Job Responsibilities:

Current subject matter responsibilities include general farm and financial management, computerized farm planning and analysis, risk management, income tax planning and management, bioenergy economics, sustainable agriculture and Chair of Biofuels Farmer Education Team. As Coordinator of the MANAGE Program especially close working relationship are maintained with the ten area farm management specialists.

Publications:

Over 50 peer reviewed publications. Sixty-two (62) papers presented at professional meetings. More than 200 departmental papers.

Grants & Contracts:

Garland has individually and as part of project teams obtained more than 68 grants and contracts totaling over \$7 million.

Recognition:

- Appreciation Award, United States Department of Energy Office of Environmental Management, 2008
- Thirty-five (35) Years of Service Award, The University of Tennessee Institute of Agriculture, 2006

- B. Ray Thompson, Sr. Outstanding Faculty Performance Award, The University of Tennessee Institute of Agriculture, 2004
- Gamma Sigma Delta Extension Award of Merit, 2002
- Distinguished Service Award, National Association of County Agricultural Agents, 2001
- United States Department of Agriculture Certificate of Appreciation for Outstanding Service in Support of the Initiative for Future Agriculture and Food Systems Competitive Grants Program, Cooperative State Research, Education and Extension Service, 2001
- Distinguished Service Award Tennessee Association of Agricultural Agents and Specialists, 2001
- Webster Pendergrass Award for Outstanding Service, The University of Tennessee Institute of Agriculture, 2000
- Epsilon Sigma Phi State Team Award of Excellence, 1998
- District 4 State Specialist of the Year, 1998
- Superior Service Award, Tennessee Valley Region Association of Demonstration Farm Families, 1996
- State Award of Meritorious Support Service, Epsilon Sigma Phi, 1995
- Epsilon Sigma Phi State Distinguished Service Award, 1988
- Epsilon Sigma Phi State Mid-Career Award, 1988
- Outstanding Young Agent Award, Tennessee Association of Agricultural Agents and Specialists, 1978

Memberships:

- American Agricultural Economics Association
- Epsilon Sigma Phi
- Charter Member, Tennessee Forage and Grassland Council
- Gamma Sigma Delta
- Southern Agricultural Economics Association
- Tennessee Association of Agricultural Agents and Specialists

Community Service:

- Farragut Church of Christ
- Member of Blount County Farm Bureau
- Gulf Park Civic Association, Former Board Member and Former Vice-President

Curriculum Vitae
Delton C. Gerloff

6017 Apache Trail
Knoxville, TN 37920

Phone (work):65.974.7408
Phone (home): 865.609.0031
e-mail: dcgerloff@utk.edu

Academic Background

Ph.D., Agricultural Economics, Texas A&M University, 1992
M.S., Agricultural Economics, Oklahoma State University, 1977
B.S., Agricultural Economics, Oklahoma State University, 1975

Professional Experience

Interim Department Head, Department of Agricultural Economics, The University of Tennessee, Jan, 2008 – present.
Professor, The University of Tennessee, 1998 – present.
Associate Professor, The University of Tennessee, 1992 – 1998 (awarded tenure in 1997).
Research Associate, Texas A&M University, 1988 – 1992.
Extension Economist, Texas A&M University, 1986 - 1988.
Area Farm Management Specialist, Oklahoma State University, 1979 – 1986.
Area Farm Management Fieldman, Kansas State University, 1977 – 1979.

Job Responsibilities

I have a 100% Extension appointment and develop educational programs in grain marketing and farm and financial management. Specific program responsibilities include teaching grain marketing/risk management farmers and Extension personnel; developing annual cost and return budgets for Tennessee row crops; and supporting the MANAGE program. I have served as interim department head since January 1, 2008.

Publications

Over 135 departmental and peer reviewed publications. Twenty-two papers presented at professional meetings.

Grants and Contracts

As PI or as a part of a team project, obtained more than \$350,000 in grants and contracts.

Recognition

Distinguished Service Award, National Association of County Agricultural Agents, Awarded July, 2005.

American Agricultural Economic Association's *Premier Forecaster Award*, for the most accurate national crop production and price forecast, 2003/2004.

Who's Who in Agriculture Higher Education, 2003

Gamma Sigma Delta Team Award of Merit, presented Nov. 19, 2002, to the Farm Bill Educational Team.

Epsilon Sigma Phi 25 Year Service Award, presented Nov. 22, 2002.

Epsilon Sigma Phi Meritorious Service Award for 2001.

Superior Service Award, Texas Agricultural Extension Service: "For developing and implementing an integrated financial analysis computer program to help producers plan and analyze whole farm and ranch operations for improved profitability", November, 1988.

Memberships

National Association of County Agricultural Agents
Tennessee Association of Agricultural Agents and Specialists
Southern Extension Farm Management Committee
American Agricultural Economics Association
Southern Agricultural Economics Association
Gamma Sigma Delta

Kimberly L. Jensen

Professor, Department of Agricultural Economics
(78% Research, 22% Teaching)

302 Morgan Hall, The University of Tennessee, Knoxville, TN 37996-4518

Ph: 865-974-3716, email: kjensen@utk.edu

Education

Ph.D. Agricultural Economics, Oklahoma State University (1986)

M.S. Agribusiness, Arizona State University (1983)

B.S. Bio-Agricultural Sciences, Arizona State University (1981)

Professional Experience

Professor Department of Agricultural Economics, The University of Tennessee
(1999 to present)

Associate Professor Department of Agricultural Economics, The University of Tennessee
(1992 to 1999)

Assistant Professor Department of Agricultural Economics, The University of Tennessee
(October 1986 to 1992)

Areas of Interest

Field specialty-agricultural marketing and agribusiness development. Member Biobased Energy Analysis Group (BEAG) and the Agri-Industry Modeling and Analysis Group (AIMAG) at the University of Tennessee. Research includes analysis of bioenergy and renewable energy markets, agribusiness feasibility analysis, economic impacts, and consumer preferences including contingent valuation, demand, and use of labeling.

Teaching Accomplishments

Courses Taught Current-Agricultural Marketing System AGEC350 (Undergraduate), Advanced Agribusiness Marketing AGEC550 (Graduate).
*Other courses taught prior-*Graduate: Managerial Economics in Agribusiness, Undergraduate: International Agricultural Marketing and Trade, Principles of Economics, Agricultural Price Analysis, Seminar in Agricultural Economics and Business, and Introduction to Agricultural Economics

Graduate Adviser (1989-2008)-24 Committees (23 M.S., 1 Ph.D.) Member-
Committees (1989-2008)-28 Committees (26 M.S, 2 Ph.D.)

Grants and Contracts-Prior Projects (\$1,949,722) + Current Projects (\$832,000) =Total Funding (\$2,781,722) (as of 9/08)

Current Projects:

“Tellico River Use.” US Forest Service (2008) \$31,000. PI: M. Fly Senior Personnel: B. English and **K. Jensen**.

“Cellulosic to Biofuels Market Development: Producers’ Feedstock Production and Consumers’ Willingness to Pay for Cellulosic Ethanol.” USDA CSREES National Research Initiative Competitive Grants Program (2008-2009) \$241,829. Co-PI’s: **K. Jensen**, B. English, C. Clark, and D. De La Torre Ugarte.

- “Conversion of Poultry Litter into Renewable Energy.” USDA/Rural Development (2008-2009) \$100,000. Co-PI’s: E. Bazen, R. Roberts, B. English, and **K. Jensen**
- “Incorporating Forest Lands into POLYSYS: The Development of a fully-Integrated Land Use Model.” ORNL(2008-2009) \$150,000. Co-PI’s: B. English , D. De La Torre Ugarte, **K. Jensen** (Senior Personnel).
- “Consumer Labeling and Motivation Crowding-Out.” Environmental Protection Agency (2007-2009) \$309,171. Co-PI’s: C. Clark, **K. Jensen**, and S. Yen.

Awards and Professional Service

- Awards* **2001 Presidential Award for Excellence in Research and Communication**, Food Distribution Research Society; 2000 University of Tennessee, CASNR **Neal and Tacie Peacock Teaching and Learning Merit Certificate**; 1996 UTIA **T.J. Whatley Distinguished Young Scientist**; 1995 SAEA **Best Poster Presentation Award**.
- Professional Service* 2005 President, SAEA; Executive Committee, SAEA; Editorial Board RAE; Reviewer *AJAE, JAAE, Agribusiness: An International Journal, JARE, Journal of Food Distribution Research, Journal of Agribusiness*, Co-Chair AAEA Selected Papers, 1993.

Publications/Presentations Summary(As of 9/08)

Journal Publications.....39

Presentations at Professional Meetings.....50

Other Presentations and Publications..... >150

Selected Publications List

- In Press. **Jensen, K.**, B. English, J. Menard. "Livestock Farmers’ Use of Animal or Herd Health Information Sources." *Journal of Extension*.
- In Press. **Jensen, K.**, B. English, J. Menard, and R. Holland. “Farmers’ Views on Access to Veterinary Services.” *Journal of Veterinary Medical Education*.
- Jensen, K.** C. Clark, P. Ellis, B.English, J. Menard, M. Walsh and D. De La Torre Ugarte. “Farmer Willingness to Grow Switchgrass for Energy Production.” *Biomass and Bioenergy* 31,11-12 (November-December 2007): 773-781.
- De La Torre Ugarte, D. B. English, and **K. Jensen**. “Sixty Billion Gallons by 2030: Economic and Agricultural Impacts of Ethanol and Biodiesel Expansion.” *American Journal of Agricultural Economics* 89,5 (December 2007):1290-1295.
- English, B., **K. Jensen**, J. Menard, M. E. Walsh, C. Brandt, J.Van Dyke, and S. Hadley. “Economic Impacts of Carbon Taxes and Biomass Feedstock Usage in Southeastern United States Coal Utilities.” *Journal of Agricultural and Applied Economics* 39(2007): 103-119.
- Walsh, M., D. De La Torre Ugarte, B. English, **K. Jensen**, C. Hellwinckel, J. Menard, and R. Nelson. “Agricultural Impacts of Biofuels Production.” *Journal of Agricultural and Applied Economics* 39,2 (August 2007): 365-372.
- Jensen, K.**, B. English, and C. Clark. “Distance Education in Agricultural Economics: Perceptions of Department Heads.” *Journal of Agricultural and Applied Economics* 39, 2 (August 2007): 253-264.

DAYTON M. LAMBERT

16 October 2008

Assistant Professor (10% teaching, 90% research)
Department of Agricultural Economics
University of Tennessee
2621 Morgan Circle
321 Morgan Hall
Knoxville, TN 37996-4511
E-mail: dmlambert@tennessee.edu

EDUCATION

2000-2005

Ph.D., Agricultural Economics, Purdue University
Specialty areas: spatial econometrics, production economics

Dissertation under the direction of Dr. Jess Lowenberg-DeBoer

1998

M.S. Fisheries Biology and Aquaculture, Auburn University
Specialty areas: genetics, aquaculture production

Thesis under the direction of Dr. Rex A. Dunham

1991

M.A. Cultural Anthropology, Rutgers University
Specialty area: human ecology
Research under the direction of Dr. Bonnie McCay

1989

B.A. Anthropology, Miami University

TEACHING

Agricultural Economics 360 – Rural Economic Development

SELECTED PUBLICATIONS

Lambert, D.M., M. Wilcox, A. English, and L. Stewart. 2008. Ethanol Plant Location Determinants and County Comparative Advantage. *Journal of Agriculture and Applied Economics* 40(1): 117 – 135.

Grant, J.H., and D.M. Lambert. 2008. Do Regional Trade Agreements Increase Agricultural Trade? *American Journal of Agricultural Economics* 90(3): 765 - 782.

Cho, S. H., N. Poudyal, and D. M. Lambert. 2008. Estimating Spatially Varying Effects of Urban Growth Boundaries on Land Development and Land Value. *Land Use Policy*, 25: 320 - 329.

Lambert, D. M., C. D. Clark, M. D. Wilcox, and W. M. Park. 2007. Do Migrating Retirees Affect Business Establishment and Job Growth? An Empirical Look at Southeastern Non-metropolitan Counties, 2000 – 2004. *Review of Regional Studies* 37(2): 251 – 278.

Wojan, T. R., D. M. Lambert, and D. A. McGranahan. 2007. Emoting With their Feet: Bohemian Attraction to Creative Milieu. *Journal of Economic Geography* 7: 711 - 736.

Lambert, D.M., P. Sullivan, R. Claassen. 2007. Working Farm Participation and Acreage Enrollment in the CRP. *Journal of Agriculture and Applied Economics*, 39(1): 151 - 169.

Lambert, D.M., G. Schaible, R. Johansson, and U. Vasavada. 2007. The Value of Integrated CEAP-ARMS Survey Data in Conservation Program Analysis. *Journal of Soil and Water Conservation*, 62(1): 1 - 10.

Lambert, D.M., P. Sullivan, R. Claassen, and L. Foreman. 2007. Profiles of U.S. Farm Households Adopting Conservation-Compatible Practices. *Land Use Policy*, 24: 72-88.

Lambert, D.M., J. Lowenberg-DeBoer, and G.M. Malzer. 2007. Managing Phosphorous Soil Dynamics Over Space and Time. *Agricultural Economics*, 37: 43 - 53.

Wojan, T. R., D. M. Lambert, and D. A. McGranahan. 2007. The Emergence of Rural Artistic Havens: A First Look. *Agricultural and Resource Economics Review*, 36(1): 1 – 18.

Lambert, D.M., K. McNamara, and M. Garret. 2006. Food Industry Investment Flows: Implications for Rural Development. *Review of Regional Studies*, 36(2): 140 - 162.

Lambert, D.M., K. McNamara, and M. Garret. 2006. An Application of Spatial Poisson Models to Manufacturing Investment Location Analysis. *Journal of Agriculture and Applied Economics*, 38(1): 102-115.

Lambert, D.M., P. Sullivan, R. Claassen. 2006. Land Retirement and Working-land Conservation Structures: A Look at Farmers' Choices. *Amber Waves*, 4(3): 16-21.

Lambert, D.M., P. Sullivan, R. Claassen, and L. Foreman. 2006. Use of Conservation-Compatible Practices Varies by Farm Type. *Amber Waves*, 4(1): 7.

James A. Larson

Associate Professor, Department of Agricultural Economics
308 Morgan Hall, 2621 Morgan Circle
The University of Tennessee, Knoxville, TN 37996-4518
Phone:(865)-974-3716; email: jlarson2@utk.edu

Areas of Specialization

Production Economics, Farm Management, Finance, Risk Management, Economic Modeling, Technology Assessment

Education

Ph.D. Agricultural Economics, Oklahoma State University, 1992

M.S. Agricultural Economics, North Dakota State University, 1987

B.S. Animal Science and Agricultural Economics, North Dakota State University, 1979, 1985

Relevant Expertise

Production Economics, Farm Management, Risk Management, Finance, Economic Modeling, Technology Assessment

Professional Experience

Associate Professor: Department of Agricultural Economics, The University of Tennessee; 1998 to Present.

Teaching Accomplishments:

- Taught departmental courses, both undergraduate and graduate level, in Agribusiness Management, Advanced Agribusiness Finance, Advanced Agribusiness Production Decisions, Managerial Economics for Agribusiness.
- Directed thesis and non-thesis agribusiness students
- Chairman, Masters Program Agribusiness Non-thesis Concentration Committee
- Chairman, Masters Program Written Non-thesis Concentration Examination Committee.

Research Accomplishments:

- Developed or co-developed economic-based decision analysis tools and information to help decision-makers make sound choices.
 - CYMIDA—Cotton Yield Monitor Investment Decision Aid
 - CPAIDA—Cotton Precision Agriculture Investment Decision Aid
 - WEBISSM—Whole-farm Economic Biological Institutional Stochastic Simulation model
- Developed and used simulation and risk programming models to conduct analysis of production and environmental issues revolving around agricultural production.
- Analyzed the adoption of site-specific management technologies by cotton farmers
- Evaluated economics of biotechnology in cotton production.
- Evaluated economics of conservation tillage and cover crops in corn and cotton production.
- Evaluated economics of alternative production practices in cotton production
- Developed and used models to evaluate the impacts of conservation tillage on carbon sequestration.
- Evaluated the farm level impacts of growing bioenergy crops on the expected value and variability of farm income (risk).

Assistant Professor: University of Tennessee, 1993 to 1998.

Agricultural Economist: Economic Research Service, U.S. Department of Agriculture, 1992-1993.

Selected Awards and Other Professional Activities:

- Professional Memberships: American Economics Association, American Agricultural Economics Association, Southern Agricultural Economics Association, Western Agricultural Economics Association, Soil and Water Conservation Society
- University of Tennessee Faculty Senate—2008-2010
- University of Tennessee Institute of Agriculture Advisory Council—2007-2009
- Dutch and Marilee Cavendar Award for Best Research Publication, July 2000
- American Agricultural Economics Association Outstanding Masters Thesis, 1988

Grant and Contract Activities:

- Over \$1 million in funds from the following agencies/organizations:
 - Oak Ridge National Laboratory/NASA
 - USDA NRI Competitive Grants Program
 - USDA, NRCS
 - USDA Rural Development
 - Cotton Incorporated
 - USDA Higher Education Challenge Grants Program

Graduate Students Directed:

- Six MS Thesis Students
- 11 MS Nonthesis Agribusiness Option students

Publications

- 34 Journal Articles published, 7 manuscripts in development or review
- Two book chapters
- Over 100 papers presented at professional meetings
- Numerous Experiment Station Bulletins/Research Reports/Other Publications

Recent publication/presentation examples

Larson, J.A. 2008. "Risk and Uncertainty at the Farm Level." Paper presented at the conference sponsored by the Farm Foundation, *Transition to a Bioeconomy: Risk, Infrastructure and Industry Evolution*, 24-25 June 2008, Berkeley California.

He, L. **J.A. Larson**, and B.C. English. "Farm Level Energy Feedstock Production Risk Analysis: A Comparison Using Quadratic and SemiVariance Risk Penalty Measures." Paper presented at the SCC-76 Annual Meeting, 13-15 March 2008, Orange Beach, AL.

Larson, J.A., R.K. Roberts, B.C. English, S.L. Larkin, M.C. Marra, S.W. Martin, K.W. Paxton, and J.M. Reeves. "Farmer Adoption of Remotely Sensed Imagery for Precision Management in Cotton Production." *Precision Agriculture* 9(2008): 195-208.

Larson, J.A., R.K. Roberts, and C.O. Gwathmey. "Herbicide-Resistant Technology Price Effects on the Plant Population Density Decision for Ultra-Narrow-Row Cotton." *Journal of Agricultural and Resource Economics*. 32(2007):383-401.

Dan L. McLemore

Professor, Department of Agricultural Economics, University of Tennessee, Knoxville.

Education:

Ph.D., Agricultural Economics, Clemson University, 1971, minor: Economics.

M.S., Agricultural Economics, Clemson University, 1969, minor: Economics.

B.A., Economics, Presbyterian College, 1966.

Professional Employment:

2008 to present - Professor of Agricultural Economics. Responsibilities include research (80%) in beef cattle markets, prices, and management and undergraduate and graduate teaching (20%) in the areas of quantitative methods and strategic management.

1997 to 2007 - Head, Department of Agricultural Economics, University of Tennessee. Responsible for leadership and administration of Departmental personnel and programs in research, teaching, and extension. The Department includes 22 faculty positions, 26 research and extension associates and GRAs, and 10 staff. Also, beginning in 2003, responsible for administration of the Agricultural and Extension Education program consisting of two faculty, three GTAs, and one staff member.

1976 to 1997 - Associate Professor to Professor of Agricultural Economics, University of Tennessee. Major responsibilities include (a) research in livestock markets, prices, and management and (b) undergraduate and graduate teaching in the areas of principles, markets, prices, econometrics, and microeconomic theory.

1972 to 1976 - Extension Section Leader and Assistant Professor, Department of Agricultural Economics, Clemson University. Responsible for program leadership in Extension Community Resource Development including educational programs in natural resource development, economic development, and community infrastructure. Served as supervisor for the six extension specialists in CRD.

1971 to 1972 - Extension Specialist, Department of Agricultural Economics, Clemson University. Primary responsibilities included (a) the extension program in cotton marketing and (b) extension assistance to agricultural cooperatives.

Record of College Teaching:

Clemson University - 1968-70:

Ag Econ 456/756 - Agricultural Price Analysis (2 sems.)

University of Tennessee - 1978 - present:

Ag Econ 2410 - Econ of Food and Rural Resources(7 qtrs.)

Ag Econ 3320 - Marketing Farm Products (5 qtrs.)

Ag Econ 5120 - Ag Price Analysis (1 qtr.)

Ag Econ 5820 - Adv Ag Price Analysis (6 qtrs.)

Ag Econ 210 - Intro to Ag Econ (1 sem.)

Ag Econ 524 - Econometrics in Ag Econ (4 sems.)

Ag Econ 505 - Microeconomic Analysis (3 sems.)

Ag Econ 350 - Ag Marketing System (6 sems.)

Ag Econ 450 - Analysis of Ag Prices (1 sem.)

Ag Econ 650 - Analysis of Ag Markets (1 sem. - team)

Ag Econ 552 - Advanced Agribusiness Seminar (current sem.)

Ag Econ 324 - Quantitative Methods in Ag Econ (Spring sem.)

Undergraduate and Graduate Advising:

Served as an Undergraduate Adviser from 1978 until 1997, advising 20 to 40 students per semester.

Restarted advising in 2008.

Served as Major Professor to approximately 30 M.S. and Ph.D. students.
Served as Faculty Adviser to the Ag Business Club, 1978-1980.
Served as a faculty representative on the College of Agriculture Student-Faculty Council, 1977-1982.
Coordinated the College's Career Day activities for four years.
Served as Faculty Adviser to FarmHouse Fraternity from 1997 to 2001.
Received a USDA-CSRS-HEP Multicultural Scholarship Program grant for \$40,000 for 1995-1999 to attract minority students to the Department through scholarships.

Theses and Dissertations Directed and Service on Master's and Doctoral Committees:

Directed 13 theses and dissertations between 1980 and 2008.
Served as a member of 30 M.S. and 8 Ph.D. committees in Ag Econ between 1985 and 2008.
Served on 2 M.S. and 9 Ph.D. committees in other departments between 1985 and 2008.

Selected Publications:

McLemore, D.L. and J.A. Larson. Purchasing vs. Retaining Replacement Heifers in Commercial Beef Herds: A Cash Flow Analysis, Research Report 97-06, TN Agric. Exp. Station, March 1997.

Sleigh, D.E., McLemore, D.L., and E.L. Rawls. An Economic Analysis of Retained Ownership and Alternative Pricing Strategies for TN Feeder Cattle Producers, Res. Rpt. 97-02, TAES, Feb. 1997.

McLemore, D.L. "Beef Cattle Industry Leaders Identify Priorities", *Tennessee AgriScience*, No. 178, TN Agric. Exp. Station, Spring 1996, pp 18-22.

McLemore, D.L. and J.A. Larson. "Economics of Heifer Selection and Management", *Proceedings of the 1995 Beef Management Conference*, UT Agric. Exp.Sta., June 1995, pp. 36-52.

McLemore, D.L. "Current Situation and Outlook for Beef Cattle Prices", *Proceedings of the 1995 Beef Management Conference*, UT Agric.Exp. Station, June 1995, pp. 3-56.

McLemore, D.L. and R.W. Holland. Attitudes of Feeder Cattle Buyers and Market Operators Toward Types of Markets in Tennessee, Research Report 94-19, TN Agric. Exp. Station, Oct. 1994.

Holland, R.W. and D.L. McLemore. Reasons for Use of Alternative Markets by Tennessee Feeder Cattle Producers, Research Report 94-07, TN Agricultural Experiment Station, May 1994.

McLemore, D.L., K.W. Ferguson, C.J. Hood, and W.T. Butts. Effects of Feeder Calf Characteristics on Inherent Calf Value Under Different Carcass Prices and Feed Costs, Bulletin 688, TN Agricultural Experiment Station, Dec. 1993.

McLemore, D.L., E.L. Rawls, and D.E. Wells. Factors Affecting Price Differences for Feeder Cattle Sold Through Tennessee Auctions, Research Report 93-18, TN Agric. Exp. Sta., August 1993.

VanTassell, L.W., D.L. McLemore, and R.K. Roberts. "Expectations and Perceptions of the Peer Review Process: A Study of Four Agricultural Economics Journals", *Review of Agric. Economics*, 14.2(July 1992):241-254.

McLemore, D.L. and E.L. Rawls. "Economics of Cow-Calf Management: Selected Examples", *Proceedings of the 1992 Beef Management Conference*, TN Agric. Exp. Sta., June 1992, pp. 64-85.

Editor, *Southern Journal of Agricultural Economics* 1989 to 1992. Reviewed 139 submitted manuscripts and coordinated publication of 51 of those.

CURRICULUM VITAE

WILLIAM M. PARK

CURRENT POSITION:

Professor, Department of Agricultural Economics (80% teaching; 20% research).

AREAS OF PROFESSIONAL INTEREST:

Natural resource economics; market-based environmental policy.

EDUCATIONAL BACKGROUND:

- B.A. - Economics, DePauw University, 1974.
- M.S. - Agricultural Economics, Purdue University, 1976.
- Ph.D. - Agricultural Economics, Virginia Tech, 1980.

PROFESSIONAL EXPERIENCE:

- Assistant Professor, Department of Agricultural Economics, The University of Tennessee, 1980-1984.
- Associate Professor, Department of Agricultural Economics, The University of Tennessee, 1984-1992.
- Senior Fellow, Energy, Environment and Resources Center, University of Tennessee, 1991-2004.
- Professor, Department of Agricultural Economics, The University of Tennessee, 1992-present.
- Visiting Center Associate, Western Rural Development Center, Oregon State University, 1993-1994.

TEACHING AND ADVISING ACTIVITIES:

Administrative

- Undergraduate Program Coordinator, 1994-present.
- Assistant Head for Teaching, 2006-present.

Advising

- Academic advisor to approximately 30 undergraduate students, 1982-present.
- Major professor to 14 M.S. students and 2 Ph.D. students.

Courses Taught – (selected)

- | | |
|------------------|--|
| Ag Econ 110 | Opportunities in Agricultural Economics and Business |
| Ag Econ 212 | The Agribusiness Firm |
| Ag Econ 360 | Rural Economic Development |
| Ag Econ 410 | Seminar in Agricultural Economics and Business |
| Ag Econ 470 | Natural Resource Economics |
| Univ. Honors 100 | Urban Sprawl and Farmland Loss (Freshman Seminar) |
| Univ Honors 267 | Can Markets Save the Environment? (Gen. Ed. – Soc. Sci.) |

Committee Assignments – (selected)

- College representative to University Undergraduate Council, 1991-93, 1994-1997, 2002-present.
- Chair, University Teaching Council, 1999-2000.
- Chair, University Appeals Committee, 2007-present

Awards – (selected)

Alumni Outstanding Teacher Award, University of Tennessee, 1992.

B. Ray Thompson Outstanding Faculty Performance Award, Institute of Agriculture, 1998

Chancellor's Excellence in Advising Award, University of Tennessee, 2005.

RESEARCH ACTIVITIES:

Refereed Publications - (selected, 28 total)

Park, W. M., and L. A. Shabman, 1982 (August). "Distributional Constraints on Acceptance of Nonpoint Pollution Controls," *American Journal of Agricultural Economics*, 64:3:455-462.

Park, W. M., and D. G. Sawyer, 1987 (December). "Cost Effectiveness of Alternative Subsidy Strategies for Soil Erosion Control," *Southern Journal of Agricultural Economics*, 19:2:21-31.

Park, W. M., and S. E. Monteith, 1989 (March-April). "Cost Effectiveness of the Variable Cost-Share Level Option in the Agricultural Conservation Program," *Journal of Soil and Water Conservation*, 44:2:173-176.

Ralston, S., and W. M. Park, 1989 (December). "Estimation of Potential Reductions in Recreational Benefits Due to Sedimentation," *Water Resources Bulletin*, 25:6:1-7.

Roberts, R. K., P. V. Douglas and William M. Park, 1991 (December). "Estimating External Costs of Municipal Landfill Siting Through Contingent Valuation Analysis: A Case Study," *Southern Journal of Agricultural Economics*, 23:2:155-165.

Bell, C. D., R. K. Roberts, B. C. English and W. M. Park, 1994 (December). "A Logit Analysis of Participation in Tennessee's Forest Stewardship Program," *Journal of Agricultural and Applied Economics*, 26(2):463-472.

Tiller, K. H., P. M. Jakus and W. M. Park, 1997 (December). "Household Willingness to Pay for Drop-Off Recycling," *Journal of Agricultural and Resource Economics*, 22(2):310-320.

Park, W. M., K. S. Lamons and R. K. Roberts, 2002 (October). "Factors Associated with Backyard Composting Behavior at the Household Level," *Agricultural and Resource Economics Review*, 31(2):147-156.

Cho, S., C.D. Clark, W.M. Park, and S. Kim. 2008. "Spatial and Temporal Variation in the Housing Market Values of Lot Size and Open Space." *Land Economics* 84.

Roberts, D. C., C. D. Clark, W. M. Park and B. C. English, *forthcoming*. "A Spatial Assessment of Possible Water Quality Trading Markets in Tennessee," *Review of Agricultural Economics*.

Other Publications - (50)

Paper Presentations at Professional Meetings (Reviewed) – (34).

Other Professional Presentations – (70).

Grants and Contracts - (PI or Co-PI on 13, with total funding over \$700,000)

VITAE
EMMIT L. RAWLS
PROFESSOR
AGRICULTURAL ECONOMICS
UNIVERSITY OF TENNESSEE EXTENSION

EDUCATIONAL BACKGROUND AND DEGREES

B.S. 1960 – 1964 VIRGINIA TECH ANIMAL SCIENCE
M.S. 1964-1967 VIRGINIA TECH AGRICULTURAL ECONOMICS
PhD. 1967-1969 VIRGINIA TECH AGRICULTURAL ECONOMICS

PROFESSIONAL EXPERIENCE

- 1973-2008 Extension Agricultural Economist - Responsibilities included planning, coordinating, implementing and evaluating educational programs in the areas of livestock marketing, livestock outlook, and general agricultural marketing. During the years of 2000 - 2007 served as coordinator of the Tennessee Beef Cattle Improvement Initiative. Duties included gathering of data, applied research and other special economic analysis for all units of U. T. Extension and other agricultural agencies and organizations. Responsible for making research based information available by means of training seminars, workshops, reports and publications.
- 1971-1973 Assistant Professor and Division Chairman - Agriculture, Business, Secretarial Science and Liberal Arts at Paul D. Camp Community College - Franklin, Virginia.
- 1969-1971 U. S. Army - 1st Lieutenant and Captain. Veteran of Vietnam War
- 1964-1969 Research Assistant, Virginia Agricultural Experiment Station, Virginia Tech.
- 1964 Extension Agent Trainee - Virginia Cooperative Extension Service - Isle of Wight County, Smithfield, Virginia.

EXTENSION PROGRAMS

Market Outlook - prepare weekly beef cattle market comments for newsletter distributed via email and Internet. Write beef cattle outlook column for Tennessee Farm Bureau News. Prepare market outlook presentations for use by Area Specialist. Past Chair and member of the Technical Advisory Committee for the Livestock Market Information Center.

Beef Cattle Marketing Alliances - Prepare and give informational presentations on feeder cattle marketing alliances. Assist groups of beef producers to organize into effective marketing alliances in order to gain added value from feeder cattle. Serve in an advisory capacity to several alliances in the state.

Marketing Methods - Develop educational materials to assist Extension Agents and producers understand the various methods of marketing beef cattle. Encourage and advise marketing agencies to evaluate and use new marketing methods to enhance the value of Tennessee feeder cattle. Coordinate the Tennessee Beef Evaluation which allows beef producers to send feeder cattle to a custom feedlot in order to gain performance information on their cattle. Educational materials are developed to assist producers in understanding results of the evaluation. Risk management of purchased feed and cattle to be sold is taught to participants.

Tennessee Beef Cattle Improvement Initiative - Coordinate the initiative with emphasis on the marketing and animal identification priorities. Conduct demonstrations on beef cattle genetics, feeder calf weaning and post weaning methods. Wrote text and teaching materials for the marketing section of the Master Beef Producer program and teach that section as requested.

GRANTS AND CONTRACTS

Risk Management Education - Managing Price Risk for Purchased Feed by Livestock Producers and Feed Suppliers, July 2007 - June 2008, \$35,000

Risk Management Education - Increasing Use of Price Risk Management Tools by Beef Producers, June 2006 - June 2007, \$30,686

Tennessee Department of Agriculture - Mobile Education Display Unit on Animal Identification, March - September 2006, \$33,280

Tennessee Department of Agriculture - Vocational Agriculture High School Educators Training and Educational Materials for Extension Agents, March - September 2006, \$30,623

Tennessee Department of Agriculture - National Animal Identification Training, May-September 2005, \$13,800

USDA Fund for Rural America, - Development of Beef Cattle Management and Marketing Systems Educational Program \$218,000

HONORS AND AWARDS

Outstanding Extension Publication 1987

Award of Merit - Gamma Sigma Delta 1991

Webster Pendergrass Award for Outstanding Service - 1993

B. Ray Thompson Award for Outstanding Faculty Performance - 1996

Distinguished Service Award - National County Agricultural Agents Association - 2004

Outstanding Team Award for Master Beef Producer Program - Gamma Sigma Delta - 2005

VITAE
DARYLL E. RAY

Department of Agricultural Economics
309 Morgan Hall
University of Tennessee
Knoxville, TN 37996-4519
Email: dray@utk.edu

Educational Background:

Bachelor of Science, Agricultural Economics, Iowa State University, 1965
Doctor of Philosophy, Agricultural Economics, Iowa State University, 1971

Professional Experience:

Professor (with Tenure 07/01/93), Blasingame Chair of Excellence in Agricultural Economics and Rural Sociology and Director of the Agricultural Policy Analysis Center, The University of Tennessee, Knoxville, 1991–present.
Professor, Dept. of Agricultural Economics, Oklahoma State University, 1978–1991.
Associate Professor (with Tenure 09/01/74), Dept. of Agricultural Economics, Oklahoma State University, 1974–1978.
Assistant Professor, Dept. of Agricultural Economics, Oklahoma State University, 1971–1974.
Research Associate, Economics Department, Iowa State University, 1967–1971.
Research Assistant, Economics Department, Iowa State University, 1965–1967.

Noteworthy Professional Activities:

Testified numerous times before the Senate Committee on Agriculture, Nutrition, and Forestry and before the House Committee on Agriculture at their request.
Testified before Presidential commissions dealing with agricultural policy issues.
Founder and Director of the Agricultural Policy Analysis Center within the Department of Agricultural Economics. Its primary charge is to analyze impacts of economic conditions and policies at the national, Tennessee, and farm levels.
Publish a weekly agricultural policy column carried by many national and regional newspapers, magazines, and other outlets. One week after its initial publication, each column is sent to 1000s of recipients via a network of e-mail list-serves.
Developed an elasticity-based policy simulation model, POLYSIM, which was the first comprehensive policy simulation model to be routinely used by the U.S. Department of Agriculture.
Author of over 400 professional papers, articles, and book chapters and in the last ten years has made over 300 invited presentations.
Developed the first econometric, equation-based policy simulation model of U.S. agriculture with subsector detail on supply and utilization components for major crop and livestock categories. This model was the foundation for the early econometric policy simulation work done at Iowa State University's Center for Agricultural and Economic Development.

Selected Publications:

Ray, D.E. and H.D. Schaffer. *The Connection Between Changes in US Farm Policy in the Mid-1990s and Depressed International Crop Prices*. in Effects of International Trade on the Developing Countries. Editors: Pinstrup-Andersen, et al. 2006.

Ray, D.E. and H.D. Schaffer. *Toward a Pro-Middle Farm Policy: What Will It Take To Ensure A Promising Future for Family Farming?* in Renewing an Agriculture-of-the-Middle: Situation and Strategy for the Center of the America's Food System. Editor: Steve Stevenson, 2006.

Ray, D.E. and H.D. Schaffer. *Supply and Stocks Management*. in Extension Pamphlet Series on 2007 Farm Bill. Editor: Joe Outlaw, 2006.

Ray, D.E. Review of *The Curse of American Agricultural Abundance: A Sustainable Solution*. W. W. Cochrane, Univ. NB Press, Lincoln, NB, 2003, 160 pp., ISBN: 0803215290. (Book Review), Agriculture Economics. 32:1-3, 2005.

Ray, D.E. Fourth Annual Pesek Colloquium Lecture: *Agricultural Policy for the Twenty-First Century and the Legacy of the Wallaces*. Published lecture, Iowa State University, March 3, 2004.

Ray, D.E., D.G. De La Torre Ugarte and K.J. Tiller. *Rethinking US Agricultural Policy: Changing Course to Secure Farmer Livelihoods Worldwide*. Agricultural Policy Analysis Center, UTK, 09/03.

Ray, D., M. Shahidi, and H. Schaffer, 2001. An Analytical Database of U.S. Agriculture, 1950-1999: The APAC Database?, 2001 Edition, APAC Staff Paper No. 01-1, Knoxville, TN, published 06/02.

Ray, D.E. *Southern policies issues for the 2002: Legacy of the 1996 act*. Published abstract, Journal of Agricultural and Applied Economics. 34(2):384 August 2002.

De La Torre Ugarte, D., D.E. Ray, and K.H. Tiller. *Analysis of Farm Policy Options: National Level Results*, Published abstract, Journal of Agricultural and Applied Economics. 34(2):382 Aug. 2002.

Ray, D., K. Tiller, D. De La Torre Ugarte, and R. White. *Outlook for Tennessee Agriculture*. An Economic Report to the Governor of the State of Tennessee. TN State Publ. Office, Nashville, 01/02.

Ray, D.E. *Impacts of the 1996 Farm Bill Including Ad Hoc Additions*. Journal of Agricultural and Applied Economics. 33(2):245-260. August 2001.

Ray, D.E. *An Examination of Potential Production Price and Income Trends under Current Policies*. Invited presentation, American Agric. Econ. Assoc. annual Mtgs, Chicago, IL, 08/01/01. Proceedings Food and Agricultural Policies, p. 55-77, eds. L.C. Polopolus and C. Fountain, University of Florida.

Ray, D.E. *The Economic Climate for the Farm Bill Debate*. Presented at the Fixing the Farm Bill Policy Conference at the National Press Club, Washington, D.C., 03/27/01. Proceedings with same title as conference, pp. 9-21, eds. Dr. John A. Schnittker and Dr. Neil E. Harl, Iowa State University.

Ray, D.E. "Crop Agriculture Faces Long-Term Price and Income Problems." The House Committee on Agriculture, First Session: Washington, D.C., U.S. Government Printing Office, pp. 6-12, 2001.

Ray, D., J.W. Richardson, D. De La Torre Ugarte, and K. Tiller. "Estimating Price Variability in Agriculture: Implications for Decision Makers." JAAE. 30(1):21-33. July 1998.

De La Torre Ugarte, D., D. Ray, and K. Tiller. "Using the POLYSYS Modeling Framework to Evaluate Environmental Impacts in Agriculture." in *Evaluating Natural Resource Use in Agriculture*. Eds: T. Robertson, B. English, and R. Alexander, Ames, IA: IA State Univ. Press, 6:151-172, 1998.

Ray, D. and K. Tiller. *U.S. Agricultural Exports: Projected Changes Under FAIR and Potential Unanticipated Changes*. Selected paper, published abstract, JARE. 22(2):397. December 1997.

Setia, P.P., Bengt T. Hyberg, D. De La Torre Ugarte, and D. Ray. "Planting Flexibility: Implications for Agriculture Sustainability." International Advances in Economic Research. 3(3):299-311. 08/97.

JOHN B. RILEY

Present Position:

Professor, Department of Agricultural Economics, University of Tennessee (UT), Knoxville, TN.
August 1999 to present. Current position 100% teaching.

Teach: Agribusiness Finance, Agribusiness Management, The Job Search Process,
Marketing and Sales Communications

Advise undergraduate students. One of 3 advisers for the current 70 undergraduate
students in the department.

Coordinate undergraduate student internships

Coordinate departmental student recruitment and student placement. Member of College
Placement Committee.

Member of Undergraduate Program Committee plus others committees as requested.

Serve as International Secretary of Gamma Sigma Delta - The Honor Society of Agriculture.

Served as International President 1998-2000.

Coach the NAMA Marketing Team. Placed 3rd 2008, 5th 2005, 2nd 2001, semi-final
heats 2000. Typically 30-35 teams from the U.S. and Canada in this competition.

Advise the NAMA/Agribusiness Club. Adviser to FarmHouse Fraternity 2000-07.

Past President and current Membership Chairperson, Phi Kappa Phi, University of Tennessee

Prior Professional Experience:

October 1995 to August 1999, Dean, College of Agricultural Sciences and Natural Resources,
University of Tennessee, Knoxville, TN.

October 1985 to October 1995, Professor, Assistant Director - Academic Programs, College of
Agriculture, Kansas State University (KSU), Manhattan KS.

January 1974 to October 1985, Coordinator - Undergraduate Programs, Acting Head, Assistant Head
and Associate Professor, Assistant Professor, Department of Agricultural Economics, Kansas
State University, Manhattan, KS.

Prior Research Experience:

Project Topic Areas:

Dogwood Research with faculty in Horticulture and Entomology & Plant Pathology (1999-2001).

Commercial Bank Risk Management (1985-1986)

Farm Financial Stress (1984-1986)

Use of Financial Futures by Agricultural Producers (1983-1985)

Improving Systems of Marketing Red Meat with Department of Animal Sciences (1975-1985)

Farm Radio Broadcasting (1976-1978)

Improving the Management Resource in multi-man Decision Unit Agribusiness Firms 1974-1980)

Extension Experience:

Riley County KS Extension Council 1983-1988, 1991-1995(KS). Chairperson of Executive
Committee 5 years.

Summer Intern Rockbridge County (VA) office 1968.

Kansas Ag Bankers School 1975-1986. Coordinating Council and Assistant Director of school

Prior Advising Experience:

Undergraduate student advisor. Had 40-60 advisees during 1979-1985 period while in KSU
Agricultural Economics Department. Advised 15-25 General Agriculture students during 1985-1995
period while in KSU Ag Academic Programs

Adviser to Ag Student Council, 1986-1995(KSU), 1995-1999(UT)

KSU: Adviser to National AgriMarketing Association (NAMA), 1978-1995; National Outstanding Chapter Award 1992, 1991, 1987, 1984; Runner-up 1989 and 1993; Third Place 1984, 1990; Honorable Mention 1988, 1986, 1985; Outstanding Special Projects Award 1990; National Marketing Team Winner 1988 and 1983, Second 1991 and 1986

Adviser to McCain Student Development Council, 1988-1995. Adviser to Ag Econ Club, 1976-1985. Adviser to FarmHouse Fraternity, 1994-1995, 1981-1983. Adviser to Clovia 4-H Scholarship House, 1992-1995

Honors:

UT Institute of Agriculture Lidvall Outstanding Teaching Award 2004
UT College of Agricultural Sciences and Natural Resources
Outstanding Faculty Advisor Award 2003
UT InterFraternity Council Outstanding Chapter Advisor 2003
National AgriMarketing Association Outstanding Chapter Advisor 2003, 1987
UT Block & Bridle Club Honorary Member 2003
Nominee Chancellor's Outstanding Teaching Award Citation 2003
National AgriMarketing Association R. C. Ferguson Leadership Award 1996
Tennessee FFA Honorary State Farmers Degree 1996
Phi Kappa Phi Meritorious Service Award 1994
FarmHouse Snyder Award 1990
FFA Honorary American Farmer Degree 1988
Western Agricultural Economics Association - Outstanding Teaching Award Finalist 1984
University Activities Board Outstanding Organization Advisor 1983
Kansas FFA Honorary State Farmers Degree 1983
Gamma Sigma Delta, Teacher Award of Merit 1981
College of Agriculture Outstanding Advisor Award 1979
Associate Membership - FarmHouse Fraternity May, 1979
Graduate School of Banking Participant, University of Wisconsin 1975

Education:

Ph.D. Oklahoma State University, June 1974
Major: Agricultural Economics

M.S. Virginia Polytechnic Institute & State University, June 1970
Major: Agricultural Economics

B.S.(with honors) Virginia Polytechnic Institute & State University, June 1969
Major: Agricultural Economics

Roland K. Roberts

(Full Vita—http://economics.ag.utk.edu/staff/pdf/roberts_vita.pdf)

Educational Background:

Ph.D. Agricultural Economics, Iowa State University, 1979

M.S. Agricultural Economics, Utah State University, 1976

B.S. Economics, Utah State University, 1975. Graduated Magna Cum Laude.

Employment:

Professor, University of Tennessee (1991-Present)

Agricultural Policy Analyst and Program Manager, USAID Jakarta, Indonesia (1991-1993)

Associate Professor, University of Tennessee (1984-1991)

Assistant Professor, University of Hawaii (1980-1984)

Research Associate, Staff Economist and Instructor, Iowa State University (1975-1980)

Summary of Publications, Presentations and Grants:

Item	Number	Interdisciplinary
Journal Articles	72	34
Chapters in Books	3	1
Other Publications	264	77
Presentations at Professional Meetings	81	21
Other Presentations	108	27
Grants and Contracts	49 (\$2,858,000)	14 (\$1,915,00)

Examples of 34 Journal Articles with 18 UTIA Scientists from Other Departments

Roberts, R.K., J.T. Walters, J.A. Larson, B.C. English, and D.D. Howard. "Effects of Disease, Nitrogen Source, and Risk on Optimal Nitrogen Fertilization Timing in Winter Wheat Production." *Agronomy Journal* 96(2004):792-799.

Pendergrass, R., R.K. Roberts, D.E. Deyton, and C.E. Sams. "Economics of Using Soybean Oil to Reduce Peach Freeze Damage and Thin Fruit." *HortTechnology* 10(2000):211-217.

McKinley, T.L., R.K. Roberts, R.M. Hayes, and B.C. English. "Economic Comparison of Herbicides for Johnsongrass (*Sorghum halepense*) Control in Glyphosate Tolerant Soybeans (*Glycine max*)." *Weed Technology* 13(1999):30-36.

Roberts, R.K., J.A. Larson, D.D. Tyler, B.N. Duck, and K.D. Dillivan. "Economics Analysis of the Effects of Winter Cover Crops on No-Tillage Corn Yield Response to Applied Nitrogen." *Journal of Soil & Water Conservation* 53(1998):280-284.

Examples of 38 Other Journal Articles

Epplin, F.M., C.D. Clark, R.K. Roberts, and S. Hwang. "Challenges to the Development of a Dedicated Energy Crop." *American Journal of Agricultural Economics* 89(2007):1296-1302.

Torbett, J.C., R.K. Roberts, J.A. Larson, and B.C. English. "Perceived Importance of Precision Farming Technologies in Improving Phosphorus and Potassium Efficiency in Cotton Production." *Precision Agriculture* 9(2007):127-137.

Roberts, R.K., B.C. English, Q. Gao, and J.A. Larson. "Simultaneous Adoption of Herbicide-Resistant and Conservation-Tillage Cotton Technologies." *Journal of Agricultural and Applied Economics* 38(2006):629-643.

Roberts, R.K., B.C. English, and J.A. Larson. "The Variable-Rate Application Decision for Multiple Inputs with Interactions." *Journal of Agricultural and Resource Economics* 31(2006):391-413.

Roberts, R.K., B.C. English, J.A. Larson, R.L. Cochran, W.R. Goodman, S.L. Larkin, M.C. Marra, S.W. Martin, W.D. Shurley, and J.M. Reeves. "Adoption of Site-Specific Information and

Variable Rate Technologies in Cotton Precision Farming.” *Journal of Agricultural and Applied Economics* 36(2004):143-158.

Chapters in Books

- Larson, J.A., B.C. English, and R.K. Roberts. “Precision Farming Technology and Risk Management.” Chapter 19, pp. 417-442. In (eds. R.E. Just and R.D. Pope) *A Comprehensive Assessment of the Role of Risk in U.S. Agriculture*. Kluwer Academic Publishers, Norwell, MA, 2002.
- Roberts, R.K., D. Kemper, and L. Christensen. “Crop Mechanical Technologies Work Group Report.” pp. 101-112. In (eds. B.C. English, R.L. White, and L. Chuang) *Corp and Livestock Technologies: RCA II Symposium*. Iowa State University Press, Ames, Iowa, 1997. Second printing, same pages, *Corp and Livestock Technologies for the 21st Century*. Iowa State University Press, Ames, Iowa, 2000.
- Roberts, R.K., D.E. Ray, D.O. Mitchell, and R.J. Schatzer. “Agricultural Sector Simulation Modeling.” pp. 29-51. In (eds. J. Langley, G. Vocke, and L. Whiting) *Earl O. Heady: His Impact on Agricultural Economics*, Iowa State University Press, Ames, Iowa, 1994.

Examples of Grants and Contracts

- Roberts, R.K., B.C. English, and J.A., Larson. “Economics of Precision Farming Working Group-Tennessee.” Cotton Inc., \$270,000 for 2000-2007.
- Larson, J.A., R.K. Roberts, and B.C. English. “Current Status and Future Adoption of Precision Farming Technologies in Tennessee.” Cotton Inc., \$155,000 for 1999-2007.
- Roberts, R.K., D.E. Deyton, and C.E. Sams. “Economic Analysis of a Potential New Market for Soybean Oil: Using Soybean Spray Oil to Delay Bloom and Reduce the Risk of Freeze Damage in Peach Production.” Tennessee Soybean Promotion Board, \$14,567, 1997-1998.
- Oliver, S.P., E.C. Jaenicke, R.K. Roberts. “Efficacy of Extended Pirlimycin Therapy for Treatment of Chronic Environmental Streptococcus Species Intramammary Infections in Lactating Dairy Cows.” Pharmacia & Upjohn Company, \$103,000 for Jan. 1- July 31, 1998.
- Deyton, D.E., C.E. Sams, R.K. Roberts, D.E. Ray, and Others. “Applications of Soybean Oil to Delay Flower Bud Development, Thin Fruit, and Manage Insect Populations on Fruit Trees.” United Soybean Board, \$500,000 for 1996-1998.
- Roberts, R.K. and R.M. Hayes. “Analysis of Agronomic and Economic Comparisons of Roundup to Alternative Strategies for Johnsongrass Control.” Tennessee Soybean Promotion Board, \$12,500 for 1996.

Examples of Service and Awards

College of Agricultural Sciences and Natural Resources, Graduate Council, 2006-2007; Department of Agricultural Economics, Leader of the Strategic Planning Process, 2006-2007; Department of Agricultural Economics, Graduate Coordinator, 2006-2007; University of Tennessee Faculty Senate, 2000-2003; USAID Administrator's Implementation Award, Economic Policy Support Office, USAID/Indonesia, 1991; Gamma Sigma Delta Honor Society of Agriculture; Phi Kappa Phi National Honor Society.

George F. Smith

Address:

120 Morgan Hall
2621 Morgan Circle
Knoxville, TN 37996-4522

Phone: (865) 974-7112
Fax: (865) 974-1086
E-mail: gfsmith@utk.edu

Date & Place of Birth: July 16, 1941. Batavia, New York.

Education:

Ph.D. University of Tennessee. 1974, Agricultural Economics.
M.S. Montana State University. 1967, Agronomy.
B.S. University of Connecticut. 1963, Agriculture.

Professional Experience:

2008-Present Interim Assistant Dean for Agriculture, Natural Resource, and Resource Development programs, University of Tennessee Extension.
1986-Present Professor, Agricultural Economics, University of Tennessee Extension.
1979-1986 Associate Professor, Agricultural Economics and Resource Development.
1974-1979 Assistant Professor, Resource Development.
1970-1974 Graduate Research Assistant. Department of Agricultural Economics and Rural Sociology, University of Tennessee, Knoxville.
1967-1970 Agricultural Program Technical Representative. Peace Corps/Bolivia.
1965-1967 International Technical Training Fellow. Montana State University, Bozeman, Montana. Coordinator of five week USAID training program for Ecuadorian Extension Agents, summers of 1966 and 1967. Instructor for Peace Corps/Ecuador Volunteer Training Programs, summers 1966 and 1967.
1963-1965 Peace Corps Volunteer. Archidona, Ecuador.

Job Responsibilities:

To provide leadership in planning, coordinating implementing, evaluating and reporting the clean water priority program focusing on water quality, animal waste management and related environmental stewardship issues. Coordinate in-state education-information activities as part of the Southern region water quality coordination project (USDA section 406 watershed resources management project). Develop educational programs in land use, tourism, recreation and related economic development areas. Support county, district and state rural development committees.

Publications:

Over 70 peer reviewed publications. Twenty-five papers presented at professional meetings; 12 educational videotapes and CD-ROMs. More than 100 departmental papers.

Grants and Contracts:

Dr. Smith has individually and as part of project teams obtained more than 40 grants and contracts totaling over \$8 million.

Recognition:

Southern Rural Development Center Community Development Educator Lifetime Achievement Award, 2006.
Gamma Sigma Delta Team Award, 2002.
Tennessee Department of Environment and Conservation Environmental Stewardship Award, Environmental Stewardship Priority Team, 1998.
Webster Pendergrass Award for Outstanding Service, Institute of Agriculture, 1994.
Gamma Sigma Delta Extension Award of Merit, 1993.
Epsilon Sigma Phi Mid-Career Award, 1992.
Outstanding Teamwork Award, Environmental Stewardship Priority Team, 1992.
Exemplary District Adult Agriculture/CRD Program, 1990.
Honorable Mention, American Agricultural Economics Association Published Research, 1977.

Memberships:

Alpha Zeta.
American Agricultural Economics Association.
Epsilon Sigma Phi.
Gamma Sigma Delta.
Sigma Xi.
Southern Agricultural Economics Association.
Tennessee Association of Agricultural Agents and Specialists.

Languages: Fluent in Spanish.

Community Service:

John XXIII Catholic Church: Family Life Committee. Parish Council member and Chairman.
Girl Scouts: Unit assistant leader. Coordinator of several Council events. Three terms on Council Board, Vice President. Property Committee Chairman. Several merit awards.
Boy Scouts: Unit Leader. District adult training chairman. Council camping and activities committee chairman. Coordinator or assistant in many district and Council events. Several training and merit awards.

Kelly J. Tiller

Professional Preparation

University of Tenn., Knoxville	Agricultural Economics	Ph.D.,	December 1996
University of Tenn., Knoxville	Agricultural Economics	M.S.,	August 1993
University of Tenn., Chattanooga	Economics	B.A.,	May 1991

Appointments

Director of External Operations, Office of Bioenergy Programs, Institute of Agriculture, University of Tennessee, Knoxville, 2007-present

Director, Center for Tobacco Grower Research, Department of Agricultural Economics, University of Tennessee, Knoxville, 2007-present

Assistant Professor, Agricultural Policy Analysis Center, Department of Agricultural Economics, University of Tennessee, Knoxville, 2005-present

Research Assistant Professor, Agricultural Policy Analysis Center, Department of Agricultural Economics, University of Tennessee, Knoxville, 1999-2005

Post-doctoral Research Associate, Agricultural Policy Analysis Center, Department of Agricultural Economics, University of Tennessee, Knoxville, 1997-1999

Research Fellow, Waste Management Research and Education Institute, University of Tennessee, Knoxville, TN, 1995-1996

Publications:

(i) Related to Project:

Tiller, Kelly J. "The Cost and Availability of Energy and the Effect on Small Business." Congressional Testimony before the U.S. House of Representatives, Committee on Small Business, Field Hearing (Congressional Record), August 31, 2007.

Wilcox, Michael, Dayton Lambert and Kelly J. Tiller. "Biofuels '101'." Extension Service Publication SP700-A, Tennessee Agricultural Extension Service and Tennessee Agricultural Experiment Station, The University of Tennessee, Knoxville, August 2007.

Tiller, Kelly J. "Meeting the Workforce Demands of Small Bioenergy Businesses." Congressional Testimony before the U.S. House of Representatives, Committee on Small Business, Subcommittee on Contracting and Technology, Washington, D.C. (Congressional Record), June 20, 2007.

Tiller, Kelly J. "Biofuels Policy in the U.S.: Overview and Alternatives." Invited paper, published proceedings, International Starch Technology Conference, Urbana-Champaign, IL, June 2007.

Tiller, Kelly J., Terry Nipp, Mark Downing, and James Doolittle. "Regional Feedstock Partnerships: Producing the Billion Tons of Biomass." Proceedings of the World Congress on Industrial Biotechnology and Bioenergy, Orlando, FL, March 2007.

Tiller, Kelly J., Timothy G. Rials, Colin South, Martin Keller and Thomas Klindt. "Developing a Cellulosic Biofuels Industry: The Tennessee Biofuels Initiative." Proceedings of the Pacific Rim Summit on Industrial Biotechnology and Bioenergy: Building Partnerships Across the Pacific, Honolulu, HI, November 15, 2007.

(ii) Other Significant Publications:

Tiller, Kelly J., A. Blake Brown and William M. Snell. 2007. "Tobacco Policy." in Outlaw, Joe and Steven Klose, eds. 2007 Farm Bill: Policy Options and Consequences. Oak Brook, IL: Farm Foundation.

Tiller, Kelly J., LaKeya N. Jones, Daryll E. Ray and Daniel G. De La Torre Ugarte. "Situation and Outlook for Tennessee Agriculture." An Economic Report to the Governor of the State of Tennessee, Tennessee State Publishing Office, Nashville, TN, pp. 25-32. January 2006.

Tiller, Kelly J. and Paul M. Jakus. 2005. "Applying the Miceli Model to Explain Cooperation in Municipal Solid Waste Management." *Agricultural and Resource Economics Review*. Vol. 34(2):217-225.

Ray, Daryll E., Daniel G. De La Torre Ugarte and Kelly J. Tiller. "Rethinking U.S. Agricultural Policy: Changing Course to Secure Farmer Livelihoods Worldwide." Agricultural Policy Analysis Center, The University of Tennessee, Knoxville, TN, September 2003 (translated into 3 languages).

Tiller, Kelly J. "Movement Toward Sustainable Agricultural Policies: Cooperative Policy Alternatives to Address the Farm Income Crisis." Published proceedings, "Moving Forward from Cancún: The Global Governance of Trade, Environment and Sustainable Development," Berlin, Germany, Oct. 30, 2003.

Synergistic Activities:

(1) Coordinating and leading the Tennessee Biofuels Initiative, an integrated RD&D program to implement a cellulosic biofuels industry in Tennessee, with State and federal funding exceeding \$100 million; (2) Co-coordinator of the BioSucceed project, a multi-institutional effort to develop a graduate curriculum in bioenergy conversion technologies, funded through a USDA Higher Education Challenge Grant; developing a graduate course in Life Cycle Analysis, Policy, and Economics; (3) Developer and director of the BioWeb project, a \$0.5 million national Sun Grant funded effort to develop an online repository of bioenergy and bioproducts information; www.bioweb.sungrant.org; (4) Working with the University of Tennessee's Sun Grant Steering Committee to implement the Southeast Sun Grant Initiative; (5) Developer and director of the Center for Tobacco Grower Research, a national survey research center of excellence; funded by \$2.5 million in external funding; (6) Extensive research and educational activities contributing to the development and implementation of the \$10.1 billion federal tobacco buyout in 2004; (7) Recognized with several awards for tobacco research and education, including the Am. Agricultural Economics Association Program of Distinction (2006), S. Agricultural Economics Association Outstanding Extension Program (2006), and the Univ. of Tenn. Research Impact Award (2005).

Collaborators and Other Affiliations:

(i) Collaborators:

Dr. Joseph Bozell, Forest Products Center, Univ. of Tenn.; Dr. A. Blake Brown, Economics, North Carolina State Univ.; Dr. Daniel G. De La Torre Ugarte, Agricultural Policy Analysis Center, Univ. of Tenn.; Dr. James Doolittle, Plant Science, North Dakota State Univ.; Dr. Mark Downing, Environmental Sciences, Oak Ridge National Laboratory; Burton C. English, Agricultural Economics, Univ. of Tenn.; Daniel Green, Agricultural Economics, Univ. of Tenn.; Dr. Kimberly Gwinn, Plant Science, Univ. of Tenn.; Sam Jackson, Bioenergy Programs, Univ. of Tenn.; Dr. Paul M. Jakus, Economics, Utah State University; Lucian Lucia, North Carolina State University; Dr. Terry Nipp, National Sun Grant Association; Dr. George W. Norton, Applied Economics, Virginia Tech; Dr. Bonnie Ownley, Plant Science, Univ. of Tenn.; Dr. William M. Park, Agricultural Economics, Univ. of Tenn.; James H. Perdue, U.S. Forest Service; Dr. Daryll E. Ray, Agricultural Policy Analysis Center, Univ. of Tenn.; Dr. Dixie W. Reaves, Applied Economics, Virginia Tech; Dr. Timothy G. Rials, Forestry Wildlife & Fisheries, Univ. of Tenn.; Dr. James W. Richardson, Agricultural & Food Policy Center, Texas A&M University; Harwood D. Schaffer, Agricultural Policy Analysis Center, Univ. of Tenn.; Dr. William M. Snell, Agricultural Economics, Univ. of Kentucky; Dr. Neal Stewart, Plant Science, Univ. of Tenn.; Dr. Wally Tyner, Agricultural Economics, Purdue University; Dr. Marie E. Walsh, Consultant; Dr. Timothy M. Young, Forest Products Center, Univ. of Tennessee

(ii) Advisors:

Master's Thesis, "A Case Study Analysis of Household Recycling Behavior In and Willingness to Pay for a Drop-off Recycling Program." Dr. William M. Park, University of Tennessee, Agricultural Economics Department.

Ph.D. Dissertation, "Multijurisdictional Cooperation in Municipal Solid Waste Management." Dr. William M. Park, University of Tennessee, Agricultural Economics Department.

(iii) Advisees:

Robert Elliott, Master's Thesis, in progress; LaKeya N. Jones, Master's Thesis, completed August 2007; Brad C. Robbins, Master's Thesis, completed August 2006; Sherry Hulsey, Master's non-thesis, completed December 2004; James A. Whaley, Master's non-thesis, completed May 2000.

Margarita M. Velandia
Curriculum Vitae

Department of Agricultural Economics
University of Tennessee Knoxville, TN 37996

Office: 865-974-7409
E-mail: mvelandia@utk.edu

EDUCATION

Ph.D. Agricultural and Applied Economics Texas Tech University	May 2007
M.S. Environmental and Resource Economics(joint degree) Universidad de los Andes, Colombia - University of Maryland	September 2002
B.S. Economics Universidad de Los Andes, Colombia	September 2000

PROFESSIONAL EXPERIENCE

Assistant Professor University of Tennessee, Knoxville	September 2007- present
Research Associate Texas Tech University	March 2007 - July 2007
Research Assistant Texas Tech University	September 2003 - February 2007
Consultant International Colombian Corporation(CCI), Colombia	January 2002 - August 2003
Economic Assistant Regional Autonomous Corporation (CAR), Colombia	January 2001 – December 2001

CURRENT JOB DESCRIPTION

Current responsibilities are focus in the areas of production economics and management. In these areas this position requires the development and dissemination of new knowledge in alternative products, production technologies, and management practices to help Tennessee producers to make income-enhancing decisions.

REFEREED JOURNAL PUBLICATIONS

Velandia, M., R.M., Rejesus, T.O., Knight, and B.J., Sherrick “Factors Affecting Farmers’Utilization of Agricultural Risk Management Tools: The Case of Crop Insurance, Forward Contracting, and Spreading Sales.” *Journal of Agricultural and Applied Economics* (Accepted).

Velandia, M., R.M. Rejesus, E.Segarra, and K. Bronson. “Economics of Management Zone Delineation in Cotton Precision Agriculture.” *Journal of Cotton Science* (In review).

Velandia, M., R.M. Rejesus, E.Segarra, and K. Bronson. “Un Analisis Economico de la Aproximacion Estadistica Para el Establecimiento de Zonas de Manejo en Agricultura de Precision: El Caso de Algodon en Texas.” *Revista Desarrollo y Sociedad* (Development and Society). Vol. 54 (September 2004): 253-273.

PAPERS IN PROCEEDINGS, PUBLISHED ABSTRACTS AND SELECTED PAPERS

Three (3) papers in proceedings, one (1) published abstract, and three (3) selected papers.

EXTENSION PRESENTATIONS

Velandia, M., H.P., Denton, V.F., Witcher. "Burley Mechanization." *Tobacco and Forage Production Field Day, Research and Education Center at Greenville, The University of Tennessee, Institute of Agriculture* (07/17/08)

REVIEWER

Reviewer for *Lecturas de Economia - Universidad de Antioquia Journal, Colombia* and (Co-reviewer for *Rural Sociology* in 2008. **Reviewer** for *Cuadernos de Economia - Universidad Nacional Journal, Colombia* *Desarrollo y Sociedad - Universidad de los Andes Journal, Colombia* and **Co-reviewer** for *American Journal of Agricultural Economics* in 2006.

FUNDED PROJECTS

Economics of Precision Farming Working Group Tennessee, Funded by Cotton Inc.(with Roland Roberts, James Larson, Dayton Lambert, and Burton English). {\$24, 500}, 2008 – 2009.

Improving competitiveness in the tobacco global market through information Channels and decision-making tools, Funded by Tobacco Education and Research Council, Inc., TERC. {\$75,963}, 2008-2010.

Design, Development and Evaluation of Alternative Market Preparation Systems for Burley Tobacco, Funded by Philip Morris USA. {\$70,000}, 2007-2008.

Design, Development and Evaluation of Alternative Market Preparation Systems for Burley Tobacco, Funded by Philip Morris USA. {\$28,000}, 2008-2009.

Design, Development and Evaluation of Alternative Market Preparation Systems for Burley Tobacco, Funded by Philip Morris International. {\$42,000}, 2008-2009.

GRADUATE STUDENT ADVISEMENT

Committee member.

M.S. Thesis, Universidad de Los Andes, Colombia

Perdomo, J.A. Estimación de Funciones de Producción y Eficiencia Técnica

Adviser.

Amanda Jenkins, Ag. Econ., M.S., thesis, program in progress

Kimberly Ball, Ag. Econ., M.S., non-thesis, program in progress

MEMBERSHIPS

American Agricultural Economic Association

Southern Agricultural Economic Association

Michael D. Wilcox, Jr.

Department of Agricultural Economics
University of Tennessee
2621 Morgan Circle, 314B Morgan Hall
Knoxville, TN 37996
(865) 974-7410

EDUCATION

Purdue University, College of Agriculture - Agricultural Economics, West Lafayette, IN
PhD, May 2006

Auburn University, College of Agriculture - Fisheries & Allied Aquacultures, Auburn, AL
MS, August 1998

Cornell University, College of Agriculture and Life Sciences - Biological Sciences, Ithaca, NY
BS, May 1992

PROFESSIONAL EXPERIENCE

University of Tennessee, Knoxville, TN

2006 – Present Assistant Professor, Department of Agricultural Economics

Purdue University, West Lafayette, IN

2001 – 2006 Graduate Research Assistant, Department of Agricultural Economics

Harris AgriScience and Technology Center (Magnet School), Bloomfield, CT

1998 - 2001 Educator/Curriculum Consultant

Auburn University, Auburn, AL

1996 - 1998 Graduate Research Assistant, Department of Fisheries and Allied Aquacultures

United States Peace Corps, Yaoundé, Cameroon

1993 - 1995 Aquaculture Extension Agent

STATEMENT OF CURRENT RESPONSIBILITIES

Responsibilities of this 100% Extension appointment include: 1) providing leadership for Extension educational programs in rural economic development, 2) working closely with Extension agents, government officials, local/regional/national/international economic development agencies, planners, businesses, and interested citizens to develop and deliver highly relevant rural economic educational programs, 3) working closely with other Extension, research, and teaching faculty across the University to develop effective programs, 4) conducting applied research in support of the Extension program and remaining abreast of current research and other developments in the area of work, 5) acquiring

significant extramural funding and fees to support the Extension program, 6) employing appropriate educational methods, technology, and media including conferences and workshops, and 7) participating in the committee and governance structure of the Department, Institute, and University. Areas of emphasis include analysis of economic development initiatives and policy; training and development of community leaders and entrepreneurs; identifying fertile avenues for rural economic development and employment; business recruitment, retention and expansion; tourism development; and financing options for economic development.

PUBLICATIONS AND PRESENTATIONS

Since his arrival at the University of Tennessee, Dr Wilcox has authored or co-authored five peer reviewed publications and eight technical reports to donors and partners. In addition, Dr Wilcox has presented thirteen papers at professional meetings and conducted over twenty five Extension workshops.

TECHNICAL ASSISTANCE

Dr. Wilcox has provided technical assistance to twenty entities ranging from small Tennessee businesses to local, state, national and international governmental and non-governmental organizations since his arrival at the University of Tennessee.

GRANTS AND CONTRACTS

Dr. Wilcox has individually and as part of project teams obtained five grants and contracts totaling \$225,996 since his arrival at the University of Tennessee.

MEMBERSHIPS

American Agricultural Economics Association
National Association of Community Development Extension Professionals
Southern Agricultural Economics Association
Tennessee Association of Agricultural Agents and Specialists

LANGUAGES

Fluent in French